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THE OLD CITIES OF KABAW VALLEY*

Tin Maung Htwe[1] and Khin Mi Mi Khine[2]

Abstract

Kabaw valley was one of the territories under the Pyu kings (Myanmar) since Pyu period (from 5th century BC to 9th century AD). Besides, it was also one of the territories under the Myanmar kings since Bagan period (from 9th century AD to 13th century AD). Therefore, Kabaw valley is as part of Ancient Myanmar History. So, Kabaw valley is an important area for Myanmar History. Moreover, Kabaw valley (Kabaw Chaung in Myanmar sources) is an interesting area for researchers in history and archaeology because it has old city sites namely Kalay, Yazagyo, Khampat and Thaungdut. According to some data made by field survey research, these old cities came into existence during the Pyu period and were destroyed and then they were re-built during the Bagan period. Since then, these old cities continued to exist until Konbaung period (AD 1752-1885). Some of these old cities were very important ones for military purpose to northern part of Myanmar.

Keywords; City Plan, City Wall, Bricks, Buddha Images, Archaeological Objects

Introduction

The main motivated factor to write this paper "The Old Cities of Kabaw Valley" is that the old cities of Kabaw Valley contributed significant facts in Myanmar History. When I collected materials to write this paper, I found some evidences concerning with the old cities of Kabaw Valley. Thus, my objective to examine these data to make systematic compilation and interpretation of history of mentioned old cities became second motivation in writing this paper. In preparing this paper reliance has been made on library research and even on field survey research of necessary. Besides, aim and purpose of this paper is to reveal the history of the old cities of Kabaw Valley as part of Myanmar History.

Methodology

Historical method including field survey research and library research is used in this paper.

Location of Kabaw Valley and its Brief Background History

Kabaw valley (Kabaw Chaung in Myanmar sources) is an interesting area for researchers in history and archaeology because it has old city sites namely Kalay, Yazagyo, Khampat and Thaungdut. Moreover, it is also an important area of the northwestern part of Republic of Union of Myanmar due to bordering with the Republic of India. The name "Kabaw" is derived from Manipuri or Cassay word, meaning the Bamar living eastern part of Manipuri or Cassay province (Manipura). Later, it refers to the ethnic people of Shan and Bamar[3]. Kabaw valley is situated between latitudes 22º 45'N and 24º 45'N and longitudes 94º50'E and 94º37'E. It is bordered on the east by Phaung Pyin, Maw Laik, Minkin and Kalaywa Townships, on the west by the Chin State and Manipur province of the Republic of India, on the north by Manipur of India, and on the South by Pakokkhu Township (see map 1 and 2). The total area of Kabaw valley is about

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* First Prize (2023)

[1] Department of History, Bago University

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[3] Lyanner, U, ***History of Mizo in Myanmar (In Myanmar)***, A thesis for MA, History Department, University of Mandalay, 1975 (Edited in 1981), P-82 (Henceforth as Lyanner, 1981)

1470 square miles with about 150 miles in length, north to south, and the widest breadth is about 12 miles from west to east[1]. Concerning the brief background history of Kabaw valley, there are many concrete evidences in literature and epigraphs.

On the basis of new finding concerning Pyu civilization, the late Dr. Than Tun[2], famous historian of Myanmar, contributed the new concept that the Pyu people settled down in Yaw, Htilin and certain areas around the Uru stream of northern part of Myanmar[3]. Besides, according to Chinese records during the 9th century AD, the limits of the Pyu kingdom were given as 3000 li[4] from east to west and 3500 or 5000 li from south to north. On the east, it adjoined Comboja (Chen-la), on the south the sea, on the southwest (probably a slip for southeast) Dvaravati (To-ho-lo) or old Siam (Thailand), on the west Eastern India, on the north Nanchao[5]. Moreover, according to late U Yi Sein[6],Scholar and specialist in Pyu period in Myanmar History, there were three trade routes between China and India; by one water way and two by land routes during the Pyu period. Among the two land routes, with concreted evidences, it is suggested that one from Chiao-chou of An-nan (An-nam) province (Vietnam) to Chia-Mo-Po (Kamarupa) (Present day Gauhati of Asam in India) ran through Upper Myanmar and reached Kalaywa and then crossed the Mountain ranges[7] situated at the frontier between India and Myanmar[8] (See Map-3). According to the mentioned facts, it is assumed that Kabaw valley was one of the territories under the Pyu kings (Myanmar) since Pyu period (from 5th century BC to 9th century AD). Moreover, *Mahayazawindawgyi Vol I* mentions during the reign of the king Kyansitthar[(Htihlaing Min (AD 1084-1112)], the territory of Bagan (Arimaddanapura) consists of …….Patikhaya9- Lame Kula Pyi on the west.[10] Besides, Dhammarajika Stone Inscription dated Myanmar Era (ME) 558 (AD 1196) also bears the territory of Bagan include……..Mitsagiri[11] Patikhaya……on the west[12.] According to the mentioned facts, it is proved that Kabaw valley was one of the territories under the Myanmar kings since Bagan period (from 9th century AD to 13th century AD). Therefore, it is no doubt that Kabaw valley is a part of Ancient Myanmar History. Besides, successive Myanmar kings assumed Kabaw valley was an important one for military purpose and operations to northwestern part of Myanmar against the foreign invaders from Bagan period (9th century AD to 13th century AD) to Konnbaung period

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1 Ibid, P-82-83

2 Than Tun, Dr. (1923-2005), Historian, Retired Professor and member of Myanmar Historical Commission.

3 Than Tun, Dr, ***Miscellaneous things in Myanmar History (In Myanmar),*** Yangon, Phowa Offset, 2005, P-8

4 1 Li (in Chinese Term) is generally equal to 1/3 milYe Sein, U, ***Selected Writings of U Ye Sein (in Myanmar)***nYangon, Department of Historical Research (Ministry of Culture, 2007, P-220 (Henceforth as Ye Sein, 2007)

5 Luce, G.H, "The Ancient Pyu", ***JBRS Vol XXVII, Pt iii***, P-250

6 Mr. Chen Yi Sein (1924-2005), Retired Research Officer

7 This mountain is called by the Myanmar as Yoma and by the Cassay as Malai Tin Maung Htwe, Dr, Field Survey Notes on Kabaw valley (from 1.4.2013 to 31.4.2013)

8 Yin Sein, 2007, pp-17-43, 77

9 It is Tipperah province where kingdom or city state came into existence in old days and also situated east of present day Comila town, located southwest of Manipur and north of Chittagaung. Than Tun, Dr, ***ROB Vol X***, Kyoto, Center for Southeast Asia, Kyoto University, 1983 p-116

10 Kala, U, ***Mahayazawindawgyi (in Myanmar) Vol I,*** (Edited by Saya Pwa), Yangon, Yarpyi Offset, 2006, p-186

11 (Mitsa=Five, Giri= Mountain) It may be hilly tract around present day Thayet district west bank of Irrawaddy and it may be settled down by That tribe in those days. Thein Hlaing, U, ***Dictionary in Ancient Myanmar History*** (in Myanmar), Yangon, Universities Historical Research Centre, 2000, p-127

12 PL 117/ a6-10(117/ a6-10 means Plate No-117/ a in ***Five Port folios of Inscription of Burma***, line – 6-10

(AD 1752-1885) (See Map-4)[1]. So, Kabaw valley is an important area for Myanmar History. During the colonial period (AD 1886-1948), since 1905, Kabaw valley was divided into two; Kalay valley with Kalay town as main centre (Southern part) and Kabaw valley with Tamu town as main centre (Northern part)[2]. However, the study area in this paper for Kabaw valley includes Kalay valley (Kalay plain) and Kabaw valley (Tamu plain). In this paper, I try to identify the founding dates of old cities of Kabaw valley as well as to reveal the history of these cities as much as possible by making field survey research.

The Old Cities of Kabaw Valley

Kalay Old City - Kalay old city is situated at Aungmingalar Quarter, the present day Kalay. It is also located at the point of 23°10'58.80"N and 94°03'51.92"E. It is situated on the plain (valley) between Chindwin River and Pontaung mountain range in the east and Chin mountain range in the west[3]. (See Map-2)

According to field survey research, almost all city-walls are reduced to ground level because of urbanization and cultivation by human beings. Some remains may be traced along the eastern city-wall like ridges still exists at Basic Education High School No (1) on which a brick wall of the school has been built. (See Photo-1). It still exists as the earthen wall only and is 15' in height and 40' in breadth[4]. Like the city walls, almost all city corners disappeared except southeastern city corner near Ayemyawaishe Monastery, Bè Inn, Aungmingalar Quarter. The city corner seems to be actual angle in shape. (See Aerial Photo-1 and Drawing Map-1) According to field survey, Kalay old city has one wall with two moats; water moat and swamp moat on the eastern and southern side. (See Aerial Photo-1) These mentioned walls with two moats can be traced clearly at the southeastern city corner. While the water moat is about 10' in depth and about 70' in breadth, the swamp moat is about 10' in depth and about 50' in breadth[5]. (See Photo-2) At the present, although almost all city walls are seen as the earthen walls only, they seemed to be originally the kind of bricks wall with earthen reinforcement. Because it is discovered that the remain of wall with the brick layer exists within the compound of U Than Shein's house, Be Inn, Aungmingalar Quarter as original type of wall[6] (See Photo-3). It is suggested that it should be preserved as archaeological or historical value of Kalay old city because almost all evidences concerning with Kalay old city have been damaged by human beings for urbanization and cultivation. The size of the bricks found at the brick layer of the wall is 10"x7"x2" or 10"x8"x2½" in measurement[7]. Therefore, it is assumed that this kind of brick seems to be belonged to Bagan period (from 9th century AD to 13th century AD) or Post Bagan period (from 13th century AD to 15th century AD)[8].

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[1] Tin Maung Htwe, Dr, Field Survey Notes on Kalay old city site (form 1.12.2013 to 31.12.2013) (Henceforth as Field Survey Notes on Kalay old city site)

[2] Lyanner, 1981, P-81

[3] Field Survey Notes on Kalay old city site

[4] Field Survey Notes on Kalay old city site

[5] Tin Maung Htwe, Dr, Field Survey Notes on Kalay old city site (form 1.12.2013 to 31.12.2013) (Henceforth as Field Survey Notes on Kalay old city site)

[6] Ibid

[7] Field Survey Notes on Kalay old city site

[8] Tin Maung Htwe (Researcher), Dr, "Khampat old city (in Myanmar)", ***The Yangon Time Vol 7, No. 19 and No 20***, Yangon Media Group, 2011 (Henceforth as Tin Maung Htwe, 2011)

By the field survey, it is assumed that Kalay old city has cultural overlap of two old cities. Because the size of some bricks discovered at the base or foundation of some part of the wall are larger than that of the bricks found at the brick layer of the wall on the ground. The measurement of the bricks discovered at the base is 17" x 8½" x 3"[1]. (See Photo-4) This measurement is similar to that of the bricks belonged to Pyu period (from 5th century BC to 9th century AD)[2] but no finger marked designs on them. However, the bricks discovered at the base of the foundation differ in size, colour, and type from the bricks found at the brick layer of the wall on the ground. Therefore, it is deduced that the city-wall of second Kalay old city seemed to be built on the remains of the base or foundation of the wall belonged to the first Kalay old city which was destroyed. In other word, it is assumed that the first Kalay old city might have been come into existence during the Pyu period (from 5th century BC to 9th century AD) and was destroyed and then the second Kalay old city came into existence during the Bagan period (from 9th century AD to 13th century AD) or post Bagan period (from 13th century AD to 15th century AD). The Kalay old city has a length of about 0.7 mile and a width about 0.6 miles. The circumference of city-wall is about 2.5 mile[3]. Unlike other ancient cities, Kalay old city has a peculiar parallelogram shape, skewing about 21° toward the west. (See Aerial photo-1 and Drawing map-1)

Yazagyo Old City - Yazagyo old city is situated near well-known Yazagyo Dam and about 23 miles north of the present day Kalay town. It is also located at the point of 23°29'31.78"N and 94°05'18.07"E and is situated on the plain (valley) between Hmanlon creek and Myway Taung, Phar Taung of the Chin mountain range of the west and Nayitsara creek and Minthemi mountain range of the east.[4] (See Map-2)

According to the field survey research, the eastern part of Yazagyo old city site together with city-wall is disappeared on the ground because of erosion as well as the reclamation for cultivated lands by human beings. If completing, the town plan of Yazagyo old city is oval in shape. (See Aerial Photo-2 and Drawing Map-2) The present circumference is about 2 miles. If completing, its circumference is about 4 miles. Almost all city walls, northwestern and Southwestern corners of the city wall are still visible on the ground. The city corners (northwestern and southwestern corners) are seemed to be roundish in shape. (See Aerial Photo-2) Yazagyo old city has one city wall with one water moat.[5] It is assumed the city wall seemed to be originally the kind of brick wall with earthen reinforcement although, at present, almost all city walls can be found as the earthen wall only. Because a few brick layers may be traced at some part of city wall at the base.[6] The city-wall is about 30' in height and 45' in breadth except some part is about 20' in height and 25' in breadth. Besides, the moat is 40' in breadth and 10' in depth except some part is 40' in breadth and 25' in depth (See Photo -5). During the term of my field survey research, four city gates have been traced, the one in the northern part and the rest in the northwestern, western, and southwestern parts. If they are excavated systematically in future, it will be studied and observed what kind of city gate and its purpose. Besides, the evidences concerning Yazagyo old city will be gotten for scholars and researchers. The width of each city

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1 Field Survey Notes on Kalay old city site
2 Tin Maung Htwe, 2011, P-31
3 Field Survey Notes on Kalay old city site
4 Tin Maung Htwe, Dr, Field Survey Notes on Yazagyo old city site (from 1-12-2013 to 31-1-2013) (Henceforth as Field Survey Notes on Yazagyo old city site)
5 Field Survey Notes on Yazagyo old city site
6 Ibid.

gate is about 50' (See Photo6). The length of eastern city wall is about 0.5mile, western wall about 0.85 mile, and southern wall about 0.5 mile. To the southwestern part within the city wall, there is a lake (dam) namely Kyar Inn which was contemporary with Yazagyo old city[1] (See Photo-7).

There are surface finds and chance finds concerning with archaeological and historical evidences at Yazagyo old city site. They are able to use as historical evidences to reveal the history of Yazagyo old city though they are less valuable than those from systematically excavation in history and archaeology. During the term of my field survey research, finger marked bricks[2] can be traced at the city wall as surface finds. The measurement is 17"x8"x2 ½" similar to that of the bricks belonged to Pyu period (from 5th century BC to 9th century AD) (See Photo-8). Besides, near the northwestern city gate, there are two ruin brick walls in east-west direction which seem to be the length of ancient structure base concerning with Yazagyo old city. The size of each brick found at ancient structure base is similar to the measurement of the bricks found at city wall[3] (See Photo-8). These bricks are chance finds that are more valuable evidences to reveal the history of Yazagyo old city. Besides, if this ruin structure mound is excavated systematically, it will be studied and observed what kind of structure and its purpose. Moreover, the evidences concerning with the Yazagyo old city will be gotten for scholar and researchers.

Moreover, there are many ruin stupas near the Min Kyaung monastery. Almost all stupas are so damage that I cannot study and observe their architectural type and style except a few because of little damage in condition (See Photo-9). The porch of each is the same. This mentioned porch is decorated by the Corbelled Arch which is done by making each layer of brick extend a little longer than the one immediately below it and thus making the two arms of the wall meet above at a certain height (See Photo-10). The architectural style is very simple and different from those of Pyu period (from 5th century BC to 9th century AD) and those of Bagan period (from 9th century AD to 13th century AD). According to architectural style[4], it is assumed these stupas are belonged to Nyaung Yan period (AD 1600-1752). The size of the bricks found at stupas is 15 ½"x 8" x 2 ½" in measurement (See Photo-11). During the term of my field survey, I have a chance to study and observe the chance find that is a alabaster Buddha image. It was found in the shrine of ruin stupa namely Amat Choak before re-building and is now kept in Min Kyaung monastery. In the art style, it is carved Buddha seated in Bhūmisparsa mudrã with his right leg overlapped on left in Paryankãsan on the double lotus throne.The face of Buddha is composed of broad forehead, big eyes and eyebrows, and plumb cheeks. Ushnisha has domed finial. The big and elongated earlobes almost touch on the shoulders. The image has massive body. The thick rob covers both shoulders and is more decorated than those of Pyu period (from 5th century BC to 9th century AD) and Bagan period (9th century AD to 13th century AD).

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[1] Field Survey Notes on Yazagyo old city site

[2] Generally, the culture of finger marked bricks flourished during the Pyu Period (from 5th century B.C to 9th century A.D). The size of these bricks are from 20"x10 ½"x 3 ½" to 17 ½"x 8 ½"x 1 ¼".
Tin Maung Htwe, Dr. Field Survey Notes on Visnu old city form 1-3-1999 to 1-4-1999 and
Tin Maung Htwe, Dr, Field Survey Notes on Srikshetra old city from 1-8-2011 to 1-9-2011 (Henceforth as Tin Maung Htwe, 1999 and 2011)

[3] Field Survey Notes on Yazagyo old city site

[4] Tin Maung Htwe, Dr, Study on Architecture of Stupa and Art of Buddha Images of Nyaung Yan Period (A.D 1600-1752) of Kyar-Pin Village, Min-Kin Township, Sagaing Region, (The best paper Award winning Paper in the Arts at Kalay University, 2012) PP,4-5 (Henceforth as Architecture of Stupa and Art of Buddha Images of Nyaung Yan Period) (Henceforth as Tin Maung Htwe, 2012)

Moreover, the robe is decorated by royal dressing. The head is decorated with big ornamental ear-flaps. Therefore, it is deduced this Buddha image seemed to be paid homage as a Buddha Sakyamuni. According to art style, this Buddha icon is belonged to Nyaung-Yan period (AD 1600-1752) (See Photo-12)[1]

Khampat Old City - Khampat old city is situated about 1½ miles east of the present Khampat town about 53 miles north of Kalay. It is also situated at the point of 23° 48' 13.3" North latitude and 94° 10' 58.5" East longitude. It is located on the plain (valley) between Chin Mountain of the west and Minthami Mountain of the east[2] (See Map-2).

According to field survey research, it is assumed Khampat old city has cultural overlap of three old cities. The town plan of first old city is oval in shape. It is surrounded by a wall and a moat. (See Photo No- 13 and 14) The northern and northeastern parts of the first old city at Khampat old city site are eroded by Nanpalaw Chaung (stream) and so, the northern and northeastern city walls are disappeared on the ground. (See Aerial photo-3 and Drawing Map-3) Almost all city walls, southwestern and southeastern corners of city wall are still visible on the farms near Khampat Ywahaung (No-5 Quarter of the present Khampat Town) except its southern wall is reduced to ground level in some places because of cultivation by human beings. The city corners are seemed to be roundish in shape (See Drawing Map-3). The prominent remain of city-wall like ridge still exists on the farms near Khampat Ywahaung and it is 30' in height and 50' in breadth. The moat is 30' in depth and 50' in breadth. The circumference of the city-wall is about 2 miles and it is earthen wall only at present.[3]

The town plan of second old city is square in shape and it is surrounded by a wall and a moat (See Photo No-15 and 16). Like first old city, as the northern and northeastern parts of second old city are eroded by Nanpalaw Chaung, the northern and northeastern walls of second old city are disappeared on the ground. According to field survey research, the second old city continued to use the southern wall of the first old city as its southern wall. Therefore, it is assumed after the first old city had been destroyed, the second old city was built at Khampat old city site. Like first old city, almost all city walls, southwestern, and southeastern corners of the city wall can be traced clearly on the farms near Khampat Ywahaung but some parts of southern city wall are reduced to ground level in some places because of cultivation by human beings. The city corners are square. (See Drawing Map-3). The prominent remain of city-wall like ridge still exists at Pho Sila Altar. (See Photo No- 16) It is 30' in height and 50' in breadth. The moat is 20' in depth and 20' in breadth. The circumference of the city wall is about 1½ miles and it is earthen wall only at present.[4]

The town plan of third old city is oval in shape and it is surrounded by only a wall. The northern part of city is eroded by Nanpalaw Chaung and so, the northern wall is disappeared on the ground. The remain of city-wall still exists around the three pagodas in north-south direction called Trilokamitsu and a prominent big banyan. It is 15' in height and 20' in breadth and circumference of city-wall is about 1 mile. As though the town plan is oval in shape, the area of

[1] Tin Maung Htwe, 2012, PP, 4-5
[2] Tin Maung Htwe, Dr, Field Survey Notes on Khampat old city site (from 1.12.2013 to 31.1.2013) (Henceforth Field Survey Notes on Khampat old city site)
[3] Field Survey Notes on Khamphat old city site
[4] Field Survey Notes on Khamphat old city site

city is small; it seems to be a fort (See Drawing Map-3) The city-wall is kind of the earthen wall only.

There are surface finds and chance finds concerning with archaeological and historical evidences at Khampat old city site. They are able to be used as historical evidences to reveal the history of Khampat old city though they are less valuable than those from systematic excavation in history and archaeology. Concerning with Khamphat old city site, surface finds collected by U Khin Maung Yin, a villager of Khampat Ywahaung are a Neolithic stone axe, and a bronze unit in weight and terracotta pipe of Post Bagan period (from 13th century AD to 15thcentury AD) (See Photo No-17). Besides, some local people said that they had found some bronze weapons. Unfortunately, I can't observe and study these bronze weapons because these bronze weapons are out of their hands (See Drawing). Moreover, it is found a certain plain (valley) consisting of Khampat old city site and its environment is good soil for cultivation according to field survey. Alluvial soils are found within the Kabaw valley. Therefore, the study area is provided for good agriculture.[1] It is suggested that mentioned fact is an important geographical factor to appear old cities at Khampat Old city site. Besides, during the term of field survey research, a finger marked brick[2] measuring? x 8½" x 2½" on the wall of first old city of Khampat old city site is found (See Photo No-18). According to mentioned facts, since Bronze Age (BP 3500-2500), people came to settle down at Khampat old city site. Then, the first old city came into existence during the Pyu period (from 5th century BC to 9th century AD) because the town plan is oval in shape and finding finger marked brick on the wall.[3] Then, this city was destroyed before Bagan period (from 9th century AD to 13th century) or Post Bagan period (from 13th century AD to 15th century AD) because of the fact that the second old city continued to use southern wall of the first old city as its southern city wall.

Likewise some bricks measuring 14" x 8" x 2½" belonged to Bagan period (from 9th century AD to 13th century) or Post Bagan period(from 13th century AD to 15th century AD) are found on the wall of second old city during the term of field survey research[4] (see Photo No- 19). According to mentioned facts, it is assumed that after the first old city had been destroyed, the second old city was built during the Bagan period or Post Bagan period because of the facts that the town plan of second old city is square and finding some bricks belonged to Bagan period or Post Bagan period and the second old city continued to use the southern wall of the first old city as its southern wall. Unfortunately, there are no historical and archaeological evidences concerning with the third old city of Khampat old city site.

Thaungdut Old City- Thaungdut old city is situated at Myothit about 28 miles northeast of the present day Tamu town, Sagaing Region. It is also located at the northwestern part of Union of Republic of Myanmar as well as at the plain (valley) between Yu creek, Yoma mountain called by the Myanmar or Malain mountain called by the Cassay and Manipur province of Republic of

[1] Lay May, Ma, ***Transportation and Communication of Kalay district*** (in Myanmar), (MA Thesis), Mandalay University, May 1997, PP, 41- 42

[2] Tin Maung Htwe, 1999 and 2011

[3] Field Survey Notes on Khamphat old city site

[4] Ibid

India in the west and Minthemin and Payataung mountain ranges in the east. It is situated at the point of 24 30' 40.98" N and 94 31' 14.48" E.[1](See Map-2)

According to field survey, Taungdut old city has one wall with two moats; water moat and Swamp moat. Although the city wall of Thaungdut seemed to be originally the kind of brick wall with earthen reinforcement, only the earthen wall can be found or traced at present. The city wall is still visible on the ground except that some parts are reduced to ground level because of damage by human beings. At present, according to field survey, the city wall is about 5' in height and about 20' in breadth and also for two moats, each is about 15' in width and 6' in depth.[2] (See photo-20) Within the Thaundut old city site, there are also two famous pagoda namely Gormonna (Photo 21) and Payagyi (Photo 22). Although local people said that these pagodas are the historic pagodas of Thaungdut old city, the architectural type and style of them belonged to modern age. As far as my exploration concerning the Thaungdut old city site, there are no remains of ancient monuments which were contemporary with Thaungdut old city. While the length of southern wall is about 0.48 mile, the northern wall is about 0.62 mile. Besides, while the length of eastern wall is about 1.10 mile, the length of western wall is about 1.2 miles. The circumference of the Thaungdut old city is about 3.5 miles. Its town plan is almost a square in shape with the corner on the southeast and northeast a bit rounded.[3] (See aerial photo-4 and Drawing map-4)

Within the Thaungdut old city site, there are ruin pagoda mounds and one ruin structure mound measuring 50'x60' on the southwestern part. A large number of broken bricks with finger marks can be traced at the ruin structure mound during the term of field survey. Unfortunately, only even a complete size of these bricks cannot be found. Among them, one broken brick has to be taken a photo as an example. Its measurement is about? x8"x2½"(Photo 23). By some sources, the finger marked bricks seem to be belonged to the Pyu period (from 5th century BC to 9th century AD)[4] If this ruin structure mound is systematically excavated, people can study and observe its purpose and what kind of structure it is. Besides, the evidences concerning with Thaungdut old city will be got for scholars and researchers.

Conclusion

According to mentioned facts, Kabaw valley was one of the territories under the Pyu kings (Myanmar) since Pyu period (from 5th century BC to 9th century AD). and under the Myanmar kings since Bagan period (from 9th century AD to 13th century AD). It is no doubt that Kabaw valley is a part of Ancient Myanmar History. Besides, Myanmar Kings assumed that Kabaw valley was an important one for military purpose and operation to northwestern part of Myanmar against the foreign invaders from Bagan period (9th century AD to 13th century AD) to Konnbaung period (AD 1752-1885). So, Kabaw valley is an important area for Myanmar History. The old cities of Kabaw such as Kalay, Yazagyo, Khampat, Thaungdut come into existence during the Pyu period (from 5th century BC to 9th century AD) and were destroyed and then some were re-built during the Bagan period (from 9th century AD to 13th century AD). Since then, these old cities continued to exist until Konnbaung period (AD 1752-1885) according to Myanmar chronicles and local sources.

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[1] Tin Maung Htwe, Dr, Field Survey Notes on Thaungdut old city site (from 1-12-2013 to 31-1 2013) (Henceforth as Field Survey Notes on Thaungdut old city site)

[2] Field Survey Notes on Thaungtud old city site.

[3] Field Survey Notes on Thaungtud old city site

[4] Tin Maung Htwe, 1999 and 2011.

Acknowledgement

I would like to express my heartfelt thanks to local people for their helpful assistance during the term of field survey research. Besides, I would like to express my special thanks to Dr. Aye Aye Khaing, Rector of Bago University for her encouragement to do research. I owe great gratitude to Dr. Aung Ko Ko, Professor and Head of Department of History, Bago University and Daw Khin Mi Mi Khine, Tutor, Department of History, Bago University for their kind help and kind support to conduct this paper

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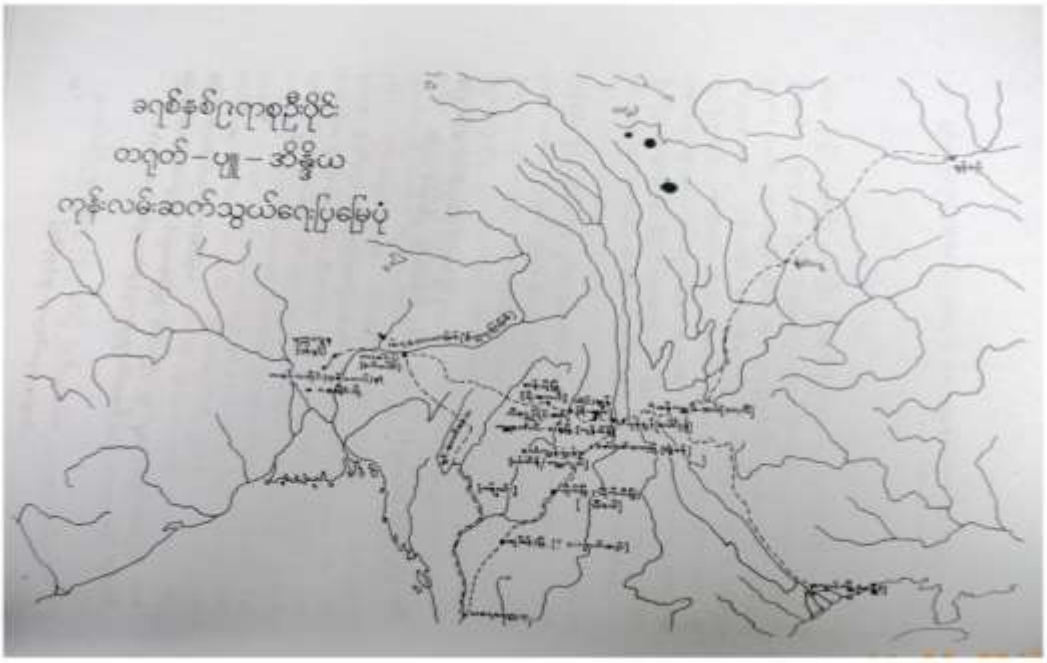
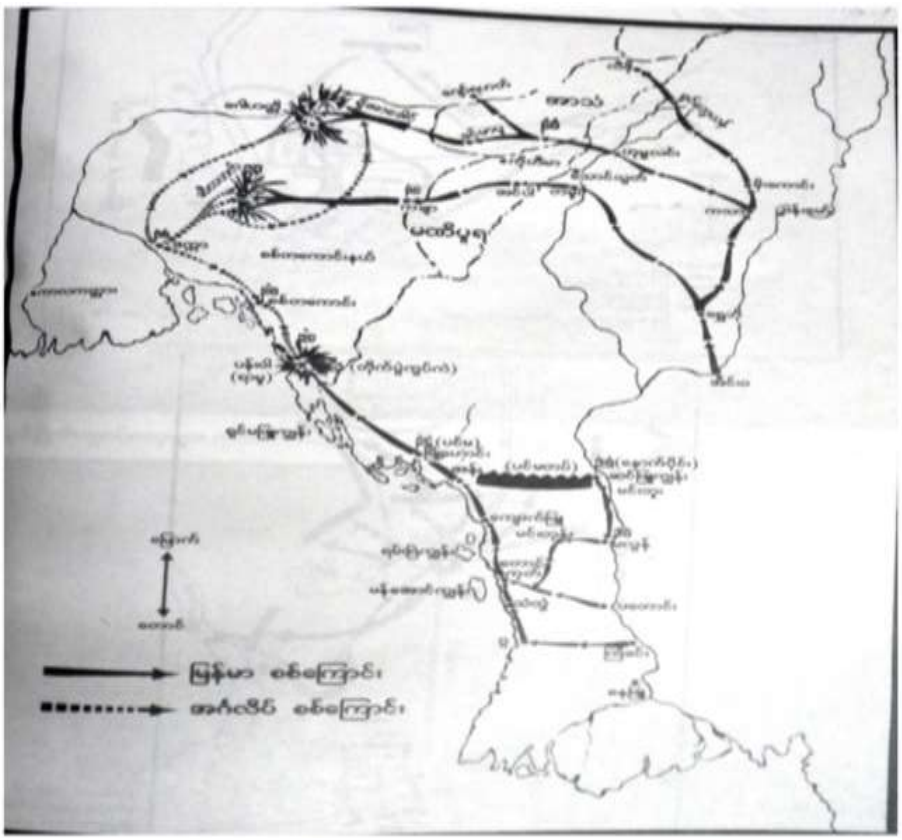
Appendix I

Map (1) Location of Kabaw Chaung (Kabaw Valley) with its old city sites

Map (2) Location of Kabaw Chaung (Kabaw Valley) with its old city sites



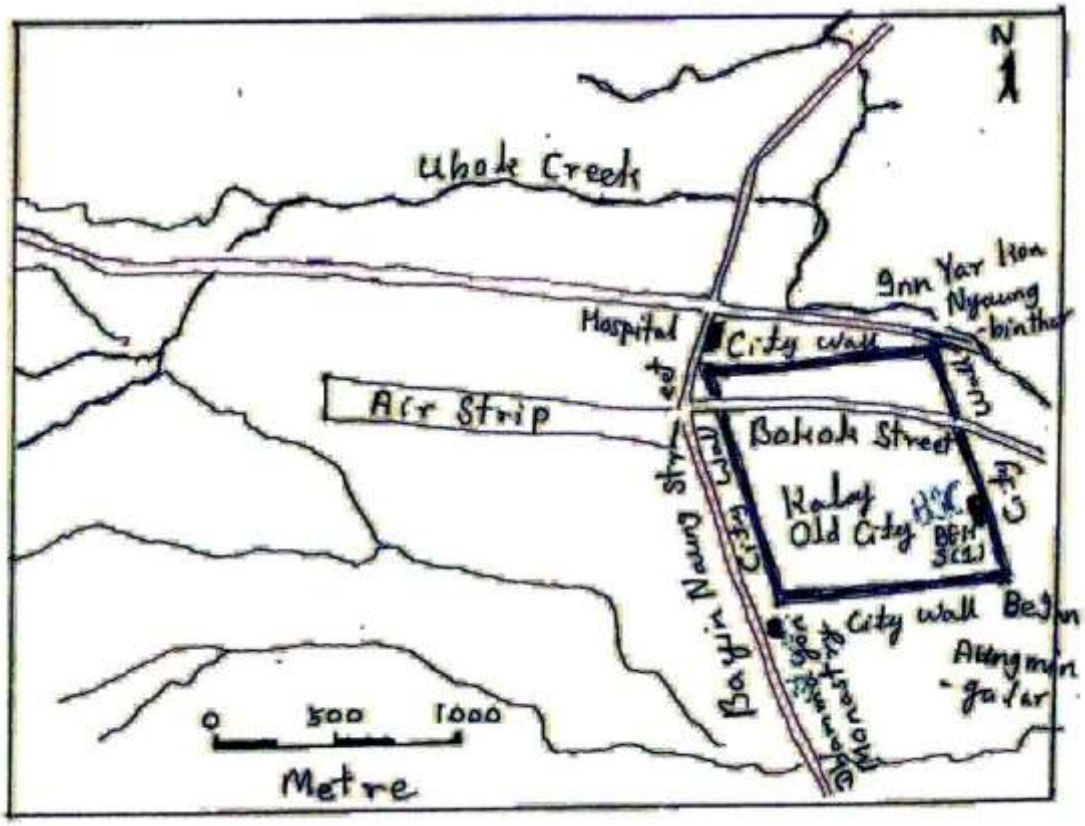
Map-3 Trade routes among China, Pyu, and India during the early 9th century A, Source from Yi Sein, 2007, p-182



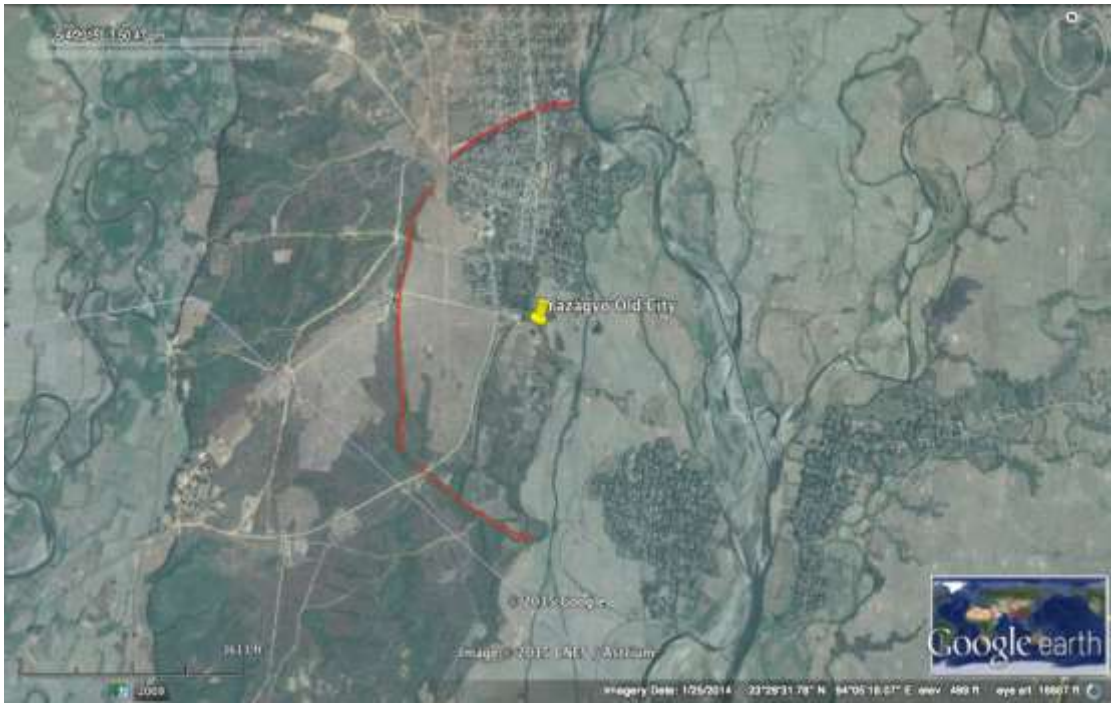
Map-4 Early Battlefields in the Course of First Anglo-Myanmar War Source from Myanmar Encyclopedia Vol XV, p-204

A

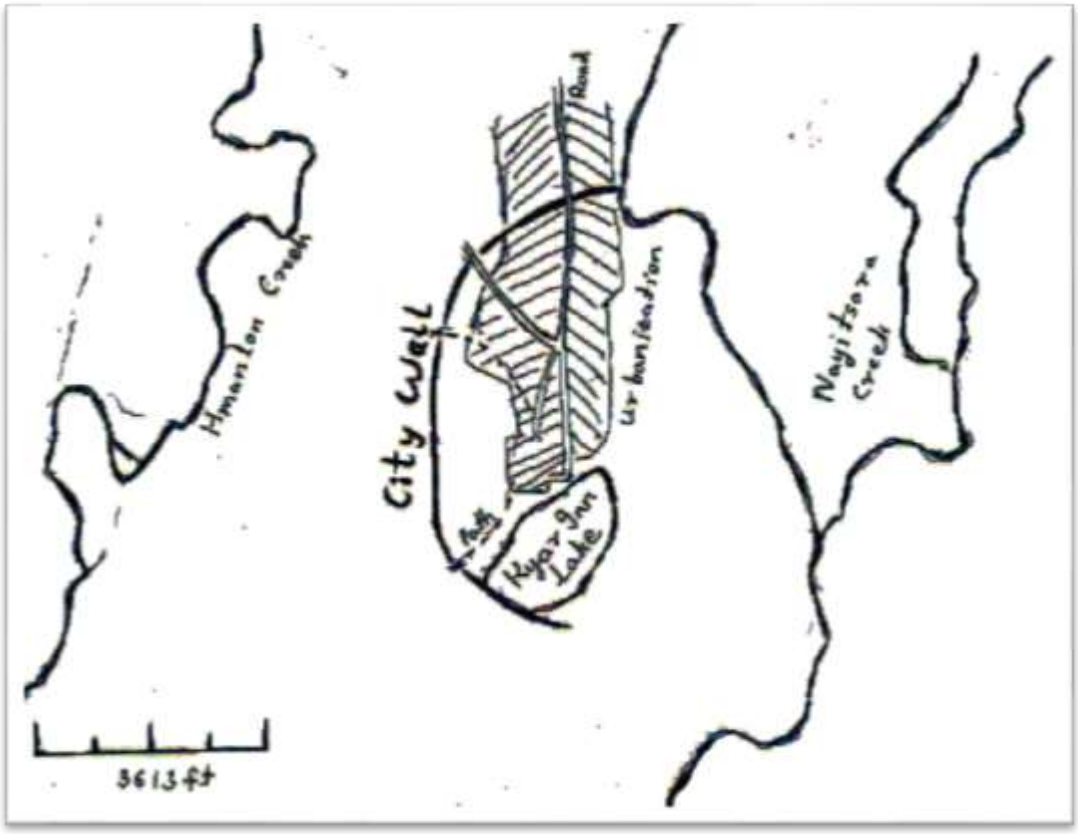
Aerial Photo (1) Aerial Photo of Kalay old city



Drawing Map (1) Drawing Map of Kalay old city

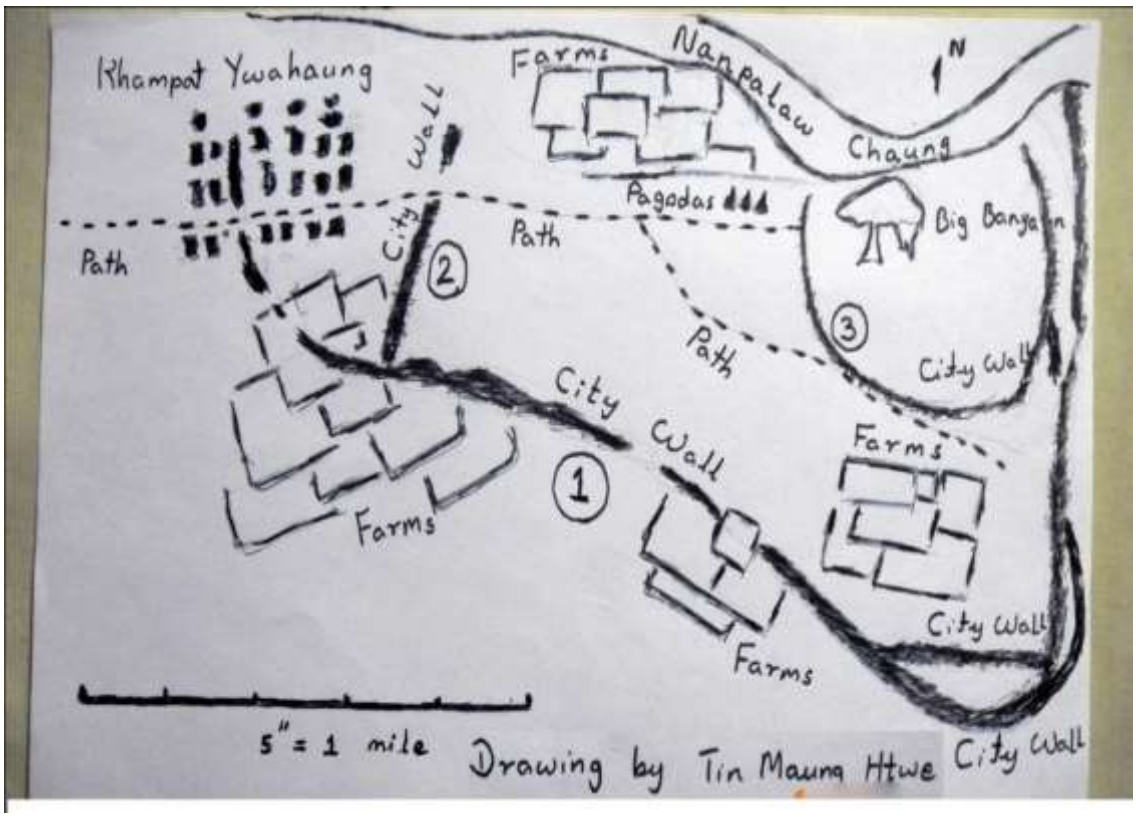


Aerial Photo (2) Aerial Photo of Yazagyo old city



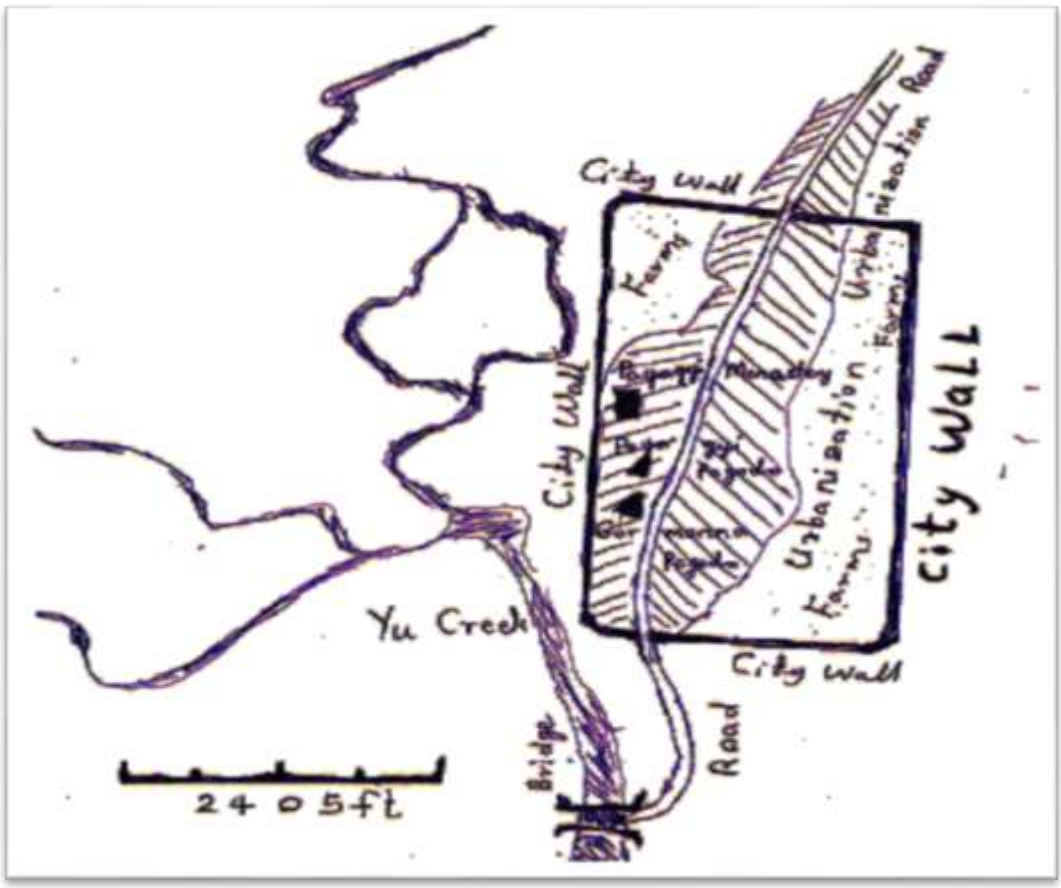
Drawing Map (2) Drawing Map of Yazagyo old city

Aerial Photo (3) Aerial Photo of Khampat old city



Drawing Map (3) Drawing Map of Khampat old city

Aerial Photo (4) Aerial Photo of Thaungdut old city



Drawing Map (4) Drawing Map of Thaungdut old city

Appendix II

Photo 1- The remain of eastern city wall of Kalay old city at BSHC No (1)

Photo 2 - The Southeastern city corner with two moats; water moat and swamp moat

Photo 3- The remain of city wall at U Than Shein's house, Be Inn, Aungmingatar Quarter as the original type

Photo 4 - The brick without finger marked designs found at the base of city wall of the first Kalay old city which was destroyed.

Photo 5 - Northwestern city wall with moat at Yazagyo old city site

Photo 6 - Northwestern City Gate at Yazagyo old city site

Photo 7- Kyar Inn lake (Dam) which was contemporary with Yazagyo old city

Photo 8 - Finger marked brick found at City wall of Yazagyo

Photo 9 - Ruin Stupas near Min Kyaung Monastery of Yazagyo

Photo 10 - The Porch decorated by Corbelled Arch

Photo 11 - The size of the brick found at Stupu near Min Kyaung Monastery

Photo 12 - Buddha Sakyamuni Image kept in Min Kyaung Monastery

Photo 13 - Southern city wall of first old city at Khampat old city site

Photo 14 - Moat and city wall of first old city at Khampat old city site

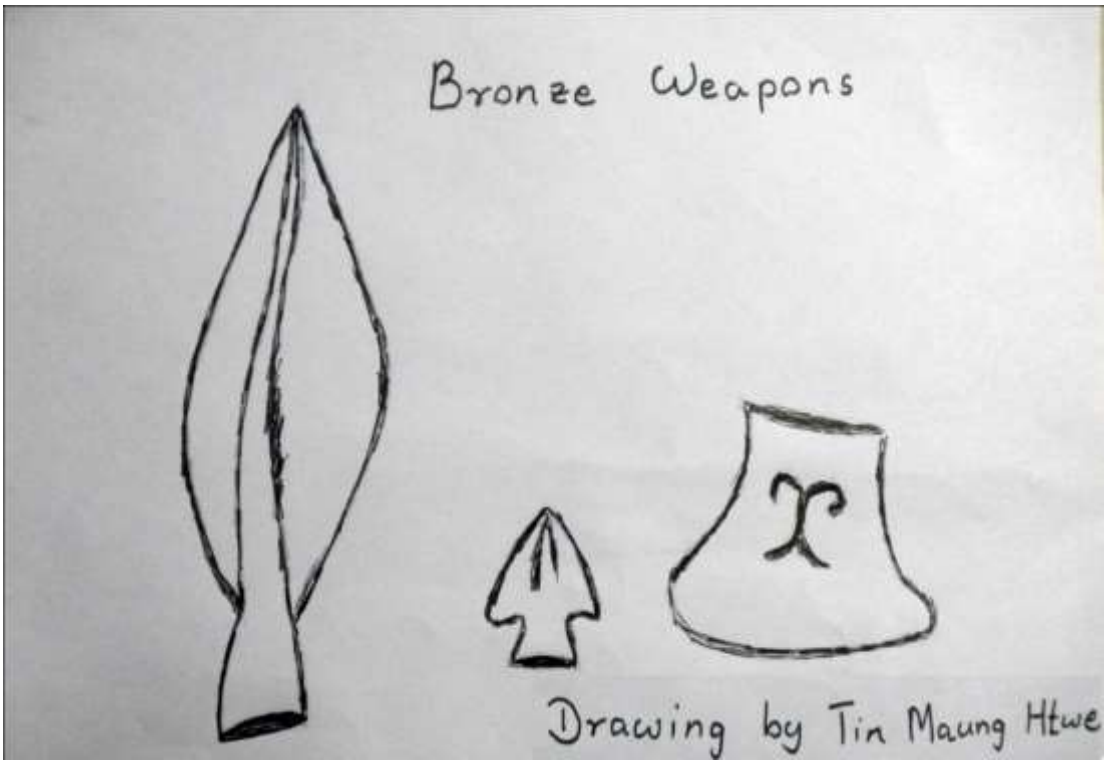
Photo 15 - Moat and city wall of second old city at Khampat old city site

Photo 16 - City wall of second old city at Khampat old city site

Photo 17 - Surface finds collected by U Khin Maung Yin

Photo 18- Finger marked brick found on city wall of first old city

Photo 19 - Brick belonged to Bagan or post Bagan Period found on city wall of second old city



Drawing of Bronze Weapons as fold by villagers

Photo 20 - Northern city wall of Thaungdut with moat

Photo 21 - Garmonna Pagoda within the Thaungdut old city site

Photo 22 - Payagyi Pagoda within the Thaungdut old city site

Photo 23 - Broken finger marked brick at the ruin structure mound Thaungdut old city site

THE SACRED MONUMENTS: AN EXAMINATION OF THE REPOSITORY COMPLEX OF *TIPIṬAKA* INSCRIPTIONS IN YENANCHAUNG*

Kyaw Swe Oo[1]

Abstract

This paper examines Tradition of *Twin-yoe Twin-za* and a Sacred Monument (Repository of *Tipiṭaka* Inscriptions) in Yenanchaung. It aims at having a notion that *Dhamma Zedî* (Repository of *Tipiṭaka* Inscriptions by Lord Buddha) which is included in four kinds of *Zedî* of Theravada Buddhism must be revered deeply in the hearts of all the Buddhists. It aims at bringing out a spirit of protection for *Dhamma Zedî* threatened by the lack of maintenance, and at taking a notice of such sacred monument in Yenanchaung. Based on primary sources and secondary documents, the descriptive method is used for scenes of the monumental buildings, and the analytical method is used for assessing the data collected and visual sources. This paper provides three new interpretations: (1) recognition of struggle for consolidation of Theravada Buddhism in the colonial period (1886-1947) influenced by other religions; (2) recognition of attribute made by an ordinary family who was capable of building such *Dhamma Zedî*; and (3) recognition of significant structure of the Repository Complex and workmanship on stone slabs. By searching for further Repositories established in Myanmar, the noble practice for strengthening Theravada Buddhism by means of building *Dhamma Zedîs* has to be honoured. It is expected that all the Buddhists will take a great value for having such practice and will keep a special care for preserving such sacred monuments (*Dhamma Zedîs*).

Keywords: *Dhamma Zedî* (Sacred Monument, Repository), Theravada Buddhism, *Tipiṭaka* Inscriptions, *Twin-yoe Twin-za*, Yenanchaung.

Introduction

Yenanchaung had a long tradition of Culture of Stone Ages that existed in the central part of Myanmar. In fact, it includes in a circle of the *Anyathian* Culture that had been recognized as the Culture of Stone Age in Central and Upper Myanmar.

In A.D. 906 of Bagan period, *Salay Ngakhway* (906-915) executed King *Tannak* (878-906) and seized the throne. *Tannak*'s Queen and relatives fled to *Kamma* that is recognized as the name "Rising up of Good Fortune". The twelve families of Queen's relatives could do their settlement at "*Seiktha Kunnhtauk*". The twelve men among the families wandered around "*Seiktha Kunnhtauk*" and they saw *Pyarr-gyi Taung* (Hillock). Then, they proceeded to the northeast direction and found *Nanttha Myaysi* (Earth-Oil) coming out from the ground. They fixed marks on the place and took possession of land from *Myo-thugyi* (Administrator of Town). They earned from the sale of *Nanttha Myaysi* products. The story exposed an original name of Yenanchaung. It is learnt that in the reign of King *Salay Ngakhway*, the Town has been known as "*Seiktha-Kunnhtauk*" that means the "good harbor (*Seiktha*) for short time of stay (*Kunnhtauk*)". Since those times, only Queen and twelve of her relatives have been given the formal right to earn from the *Nanttha Myaysi* demarcating four divisions of the land.

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* Second Prize (2023)

[1] Department of History, Yenanchaung University

In the reign of King *Anawrahta* (1044-1077), the King ordered the people living in those divisions of land to submit an official list of their family members. The list forms a group of thirty-eight who contains twenty-four *Twin-yoes* and fourteen *Twin-zas*. *Twin-yoe* means a person who is recognized by the King for the production of Earth-Oil. *Twin-yoes* have the traditional right of possession of oil-production and they are administrators. *Twin-za* means a Head who is administered by *Twin-yoe*. *Twin-zas* became *Twin-za-yoes* (the hereditary owners of the oil wells) when they succeeded the right of possession of oil-production. *Twin-thugyi* means a Chief who manages the cases happened among the *Twinza-yoes*. He was also known as *Twingyi-min*. Twenty-four *Twin-yoes* was consisted of Twelve *Twin-thugyis*, seven junior *Twin-thugyis*, and five descendants.

King Anawrahta renamed "*Seiktha Kunnhtauk*" as "*Yenanttha*" (meaning water of aromatic oil). In the reign of King Alaungsithu (1113-1162), "*Yenanttha*" has been known as "*Yenan Chaung*". In the name of "*Yenan Chaung*", it is recognized that Earth-Oil comes out from the place and its surroundings; and that much of Earth-Oil flows like stream. According to a Bell Inscription of 1869, it is learnt that the Town was called "*Kyaukdagarr*", meaning hard texture of soil that produces the Earth-Oil in the reign of King *Alaungsithu*.

According to a *Sittan* (Revenue Inquest) of King *Badon* (1782-1819), it is learnt that Yenanchaung *Twingyi-min U Kauk Ra* with the title of *Naymyothammantaraja*, and *Twin-yoe Twin-za* families – Sixty-four families of *Twin-yoe Twin-za* (*Twin-yoe* – twenty-four and *Twin-za* – forty) were included in a list of *Sîrisangā Taik* (Royal Building for Record).

In the reign of King *Tharrawady* (1837-1846), Yenanchaung *Twin-za-yoe U So* served as Clerk of *Byèdaik* (Royal Privy Council), Clerk of *Hluttaw* (Royal Council of Ministers) and *Thandawsint* (Royal Herald). In the reign of King *Bagan* (1846-1853), *U So* had to serve as Minister of Riverine Regions, Minister for Nine Districts and Yamèthin Commander (Colonel). In the time of King *Mindon* (1853-1878), *U So* was recognized as Minister of Riverine Regions, Minister for Nine Districts and Yamèthin Commander, and he was allowed to enjoy the position of Yenanchaung *Myo-za Wungyi* (Minister) with the title of *Thadomingyi Maha Minhla Minkhaungkyaw*.

Giving the reason on the oil-productions, *Mindon* took *Ma Ma Khin (*Court Maid), daughter of *U So* and placed her at the position of small queen (*Kyaymyin Taik* Princess) with the title of *Susîri Pabhā*. *Mindon* gave *U So* the position of Commander-Minister. In the time of King *Thibaw* (1878-1885), *U So* had also been Yenanchaung *Myo-za Wungyi* (Minister). Most of pagodas, monasteries, religious buildings in Yenanchaung are the buildings donated by the members of *Twin-yoe Twin-za* Community. Of those buildings, Repository of *Tipiṭaka* Inscriptions has also been such kind of Sacred Monument.

Materials and Methods

The data used in this Paper are mainly collected from the primary and secondary sources maintained in National Library, Library of Historical Research Department, Universities' Central Library and Library of History Department (University of Yangon). A thorough examination on the Sacred Monument (Repository of *Tipiṭaka* Inscriptions – *Dhamma Zedî*) is made for portraying the purposes of the paper. The descriptive method is applied for gaining clearer scene of significant structures. The analytical method is used for estimation of times relating to the *Dhamma Zedî* (Repository of *Tipiṭaka* Inscriptions). The comparative study is also used for

calculating number of slabs and times of establishment with other *Dhamma Zedîs*. With the aim for gaining fuller realization of the Paper's purposes, explanatory notes are appended to those descriptions, analysis and comparison.

Findings

This Paper provides such new interpretation – "recognition of efforts at strengthening Theravada Buddhism during the colonial period (1886-1947)". It exposes three points (1) recognition of attribute made by an ordinary family who was capable of building such *Dhamma Zedî* (Repository Complex of *Tipiṭaka* Inscriptions in Yenanchaung), having no administrative power and authority; (2) recognition of such *Tipiṭaka* Inscriptions in line with version of the Fifth Buddhist Synod (Council); and (3) recognition of significant structure of the Repository Complex and workmanship on stone slabs. Furthermore, it gives a panoramic illustration of structures in such Repository Complex (Sacred Buddhist Monument).

Discussion

The Repository Complex of *Tipiṭaka* Inscriptions is located on the Hill of *Radanāgîri*, *Ponna-gone* area, North *Myoma Daing-nel*[1], Yenanchaung Township. The Repository Complex[2] has an area of 1.689 acres and consists of five buildings: two buildings for *Suctam Piṭakat*; one building for *Vinaya Piṭakat* and two buildings for *Abhidhammā Piṭakat*, and other religious buildings.

Donors

The Repository Complex has been donated by *Twin-za-gyi U Thar Kan* and his *Paramîphak*[3] *Daw Khin Thin*. *U Thar Kan* is the eldest son of *Twin-za-yoe U Kunn* who had six children. As an eldest son, *U Thar Kan* received an inheritance of *Twin-yoe* from his father. *Daw Khin Thin* is a daughter of Governor of Four Towns[4] and the name of her childhood is *Ma Khin Lay*. She is the second wife of *U Thar Kan*.

Three *Piṭakats*

It is learnt that *Piṭakat* means *Priyatti* – keeping a great study on noble and good *Dhamma* (Buddha's Teachings and Admonitions). Three *Piṭakats* or *Tipiṭaka* are vital for Theravada Buddhism. For the pious Buddhists, it is believed that *Suctam* means sermons for secular and religious interests, sermons for all beings in accordance with their inherent perceptions; that *Vinaya* means rules and commandments taking measures on physically and verbally; and that *Abhidhammā* means the extreme natural *Dhamma* and the *Dhamma* higher than the common sermons.

Origins of the Repository

According to an appeal of *Twin-za-gyi Catu Maung Maung* and the donors, *Seinpanpin Sayadaw U Zagaya* arrived at Yenanchaung. *Sayadaw* received *Mahā Vipulārāma Taik*

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[1] Probably, *Daing-nel* (ဒိုင်နယ်) means *Taing-nel* (တိုင်နယ်). It is an area demarcated in accordance with administrative limitation of territory. Now, it exists as "Quarter" (ရပ်ကွက်). See Figure - 1.

[2] See Figure - 2.

[3] *Paramîphet* means life-partner, sharing the good deeds and enjoying the good lives.

[4] Four Towns – Yenanchaung, Wakmasut, Kyaukye' and Pakhan-nge

(Monastery), water-wells and other religious monuments. When *Twin-za-gyi U Thar Kan* and his Paramiphet *Daw Khin Thin* made a supplication "Which kind of donation should we do?" to *Seinpanpin Sayadaw*. *Sayadaw* replied that "Now, *Tipiṭaka* Inscriptions encounters the Texts differed from the ratified Texts of the Fifth Buddhist Synod; aiming to embed the genuine texts, you have to build a Repository and donate the slabs of the genuine *Tipiṭaka* Texts in Yenanchaung." Both *U Thar Kan* and *Daw Khin Thin* accepted it.

The Fifth Buddhist Synod

King *Mindon* (1853-1878) held the Fifth Buddhist Synod in his Capital of Yadanabon. From 15 April 1871 to 12 September 1872, 400 Buddhist monks read *Tipiṭaka* Texts in both daytime and nighttime. It lasted for five months and three days. With the work of inscribing *Tipiṭaka* Texts on slabs, the Fifth Buddhist Synod can be held successfully.[1]

***Seinpanpin Sayadaw* Ashin Zagaya**

The Repository Complex that stored *Dhamma Zedîs* has been built under the guidance of *Seinpanpin Sayadaw Ashin Zāgara* who presided over Yenanchaung *Mahā Vipulārāma Taik* (*Seinpanpin* Monastery), *Mahā Visutārāma Taik* (*Kyauksa-ron* Monastery), *Twingone* Hill Monastery, Salin *Seinpanpin* Monastery and some Monasteries in Magway.

The would-be *Seinpanpin Sayadaw Ashin Zāgara* was born on 29 November 1840 in *Kamma* village, Yenanchaung. *Shin Zāgara* passed five *Vinaya Piṭakats* (*Pãli*) in the First Examination of *Sudhammā* Sect and received a position of qualified monk on *Viban:* Texts. In 1860, King *Mindon* and his Chief Queen assumed the promoters of *Shin Zāgara* into holy monkhood. In 1867, Magway *Mingyi* (Minister) and the donors offered Magway *Myoma Nyaungpin Kyaung* (*Seinpanpin Taik*) to *Sayadaw Ashin Zāgara*. *Ashin Zāgara* was capable of writing many treatises relating to Theravada Buddhism. *Sayadawgyi*'s "*Pali Visaudhanî*" is a treatise offered to State Sixth Buddhist Synod in 1954. *Sayadawgyi* passed away on 8 December 1916.[2]

Work of Inscribing Inscriptions

For inscribing the *Tipiṭaka* Texts in line with the Fifth Buddhist Synods, *Sayadaw Ashin Zāgara* ordered many slabs of alabaster from Mandalay and took the experts who were skillful in sculpting and inscribing stones. Before inscribing the letters on slabs, *Sayadaw* forced the work of editing and clarifying *Tipiṭaka* Texts in accordance with alphabets of *Magadha* and *Sanskrit* Grammars, and the work of checking the Texts with Pali *Aṭhakathā* (Explanatory Treatise) and *Dîghā* (Elaborate Treatise).

In inscribing Texts on slabs, firstly, drafts are written by lead-pencil and in ink. The drafts are repeatedly examined and revised by *Sayadaw U Pannya Sîla* (*Seinpanpin Taik*), *Sayadaw U Panña Vamsa* (*Sasana Dagon*), *Sayadaw U Kalyāṇa* (*Mahā Visutārāma Kyauksa-ron Taik*), *Sayadaw U Aubhāsa* (*Twingone* Hill Monastery) and *Sayadaw U Sondara* (*Salin Seinpannpin*

[1] Ludu Daw Ah Mar, *Kaba Ah-gyi-zone Sar-ok* (*The World's Biggest Book*), Mandalay, Ludu Press, 1990, Fourth Edition, p.34 (Hereafter cited as Ludu Daw Ah Mar, 1990.)

[2] Committee, *Seinpanpin Sayadawphayagyi Htayyutpatti Sardan* (*A Paper on Biography of Abbot Seinpanpin Sayadawphayagyi*), 1931, Yenanchaung, Baho Mandaing Press, p.6-10 (Hereafter cited as Committee, 1931.)

Taik). After making the drafts to be correct, *Sayadaw U Zāgara* allows to inscribe the draft Texts (in Pali) on slabs of alabaster.[1]

Men of Inscribing Inscriptions

Sayadaw U Zāgara attempted at selecting experts in this work. The experts who constructed Repository Complex, pagodas, religious monuments and spiritual houses were *U Kaing* and associates (carpentry), *U Ba Aye*, *U Shwe Hla* and associates (blacksmith), *U Than*, *U Thar Htoo* and associates (masonry and stucco work), *U Maung Ka Lay* and associates (stone sculpture), and *U Chin Bon*, *U Maung Gyi* and associates (stone inscription). They cooperated with the native experts for this work.

Duration and Cost

From the time of starting to finishing point, those works lasted for seventeen years (? 1908-1925). The time of durability is 115 years from 1908 to 2023. *Twin-za-gyi U Thar Kan*, *Paramîphak Daw Khin Thin*, their son *U Thant Sin* and his wife *Daw Ma Ma Gyi*, and the family donated such *Zedîs* at a cost of five *tinns*[2] of silver coin.[3]

Religious Buildings and Statues

In the vicinity of Repository Complex, pagodas, Buddha images, gatehouses, rest houses and spirit-houses were also built as the supplementary buildings. It can be clearly seen that worship of Theravada Buddhism flourished in Yenanchaung together with belief in traditional *Nats* (*Devas* - Guards and Spirits).

Position of the Repository Complex

As the Repository Complex of *Tipiṭaka* Inscriptions, there are five repositories in order of ground level, higher level and highest level. The ground level is planned with two repositories of *Suctan Piṭakat* in the positions of left and right. The right repository[4] (east side) has sixty-four slabs of *Piṭakat* inscriptions, measuring sixty-five feet in length, thirty-five feet in width and twenty-five feet in height. The left repository[5] (west side) has sixty slabs of *Piṭakat* inscriptions, measuring sixty-five feet in length, thirty-five feet in width and twenty-five in height. The higher level is planned with two repositories of *Abhidhammā Piṭakat* in the positions of left and right. The right repository[6] (east side) has 112 slabs of *Piṭakat* Inscriptions, measuring sixty-five feet in length, sixty feet in width and twenty-five feet in height. The left repository[7] (west side) has 101 slabs, measuring sixty-five feet in length, sixty feet in width and twenty-five in height. In the

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[1] Sein Hlyan, *Pitakatdaw ah-sone Kyauk-sa-yon Dhamma Zedi-myar Thamaing* (*History of Repository Complex of Pitakats called Dhamma Zedis*), Hand-written Manuscript, Yenanchaung, U Sein Hlyan's Collection, 2000, p.7-8 (Hereafter cited as Sein Hlyan, 2000.)

[2] (a) Five *tinns* of silver coin can be converted into 4,000 *kyatthas*. At the time of 1875, 25 *kyats* of silver coin are equivalent to one *kyat* of gold coin. Therefore, Five *tinns* of silver coin (4,000 *kyatthas*) are equivalent to 160 *kyatthas* of gold coin. According to the present value of gold, it can be estimated that the cost of the Repository is ? 480,000,000 *kyats*.

[3] Sein Hlyan, 2000, 9-10

[4] Appendix - 1 A

[5] Appendix - 1 B

[6] Appendix - 2 A, 2 B

[7] Appendix - 2 C

highest level, it is placed a repository of *Vinaya Piṭakat*[1] that has 114 slabs, measuring seventy-five feet in length, sixty feet in width and twenty-five feet in height. For the repository of *Vinaya Piṭakat*, total height from its basement to its small shrine is thirty-five feet.

In measuring the slabs of *Piṭakat* Inscriptions[2], the highest slab is five feet and seven inches in height, four feet in width for the upper part of it, and three feet and two inches for the lower part of it. The slab has about 100 lines of inscriptions in each side. The lowest slab is four feet and eight inches in height, three feet and seven inches in width for the upper part of it, and three feet for the lower part of it. The slab has about eighty lines of letters[3] in each side. As the total number of slabs, there are 451 slabs: 124 slabs in the repositories of *Suctam Piṭakat*; 203 slabs in the repositories of *Abhidhammā Piṭakat* and 114 slabs in the repository of *Vinaya Piṭakat*.[4]

Inscriptions by U Thar Kan and Daw Khin Thin

An ordinary family named *Twin-za-gyi U Thar Kan* and his *Paramîphak Daw Khin Thin* followed the order of donating *Tipiṭaka* Inscriptions from *Seinpanpin Sayadaw U Zāgara*, and donated a Repository Complex of *Tipiṭaka* Inscriptions in Yenanchaung. The total number of slabs is 451. According to discovery of inscribing inscriptions, it is regarded that the period of inscribing inscriptions is about thirteen years[5]. Although the great work is carried out by the ordinary donor (common family), it is accomplished due to the guidance of a well-educated *Sayadawgyi* and the supervision of the learned *Sayadaws* in editing *Piṭakats*. The family built and donated pagodas, Buddha images, gatehouses and spirit-altars. It must be esteemed that the family endeavoured to preserve Theravada Buddhism by building *Dhamma Zedî* with the investment of their own properties.

Estimating Times on Yenanchaung Repository

Yenanchaung Repository of *Tipiṭaka* Inscriptions by *Twin-za-gyi U Thar Kan* and *Daw Khin Thin* started its foundation of building on 28 September 1914. The construction was started in February 1915.[6] There is also a version that the construction of Repository had been begun since 1908.[7]

According to the description contained in first slab of *Bhikkhunî Pātimouk* Pali stone inscription (in repository of *Vinaya Piṭakat*), it is noticed that work of inscribing letters was finished on 7 December 1912. Based on this fact, it can be concluded that if the work of inscribing slabs is after finishing the work of constructing Repository, the time of starting construction is impossible in 1914 and the time of constructing Repository should be earlier than the time of inscribing slabs. Thus, it is possible that the time of constructing Repository was between 1908 and 1912.

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[1] Appendix - 3, Figure - 3
[2] See Figure - 4.
[3] See Figure - 4.
[4] Sein Hlyan, 2001, *Kyauk-sa-yon hnit Kyauk-sa-chat-myar-ti-nay-ya-pya-pon* (*Drawing of Location of Repository Complex and Slabs of Inscriptions*), Hand-written Manuscript, Yenanchaung, U Sein Hlyan's Collection, 2001, p.7-9 (Hereafter cited as Sein Hlyan, 2001.)
[5] 1912-1925 (Year of the earliest inscribed slab – Year of the latest inscribed slab)
[6] Team of Recording History, 1969, *Yenanchaung Myo-nel phyit-sin hmat-tam* (*Record on Historical Events of Yenanchaung*) Yenanchaung, Kawi Mahein Press, 1969, p.25 (Hereafter cited as Team, 1969.)
[7] Sein Hlyan, 2000, 8

Moreover, there is also a description that construction of the building was finished in 1920. According to the description contained in *Dasanguttara Pāli* stone inscription (in the right repository of *Suctam*), it is noticed that work of inscribing letters was finished on 1925. Based on this fact, it can be concluded that if the work of constructing Repository is after finishing the work of inscribing slabs, the time of finishing the work of constructing Repository must be later than 1925. Generally, if it is from 1908 (start) to 1925 (finish), it may be assumed that the duration of those works is about seventeen years.

There is also another perception in this case. It is probable that the scribes inscribe letters on slabs while constructing these buildings; and that the experts construct these buildings while inscribing letters on slabs. It is concluded that by adjusting between the amount of letters in each slab, the width of space taken to each slab, and the width of the whole area for constructing the Complex, the two works[1] are carried out at the same time.

Interpretations relating to the Practice

In Theravada Buddhism, all of the good Buddhists must do in preserving three practices: *Dāna*; *Sîla* and *Bhāvanā* [2]. Most of the people do the first one, *Dāna*, at any time and at any circumstances for being simple in doing this. Regarding the materials of *Dāna*, there are three kinds of materials of *Dāna*[3] in Buddhism. After completing their religious donations and contributions, donors usually left some landmark by inscribing letters of accounts that they want to record and want their generations to know.

Now, only paper materials about the Repository Complex can be examined for its event, combining with visual documents of the buildings. According to the List of Slabs of *Tipiṭaka* Inscriptions throughout Myanmar[4], it is noticeable that Yenanchaung Repository was built in 1912 and it has been the third earliest Repository.

Conclusion

Dhamma Zedîs (Repository Complex of *Tipiṭaka* Inscriptions in Yenanchaung is not concerned with an individual or an organization holding political power and authority. An ordinary family who has personal wealth donated it with the intention of flourishing the long-lasting Theravada Buddhism in Myanmar. According to guidance and supervision of the learned *Sayadaws*, the genuine and complete *Tipiṭaka* Texts could be inscribed on the stones in accordance with the original teachings of Buddha. The letters on the Inscriptions are so neat and pleasant due to the excellent skills and the good will of the experts.

Significantly, the construction of *Dhamma Zedîs* was carried out during the period of British occupation (1886-1942). It can be regarded that the construction of *Dhamma Zedîs* could defend such threat; and that the work was leading to the cause for preserving "Myanmar Race, Culture, Language and Belief". It is concluded that the construction of Repository Complex of *Tipiṭaka* Inscriptions was capable of exposing a religious unity of the Myanmar and a cohesive

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[1] "Work of constructing the buildings" and "Work of inscribing letters on stone slabs"

[2] Charity, Moral Conduct, Concentration by Meditation
(Two processes: *Samatha* - concentration, calmness and tranquility; and *Vipacsanā* - realization of impermanence, suffering and no soul, no-self, non-ego)

[3] *Dāna-dāsa* (material of charity that is more inferior than material of own use)
Dāna-sahāya (material of charity that is similar to material of own use)
Dāna-sāmi (material of charity that is more superior than material of own use)

[4] Appendix - 4

protection of the Myanmar *Vamsānu Rakkhita* Ethic (the Ethic on mindset of defense, maintenance and love for the Original Race) during the colonial period (1886-1947). It has to be admirable that the donors' fervour forced themselves to contribute properties to Theravada Buddhism; and that their *Dhamma Zedîs* have the significant structures at those times. Repository of *Tipiṭaka* Inscriptions has been a sacred and notable monument in Yenanchaung. It can be concluded that the Repository represented as a noble image of the *Twin-yoe Twin-za* community.

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Interviewees and Dates

Rev. Baddanta Sobhana, *Abhidhaja Mahã Ratha Guru, Agga Mahã Pandita, Mahã Nãyaka-Sayadaw* of Shwetaung Taik Pali University, Yenanchaung (2 September 2023, Saturday)

Rev. Baddanta Revata, *Agga Mahã Ganda Vacaka, Dhammacariya*, Lecturer on *Dhamma*, Shwetaung Taik Pali University, Yenanchaung (9 September 2023, Saturday)

Field Work

Field Work (First Time) - 10 September 2023, Sunday)

Field Work (Second Time) - 25 November 2023, Saturday)

Appendix I

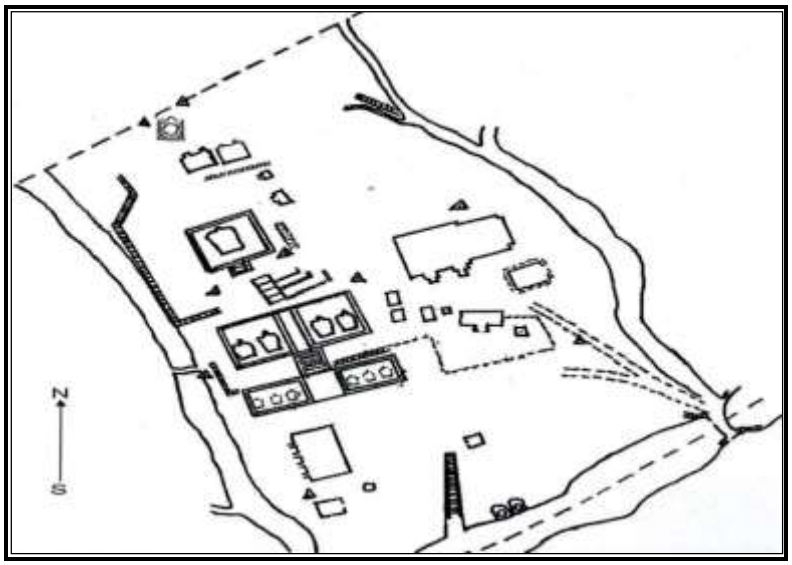

Figure - 1, Repository Complex (Yenanchaung)

w Repository of *Vinaya Piṭakat* {the Highest Level)

ww Repository of *Abhidhammã Piṭakat* {the Higher Level}

www Repository of *Suctan Piṭakat* {the Ground Level}

Figure - 2, Repository Complex (Yenanchaung)

Figure - 3, Repository of *Vinaya Piṭakat*

Figure - 4, Stone Slabs in Repository

Appendix - 1 A

Suctan Piṭakat Pali (the Right Repository) {the Ground Level}

	7	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**H1**	**2**
	2	**3**	**4**	**5**	**G1**	**2**	**3**	**4**	**5**	**6**
6	**E1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**F1**
3	**4**	**5**	**6**	**7**	**8**	**D1**	**2**	**3**	**4**	**5**
6	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**C1**	**2**
A1	**2**	**3**	**4**	**5**	**6**	**B1**	**2**	**3**	**4**	**5**

A. *Catukaṅguttara* *Pali* 1 ---- 6

B. *Paṇcakaṅguttara* *Pali* 1 ---- 14

C. *Chatṭhakaṅguttara* *Pali* 1 ---- 8

D. *Sattakaṅguttara* *Pali* 1 ---- 6

E. *Atthakaṅguttara* *Pali* 1 ---- 9

F. *Navakaṅguttara* *Pali* 1 ---- 5

G. *Dasakaṅguttara* *Pali* 1 ---- 14

H. *Aekādasakaṅguttara* *Pali* 1 ---- 2

Length - 65 feet × Width - 35 feet **64 Slabs**

Appendix - 1 B

Suctan Piṭakat Pali (the Left Repository) {the Ground Level}

7	**6**	**5**	**4**	**3**	**2**	**G1**	**11**	**10**	**9**
8	**7**	**6**	**5**	**4**	**3**	**2**	**F1**	**2**	**E1**
2	**D1**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**
4	**3**	**2**	**C1**	**14**	**13**	**12**	**11**	**10**	**9**
8	**7**	**6**	**5**	**4**	**3**	**2**	**B1**	**12**	**11**
10	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**A1**

A. *Sucsîlakkhan* *Pali* 1 ---- 12

B. *Sucmahāwā* *Pali* 1 ---- 14

C. *Sucpātheya* *Pali* 1 ---- 12

D. *Aekaṅguttara* *Pali* 1 ---- 2

E. *Dukaṅguttara* *Pali* 1 ---- 2

F. *Tikaṅguttara* *Pali* 1 ---- 11

G. *Catukaṅguttara* *Pali* 1 ---- 7

Length - 65 feet × Width - 35 feet **60 Slabs**

Appendix - 2 A + B

Abhidhammã Piṭakat Pali (the Right Repository) {the Higher Level}

K1	L1	M1	N1	2	O1	P1	Q1	R1	S1	T1	U1
9	E1	2	3	4	5	6	F1	G1	H1	I1	J1
	25	26	27	D1	2	3	4	5	6	7	8
	14	15	16	17	18	19	20	21	22	23	24
	3	4	5	6	7	8	9	10	11	12	13
	31	32	33	34	35	36	37	38	39	C1	2
	20	21	22	23	24	25	26	27	28	29	30
	9	10	11	12	13	14	15	16	17	18	19
	12	13	14	B1	2	3	4	5	6	7	8
	A1	2	3	4	5	6	7	8	9	10	11

A.	*Aimdiya Yamiuk*	*Pali*	1 ---- 14
B.	*Tika Pahtan:*	*Pali*	1 ---- 39
C.	*Duka Pahtan:*	*Pali*	1 ---- 27
D.	*Duka Tika Pahtan:*	*Pali*	1 ---- 9
E.	*Tika Duka Pahtan:*	*Pali*	1 ---- 6
F.	*Tika Tika Pahtan:*	*Pali*	1
G.	*Duka Duka Pahtan:*	*Pali*	1
H.	*Paṇcanniya Duka Pahtan:*	*Pali*	1
I.	*Paṇcanniya Tika Duka Pahtan:*	*Pali*	1
J.	*Paṇcanniya Tika Tika Pahtan:*	*Pali*	1
K.	*Paṇcanniya Duka Duka Pahtan:*	*Pali*	1

Abhidhammã Piṭakat Pali (the Right Repository) {the Higher Level}

K1	L1	M1	N1	2	O1	P1	Q1	R1	S1	T1	U1
9	E1	2	3	4	5	6	F1	G1	H1	I1	J1
	25	26	27	D1	2	3	4	5	6	7	8
	14	15	16	17	18	19	20	21	22	23	24
	3	4	5	6	7	8	9	10	11	12	13
	31	32	33	34	35	36	37	38	39	C1	2
	20	21	22	23	24	25	26	27	28	29	30
	9	10	11	12	13	14	15	16	17	18	19
	12	13	14	B1	2	3	4	5	6	7	8
	A1	2	3	4	5	6	7	8	9	10	11

L.	*Anulomapaṇcaniyatika Pahtan:*	*Pali*	1
M.	*Anulomapaṇcaniyadukatika Pahtan:*	*Pali*	1
N.	*Anulomapaṇcaniyatikaduka Pahtan:*	*Pali*	1 ---- 2
O.	*Anulomapaṇcaniyatikatika Pahtan:*	*Pali*	1
P.	*Anulaomapaṇcaniyadukaduka Pahtan:*	*Pali*	1
Q.	*Paṇcaniyānulomatika Pahtan:*	*Pali*	1
R.	*Paccaniyānulomadukatika Pahtan:*	*Pali*	1
S.	*Paṇcanniyānulomatikaduka Pahtan:*	*Pali*	1
T.	*Paṇcanniyānulomatikatika Pahtan:*	*Pali*	1
U.	*Paṇcaniyānulomadukaduka Pahtan:*	*Pali*	1

Length-65 feet × Width - 60 feet **112 Slabs**

Appendix - 2 C
Abhidhammã Piṭakat Pali (the Left Repository) {the Higher Level}

4	**3**	**2**	**M1**	**L1**	**13**	**12**	**11**	**10**	**9**	**8**
7	**6**	**5**	**4**	**3**	**2**	**K1**	**3**	**2**	**J1**	
3	**2**	**I1**	**7**	**6**	**5**	**4**	**3**	**2**	**H1**	
2	**G1**	**F1**	**22**	**21**	**20**	**19**	**18**	**17**	**16**	
15	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	
5	**4**	**3**	**2**	**E1**	**4**	**3**	**2**	**D1**	**5**	
4	**3**	**2**	**C1**	**23**	**22**	**21**	**20**	**19**	**18**	
17	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	
7	**6**	**5**	**4**	**3**	**2**	**B1**	**13**	**12**	**11**	
10	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**A1**	

A.	*Dhammasaṅghanî*	*Pali*	1 ---- 13
B.	*Wiban:*	*Pali*	1 ---- 23
C.	*Dhātukathā*	*Pali*	1 ---- 5
D.	*Pucgalapañat*	*Pali*	1 ---- 4
E.	*Kathāwucthu*	*Pali*	1 ---- 22
F.	*Mūlayamiuk*	*Pali*	1
G.	*Khaõtayamiuk*	*Pali*	1 ---- 2
H.	*Âyatanayamiuk*	*Pali*	1 ---- 7
I.	*Saccãyamiuk*	*Pali*	1 ---- 3
J.	*Saṅkhārayamiuk*	*Pali*	1 ---- 3
K.	*Anucsayayamiuk*	*Pali*	1 ---- 13
L.	*Cittayamiuk*	*Pali*	1
M.	*Dhammayamiuk*	*Pali*	1 ---- 4

Length-65 feet × Width - 60 feet **101 Slabs**

Appendix - 3
Vinaya Piṭakat Pali {the Highest Level}

18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**
6	**5**	**4**	**3**	**2**	**H1**	**26**	**25**	**24**	**23**	**22**	**21**
20	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**	**9**
8	**7**	**6**	**5**	**4**	**3**	**2**	**G1**	**27**	**26**	**25**	**24**
23	**22**	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**
11	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**F1**	**9**
8	**7**	**6**	**5**	**4**	**3**	**2**	**E1**	**13**	**12**	**11**	**10**
9	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**D1**	**19**	**18**	**17**
16	**15**	**14**	**13**	**12**	**11**	**10**	**9**	**8**	**7**	**6**	**5**
			4	**3**	**2**	**C1**	**B1**	**A1**			

A.	*Bhikkhupātimok*	*Pali*	1
B.	*Bhikkhunipātimok*	*Pali*	1
C.	*Pārājikam*	*Pali*	1 ---- 19
D.	*Bhikkhupācit*	*Pali*	1 ---- 13
E.	*Bhikkhunipācit*	*Pali*	1 ---- 9
F.	*Mahāwā*	*Pali*	1 ---- 27
G.	*Cūlawā*	*Pali*	1 ---- 26
H.	*Pariwā*	*Pali*	1 ---- 18

Length-75 feet × Width - 60 feet **114 Slabs**

Appendix - 4

List of Slabs of Tipiṭaka Inscriptions in Myanmar

No	Place Stored Inscriptions	Year	*Pãli*			*Aṭhakathã*			*Dîgã*			Total
			S	V	A	S	V	A	S	V	A	
1	Kuthodaw Pagoda (Mandalay)	**1860**	410	111	208							729
2	Kyaikkasan Pagoda (Yangon)	**1897**		95								95
3	Kyauksarom (Yenanchaung)	**1912**	124	114	213							451
4	Sandarmuni Pagoda (Mandalay)	**1913**				1,148	225	136	59	170	34	1,772
5	Htithonesint Pagoda (Meikhtila)	**1915**				377	114	106				597
6	Pyilonechantha Pagoda (Danubyu)	**1917**	41	128	230							399
7	Shwesaran Pagoda (Thaton)	**1921**	407	123	55							585
8	Lokamaraung Pagoda (Aphyauk)	**1924**	403	112	205							720
9	Shwebontha Pagoda (Minkin)	**1925**		171								171
10	Min Village, Kangyikone Monastery (Thonekhwa)	**1925**		154								154
11	Nyaungyan Village, Shwemuthtaw Pagoda (Thazi)	**1927**	192	141	183							516
12	Koetaungpyit Pagoda (Thetaw)	**1933**	186	116	208							510
13	Phayasu Village, Ywa-U Monastery (Wantwin)	**1939**		110								110
14	Kanbe, Pyinsanikaya Monastery (Yangon)	**1977**	68	235	702							1,005
15	Maha Buddhawin 720 Momeik Hill, Mingun Range	**1980**	990	90								1,080
16	Shwethalyaung Pagoda (Bago)	**Unk.**			58							58
Total			2821	1700	2062	1525	339	242	59	170	34	**8,952**

S = *Suctan*
V = *Vinaya*
A = *Abhidhammã*
Unk. = Unknown

THE TRADITIONAL MEDICINES OF MYANMAR: PAST, PRESENT AND FUTURE

San Yu Kyi[1] and Thin Thin Aye[2]

Abstract

This paper attempts to study the historical background of traditional medicines in Myanmar. Myanmar traditional medicine is a heritage with historical past. There are four types of Myanmar traditional medical science. Myanmar traditional physicians have used *Abhidhama* and *Ayurveda* medical treatment methods to cure their patients. So, Myanmar traditional medicine is based on *Abhidhama* and *Ayurvedic* concepts. During the Konbaung period (1752-1885), many foreign medical treatises could be translated into Myanmar and some traditional physicians could have invented a sort of medical science based on the concepts of the *Abhidhama* and *Ayurvedic*. At that time, although Myanmar traditional physicians were not oriented by academically qualified *Ayurvedic* physicians, their traditional practice of medicine passed from one generation to another. In 1976, Myanmar Institute of traditional Medicine was opened in Mandalay to be able to produce well- qualified graduated traditional physicians. Now, with the government's encouragement for development of Myanmar traditional medicine, Myanmar traditional medicine is wide and deep. In this paper, in order to give a reasonably clear picture of the progress of traditional medical science in Myanmar, I would like to present my paper under the following four main points: (1) historical evolution of the Myanmar traditional medicine, (II) human resource development of traditional medicine, (III) National laws and policies and, (IV) future prospects of traditional Myanmar medicines.

Keywords: *Ayurveda*, *Abhidhama*, traditional physician, traditional medicines

Introduction

World Health Organization (WHO) defines traditional medicine as including diverse health practices, approaches, knowledge and beliefs, incorporating plant, animal, and / or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain wellbeing as well as to teat, diagnose or prevent illnesses.[3] According to the Traditional Medicine Drug Law of 1996 in Myanmar, traditional medicine is defined as medicine for the physical well-being and longevity of people in accordance with anyone of the four nayas (subjects) of traditional medicine, namely *Desana naya, Bethitsa naya, Netkhata veda naya,* and *Vissadara naya.*[4] *Desana naya* is based on natural occurrences enshrined in Buddhist Philosophy. *Bethitsa naya* is based on Ayurveda concepts with extensive use of herbal and mineral compounds to establish balance among three dosas namely Kapha, Vata, and Pitta. *Netkhataveda naya* is based on the calculations of zodiac of stars, planets and the time of birth and age. These calculations are linked to prescribed dietary practices. The *Vissadara naya* largely depends on meditation and practices of alchemy. The skill, know-how and techniques of the drug preparations are such that they are derived from heavy metals such as lead, mercury and poisonous substances such as arsenic and its compounds after they are converted into inert ones by means of series of chemical processes in order to obtain supernatural power.

Myanmar Traditional practitioners have used a combination of four methods of medical practices known as medicine science. Two of them, *Bethitsa naya* (*Ayurveda) and Vissadara*

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[3] WHO Traditional Medicine Strategy 2002–2005, World Health Organization Geneva, World Health Organization 2002, p-7

[4] The State Law and Order Restoration Council, The Traditional Drug Law (The State Law and Order Restoration Council Law No. 7/96) (25th July, 1996), Section 1(b)

*naya (*Archery and Spirit Power*)* have been since about 8th century[1]. Astrology (*Netkhataveda naya*) is also very old. By contract, *Desana naya,* (*Abhidhama)* was invented in 18th century and is the system that is still widely at present time. Myanmar traditional medicine is a heritage with high historical value. It has played an indispensable role since the time of Bagan Period. According to the traditional beliefs in Myanmar, there are 96 diseases which afflict humans. Myanmar people believed to be able to cure all of these diseases by using Myanmar traditional medicines. Today, there has been a great change in lifestyles and cooking methods in the world, many new diseases come out. But most of the Myanmar people more still rely on the traditional medicines which is cheap than western medicines. Myanmar Traditional practitioners invented a sort of medical science based on the concepts of the *Abhidhama* and *Ayurveda*. They complied various medical treaties. It had been handed down through generations. Now, on a mass scale, traditional medicines are manufactured by both the public and private sectors. Based on this understanding and using data obtained in Myanmar, this paper describes the History of Myanmar Traditional Medicine, based on sources available in English from the Internet, as well as scientific papers in English and Myanmar language newspapers reporting the recent changes. The main sources are the official website of Department of Traditional Medicine, Myanmar (http://www.dtm.gov.mm). This article covers Myanmar Traditional Medicine: Past, Present and Future.

Historical Evolution of the Myanmar Traditional Medicine

There are scholarly treatises on traditional medicine and on Ayurveda medicine from which it is mainly derived, but there was no formal system of traditional medicine teaching; knowledge and skills were handed on by teacher to pupil, person-to person, by apprenticeship. According to the *Hman Nan Yazawin*, traditional medicine from India had been practiced successfully. It was recorded that during the *Bagan* Dynasty under the reign of King *Narapatisithu(*1174-1211), the names of some books on traditional medicine were firmly mentioned on *Tet Nwe Kyaung* (တက်နွယ်ကျောင်း) stone inscription.

During the monarchical days, Myanmar traditional physician was called *Themardaw* သမားတော်.[2] The persons who are competent in medical science and earn their living through it are called *Themar* သမား. The physicians who treated the kings, the members of their families and servants were termed as *Themartaw* (သမားတော်) by suffixing the term *Themartaw* (သမားတော်) with *taw* (တော်). The *Themar* (သမား)who were fully equipped with virtues of good physician and comprehensive knowledge of Myanmar traditional medical science were appointed royal physicians. To formalize appointment, their qualities were examined and recommended. It was not an easy task to be recognized by the government of ancient times as a physician. To be able to become a royal physician, he must not only be endowed with the following qualities but also undergo a very severe and difficult examination. He must be a descendant of the lineage of physicians. He could manifestly display his theoretical and practical medical knowledge in the presence of a patient. He must be able to pass the examination conducted by a board of royal physicians[3].

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[1] U Win Ko, *A Drop of Rain in Asia; A Brief Introduction to Traditional Burmese Medicine*, Lulu.com, 2013,p-8 ISBN-978-1-291-50026-4 (Hereafter cited as Win Ko, Brief Introduction)

[2] U Ba Than, *သမားဂုဏ်ရည်ကျမ်း (Treatise on Qualities of Physicians),* Yangon, Pitaka Press, 1972, p. 44 (Hereafter cited as Ba Than, Qualities of Physicians)

[3] Venerable Nagasin, *အကြောပြင်သွေးစမ်းကျမ်း (Treatise on Adjusting Veins and Checking Pulses),* Yangon, Mingalardon Press, 1971, pp. 36-37

Only the physicians who had passed this very difficult examination were entitled to suffix their names with *taw* (တော်) and dress themselves in the apparels according to their ranks and positions to distinguish themselves from other commoners. They were permitted to dress themselves in a grander way than ordinary physicians. They had to wear rolled headbands and to do their hair knots obviously. They also had to wear white long-sleeved (*engyis)* and nether garments (*longyis*) with protruding flap. They were also granted free access to the presence of the King. Therefore, the royal physicians could be recognized easily just at a single glance due to the distinctive ways of their dressing. With regard to way of dressing, they were offered privileges. In 1857, during the reign of King Mindon (1853-1878), they were provided with salary as honorarium. They received salary of 53 kyats per month.[1]

Taung Pheelar Sayadaw, *Shwe U Min Sayadaw*, *Sayadaw Khingyipyaw*, *Maungtaung Sayadaw*, Minister *Satuyingabala*, Minister *Mahadhama Raza Thingyan*, had written books on Myanmar traditional medicine. During the King Mindon (1853-1878) Minister *U Pho Hlaing* compiled and wrote *Kaya Noppathana Kyan* (*ကာယနုပသညာကျမ်း*) and *Utu Bawzana Thingaha Kyan* (*ဥတုဘောဇနသင်္ဂဟကျမ်း*) which were the significant textbooks of Myanmar Traditional Medicine. Many treaties of Ayuveda medical science could be translated to Myanmar.

Figure 1. Minister *U Pho Hlaing and Utu Bawzana Thingaha Kyan* (ဥတုဘောဇနသင်္ဂဟကျမ်း)

In the Late Konbaung period (1819-1885), Myanmar traditional medical physician *Saya Hment* invented six diagnostic systems called *Taungthar Chauk-lone-kauk* (တောင်သာခြောက်လုံးကောင်းဆေးပညာ) Medicine Science on the basis of the concepts of the *Ahidhamma*. It was called *Ahidhamma* medical science. He described a sort of medical science, with the perspective that all disease fall within the contexts of six kinds of disease, three kinds caused by extreme heat and three kinds by extreme cold, based on five major elements such as earth (ပထဝီ), heat (တေဇော), water (အာပေါ), air (ဝါယော) and space (အာကာသ).[2] In the *Abhidhamma Taungthar Chauk-lone-kauk* medical science , cold-inducing disease are cured with sour, hot and bitter tasted medicine and diet while heat inducing diseases with sweet, creamery and cool-tasted medicine and diet.

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[1] U Tin, *မြန်မာမင်းအုပ်ချုပ်ပုံစာတမ်းနှင့်ဘိုးတော်ဘုရား၏ရာဇသတ်ခေါ်သောအမိန့်တော်ထမ်းကြီး (Treatises on Administration of Myanmar)*, Vol. III, Yangon, Yangon Central Press, 1970, p. 81

[2] Taungthar Gun-Yee Thukhami Saya Kyi, *ကိုလိုနီခေတ်မြန်မာဆေးဝါးဥပဒေများနှင့် အမျိုးသားဆေးပညာလှုပ်ရှားမှုမှတ်တိုင်များ* (*Myanmar Drug Laws in the Colonial Period and Mile-stones of National Movements on Medical Science*), Yangon, Hlaing Yadana Press, 1995, pp. 293-94 (Hereafter cited as Saya Kyi, Myanmar Drug Laws in the Colonial Period)

Abhidhamma Taungthar Chauk-lone-kauk medical science was included five times in the eleven texts prescribed for the traditional examinations held by the Revolutionary Government (1962-1974). It's branched out into different types, namely, တောင်သာဆေးပညာ (*Taungthar Chauk-lone-kauk* medical science), သဘာဝဓမ္မဆေးပညာ (*Thabawa Dhama* medical science), ပရမတ္တအလင်းပြဆေးပညာ (*Paramatta* medical science). They continue to thrive up to the present. *Saya Hment* died in 1877, having passed on his knowledge of *Taungthar* system to his follower: *U Hmont, U Phan Tha , U Poe Min, U Ka, U Chan Tha , U R Sara* (a monk) and others.

Figure .2

Figure 3. *Saya Hment*
(*Taungthar Chauk-lone-kauk* တောင်သာခြောက်လုံးကောက်ဆေးကျမ်း)

In the colonial period (1885-1947), although western medicine was introduced into the Myanmar, Myanmar traditional practitioners maintained their practices and continuing the flourishes of the traditional medicine. The well-known traditional medical physicians were *Taung Khwin Sayadaw* (who complied *Authada Sanghaha-* သုသဓေဂ်ဟ),*Saya Hmet* (who complied Explanation of *Thaungtha* System- တောင်သာဆေးနည်းအကျယ်) , *Thonese U Panthar* (who compiled *Dhadu Winisaya Rupakana-* ဓါတုဝိနယစ္ဆယရူပကဏ္ဍ),[1] *U Chantha* (who complied Truths signs of *Taungtha* System- တောင်သာအဖြေကျမ်း), *U Poe Min(* who complied *Abhidhamma Dat Kyan* - အဘိဓမ္မာဓါတ်ကျမ်း) , *Galon Saya San* (who complied *Laukhanuzu-* လက္ခဏုဒ္ဒေကျမ်း) , *Ledai Sayadaw* (who complied *Rugandaradipani-* ရောဂန္တရဒီပနီကျမ်း), monk *U Eindriya* (who complied *Thabawadhama Dhadyraza-* သဘာဝဓမ္မဓါတုရာဇော) .

Figure 4.
(Laukhanuzu- လက္ခဏုဒ္ဒေကျမ်း)

Figure 5.
(*DhaduWinisayaRupakana-* ဓါတုဝိနယစ္ဆယရူပကဏ္ဍ)

[1] It was included three times in the texts of *Abhidhamma* (*Desannaya*) subject for the physician-qualifying examination.

The British developed their interest in traditional medicine, especially herbal therapeutics, as practiced by local physicians of Myanmar. Myanmar traditional medical physicians are commonly referred to as "*Bamar Saysaya"* (ဗမာဆေးဆရာ- Bamar Doctor), or, more officially, *Taiyin Saysaya* (တိုင်းရင်းဆေးဆရာ- traditional physician). A *Bamar Saysaya*" (ဗမာဆေးဆရာ) treats using traditional medicines. A *Taiyin Saysaya* is also someone who generally treats people only with traditional medicines. In 1930, the British organized a committee of inquiry into traditional medical system. According to the committee report, it recommended that *Abidhamma (Thaungtha* system), *Ayuveda*, Astrology and Alchemy should be taught in the traditional medical training schools. But this could not be done because the Second World War come into Myanmar. During the Second World War, the people had to rely more on the Myanmar traditional medicine due to the western medicines were scarce.[1] Mi Mi Khaing (1996) describes how her parents attended her during times of sickness using only herbal remedies as no Western medicines were kept at home[2]. The healing powers of religion are also evident in Mi Mi Khaing's description of her words of encouragement to her children: "Drink it as the medicine of the Three Gems, '(ဘုရားဆေး၊ တရားဆေး၊ သင်္ဃာဆေး) *Paya-say, taya-say, thanga-say.'* [3] ("Physic of the Buddha, of the Law, of the Clergy")

During the Japanese occupation, *Thabawa Dhama* (သဘာဝဓမ) Central Medical Federation was formed with Myanmar national leaders and many scholars. *Paramatta* Treatment (ပရမတ္ထအလင်းပြဆေးပညာ) was introduced to Myanmar traditional medicine. A Buddhist monk named *Thabawa Dhama Sayardaw U Indriya* promoted *Thaung Thar Chauk Lone Kauk* treatment to *Thabawa Dhama* treatment (သဘာဝဓမ္မဆေးနည်း).[4]

In addition to *Ayuvada* and *Abhidhama* treatment methods and pragmatic treatment methods which had been employed throughout the history, the Myanmar also used efficacious homely remedies concocted from readily available materials. These Myanmar homely remedies play an important role in the treatment of Myanmar traditional medical science.[5] For example, tamarind[6] (*မန်ကျည်းသီး*) is also very useful in compounding Myanmar traditional medicine. Tamarind is a wholesome and cleansing fruit that improves digestion, relieves gas, soothes sore throats, and acts as a mild laxative. In Ayurvedic medicine, it is given to improve the appetite and to strengthen the stomach. It is also use to relieve constipation.

Thanaka[7] (*သနပ်ခါး*) has a long traditional medicine in Myanmar . It is very useful for Myanmar people especially women. *Thanaka* (*သနပ်ခါး*) can be used for a variety of purposes. It's leaves and fruits can be used as medical herbs. Leaves are compounded in the medicine to treat epilepsy. Leprosy can be treated by taking a bath with boiled water of *Thanaka* (*သနပ်ခါး*) leaves.

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[1] Journal Kyaw Ma Ma Lay, *မြန်မာ့ဆေးပညာ (Myanmar Medical Science),* Yangon, Journal Kyaw Ma Ma Lay Press, 1967, p-132

[2] Mi Mi Khaing, *Burmese Family*, Bangkok: Ava Publishing House, 1996, p-37 (Hereafter cited as Mi Mi Khaing, Family)

-Western medicines were particularly scarce during World War II and the use of indigenous medicine increased during this time.

[3] Mi Mi Khaing, Family, p-38

[4] Committee of Designing Curriculum, History of Myanmar Indigenous Medical Science, p. 124

[5] Ashin Ngathein, *ပုံပြဆေးအဘိဓါန် (Pictorial Medical Dictionary*), Vol. IV, Yangon, Kyaw Win Swe Press, 1973, pp. 156-158

[6] Family Name: Fabaceae, Botanical name: Tamarindus indica

[7] Family Name:Rutaceae, Botanical name: Limonia Acidissima L and Hesperethusa crenulata Roem

Drinking the boiled water of *Thanaka* (သနပ်ခါး) leaves, several with salt, is a good treatment to fever. *Thanaka* (သနပ်ခါး) bark is mainly used as cosmetics. The bark, root, and wood of the *Thanaka* (သနပ်ခါး) tree is ground on a small, wet circular stone called a *kyauk pyin (ကျောက်ပြင်).* The liquid paste is then applied to the person's face to provide protection from the sun. Moreover *Thanaka* (သနပ်ခါး) can be used for skin cooling and lightening. Despite the ready-made products are produced, the Myanmar women still demand the traditional *Thanaka* bark.

Figure 6. *kyauk pyin (ကျောက်ပြင်) and Thanaka* (သနပ်ခါး) bark

Four years after Myanmar's independence in 1948, the Myanmar Traditional Medical Committee was formed in 1952. The Committee drafted the Traditional Myanmar Medical Practitioners Board Act 74. It was passed in 1953.[1] When the Revolutionary Council Government was formed in 1962, aiming to develop traditional medicine systematically, the 1953 Act was amended and the organization for traditional medicine practitioners was formed on 11 March 1962.[2] It set up examination to test the qualification of Physicians in December 1962. Formally registered traditional medicine practitioners were cancelled on 19 March 1962. The government had taken measures to bring out registered traditional physicians so that they could give safe medical treatment to the patients. Eleven traditional medicine textbooks were prescribed for examinations. Only the candidates who had completed minimum age of twenty-five years with three-year medical service were admitted to sit examinations. The candidates who had completed the age of fifty years were given exemption from taking the examination.[3] Successful candidates were allowed to register. The registration of physicians was undertaken between 1955 and 1962 and resulted in 22583 physicians being legally registered.[4] But giving licenses to the physicians was not systematically carried out. There were thousands of local healers unregistered at a village level. It was widely recognized that there were a number of unlicensed illegal and so-called traditional physicians.

Free dispensaries for traditional medicine were opened in Yangon and Mandalay in 1963. The Advisory Committee of Manufacturing of Myanmar traditional medicine was formed in 1964. It gave advice to the Burma Pharmaceutical Industry (BPI) to manufacture and distribute potent and updated traditional medicine. Accordingly, fifty-seven kinds of traditional medicine were first manufactured and distributed. To prevent the traditional valid treatments from being

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[1] It was amended in 1955, 1962, and 1987.

[2] *မြန်မာ့တိုင်းရင်းဆေးပညာသမိုင်း (History of Myanmar Indigenous Medical Science),* Indigenous Medical Science, Curriculum Designing Committee, Ministry of Health, Union of Myanmar, Yangon, 1978, p. 120 (Hereafter cited as HMIMS)

[3] Ma Sein Mi, *History of Myanmar Indigenous Medicine*, PhD (Dissertation) , History Department, University of Yangon, 2013,p-112

[4] U Win Ko, *A Drop of Rain in Asia: A Brief Introduction to Traditional Burmese Medicine*, (ISBN-978-1-291 50026-4) Lu Lu .com, 2013, p-7

forgotten and to achieve the unity between Myanmar traditional medicine practitioners, the first seminar on traditional medicine was held in the Convocation Hall in Yangon University on 5-6 April 1965 and the second from 5-7 July 1972 at the Kyaikkasan ground, Yangon.[1]

Based on the seminars result, the Burma Socialist Programme Party (B.S.P.P) government encouraged promotion of the standardization medical science and unification of traditional physicians. In addition, Myanmar traditional physicians were sent on expeditions to India, Sri Lanka, China and Japan to study their traditional medical sciences.[2] The Health and Civil Service Personnel Committee adopted policies and objectives on health, one of which was "The standard of traditional medical science must be higher as it thrived." With the aim to improve the qualification of traditional medicine practitioners, the Institute of Traditional Medicine was opened in Mandalay on 31 January 1976. To support the institute and hospital, a traditional medicine production department, a library, a museum and an herbal garden were also opened.[3] The number of the traditional medical clinics came to 89 and that of the hospitals to 2 in 1979. A preliminary research hospital of traditional medicine with 16 beds was opened in *Bogyoke Aung San* Road in 1980 and transferred to the present place in *Ngar Htat Kyee* Road in August 1982.

Human Resource Development of Traditional Medicine

Before 1976, they are non- institutionally qualified practitioners, who have only a general practical knowledge which is handed down from generation to generation. They are not oriented by academically qualified Ayurvedic practitioners. They gained this knowledge either by their family traditions or by working as assistants to the traditional physicians for a period of 10 to 15 years or more. They gained a practicing experience without academic base and only with a little knowledge regarding the human anatomy, physiology and modem laboratory investigation techniques.

After the Institute of Traditional Medicine was established in 1976, systematic training programme were introduced to train and produce competent traditional medicine practitioners.[4] A three-year course including one year internship was conducted and Diploma in Traditional Medicine was conferred to successful candidates. The Institute of Traditional Medicine was renamed to the University of Traditional Medicine in 2001. The people who had already passed the matriculation examination at least were admitted to this institute. The curricula were systematically designed and drawn by a board comprising scholars from the Ministry of Health and the Ministry of Education and then they were implemented. It is a five-year course including one year internship covering all four major systems (*Nayas*) of traditional medicine, basic sciences and basic medical sciences of western medicine.[5]

At the end of their apprenticeship, they are to be conferred ‘Bachelor of Myanmar Traditional Medicine' (B.M.T.M). It is found that those who graduated from the University of Traditional Medicine Mandalay served the traditional hospitals opened by the university. University of Traditional Medicine Mandalay, the traditional medical hospital and private clinics were collectively formed into the Department of Traditional Medicine under the Ministry of Health on 3 August 1989. This Department houses more than 4000 ancient palm-leaf and parchment writings and books on traditional medicine. In addition to academic and treatment

[1] HMIMS, p-141
[2] Ibid, p. 142
[3] Health Policy Mapping Myanmar 2014, p-53
[4] Legal Status of Traditional Medicine, p-139.
[5] Health in Myanmar 2014, Ministry of Health, P-131

tasks, the University of Traditional Medicine Mandalay endeavoured to manufacture medicine systematically. Over 500 species of herbal plants were grown in the garden of the University of Traditional Medicine.

Figure 7. University of Traditional Medicine, Mandalay

Basic concepts of Myanmar Traditional medicine have been introduced to the curriculum of third year M.B.B.S medical students since 2003. A module, comprising 36 hours of teaching and learning sessions of traditional medicine was developed and assessment is done after completion of the course. A certificate was presented to all successful candidates and the main aim of the course is to familiarize medical students with Myanmar Traditional medicine. It gives opportunities for medical students to explore the concepts of traditional medicine and paves a venue for interested student to venture into the realms of Myanmar traditional medicine at a deeper level. Since 2001, it is going to produce 250 candidates yearly. This manpower production has fulfilled the requirement of traditional medicine practitioner in terms of quality as well as quantity. In 2012, the University opened Master of Myanmar Traditional Medicine course and Bachelor of Myanmar Traditional Medicine bridge course. The University also conducts a one-year course in primary health care for traditional medicine practitioners who have no certificate or license to treat patients. Those who are successful in the course receive a licence to practise traditional medicine. The physicians who had obtained the passing certificates of 3 or 4 traditional medical subjects could apply for the registration of traditional physicians. Only after they had been granted registration, they were permitted legally to give medical treatment according to the law of the Traditional Medical Council.

Private traditional medical schools could be opened since 1960s. *Saya U Soe Maung* (Myanmar Soe) imparted their medical knowledge to their students. His teaching of medical science was just for the physicians who wanted to learn it from his personally. So, *Saya U Soe Maung* compiled a medical treatise named '*Sariravana Sore Treatment Kyan*.' (သရီရဝဏ အနာပေါက်ကျမ်း) in order that the physicians who were too busy to learn from him personally could treat the patients and the people outside the physician families could cure themselves of sores without difficulty.[1]

At the instruction of Chairman of *Taungthar* Medical Association, *Saya Kyi* compiled the curriculum of *Abhidhamma Taungthar* Medical University. While serving as General-Secretary,

[1] Saya U Soe Maung (Myanmar Soe), (*ဓါတ်ဗိန္ဓော အနာပေါက်ကုထုံးကျမ်း) (Dhat Beikdaw Treatise on Treatment of Sores)*, Yangon, Min Min Zaw Press, 1996, pp. Ka, Kha, Ga (Hereafter cited as Soe Maung, Dhat Beikdaw Treatise on Treatment of Sores)

he compiled *Padethar Alin Pya Kyan* (ပဒေသာအလင်းပြကျမ်း) in 1977. He was promoted to vice-chairman in May, 1978. On the death of chairman U Tun Tin, he continued to take the office of chairman and has been serving in this capacity up to today. As chairman, he could confirm the curriculum for *Taungthar* Medical University in 1982.

Figure 8. *Saya Kyi*

Moreover, he succeeded in compiling the curriculum of *Taungthar* Medical University for the basic level in 1988. He could also prescribe the Treatise on Comprehensive Medical Treatment as part of the curriculum in 1990. Again, he finished writing the Treatise on Answers to *Chauk-Lone-Kauk* (ခြောက်လုံးကောက်အဖြေကျမ်း) and the *Kalarni* Medical Treatise (ကလျာဏီကျမ်း) in 1993 and prescribed them as parts of the curriculum. Thus he could successfully prescribe the Six-subject Treatise as the curriculum of *Taungthar* Medical University in 1995.[1] *Saya U Tun Kyi* cured the patients of malaria with *Kukko* (Albizzin Lebbek) leaves and many were totally cured of. Therefore, he became known as physician of *Kukko* leaves. He established the *Abhidhamma Taungthar* Medical University in Ein-daing Ywa-ma Hlegu Township. He also built a hospital, a medical training school, a dispensary, and wards for outside patients and kept them under the care of in -charge physicians.

The Department of Traditional Medicine was established on 3 August 1989. Mandalay Institute of Traditional Medicine, the traditional medical hospital and private clinics which were previously kept as a branch of Traditional medicine under the Department of Health, the Ministry of Health were collectively formed into the Department of Traditional Medicine.[2] Research unit under the Department of Traditional Medicine is also conducting studies to assess safety, efficacy and quality of Traditional Medicine. In collaboration with Medical Research Departments, research activities to explore new traditional medicine to treat six common diseases namely diarrhoea, dysentery, malaria, tuberculosis, hypertension and diabetes mellitus are also being conducted.[3] Three drugs including production technology was transferred to Myanmar

[1] Saya Kyi, Myanmar Drug Laws in the Colonial Period, pp. 21-22
[2] Lectures on Indigenous Medical Course, p. 8
[3] HealthinMyanmar2008, Ministry of Health, p-86

Pharmaceutical Factory for mass production.[1] Traditional Medicine Research as carried out in Myanmar does not study the principles and practice of Traditional Medicine (which is mostly based on Ayurvedic Medicine from India and perhaps also on the Unani system of Medicine). It mostly studies traditional herbal remedies and formulations used in Myanmar.[2] It houses more than 4000 ancient palm-leaf and books on traditional Myanmar medicine. Added to the 57 varieties of medicines produced by state-run traditional pharmaceutical firms are thousands of types of medicines manufactured by the private pharmaceutical industry. Judging from the numbers, it is clear that traditional medicine in Myanmar is alive and well.

National Laws and Policies

The State enacted the Myanmar National Drug Law in 1992 to regulate production and to ensure safe consumption of traditional medicine by the public. According to this act drugs can only be produced by government owned factories to ensure quality and reduce health risks. This was followed by a series of notifications concerning registration and licensing, labeling and advertising to promote traditional medicine and drugs. The formation of the Board of Authority and its duties and functions also are laid down in the law. There are 10518 traditional drugs registered, and 1985 manufacturing licenses for production have been issued to traditional medicine manufacturers across Myanmar. [3]

In 1997, the World Health Organization (WHO) drafted the Declaration on Health Development in the South-East Asia Region in the 21st Century (the Declaration), in which member states laid out their proposals for health reform.[4] As part of this initiative, the Myanmar Ministry of Industry and the Myanmar Food and Drug Administration (MFDA) actively promote policies that are advantageous to private pharmaceutical companies in the manufacture of high quality traditional medicine. One company that has benefited from such policies is FAME Pharmaceutical Company. In line with the government's desire to promote traditional medicine, in 2002 Fame started production of traditional medicine as a substitute for expensive imported medicine. The company's high-quality, low-cost products earned it a good reputation and the Fame brand became very popular. The company is now the leading manufacturer of traditional medicine in Myanmar and also enjoys a profitable export business.

With Myanmar's minimum daily wage set at US$ 2.50, and many people living on less, traditional medicine makes its strongest impact at the household level. Myanmar traditional medicines are kept at every Myanmar house. It is widely used for Myanmar people. Among the Myanmar traditional medicines, ထွန်းရွှေဝါ (*Tun Shwe War),* Great Wall are well known for pain relief. There are ကွမ်းရွက်ပုံ (*Kun Ywet Pon*) ရုပ်ပျို (*Yoke Pyo*)and for cough. The ဖိုးခွါးလေး (*Po Kwar Lay*) is a good remedy for toothache.

In December 1999, a basic course on traditional medicine production was conducted and the trainees were taught in theory and practice for the private traditional medicine manufacturers to be able to manufacture with the use of modern technology in Yangon and Mandalay and sell

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[1] Aung Than Batu, *Further Development of Medical Research in Myanmar (1987-,2011*), Ministry of Health, Department of Medical Research (Lower Myanmar), Ministry of Health, Department of Medical Research (Lower Myanmar),p-33 (Here after cited as Aung Than Btu, Medical Research)

[2] Aung Than Btu, Medical Research, p-331

[3] Traditional Medicine in Union of Myanmar (http://www.searo.who.int/entity/medicines/topics/traditional_medicine_in_Union_of_Myanmar_pdf)

[4] Declaration on Health Development in the South-East Asia Region in the 21st Century: Review of Progress 21st Meeting of Ministers of Health New Delhi, India, 8-9 September 2003, WORLD HEALTH ORGANIZATION, REGIONAL OFFICE FOR SOUTH-EAST ASIA, SEA/HMM/Meet.21/3 28 July 2003

private traditional medicine. There have been over 8000 traditional medical practitioners registered by the Traditional Medical Council all over the country up to 2000. But when the Medical Council checked the registered practitioners systematically, only about 4000 physicians were found already registered. In line with the traditional medical laws proclaimed on 25 July 1996, permission was granted to over 4500 varieties of traditional medicine to apply for registration. A total of 3962 medicinal items have been registered and 632 manufacturers have been issued production licences.[1] The Central Traditional Medical Supervisory Committee scrutinized them and issued temporary registrations and licenses to manufacture medicine.[2]

The Ministry of Health updated and revised the Traditional Myanmar Practitioners Board Amendment Act and renamed it the Traditional Medical Council Law of 2000. This Law is the leading law responsible for all matters relating to the traditional medicine and traditional practitioners in Myanmar. It regulates the training, issuance of diplomas in traditional medicine, or Bachelor of Myanmar Traditional Medicine, and registration of qualified traditional practitioners. The law also sets out the duties and powers of the traditional Medical Council in ensuring the abidance of rules and regulations by all traditional practitioners in Myanmar. The Council also is responsible to oversee and conduct research with the hope of modernizing traditional medicine to be in conformity with scientific methods. The council also is responsible for ensuring that nobody practices without a license and to withdraw or cancel the licenses of any medical practitioners who have breached the law. A new feature of the law is the insertion of a new clause that states that the Medical Council would be an independent organization. However, the fact that two-thirds of its 65 positions in the Medical Council would be filled by government officials challenges its claim of being independent. There are more than 6000 traditional medicine practitioners registered under the law. It is now in the process of receiving State approval.

The Myanmar Traditional Physicians Association was formed in 2002 with the objectives of promoting the potency and effectiveness of Myanmar traditional medicine. During the regime of State Peace and Development Council (SPDC), more varieties of traditional medicine are manufactured by both the private and the public sectors. The Department of Traditional Medicine takes the responsibility of producing medicine by the public sector with two department-owned factories. Yearly production of each factory is 10,000 kg and the medicines are produced according to the national formula. The varieties produced by these factories in the form of powder have totalled twenty-one. They are distributed to the patients of public traditional medical facilities free of charge. In addition to the medicine in powder, the factories also produce twelve kinds of drugs in the form of tablet for the commercial purpose.[3]

In 2013, the WHO Traditional Medicine Strategy 2014–2023 was developed and launched in response to the World Health Assembly resolution on traditional medicine. The strategy aims to support Member States in developing proactive policies and implementing action plans that will strengthen the role traditional medicine plays in keeping populations healthy.[4] The strategic objectives are to build the knowledge base for active management of traditional medicines through appropriate national policies, to strengthen the quality assurance, safety, proper use and effectiveness of traditional medicines by regulating products, practices and practitioners and to promote universal health coverage by integrating traditional medicines services into health care service delivery and self-health care.

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[1] Legal Status of Traditional Medicine and Complementary/Alternative Medicine: A Worldwide Review, p-136
[2] Kyaw Thein Htay, Development of Myanmar Traditional Medicine, p. 23
[3] Manual of Basic Indigenous Medical Science, pp. 10-11
[4] WHO traditional medicine strategy: 2014-2023. December 2013, **ISBN**: 978 92 4 150609 0

The private traditional medical sector is developing and conducting the mass- production of potent medicine according to the set standard. With the assistance and encouragement of the government, the manufacturing of the standardized traditional medicine could have enhanced the public confidence and reliability in traditional drugs. So, the manufacturing of the traditional medical private sector had achieved success. Although there were no laws, act and regulation regarding traditional medicine in the past, the government issued the Traditional Drug Law in 1996. Accordingly, production of traditional medicine can be controlled systematically. The Department of Traditional Medicine permits the traditional medicine manufacturers to register and issue licenses to be able to produce them legally. As the manufacturers flourish after they have registered legally, the number of the manufacturers increased to 2793 in 2018.[1] A total of 13,000 registered products are produced and distributed freely in the market by them but the advertisements of these products are controlled by the Department of Traditional Medicine. Now in Myanmar, there are 26 Traditional Medical hospitals[2], 237 dispensaries, over 900 drug production firms. In addition, total registered traditional practitioners are 7262 in which 1556 have degree from the private Institutions[3].

In addition to the Bamar traditional medicines, there are traditional medicines of other ethnic groups in Myanmar. The Republic of the Union of Myanmar has over 100 officially recognized ethnic groups. Multi-ethnicities and cultures lead to various kinds of belief in traditional medicine and treatment seeking behaviors. Among them, Kachin and Shan traditional medicines and their treatment are more popular than other ethnic groups. That is why, in 2015, the Shan State Parliament passed the law for traditional medicine practitioners and traditional medicine producers in Shan States. [4] One of the objectives of this law is to supervise traditional medicine practitioners for abidance of rule of conduct and disciplines. According to the law, all the traditional medicine drugs produced in the state have to be registered and the manufacturers must have license to produce their products. It includes articles on committee formation and its duties, registration as the traditional medicine practitioner and registration of traditional drugs, practitioners' rule of conduct, prohibitions, offences and penalties.

Future Prospects of Traditional Myanmar Medicines

Today, both urban and rural people across the Union of Myanmar place trust and reliance on Myanmar traditional medicine. The usage of traditional medicine is expanded with advertisements in the media. More than 90 percent of Myanmar people still believe in and use traditional medicine as their first treatment for their illnesses, particularly if they perceive the illness to be a minor one.

The Traditional Medicine Drugs Exhibition, a conference of traditional medicinal practitioners, has been held annually by government in Nay Pyi Daw, aimed to improve the quality of Myanmar traditional medicine. This was done by providing the public with herbal medicinal knowledge from the traditional practitioners. Myanmar government has formed the National Health Committee for Health Development, stating in its National Health Policy that it aims to reinforce the service and research activities of traditional medicine to international level and to involve such practices in community healthcare activities. Knowledge sharing is also crucial not only between the local practitioners but also between local policy makers, so that efforts can be initiated to conserve and sustain valuable medicinal species.

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[1] Department of Traditional Medicine Report (5-9-2018)

[2] Three 100 bed traditional medicine hospitals, nine 50 bed traditional medicine hospital, six 25 bed traditional medicine hospitals, eight 16 bed traditional medicine hospitals.

[3] Department of Traditional Medicine Report (5-9-2018)

[4] Law for Traditional Medicine Practitioners and Traditional Medicine Producers, Shan State (2015/No.3)

Though it has come to be influenced by western research and techniques, Myanmar traditional medicine is still popular. Myanmar traditional medicines continues to have a very important role in public health-care system in the country. But it can be found that Myanmar traditional medicines cannot be prevented the Covid 19. The State has issued a new plan for the development of traditional medicine in healthcare, which includes not only disease treatment but also nourishment, disease prevention, rehabilitation, health and cultural enterprises, and health tourism. This is a unique opportunity for Traditional medicine development in Myanmar.

The State is implementing national health plans it has laid down systematically to provide health care to the entire people. In addition, the State works out in community health care program such as prevention and control of diseases, giving educative talks and conducting training courses, research and development, and distribution of potent traditional medicines with such Asian Nations as China, India, Korea and Japan, Southeast Asian countries that are members of World Health Organization, ASEAN member countries, and BIMST EC member countries. The more Myanmar cooperates with other countries, the more Myanmar traditional medicine will improve and better healthcare with traditional medicine can be provided to the people. So, traditional medicine must be used systematically and scientifically. Traditional medical practitioners must learn from Western doctors. They must combine tradition and modern techniques.

Conclusion

Myanmar traditional medicine is a heritage with high historical value. So, it is needed to maintain methods of compounding effective traditional medicines and to conserve the sources of herbs and medicinal components. And those responsible are to conserve the traditional Myanmar medicine and nature the youth for greater development of human resources for ensuring flourishing of traditional Myanmar medicines.

Some countries such as Germany, Japan and the Republic of Korea have recognized the effectiveness of traditional Myanmar medicines. Therefore, traditional Myanmar medicines will establish a foothold in the international drug market if traditional Myanmar medicines, a legacy left by our forefathers, are produced with modern methods of the international standards. Thus, upgrading the sector of traditional medicines can be of great benefit to the country and the people. So it is necessary to maintain the usual potency and characteristics of Myanmar traditional medicines. It is also required to promote Myanmar traditional medicine to reach international standard. With the government's encouragement for development of Myanmar traditional medicine, the practitioners have to work hard for further development of Myanmar traditional medicine.

Acknowledgment

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STUDY ON THE TRADITIONAL POTTERY INDUSTRY IN AYEYARWADY REGION

Myo Thet Lwin[1]

Abstract

Earthenware was used in the Neolithic Period though its development occurred at different time. An increased range of craft activities took place in the settlements of this period, notably the manufacture of the first local pottery vessels around 5500 or 5000 BCE. In Myanmar, earthenware has been used since Neolithic period. Pottery has been commonly used for different domestic and religious and ritual purposes. The pottery industry flourishes particularly in the Townships of Ayeyarwady region. The production process of earthenware is very interesting. The potters make this earthenware by using traditional methods. They produce them by hand through five production stages. These production stages are collecting raw materials, preparing paste, shaping pot, applying before baking and baking. Because of the plastic bottles and cans, the earthenware production business of Ayeyarwady Region becomes to decline gradually.

Keywords: Pottery industry, earthenware, plastic bottles

Introduction

The purpose of this study is to provide a detailed historical background of the pottery industry. The history of pottery in Ayeyarwady Region is essential and not redundant. Since there is very little written information available on the making process of pottery industry, much of the raw material acquired in the next pages has been gleaned through the owners, interviewees with artisans at the pottery industries. Since about one hundred years ago, earthenware utensils were in height demand among locals, creating an amazing situation. Nowadays, the pottery industry still exists as a stable traditional business in Ayeyarwady Region. The evolution and development of regional styles also needs further investigation. The changes of various arts and methods of pottery industry require a lot more research. As keen craftsmen and crafts, the pottery industry has always held a particular fascination for the handicrafts in the Ayeyarwady Region.

Historical Background of Pottery Industry in Ayeyarwady Region

The pottery industry is the traditional handicraft of Myanmar, and it can be found as a business in the Ayeyarwady Region until the present day.[2] The earthenware including pottery,was produced at Pathein, Henzada, Myaungmya, Laymyethna, and Ngathaingchaung, Mawlamyainekyun Townships in the Ayeyarwady Region.[3] *Sin Oh Bo* ward is situated on the east bank of the Nga Wun River in Pathein Township. A variety of earthenware was produced at the forty kiln sites in the *Sin Oh Bo* ward of Pathein Township about forty years ago. Nowadays, only six kiln sites still produce earthenware related to pottery industry in this ward. Pathein Township has fifteen wards where the professions related to handicrafts were engaged. Among the fifteen wards of Pathein Township, Ward No. (I) engaged in the production of household utensils connected with earthenware. Therefore, This Ward is known as *Sin Oh Bo* ward since the previous time.[4] The small glazed earthen pots, mortars, vases, small pots and the principal

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[1] Department of History, Naypyitaw State Academy, Nay Pyi Taw

[2] Dr. Chit, *ကျေးလက်စီးပွားပြည်သူ့အင်အား*,(*The Rural Business, the People Strength*), Yangon, Thitsar Sarpay Press, 2009, p.347 (Hereafter cited as Dr. Chit, (*The Rural Business, the People Strength*)

[3] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8-9- 2022

[4] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 Years, dated 8 -9 - 2022

utensils were produced at *Sin Oh Bo* ward.[1] Pathein Township has fifteen words where the professions related to handicrafts were engaged at these wards. Among the fifteen wards of Pathein Township, Ward No (1) engages in the production of household utensils connected with earthenware. Therefore, this ward is khnown as *Sin Oh Bo* ward since the previous time.[2]

The potters produce earthenware at Dauntgyi village about 15 miles on the southern part of Hinthada Township near the bank of the Ayeyarwady River. The potters also produced earthenware at Laymyethna Township on the bank of Nga Wun River.[3] The kiln sites still exist about seven miles southwest of Myaungmya Township in Ayeyarwady Delta. Region. Myaungmya Township is also known as Myohaung, or the old town of Myaungmya.[4] Kwin Lyarr is situated on the west bank of Nga Wun River in Nga Thaing Chaung Township.[5] The different varieties of earthenware were produced from the pottery industries around and in Einme Township of Myaungmya district.[6] Nowadays, the production of earthenware is less in other townships except Pathein Township in Ayeyarwady Region.[7] The earthen toy pots are mainly produced in Pathein Township than other earthen industries in Ayeyarwady Region.[8]

Literature Reviews

The researchable books such as "The Neolithic Culture of Padalin Cave", compiled by U Aung Thaw in 1969, "Burma Gazetteer (Bassein District)", compiled by MR.H.P. Hewett, Mr. J. Clague in 1916, "Burma Gazetteer (Henzada District)", compiled by MR.W.S. Morrison in 1916, "Earthenware in Southeast Asia", compiled by John Miksic in 2003,"Myanma Encyclopedia, Vol.9(b)" and "Myanma Encyclopedia, Vol.10", compiled by Myanmar Translation Society in 1963, and "Myanma Terracotta", compiled by Than Tun in 2003 related to pottery industry are found to learn the process of pottery which based background history and a few processes on these books. This research paper was combined to get the perfect process of pottery with the interviews and learning these books.

Aim and Objectives

This research paper aims to explore the various changes in the economy and social life resulting from environmental changes, presented from a historical perspective in Ayeyarwady Region. Every citizen should follow moral rules to prevent socio-economic life from the destruction of ecosystems in the future. In the future, the studies should strive to collaborate preserving the environment and not harm the socio-economic as much as possible.

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[1] MR. H. P. Hewett, MR. J. Clague, *Burma Gazetteer (Bassein District) Vol. A* Rangoon, Office of The Superintendent Government, 1916, p. 67, (Hereafter cited as MR. H. P. Hewett, Mr. J. Clague, *Burma Gazetteer* (*Bassein District*))

[2] MR. W. S. Morrison, *Burma Gazetteer* (Henzada *District*), Vol-A, Rangoon, The Superintendent Government Printing and Stationery, 1916, p-67(Hereafter cited as MR. W. S. Morrison, *Burma Gazetteer* (Henzada *District*)

[3] MR. W. S. Morrison, *Burma Gazetteer* (Henzada *District*), p.100.

[4] John Miksic, *Earthenware in Southeast Asia*, Singapore, Singapore University Press, 2003, p. 96 (Hereafter cited as John Miksic, *Earthenware in Southeast Asia*)

[5] Interview with U Than Phay, Pottery Industry, KwinLyarr, Owner, The, age of 70 Years, dated 3 – 9 -2020

[6] Myanmar Translation Society, *မြန်မာ့စွယ်စုံကျမ်းအတွဲ*(ဌ-ခ) (*Myanma Encyclopedia*) Vol(9-b), Yangon, Sarpay Beik Hman Press, 1963, p. 464 (Hereafter cited as Myanmar Translation Society, *Myanma Encyclopedia*, Vol.9-b)

[7] Interview with U Than Tun, Pottery Industry, Artisan, Pathein, the age of 65 years, dated dated 3 – 9 - 2020

[8] Interview with Daw Khin Myo Win, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 48 years, dated 8 – 8 - 2020

Data and Method

The vital sources of pottery industry are got as the primary source from the interviewees related with pottery industry. Other references are used by the books and journals related to the pottery industry from Department of Information and Public Relation Library, Pathein City Hall Library in Pathein and Universities' Central Library in Yangon.

Materials and Methods

The huts used as warehouses for storing earthenware played a vital part in the process of pottery industry. According to the process of pottery industry, the huts are built to store raw materials, finished and semi-finished products and therefore it is quite different from those of their living. A large hut is usually 78 feet in length, 36 feet in width and 27 feet in height.[1] The measurement of smallest hut is 67 feet in length, 33 feet in width and 21 feet in height. The kiln is an essential building for the process of pottery in order to succeed the pottery industry. A large kiln is usually about 52 feet in length, 15 feet I width and 15 feet in height. The measurement of a small kiln is about 30 feet in length, 9 feet in width and 9 feet in height. [2] The necessary equipment are wires for cutting the extra clay on the potter wheel, knives, potter wheel, and paddles or small sticks.[3] Another important tool are mortar, boom and pestle which are very simple but interesting for earthenware industry.[4]

The diameter of a potter wheel is one foot in width, and it is a wood circle put on a small pillar of the center as an axle. On either side of a potter wheel, there are two wood handles for handling it. If the potters turn around two wood handles by their hands, this wood circle can easily turn on its axle. The measurement of paddles or small sticks are about 1 foot and 3 inches in width, and it is used to smooth the surface of pots. When the potters want to create a new creation, it was used to decorate folk images, beautiful floral designs on the pots.[5]

The working area of pottery industry is about ten feet in width and fifteen feet in length. The boom is about nine feet long log or plank. The pestle can be inserted about two and a half feet at the end of boom. The diameter of a circular pit is about 4 feet, and the depth is about 2 feet. It is operated by foot. Therefore, these tools are played a vital role to get fine powder.[6]The amount of sand, loam, and clay are lied as the different soil layers below ground. When the pieces of stone or metal diameter is appearing between 0.05 millimeter and 2 millimeters, it is called sand.[7] It is also called sediment, because the pieces of stone or metal diameter are between 0.02 millimeter and 0.05 millimeter.[8] If the pieces of stone or metal diameter are the small size than 0.02 millimeter, it is known as the clay. The sediment is combined with the sand between 40

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[1] Interview with U Than Tun, Pottery Industry, Pathein, Artisan, the age of 65 years, dated 8 –9 - 2020.

[2] Interview with U Than Tun, Pottery Industry, Pathein, Artisan, the age of 65 years, dated 8 – 9 - 2020.

[3] Myanmar Translation Society, *မြန်မာစွယ်စုံကျမ်း* (*Myanmar Encyclopedia*), Vol. 10, Yangon, Sarpay Beikman Press, 1966, p. 383 (Hereafter cited as Myanmar Translation Society, (*Myanmar Encyclopedia*), Vol. 10)

[4] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2020.

[5] Myanmar Translation Society, *Myanma Encyclopedia, Vol. 10,* p. 383

[6] Interview with U Aung Myo Win, Pottery Industry, Artisan, Pathein, the age of 47 years, dated 8 – 9 - 2020.

[7] David Saw War, *ရပ်ရွာစိုက်ပျိုးရေးနှင့်အာဟာရ* (*Rural Agriculture and Nutrition*)), Thailand, Wanida Press, 2007, p. 2 (Hereafter cited as David Saw War, *Rural Agriculture and Nutrition*)

[8] David Saw War, *Rural Agriculture and Nutrition* p. 2

percent and 60 percent. The clay is mixed with the sand below 20 percent. So, the clay is suitable in three soil layers for earthenware production.[1]

So, the owners of pottery industries are probably collecting one of the most useful clays for making earthenware. The best quality earthenware is always made from suitable clay. The potters use clay which is red clay and the yellow clay from the fields of Ayeyarwady Region. Both raw materials, which is the most useful clay, can be obtained from the sellers. Some sellers sold only the clay for the earthenware.[2]When some businessman made to dig for fishponds in the fields, they sold the suitable clay to the potters. When the owners of pottery industries purchased the suitable clay and carried the clay with three tons car. Each car costs about 40000 kyats. As some owners of pottery industry produced the clay from the grant-land, they cost only the charges of digging and transportation. The clay was sold from the month of November until May. The clay is collected at least 20 tons in the warehouse to make the clayware for the whole year. The owners of pottery industry have never purchased the clay from June to October due to soil moisture and it is difficult to obtain the appropriate clay.[3]

Prior to 1988, the potters had easily obtained the required firewood for earthenware. However, the potters have faced difficulties getting the firewood as fuel for the pottery industry after 1988. When the loggers cut down trees for wood, the owners of pottery industry purchased the fragments of wood which are carried with three tons logging vehicle, and it costs about 50,000 kyats per logging vehicle. Although the potters use a variety of wood as the raw material for the pottery industry, they only use *Malaysia Padauk* which is called *Acacia* in the scientific name. After the woods became scarce, the owners of pottery industries purchased the used scaffoldings from the construction site to use as fuel for the pottery industry. [4] The low-roof building is first built for the process of glazed jars to prevent the wind and sunshine from outside. If these glazed jars get a lot of wind and sunshine, they can break. Firstly, the potters removed the rubbish from the soil before pounding the clay. Mortar, boom and pestle are also used to crush the red clay and the yellow clay to get fine powder for making glazed ware. Although yellow clay is a suitable kind of soil for making earthenware in the rainy season, it can appear cracked situation in the dry season. So, the red clay is suitable for making glazed ware.[5]

When the potters make the glazed jars, they mix sandy soil with yellow clay because yellow clay is a scarce soil. So, the potters mixed the double proportion of red clay and one yellow clay and then placed under the sunshine. After pounding about 50 baskets of clay for the whole day, these powders are shaken by using a sift with both hands to get fine powder. Then, the fine powder is mixed with a little water. Next step of making glazed jars is to shape as a raw glazed jar and the potters' made lumps of clay with their hands about many times. Two people are required for this process; one is for putting lumps of clay on the potter's wheel or spinning and another one makes for spinning the wheel by hand. Some pottery industry used the foot-controlled-spinning wheel for shaping process.[6]

The process of these two workers requires harmony between them. There are two stages in making huge glazed-ware jars. The potters will shape each of the lower and upper parts of glazed jar. The potters take the shape of a glazed-ware jar for about from 6 minutes to 8 minutes. Firstly, the lower part of glazed jar is heated up by firing to become the complete hardness. After

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[1] David Saw War, *Rural Agriculture and Nutrition*, p. 3
[2] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5- 2020
[3] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020
[4] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5- 2020
[5] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan the age of 47 years, dated 8 - 9 - 2022
[6] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan the age of 47 years, dated 8 - 9 - 2022

the lower part is hardened, it is to be connected with the upper portion. Then the joined portions are smoothed and certainly made to line by glaze.[1]

After joining these upper and lower portions, they are needed to paint a suitable colour. Copper Sulphate for green colour, *Arsenous Sulphate* for yellowish red colour, *Sulpur* for yellow colour, *Ammonium Chloride* for blue colour are used by mixing with water and then these colours are applied on the surface of glazed jars. The artisans made to mix the needed colours to the finest shade. While putting in the sunshine, it takes care to prevent from touching cool wind because some glazed jars will appear the crack situation. The process of glazed-ware jars always requires to be faired the conditions of hot and cool and it entirely depended on the weather. To dry the large, glazed jars, it is required about 5 days in the hot season and 10 days in the rainy season. After they are dried, the potters finally bake the glazed-ware jars in the kiln which measures about 52 feet in length and 15 feet in width and 15 feet in height. The duration of baking is about one day to three days depending on the size of glazed jars. Twenty to thirty glazed-ware jars can be placed in the kiln and only the woods are mainly used as fuel for baking jars.[2]The firewoods were placed around the glazed jars on the ground as the fuel. The space of glazed jars at the entrance of kiln is left about twelve feet from firewood. Firstly, bake the potters bake glazed jars for about 2 days with a low heat. After the glazed jars get power of resistance to heat, the glazed jars are stoked up to get intense heat for about 2 days again. The potters provide the necessary fuel in the eastern entrance of kiln. So, its capacity strongly supports in full-time process.[3]

After baking for about 7 hours, the colour of lava turns into a bright glaze and it is needed to maintain this heat in the kiln for about 7 hours. There is a chimney to each kiln and the hole of chimney measures 6 inches square. From the peephole, the potter determines that the kiln is getting the required heat evenly throughout the whole kiln. The potters gradually remove the remaining firewood after getting the required conditions in the kiln. Then, all holes are shut down and the kiln is left by itself for about twelve hours and leave these glazed earthen jars to cool for 7 days in the kiln before taking it out. Then, the wall at the entrance is opened to get cold at the glazed earthen jars. Then, the workers cleaned glazed earthen jars. After cleaning these jars, the owners distribute the glazed earthen jars in the local markets for the buyers. The glazed earthen jars were sold chiefly at Pathein and other townships in Ayeyarwady Region before 1988.[4]

Making Process of Clay Mortar

The different kinds of mortar are earthen mortar, iron mortar and wood mortar. The kind of clay mortar is particularly a proud of Myanma handicrafts. Before 1980, the owners of pottery industries produced different sizes of mortars and glazed jars in Ayeyarwady Region. After modern household utensils entered into the markets, the demand for glazed jars gradually decreased and they have produced different sizes of mortars and other earthenware. Nowadays, the clay mortar businesses are located on the east bank of *Nga Wun* River in Pathein Township. The clay mortars consist of a different size which are 6 inches in width and 5 inches in height, 7 inches wide and 5 inches in height, 8 inches in width and 6 inches in height. Especially, the housewives need to choose a suitable size and kind of clay mortar in kitchen utensil.[5]

[1] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan the age of 47 years, dated 8 - 9 - 2022
[2] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan the age of 47 years, dated 8 - 9 - 2022
[3] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020
[4] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020
[5] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020

The housewives used to buy either small or large size of clay mortar depend on their cooking. The traditional clay mortar plays an important role in the culture of Myanmar families. They have used for crushing or grinding traditional herbs, and preparing food such as onion, garlic, chilies, spices, nuts, pepper, dried herbs, fresh herbs and drugs in most rural and urban communities. The clay mortar is also called *"Pan Sone"* in Myanmar language. The sellers of kitchen utensils sell clay mortars associated with wooden pestles in the houseware shops. So, they separately buy wooden pestles from the art of turnery industry.[1]According to the process of making earthenware, the potters removed rubbish and waste in the soil before pounding. The artisans said that the red clay is acceptable for making earthen mortar. The workers have to pound the red clay to get fine powder for making mortar. Then, this fine powder is mixed with water, and the workers have to tread on the clay with feet to get the sticky shape. After the suitable shape appeared, the workers modeled the lumps of clay into mortars by their hands according to demands per day. After taking the lumps of clay, the artisans place it on the pottery wheel for making mortar. Another artisan turns the potter wheel with his hand or foot. In order to get a mortar, it takes about 5 or 6 minutes. The workers use his or her nimble fingers to create the neat and beautiful mortar. The skilled worker regularly makes about 100 mortars per day which depend on the skill of the workers and the unskilled workers can make about 50 mortars per day.[2]

The workers use wire or thread to remove the bottom of the mortar on the pottery wheel. And then, each handle is fixed on the side of mortar and the artisans make to dry the mortar in the sunshine. If the weather is fine, the clay mortars will dry for a day. The workers apply the glaze liquid on the dried mortars before they are put into the kiln. If watery glazed liquid is used, the good quality mortars can be obtained. So, the glazed powder is certainly mixed in the suitable water. After making the mortars systematically, the workers carry the mortars carefully to the kiln. Then, ten mortars are arranged horizontally in the kiln and the woods and bamboos were placed around the mortars as fuel.[3]

After the fire started, the wood and bamboo were gradually put into the kiln by the workers within 24 hours. In order to prevent the fading of glaze colour the wood and bamboo are put into the kiln as fuel for 2 days or 3 days in the first stage. The workers make to get the suitable intensity of heat for the whole kiln. In the second stage, the entrance of kiln is closed by the workers because the kiln needs to get heat capacity. After the workers pulled down the closed bricks in the entrance of kiln within 6 day or 7 days, the color of the lava over the body of the mortars turns into a bright glaze. Again, all the holes of kiln are shut, and the kiln is left by itself for one or two days. This step appeared a major push to attract in the market. All the glazed mortars could be taken away for sale. After cleaning the mortars, they are ready to be used as the household utensil.[4]

A clay mortar prices is 1300 kyats for wholesale, and it is sold at 2000 kyats to 2500 kyats in retail shops. Prior to 1988, a clay mortar price was 500 kyats for wholesale and 700 kyats to 800 kyats in the retail shops. The price of the retail shops can be high or low depending on the marketplace and demands. The owners of earthenware industry sell glazed mortars to the wholesalers from most of the townships in Ayeyarwady Region and are selling around the year.[5]According to the process of clay mortar, the potters make to avoid rubbish in the soil before pounding. The artisans make that the "myayni" is the acceptable clay for making mortar. The potters turn to pound "myayni" to get fine powder for making mortar. After this appearer is

[1] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020
[2] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[3] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[4] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[5] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022

mixed in the suitable water, the potters make to tread on the clay with their feet to appear as the sticky shape. These fine powders are made into a block of clay which is ready for making mortars. After the suitable shape appeared, the potter's handshape the size of clay about 8 inches height and 6 inches wide. The potters make the block of clay depend on the number of mortars per day.[1]

After the artisan takes a block clay, he places it on the potter's wheel for making mortar. Another potter turns the potter's wheel with his hand. Sometimes they turn on this potter's wheel with their feet. When they make a variety of mortar sizes, the duration of each mortar needs to be about 5-6 minutes. The potter uses his or her nimble fingers to create neat a mortar. The potters regularly make about 100 mortars per day, which depends on the skill level of the potters. Despite the unskilled potters, they can make about 50 mortars per day. Use wire or thread to remove the bottom of the mortar on the pottery's wheel. And then, each handle is fixed on the side of mortar. The artisans surely analyze the weather conditions to dry under the sunshine.[2]

After the potters analyzed, if the weather is suitable condition, the potters make to dry mortars under the sunshine. If the weather is good, the clay mortars will dry for a day. The potters apply to the dried mortars by the glaze-liquid before kiln. If the watery glazed liquid is used, the mortars can get the right qualities. So, the glazed powder is certainly mixed in the suitable water to create an appearance of thick glaze-liquid.[3] Some artisans dipped about two inches long from both inner and outer's the lip of mortar into the glaze-liquid in the basin. Any artisan never applied the remaining interior of the mortars because the glaze-liquid would create the slippery whole interior. If this slippery condition appears the inside of mortars, the housewives are not easy to pound in cooking.[4]

When the potters thoroughly applied to the mortars, they systematically carried them to the kiln. The mortars are neatly arranged in ten steps. The 300 mortars can be put into the kiln at once. The wood and bamboo spread around the bottom of the mortars. After the fire started, the wood and bamboo were gradually put into the kiln by the workers within 24 hours. After the entrance of kiln is pulled down, add the wood and bamboo as fuel into the kiln for 2 days or 3 days again because the colour of the glaze is fading in the first stage. The potter makes the suitable intensity of heat for the whole kiln. In the second stage, the entrance of kiln is closed by the potters because the kiln needs to get heat capacity.[5]After the potters pulled down the closed bricks in the entrance of kiln within 6 day or 7 days, the color of the lava over the body of the mortars turns into a bright glaze. Again, all the holes of the kiln are shut, and the kiln is left by itself for one or two days. This step appeared a major push to attract in the market. All the glazed mortars could be taken away for sale. The baked mortars are collected by other workers. After cleaning, these mortars are ready to be used as utensils. A regular clay mortar prices 1300 Kyats for wholesale market, and it is sold at 2000-2500 Kyats in retailed shops. The price of the retail shops can be changed depending on the marketplace and consumers' demands. The owners of pottery industries sell glazed mortars to the wholesalers from most of the townships in Ayeyawady Region. The clay mortars are sold almost every month. The owners of pottery industries are selling a variety of clay mortar around a year.[6]

[1] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[2] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[3] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[4] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[5] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022
[6] Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022

Making Process of Earthen Water Pot, Thingyan-pot (*Atar-Oh*) and Vases

Despite modern household utensils entered in the Myanmar society, the earthenware such as earthen pots, vases, small pots of flowers are still standing in the rural and urban areas of Ayeyarwady Region. The water pot has different sizes and shapes. These clay pots hold at least 3 gallons and 4 gallons of water.[1] The ladies use clay pot to carry water in the rural areas of Myanmar.[2] As the temperatures raise in summer, the customers in some rural and urban areas have purchased clay pots before 1988. Therefore, the owners of pottery industries have continued to produce clay pots in most of townships of Ayeyarwady Region. The clay water pots are baked in the month of *Pyartho* (January). The people traditionally believed that these clay pots are to be cold around the year. Therefore, it is called as *Pyartho* pot in Myanmar. The clay pots are usually baked in the month of *Nattaw* (December) and *Pyartho* (January) because they can get better clay for the raw materials during these months. Since January, the wholesalers stored to sell clay pots in the warehouse.[3]

In addition, it is found that people still use pottery in traditional events including seasonal festivals and religious events such as Thingyan festival and Kason water pouring festival. A new earthen pot of about four to six inches in diameter especially made for Thingyan festival is known in Myanmar as "*Atar Oh*". According to Myanmar traditions, Myanmar always welcomes the great guardian spirit by placing a small pot in which seven kinds of flora representing seven days of the week were planted on the table in front of the house.[4] Kason water pouring festival is celebrated on the full moon day of Kason. Despite modern plastic pots entered into the market, the lovers of Myanmar handicrafts still pour water to the Bodhi tree by using the small earthen pots.[5] Moreover, the earthen vase is one of the most famous types of Myanma traditional handicraft. The earthen vases are still used by the people in rural and urban areas of Myanmar. The pottery businessmen sold the necessary vases to houses, offices, gardens, restaurants and hotels for decorating the building. Although modern plastic pots entered into the market, the earthen vases are continued to be used in rural and urban communities. Like other earthen wares, the potters used traditional hand-made methods in the processes of earthen pots, and vases by using suitable raw materials. Firstly, both the red clay and the yellow clay are taken as much as needed and soak overnight in the proportion of water in a brick tank before modeling the design on pots by the potters. Then, the potters mix the red clay and the yellow clay in a large bowl and then kneaded to get well-mixed clay paste.[6]

The potters make to be ready for many lumps of clay. By using the clay paste, potters made to be smooth surface of pots as well as to obtain the finest shape of pots. Next step is to shape a pot. In this process, two potters are required to shape a pot. Then, one potter puts the lumps of clay on the potter wheel to shape a raw pot, and another potter spins the potter wheel by hand. These two potter's skills are amazed to shape a rough water pot.[7] After spinning the potter wheel about 4 or 5 minutes, the potters make model for the surface of pots and are put to dry under the sunshine for one day depend on the weather condition. After the potters have reached a satisfied standard, the second step consists of the process of making to smooth the rounded pots. The potters beat to smooth the rounded pots by using paddle. While the potter beat the surface of

[1] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

[2] Myanmar Translation Society, *Myanmar Encyclopedia*, Vol. 10, p. 383

[3] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

[4] U Than Phay, *မြန်မာ့ယဉ်ကျေးမှုမြန်မာ့ဓလေ့နှင့်မြန်မာ့ရှုခင်း* (Myanma *Culture, Traditions and Scenery*), Yangon, San Thazin Press, 2009, p. 51, (Hereafter cited as U Than Phay, *Myanma Culture, Traditions and Scenery*)

[5] U Than Phay, *Myanma Culture, Traditions and Scenery*, p. 58

[6] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

[7] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

the pot by using the wooden paddle with one hand, an anvil of baked clay is held at the inside of pot by the other hand. The wooden paddle was called as *parlar* (ပါလာ). This paddle and an anvil of baked clay play an important part in getting a good earthen pot. Then, the potter removes the extra clay from the base of pot.[1]

Then, the water pots are dried for about one day under the sunshine. The last step of making pottery is baking pots. The pots are thoroughly placed upside down on the ground layer in the kiln and each pile has about 5 pots. As one kiln covers 100 piles, about 500 pots can be baked at one time. The firewood and straws are spread around the pile of pots. Finally, the potters make to burn firewood and straws. In the first step of baking pots, a little firewood is used to get a good pot.[2] In the second step of baking pots, much firewood is required to bake pots in the kiln. The process of baking pots takes nearly 10 to 12 hours. These water pots are kept to a cool step for 6 days after baking them. After 6 days, other workers collect pots and clean these pots which are ready to be used. The size of a water pot is eight inches in width and one foot in height.[3]

Around 1980 the price of a pot was 20 kyats at wholesale market, and it is sold about 30 kyats at the retailed shops. Nowadays, the price of a pot is 1700 kyats to 1800 kyats at the wholesale market and the pots are sold for about 2500 kyats to 3000 kyats at the retail shops. However, the prices of water pot can be changed depending on the buyer's demand. The pottery makers distribute their pots to the wholesale shops at the Ayeyarwady region by water way.[4] Since about many years ago, the pottery produced from *Kwinlyarr* at Hinthada Township in Ayeyarwady Region were well known and these pots were distributed to Pathein, Einme, Kyaungkon, Kyonpyaw, Wakhema, Shwelaung and Mawlamyinekyun Townships by water ways. [5]

Nowadays, the pottery industries from the Townships related to pottery industries produce and distribute the pottery according to the demands. Moreover, the earthenware industry makes *Atar Oh* and vases. The potters use red clay and yellow clay to make *Atar Oh* and vase like the water pots. In making *Atar Oh*, the worker places the lumps of clay on the pottery wheel to shape it. At that time, another a potter attempts to shape the pot by using his artistic hands and another one starts to turn the potter's wheel by hands. After getting a rough shape of *Atar Oh*, the potter uses his artistic thumb to decorate the simple designs around the lips of *Atar Oh* and vase. The workers make to dry these earthen *Atar Oh* in the sunshine.[6]

The drying process takes at least 2 or 3 days because of climate changes. The making processes of *Atar Oh* and vases are the same. The pottery takes about 4 to 5 minutes for a vase and 3 to 4 minutes for *Atar Oh*. The size of *Atar Oh* is about 4 inches in width and 5 inches in height. The size of a vase is about 8 inches in width and 1 foot in height. The last process is that the potters make to bake *Atar Oh* and vases in the kiln. Sometime both *Atar Oh* and vases are mixed to bake depending on the buyers because the potters make *Atar Oh* and vases before the water festival and Kason water pouring festivals. The potters put the vases on the ground inside the kiln. In each pile, 500 vases are lined up above the ground layer.[7]

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[1] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020
[2] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020
[3] Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated16 – 2- 2020.
[4] Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020
[5] Interview with U Than Phay, Pottery Industry, Kwinlyarr, Owner, the age of 70 years, dated 3 – 9 - 2020
[6] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 -8 -2020
[7] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2020

The firewood is gathered around the piles of vases. And then, when the potters bake vases, the straws are spread over and beside the firewood. Thereafter, the potters start the firing process in the kiln. When the kiln has a great capacity for the fuel, the workers close the entrance of kiln. After about one day, the *Atar Oh* and vases are required to allow cool down about 10 to 12 hours in the kiln. When these pots and vases are of an acceptable standard, the workers collect and clean them before sale. After cleaning them, these pots and vases are prepared ready for the sale. Especially, the prices can fluctuate and change a few prices depend on the market.[1]

Like other earthen wares, the potters used traditional hand-made methods in the processes of earthen water pot, atar oh and vases. Firstly, both myayni(the red clay)and myaywar (the yellow clay) are taken as much as needed and need to soak overnight in the proportion of water in a brick tank before shape pots by the potters. Then, the potters mix in the proportion of myayni(the red clay) and myaywar(the yellow clay) in a large bowl and then kneaded to get well-mixed clay paste.[2] The potters make to be ready for many clay blocks. The paste must be made smooth surface of water pots as well as to obtain the finest shape of water pots. Next step is to shape a pot. In this process, two potters are required to shape a pot. After one potter puts block of clay on the potter's wheel to shape a raw pot, another potter spins the potter's wheel by hand. Some potters use their foot to spin the potter's wheel. These two potter's skills are amazed to shape a rough water pot.[3]

After about 4-5 minutes, the rough texture of the water pot becomes half-dry and mould. These rough water pots are put to dry under the sunshine for one day depending on the weather condition. After the potters have got a satisfied standard, the second step consist of the process of making to smooth the rounded pots.[4] The potters beat the rounded pots by using paddle. This step is the important part for the recent rough pots to become good shaped. The water pots are often beaten with a paddle, to smooth and thin them. After an anvil of baked clay is held at the inside of pot by the potter's hand, the potter's other hand beats the surface of pot by using wooden paddle. Therefore, it doesn't appear to collapse and then the potters use wire to move the extra clay to beside and bottom the pot.[5]

The step of decoration consists of a vital part of water pots. There are two kinds of decoration methods such as using "**palar**" and using of paddle and anvil techniques. Most Pathein pottery industries create simple designs and Zip-zap design by using paddle and anvil techniques. Then, the water pots are dried for about one day under the sunshine. The last step of pottery is baking water pots. The pots are thoroughly placed upside down on the ground layer in the kiln. Each pile has about 5 pots. Therefore, 100 piles total have about 500 pots. When the potters make to bake pots, they mainly use firewood and straws for firing.[6]

The firewood and straws are spread around the pile of pots. Then, the straws are placed like fencing beside firewood. Each pile is surrounded by a layer of firewood and three layers of straw fences. Finally, the potters make to burn firewood and straws. The purpose of slow baking is that the pots are baked in a firm condition with the heat of firewood within a closed clay-cover. Considerable firewood is required to bake pots in the kiln. The process of baking pots takes about 10-12 hours, and it usually starts at 3 or 4 pm yesterday evening and finishes at 4 or 5 am the next day. These water pots are kept to a cool step for 4 or 6 days after baked them. After 6 days,

[1] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 -8 - 2020
[2] Interview with U Tin Tun, Pottery Industry, Artisan, Pathein, the age of 75 years, dated 16 – 2 - 2019
[3] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2 - 2019
[4] Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2 - 2019
[5] Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 - 2 - 2019
[6] Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 - 2 - 2019

other workers collect baked water pots. They also make to clean these water pots which are ready to be used. The size of a water pot is 8 inches wide and 1 feet height.[1]

Around 1980 a regular water pot priced Ks. 20 for wholesale market. It is sold about Ks. 30 in retail shops. Nowadays, a regular pot price Ks. 1700- 1800 for wholesale market and the pots are sold for about Ks.2500- 3000 in retail shops. But the prices of water pot can be changed to high or low price depending on the buying situation of customers. Since about years ago, the owners in Kwinlayar roam to sell the water pots and Thingyan-pots throughout river by boat to Pathein, Einmè, Kyaunggone, Kyonpyaw, Wakeman, Shwelaung and Mawlamyaingkyun Townships in AyeyaRwady Region.[2]

When the hyacinth groves throughout the river in the rainy season, the boat slowly goes throughout river. Therefore, the sellers take for two weeks because of hyacinth groves. Sometime the wholesalers buy the water pots, Thingyan-pots from Hlaingtharyar Township of Yangon Region. Also, the owners in Pathein sell the wholesaler market and retailed shops around Pathein.[3] According to the process of pottery, the potters make Thingyan-pots and vases like the water pots. Despite this process not being difficult, their artistic talents can amaze the customers. The potters use "myayni" and "myaywar" to make Thjingyan-pot and vase like the water pots.[4]The worker places wet one block of clay on the potter's wheel to shape Thgyian-pot and then also vase. At that time, another a potter attempts to shape Thingyan-pot and vase by using his artistic hands. The potter's wheel is started to turn by another one's hands to obtain suitable earthen wares in this process. The potter takes about 4 to 5 minutes for a vase and 3 to 4 minutes for a Thingyan-pot.[5]

The size of a Thingyan-pot (Atar Oh) is about 4 inches wide and 5 inches height. The size of a vase is about 8 inches wide and 1 feet height. The formal Thingyan-pot and vase are carefully designed, the workers make dry them under the sunshine. The pottery industry depends on the weather. If the weather is good, they will be dried for one day. If it encounters cloudy days, the drying process takes at least 2 - 3 days. The last process is that the potters make Thingyan-pots and vases in the kiln. Sometime both Thingyan-pots and vases mix to bake depending on the buyers because the potters make Thingyan-pots before the water festival. The potters put an iron circle inside each vase which thoroughly placed upside down on the ground layer in the kiln.[6]

In each pile, 500 vases are lined up above the ground layer and the firewood spread around the piles of vases. And then, when the potters bake vases, the straws are spread over and beside the firewood. Thereafter, the potters start the firing process in the kiln. When the kiln has a great capacity for the fuel, the workers close the entrance of kiln. After about one day, the Thingyan-pots and vases are required to allow cool down about 10 to 12 hours in the kiln. Sometime needs to cool down for about 3-4 days. When the Thingyan-pots and vases are of an acceptable standard, the workers collect them and clean them out before sale. After cleaning them, Thingyan-pots and vases are prepared ready for the sale. Especially, the prices of Thingyan-pot and vases can fluctuate and change a few prices depend on charges and market.[7]

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[1] Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 - 2 - 2019
[2] Interview with U Than Phay, Pottery Industry, Kwinlyarr, Owner, the age of 70 years, dated 3 – 9 - 2020
[3] Interview with U Than Phay, Pottery Industry, Kwinlyarr, Owner, the age of 70 years, dated 3 – 9 - 2020
[4] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2023
[5] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2023
[6] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2023
[7] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23- 8 - 2023

Making Process of Earthen Toy (*Oh Pote*)

The earthen toy called Oh Pote is known as a simple traditional handicraft, and it is made with the local raw material without using any advanced technology. These earthen toys are thought to have originated among the native of Myanmar children. This earthen toy business is located in the east of Nga Wun River in Pathein Township. This variety of earthen toys are pot, mortar, pestle, stove, plate, pan, and lid etc.1Especially, Myanmar young girls used to play to cook with Oh Pote every time and young boys play with toys of ox or bull. The colourful earthen toys are competing in the market with modern toys. Despite Myanma traditional earthen toys are not expensive, it is not only appreciative handicraft of Myanmar but also stand in the market. The owner of earthen toy business distributes their products throughout Pyapon, Maubin, Myaungmya, Hinthada, Latputta, and Yekyi in Ayeyarwady Region. Sometime the buyers of other townships come to buy the earthen toys from the wholesale shops of pottery in Pathein. The artisans need to buy suitable clay for the raw materials in order to make the earthen toys. Firstly, the ownerships have to collect the raw materials which can be processed into many different types of earthen toys. The owners of the earthen toy business usually collect the raw material from November to May because the raw materials cannot be easily collected during the rainy season.[2]

In particular, the raw material called black clay (*Mye Nat*) is collected from the field. Sometime the sellers of raw material mix other kinds of raw material. Therefore, the buyers must be careful to get the satisfied raw material. *Mye Nat* is a suitable raw material in the whole process of earthen toys. The owners brought this raw material in *Tegyigone* village of Pathein Township.[3] The *Tegyigone* village is located about 5 miles from the place of earthen toy business. The owners usually buy *Mye Nat* by carrying with large truck for 15 times to be enough around the whole year. The *Mye Nat* costs 25,000 kyats for a large truck. Next, the raw material is firewood which each truck costs 70000 kyats.[4] After carrying the raw materials, the workers have to store the raw materials in a suitable place. The making of earthen toys doesn't need a pestle and mortar to pound *Mye Nat* to get the fine powder because the kind of material doesn't contain lumps of mud as another kinds of clay. The size of kiln for making earthen toys is about 3 feet in height and 3 feet in width. The face and upper parts of this kiln have each entrance.

Despite other kilns having one small hole as chimney at the back to emit smoke, this kiln has only one hole to emit smoke at the upper part. Next step for making earthen toys is that raw materials soaked into the appropriate amount of water to get soften clay for about one day. The artisans often look at the situation of clay and if the clay needs a little water, a little more clay will be added. After the clay is reached a suitable situation for making toys, the artisans have made the lumps of clay depend on the number of earthen toys demanded per day. Then, the artisan places a lump of clay on the potter wheel and have to make well enough the ultimate shape by both hands of artisan. In making the earthen toys, it takes about 3 or 4 minutes for each toy. After modeling the toys, the workers make to dry these earthen toys under the sunshine if the weather is fine for a dried process.

If the weather is fine enough, it will dry for one day and if the weather is bad, it is necessary to dry the earthen toys for 3 to 4 days. After these earthen toys are dried, the workers carry and neatly arrange to dry the earthen toys in the kiln. Then, the workers continued to bake them in the kiln. The bamboo is not used to provide fuel in the kiln, because the bamboo produced a type of smoke which can change to black colour on the toys. As the workers place the

[1] Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner, the age of 56 Years, dated 23 -8 -2020
[2] Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner, the age of 56 years, dated 23-8 - 2020
[3] Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 – 8 - 2020
[4] Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner, the age of 56 years, dated 23-8-2020

embers of fire on the area of earthen toys, the workers gradually put the firewood into the kiln for 6 or 7 hours. After the heat rises, the entrance of kiln is closed for about one day. When the earthen toys get to a suitable standard, keep them cool for 5 or 6 hours in the kiln before carrying them. After cleaning the earthen toys, the artisans paint to complete a suitable traditional craft in the market. The painting is the final step in the process of earthen toy making. After painted on the toys, they are dried under the sunshine for one day. Then, the workers wrapped the earthen toys in plastic bags. One package contains 10 different toys. The price of one package of earthen toy is 500 kyats for wholesale market and it is sold at 1000 kyats at retailed shops.[1]

When the artisans make the earthen toys, they need to buy suitable clay for the raw materials. Firstly, the ownerships collect the raw material which can be processed into many different types of earthen toys (Oh Pote). The owners usually collect the raw material from November until May because of the rainy season. In particular, this raw material is collected from the field. Sometime the sellers of raw material mix with other kinds of raw material. Therefore, the buyers must be careful to get the satisfied raw material. "Myaynet"(Black colour) is a suitable raw material in the whole process of earthen toys(Oh Pote). The owners collect the raw material in Tègyigone village of Pathein. The Tègyigone village is distanced about 5 miles from the earthen toy (Oh Pote) business. The owners usually buy for 15 times of truck to be enough "Myaynet"(Black colour) around one year. The "Myaynet"(Black colour) costs Ks.25,000 at a time. Next, the raw material is firewood which each truck costs Ks. 70000.

After being carried, the workers have to store the raw materials in a suitable place. The making of earthen toys (Oh Pote) doesn't need a pestle and mortar to pound "Myaynet" (the black clay) to get the fine powder because the kind of "Myaynet" (the black clay) doesn't contain much the solid as another kinds of clay. The size of the kiln is about 3 feet height and 3 feet wide. The type of this kiln is different type from another kilns. The face and upper side of this kiln have each entrance. Other kilns have one small hole at the back to emit smoke, this kiln has only one hole to emit smoke at the upper. Next stage is that after stored the obtained raw materials, soaked to soften the clay about one day in the appropriate amount of water. It is soaked from 4 pm today until 4 pm the next day. The artisans often look at the situation of clay. If the clay needs a little water, the artisans add a little more clay.

After the clay is reached a suitable situation, the artisans have made the block of clay depend on the number of earthen toys (Oh Pote) per day. The artisan places a block of clay on the potter's wheel. Making earthen toys (Oh Pote) requires skill and experience. Both hands of artisan have made well enough the ultimate shape. When the artisans make a variety of earthen toys (Oh Pote), each toy needs to be made for 3-4 minutes. After analyzing, if the weather is suitable for a dried process, the workers make to dry these earthen toys (Oh Pote) under the sunshine. If the weather is good enough, it will dry for one day. The bad weather has allowed us to dry the earthen toys (Oh Pote) for 3 to 4 days. After these earthen toys (Oh Pote) are dried, the workers have continued to bake them in the kiln.

Next, the workers carry and neatly arranged to dry the earthen toys (Oh Pote) in the kiln. The bamboo which isn't used to provide fuel in the kiln, because the bamboo produced a type of smoking which can change to black colour on the colour of toys. After arranged, spread many broken earthen toys (Oh Pote) over the earthen toys (Oh Pote). Because the workers place the embers of fire on the area of earthen toys (Oh Pote). After the fire heat, the workers gradually put the firewood for 6-7 hours into the kiln. After the heat rises, the entrance of kiln is closed for

[1]Interview with Daw Khin Myo Win, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 48years, dated 8 – 8 – 2020

about one day. When the earthen toys (Oh Pote) get to a suitable standard, keep them cool for 5-6 hours in the kiln before carrying. After cleaning them, the artisans make to paint the earthen toys (Oh Pote) from the kiln. The painting is the final step in the process of making an earthen toy (Oh Pote) and the artisans paint to complete a suitable traditional craft in the market. After painted on the toys, they are dried under the sunshine for one day.[1]Then, the workers wrapped the earthen toys (Oh Pote) in plastic bag. One package contains 10 toys. One package of earthen toy (Oh Pote)'s price is Ks.500 for wholesale market and it is sold at Ks.1000 in retailed shops. The artisans use decorative paint for the earthen toys (Oh Pote). A package of earthen toys (Oh Pote) is Ks. 1000.[2]

Market Scope of Pottery Industries in local and Foreign Markets

The earthenware industries of Ayeyarwady Region have produced and distributed the earthenware in the local market due to their improved quality since many years ago until present day. However, they didn't penetrate into the international market because of difficulties in technology. The owners of earthenware industries distribute their products to the areas of Ayeyarwady region. During the years from 1948 to 1988, each earthenware industry distributed about 1000 to 1500 drinking water pots, 800 to 1000 earthen mortars, and 100 to 150 large jars to the domestic markets. In the previous time, Pathein, Hinthada and Kwin Lyarr were the largest importers of earthenware in the Ayeyarwady Region. After 1988, each earthenware industry distributed about 100 to 200 pots, 200 to 600 mortars and other earthenware products to the local markets. The pottery market in Myanmar faces the challenges in the market because of modern plastic utensils. The earthenware products connected to religion are continued to be produced in the Ayeyarwady Region according to the demands. The earthenware toys are produced and distributes to the markets.[3]

Findings

According to the interviews on the pottery industry, it was found that the traditional pottery industries face challenges such as the shortage of craftsmen, scarcely enough raw materials and poor marketplace in the present time. Some housewives gradually use iron and stone mortars. Some local people use plastic bottles and cans for drinking and storing water due to mobilizing living standards. However, as the clay pots can cool water naturally and are affordable and easy to use, there are some households which are still using pottery. In addition, it is found that people still use pottery in traditional events including seasonal festivals and religious events such as Thingyan festival and Kason- Bodi Tree-water festival. Myanma handmade clay toy (*Oh- Pote*) seem to have a universal appeal for children. The Oh-Pote market has closed in rural areas than urban areas.

Discussion

When the sunlight contacts plastic, it causes water to treat water in the plastic bottles. After the drinkers drank treated water, they are reacted harmful diseases such as bladder, colon cancers and can affect other diseases in the future. because of the side effects. Mixed chlorine

[1] Interview with Daw Khin Myo Win, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 48years, dated 8-8- 2020
[2] Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 56 years, dated 8-8- 2020
[3] Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Owner, Pathein, the age of 72 years, dated 12 -5-2020

into the water from the water treatment plant. By using traditional clay water pots, people should prevent these diseases in the future.

Next, when the customers eat the food the mixed meals and vegetables together with stone and iron powders by using the stone and iron mortars, they will suffer from stomach-pain (*Stomach-ulcer*), kidney stone (*Urolithiasis*) diseases in the near future. Some of these customers prefer to buy plastic pots because they want to use new items and another reason is to avoid the crack pots. But the market for small clay pot (*Atar-Oh*) has been active for around a year until today since the previous days. The artisans need to create the earthen toys (*Oh-Pote*) as distinctive designs by using the innovation method. In all of these submissions, the pottery industry had achieved as a huge market in previous time, and nowadays, the pottery industry still lives as a mid-marketplace. In order to maintain the traditional handicrafts, the ownerships need to carry on earthenware products of Ayeyarwady Region.

Conclusion

The owners of earthenware industries in Ayeyarwady Region faced challenges which consist of a shortage of craftsmen who inherit handicrafts. Therefore, the owners of earthenware industries need to apply modern technology together with traditional methods to prevent the shortage of workers. At present, the production of earthen large jars has disappeared in Ayeyarwady Region. Although the earthen pots have started to decrease in use in urban areas, they are still used in the rural areas. Earthen mortars and other earthenware are produced and distributed from the earthenware industries in Ayeyarwady Region. Nowadays, modern plastic utensils are replaced as household utensils in place of earthenware in the urban areas. Earthen mortars were well known as household utensils, but the use of these mortars decreased in urban areas than the rural areas. Although the small plastic pots penetrate into the domestic markets, the small earthen pots are still sold in the months of April and May. Therefore, it is necessary to create a new design and control the markets by creating new designs. Nowadays, modern toys influence children. However, the children from the rural areas still play with these earthen toys. In order to maintain the markets of these toys, the owners of earthenware industries need to create new designs. The competition in technologies, scarcity in raw materials, the necessity of artisans and the increase in investment effect on the markets of earthenware industries. Therefore, earthenware industries and artisans need to preserve the traditional handicrafts of Myanmar, which would be required for future directions to prevent the fading tradition.

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THE ROLE OF KYAING TONG IN MYANMAR'S RELATIONS WITH HER EASTERN NEIGHBOURS (1752-1885)

Nwe Nwe Aung[1]

Abstract

Kyaing Tong is located on the crossroads which linking Thailand, China and Laos. In monarchical days, Myanmar Kings recognized Kyaing Tong as the easternmost garrison town of Kingdom. During Konbaung Period, Myanmar Kings recognized the rule of Kyaing Tong Sawbwas as well as defended the region from invasions of neighbouring states. This paper aims to revisit the position of Kyaing Tong in dispute and friendly relations between Myanmar and her eastern neighbours. This paper also discusses the relations of Konbaung monarchs with successive Kyaing Tong Sawbwas.

Keywords: political history of Kyaing Tong

Introduction

Kyaing Tong, also known throughout history, as Gon[2], Khun[3], Khemarattha, Khemarathhajoti Tongkarapur, Tongka[4], is the largest and oldest state of Trans-Than Lwin area. It is the mountains, most easterly and culturally the farthest from the Myanmar, and of all the Shan States. The land is located between the Than Lwin and Mekong Rivers. The geographical position forced Kyaing Tong to draw its cultural inspirations from the bosom of Mekong rather than from the lands beyond Than Lwin River.

Materials and Method

The method of critical approach is used to analyze archival materials and other sources to yield the vivid information on the importance of frontier areas.

Result

Kyaing Tong Sawbwas stood as the faithful allies of Konnbaung Kings up to King Mindon. The Kings gave protection Kyaing Tong from the invasion of eastern neighbours. This paper yields the importance of strengthening the frontier areas to defend the nation.

Aims and Objectives

This paper aims to shed light on the importance of Kyaing Tong as the garrison town to defend the territorial solidarity of the kingdom of Myanmar in Konbaung period.

Research Question

How and why Kyaing Tong important for the security of the eastern Shan State as well as of the Kingdom of Myanmar?

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[2] *Jambudipa Oksaung: Jambu Island in a Nutshell,* Than Tun (Comp and Ed), Yangon, Myanmar Historical Commission, 2005, pp. 79- 80, 90

[3] This name was derived from the name of the Tai ethnic group who called themselves Khun

[4] This name derived from the name of Hermit Tong, the Legendary founder of Kyaing Tong

Findings and Discussion

Although Kyaing Tong was founded by Luas, their rule existed only in the reigns of first two *Saw-bwas*.[1] The ruler who firmly established *Saw-bwa* lineage in Kyaing Tong was Phraya Mangrai in AD 1267.[2] Mangrai was the native of Ngoen Yang in Chiang Rai and in 1261 he became the ruler of Ngoen Yang and also known as the twenty-fifth king of the Lao dynasty. The establishment of Kyaing Tong was followed by the invasion of Chinese. The Chinese emperor dispatched troops under Yu Ve-ya to demand tribute of one thousand poles of rice[3] and one thousand elephant tusks or ten elephants and 100,000 silver. During that time of the ruler of Kyaing Tong was Phaya Namthum, son of King Mangrai, who successfully defended the city and drove and the Chinese intruders.[4]

The reign of Sao Nam Thum lasted for eleven years and he was succeeded by Sao Namnam in A.D 1317. He was the longest reigning *Saw-bwa* of Nam Thuam's line and reigned for fifty-three years. In 1317, Sao Samhmunhoy succeed the throne for seven years. He was succeeded by Sao Jaylok who reigned for eighteen years. In 1342 Sao Sainang succeeded the state and died. According to Jengtung state chronicle, there was a long interregnum in Kyaing Tong due to the overwhelming of misfortune.[5] Chinese emperor demanded tribute from Kyaing Tong. During the reign of his younger brother Sao Sam, (1416-41) the Sino-Myanmar War broke out. Myanmar chronicle *Maha Yazawingyi* mentions that war broke out in Narapati's reign (1442-68) in 1443.[6] Thus the date of the outbreak of war with Chinese as mentioned in Myanmar source was about two decades later than that of Kyaing Tong Chronicle. During the war, Sao Sam sent one thousand cups of liquor to the Chinese.[7]

The stable situations of Kyaing Tong began to deteriorate after the death of Sao Aylau in 1501. His successor Comsak was a weak ruler who faced with the threat of outside enemy. He fled to Padaeng Monastery and was executed by his rival Sao-Saygho (1520-23). He was succeeded by Sao Saibron (1523-240).[8] During his reign, the rivalry for succession for the throne broke out. In this situations, Chiang Mai forces were able to occupy the city. The Khuns took the help of Lus to fight against Saen Yi who finally fled to Kyaing Saen.[9] Although Yun forces from Chiang Mai withdrew and the rival for throne was settled, the situations of Kyaing Tong did not improve under the rule of next Sawbwa. The reign of Sao Kaeuyofanarinda (1524-60) coincided with the rise of Mangbrara Hongsa.[10] After the unification of the kingdom and subduing some

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[1] Maynmar word Saswbwa derived from Sao-pha- literally means Lord of the Sky and this term dedicated to the hereditary chiefs of Shan States

[2] Ongsakul, *History of Lan Na*, Chaing Mai, Silkworm Books,2005, p.100 (Hereafter cited as Ongsakul , *History of Lan Na*)

[3] One carrier pole of rice equivalent to two baskets,

[4] Sao Saimong Mangrai,*The Padaeng Chronicle and the Jentung State Chronicle Translated,* Ann Arbor, Center of Southeast Asian Studies,University of Michigan,1981, p.205 (Hereafter cited as Mangrai , *Padaeng Chronicle*)

[5] Mangrai,, *Padaeng Chronicle*, p.231

[6] Mangrai , *Padaeng Chronicle*, p.235

[7] U Kala, *Maha Yazawingyi* (The Great Chronicle), Three Volumes, Volume Two, Yangon, Yabyei Publishing House, 2006, (Fourth Impression) pp. 77-79

[8] Mangrai, *Padaeng Chronicle*, p.238

[9] Mangrai, *Padaeng Chronicle*, p.243

[10] King Bayinnaung of Hanthawaddy

Shan principalities, King Bayinnaung led on huge expedition to Chiang Mai in 1564.[1] As Kyaing Tong located at the western gate way of Chiang Mai, King Bayinnaung occupied the city, but recognized the Sawbwa as his subordinate chief. Throughout the wars against either northern Tai states or Ayudhaya, Kyaing Tong Sawbwa stood as the loyal ally to king Bayinnaung[2] and the king took special care to create amicable relation with Kyaing Tong.

The expansion of Myanmar power under the early Konbaung dynasty in the mid-18th century, and the subsequent restoration and expansion of Siamese power under Taksin and the early Chakri dynasty, had a devastating effect on the Tai principalities of Lan Na. at the time, the Tai regions between the Salween and the Mekong Rivers, which had formerly constituted the independent Lan Na Kingdom, paid tribute to the kings of Burma, but were largely independent in practice. Between the Burmese invasion of 1762, and the Siamese counter-invasion of 1775, the Lan Na principalities became almost completely abandoned, losing the majority of their population to war, conscription, or starvation.

The 18th century was a time of conflict and instability for all of mainland Southeast Asia. For Lan Na, however the instability had begun long before the 18th century. In the 16th century, the Mangrai dynasty of Chiang Mai, who had ruled Chiang Mai from its founding and built a large kingdom with Chiang Mai at its center, collapsed, and Lan Na was overrun by the Burmese King Bayinnaung, who went on to conquer Siam and build one of the largest empires in Southeast Asian history. From the 16th until the 18th centuries, Lan Na thus existed in a state of political disintegration, with the emergence of numerous small principalities existing under the loose control of the Myanmar.[3]At the beginning of 18th century, these cities, which included the historic population centers of Chiang Mai, Lamphun, Lampang, Phrae, Nan, and Chiang Rai, were put under the administrative jurisdiction of Chiang Saen, which were ruled by a Myanmar governor, or *myowun*.[4] The Kings of early Konbaung period made their utmost efforts to secure their rule in above mentioned areas.

During King Myaydu's reign, a massive army under the command of the Myanmar general began a sweep through the Trans-Than Lwin areas, culminating in the destruction of Ayutthaya in 1767. Myanmar army settled in for a five-month siege of Chiang Mai, which culminated in the fall of the city. Despite the eventual success of the Myanmar against Ayutthaya, the campaigns devastated the lands and populations of Inwa's Tai allies. The large amount of people from Chiang Mai, Lamphun, Lampang, Phrae, and Nan were conscripted into the service of the Myanmar as soldiers or laborers. The chronicles vividly describe a time period marked by political chaos and constant warfare which laid waste to much of the region. During that period, Lan Na, Chiang Mai were fell under in chaotic situation. Most of the villages and fields were deserted, all wild and overgrown. To the south there were tigers; to the north were

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[1] (a) U-tha-yaw Amat-kyi, *Hanthawaddy Hsinbyumashin Ayedawbon Maw-gun Udan* (The Acievements and conquests of King Bayinnaung), U Toe Hla (Member of Myanmar Historical Commission) (ed), Yangon, Myanmar Historical commission, 2006, pp. 87-99

(b) The date of the invasion of King Bayinnaung was mentioned in Chiang Mai Chronicle between 1557-58.

[2] Than Tun, *Nehle Yazawin* (Peripatetic History), Yangon, Pyay Zone Press, 2004, pp.42-43 (Hereafter cited as Than Tun, *Peripatetic History*)

[3] John Sterling Forssen Smith, *The Chaing Tung Wars and Politics in Mid 19th Century Siam and Burma*, Bangkok, Institute of Asian Studies, Chulalongkorn University, 2013, p.44 (Hereafter cited as Smith, *Chaing Tung Wars*)

[4] David K. Wyatt and Aroonrut Wichienkeeo, tr., *The Chiang Mai Chronicle*, Chiang Mai: Silkworm Books, 1998, p,130 (Hereafter cited as Wyatt and Aroonrut, *Chiang Mai Chronicle*)

elephants. The land was unstable, and there was no ruler to take charge; there were but few leaders and few followers."[1]

As mentioned above, King Myaydu (1763-1776) renewed the hostility with Ayutthaya. The resolution of King Myaydu to occupy Ayutthaya was probably inspired by the abortive result of the expedition of his father, King Alaungmintaya. At first, Myanmar armies occupied the surrounding districts of Ayutthaya. Indeed, King Myaydu had already learned the knowledge of the physical geography of Ayutthaya and knew the military caliber of Ayutthaya. Based upon these, the King planned to seize Ayutthaya by the two penetration columns, one from Chiang Mai under the command of Naymyo Thihapate and the second route from Dawe under the command of Maha Nawrahta. King Myedu sent his twenty-eight battalions under the command of General Naymyo Thihapate to Chiang Mai on 6 February 1764. On reaching Mong Nai, the forces divided into two columns. One made up of three Myanmar and seven Shan battalions[2] went by Mong Pu-Mong That[3] route. The Mai column of twenty-five battalions under NaymyoThihapate went by Mong Thwin (Mong Hsin) – Keng Ye (Chiang Rai) Route. The whole force captured all fifty-seven districts of Chiang Mai and encamped at Anan (Nan).[4]

The first column of Naymyo Thihapate forces were chiefly made up of Shans. But Myanmar King did not trust on them completely. For one instance, when the political changes occurred in Myanmar, some *Sawbwas* on the Yunnan border were defiant to the Myanmar's suzerainty and they ceased paying tribute to Myanmar and took refuge into Yunnan. On 31 October 1764, Naymyo Thihapate's forces marched to Mainglonkhapin (Luang Prabang) and Linzin. His forces with twenty-five battalions went by the Mekhong River. *Sitke* Tuyin Yamakyaw with ten battalions went by land. King of Linzin submitted under Myanmar General together with such presents as weapons, horses, elephants and his relatives. Then all the forces came back on 25 March 1765 and arrived Lagun (Lampang) on 29 April. Besides King Myedu invaded Manipur in December 1764 and carried off many war captives to his capital for the purpose of increasing manpower.

Sitke Tuyin Yamakyaw headed towards Ayutthaya on 22 August 1765 with twenty battalions. They marched by the Me Pein River. Ten battalions made his vanguard, followed, by fifteen, and another thirteen under Naymyo Thihapate all fifty-eight marched to Ayutthaya. Many towns and villages of Thai territory which situated along the military route had prepared to defend the Myanmar forces. They all were however occupied by the Myanmar forces and a number of war captives were captured.[5] The towns of Thai territory can be easily occupied by the Myanmar forces. But some towns strongly defended the Myanmar forces. Town or villages officers who strongly defended the Myanmar were killed and the remain village officers were reinstated in their former ranks and rights. But the conqueror captured many captives from the defeated country. They were added in the Myanmar forces, thus increasing their own strength. Thus, force collected around and attacked Ayutthaya. The local levies were put at vanguard.

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[1] Wyatt and Aroonrut, *Chiang Mai Chronicle*, p.158

[2] Sawbwas of Mong Nai, Nyaung-shwe and the *Myosa* of Lawksawk, Mong Khine, Laihka, Mong Seik and Mong Pun

[3] Present Mong Hsat

[4] Maung Maung Tin, *Konbaungzet Maha Yazawindawgyi*,Volume I, Yangon, Yabyay Press, 2004 (Reprint) pp. 266-276 (Hereafter cited as Maung Maung Tin, *Konbaungzet I*)

[5] Maung Maung Tin, *Konbaungzet I*, pp.282-3

Myanmar King had forbidden any disturbances to the towns which submitted themselves under their power.[1] All the Myanmar forces coming from the north towards Ayutthaya numbered seventy-one battalions. So the Myanmar forces were able to get nearer to Ayutthaya. The Myanmar forces captured the towns which would be useful to them as bases. When northern capital Chiang Mai, a strategically important town, fell into Myanmar, Thai lost its defence and became in easy prey. Chiang Mai was rich in provisions and resources. So Myanmar forces easily achieved those advantages.

Naymyo Thihapate's column, on the way, met an effective resistance from in village, Bang Rachan. The Myanmar forces fought seven times but failed to capture the village. [2] Therefore, the Myanmar forces delayed for about five months on their way to Ayutthaya. The fight at this village was a decisive one. This village had halted the Myanmar advance. A Mon, who had bravely fought on Myanmar side, was made a *Thugyi*, village headman by the Myanmar. The Mon *Thugyi* fought the village, Bang Rachan eight times. The Mon *Thugyi* understood that the Myanmars defeat in the previous fights were on account of the fact that the Thais are "men of the area" and "master of the ambush". Therefore, he built several forts along the road to village. Thus he arranged carefully and led a Myanmar force from fort to fort, slowly taking half a month to reach the village. Although the Thais from the village came out and attacked the Myanmar forces several times they failed to success. The causalities on the Thai side were heavy. In such a bad situation, the villagers had requested to the Thai capital for help. The capital had refused to give help. So Bang Rachan fell in July 1766.[3] Although the villagers were "men of their own area," and had given a strong resistance, they were defeated finally. King of Ayutthaya sent two forces- one by land and another by sea to intercept Myanmar forces under Naymyo Thihapate on a bank of the Me Pein River. The Thais were defeated. The Myanmar forces advanced to Pananpathoke village on 14 January 1766.[4] The Thai made on more attempt to go out and fight against the Myanmar forces. They stood firmly in Ayutthaya.[5]

Meanwhile, the hostility with Chinese Empire broke out. One of the reasons of this hostility has centered at Kyaing-Tong. A Chinese merchant named Law Ta-yi was killed in a dispute about payment; the Myanmar resident offered blood-money and even talked of executing the slayer, but would not hand him over, and the Chinese would take nothing less. Such instances were trivial and could have been adjusted had the town governments been in communication with each other, but they had not embassy system to solve the problem on time. In this situation, Saw Bwas of Bhamo, Thein-Ni and Kyaing Tong ceased paying tribute to Myanmar. Instead, they paid tribute to Chinese Commander Son-Tu and urged to attack Myanmar. When Son-Tu submitted a full report to the Chinese Emperor, a military expedition comprised of 50,000 men and 10,000 horses was sent to Myanmar to attack Kyaing Tong. This event was coincided with the problem created by Kyaing-Ton Saw-Bwa who committed murder against a Myanmar

[1] Maung Maung Tin, *Konbaungzet I*, p.286

[2] Damrong Rajanudhap, *Our War with the Burmese*, Bangkok, White Lotus2001(Reprint), pp.331-6 (Hereafter cited as Damrong, *Our War*)

[3] (a) Damrong, *Our War*, pp.336-9
(b) The year 1766 is mentioned in Damrong, 2001. But it can be supposed to be the year 1765.

[4] Maung Maung Tin, *Konbaungzet I*, p.287

[5] Damrong, *Our War*, 340

official in a fighting between him and Myanmar officers of Kyaing Tong garrison town Let-we Kyaung-gaung and Let-ya Kyaw-gaung and took refuge to Yunnan.[1]

When Kyaing Tong was besieged by the Chinese army, Myanmar Commander Sit-Ke Shwei-Daung-Tet, Ba-Ya Than-Baing, Baya Win collaborated with the garrison forces of Kyaing-Ton for defence and submitted a report to the royal capital. Therefore, Myei-Du Min sent eleven armies under the commanders of Bala Mindin, Artillery Officer, Officer of Cassay Cavalry, Myit-Che-Za, Banya-U, Bala Pya-Chi, Tha-Mein. Set-Ka-Waw, Banya Dala, Potta Sanlon, Ka-Dok-Wun, Let-We Win Hmu. The combined forces of Myanmar armies comprised of two hundred elephants, two thousand horses, and 20,000 men. Myanmar armies left Inwa on 27 December 1765.[2] Meanwhile another Myanmar armies led by Commanders Thihapate and Maha Nawrahta waged the war against Ayutthaya.[3]

When combined Myanmar armies led by Nemyo Sithu at Kyaing Tong, two columns were separated; one was led by Let-we Win-Hmu comprising five armies, one hundred elephants, 1000 horses, 10,000 men, and named as "right column"; another column, "left column", was led by Bala Mindin with same strength and attacked against the Chinese besieging of Kyaing-Ton. In this battle, the Chinese relied on cavalry by it could not withstood the ravage of Myanmar elephants. Therefore, they retreated to Ta-Lao River where they built a stockade to make defence Myanmar attack. In the battle of Ta-Lao Chinese Commander Yi-Ta Law-Ye was killed in action.[4] And Chinese armies hastily withdrew into Yunnan Province. After the withdrawal, Lord of Kyaing Yon and Lu-Hse-Hnit Panna and Myoza Daw-Ba-Ya submitted to Myanmar commanders and explained that the "Chinese forced them to pay tributes by threatening with armies, the strength of which was superior than that of their forces. However, they would continue to submit tributes to Myanmar King and would serve under Myanmar King." Let-we Win-Hmu sent a messenger named Ye-Hla Nara to explain the situation. When Ye-Hla Nara arrived Inwa on 8 February 1766, King Hsinbyushin brought back the forces of Let-we Win-Hmu to the royal capital. But he made a precautionary measure to prevent future invasion of Chinese by placing an army led by Bala Mindin at Kaung-Tong.[5]

During The reign of King Badon (1782-1819), the efforts were made to strengthen the Myanmar garrisons at Trans-Than Lwin Area including Kyaing Tong Garrison. Naymyo Kyaw Htin Thin Hkaya was appointed as a commander and given 5,000 men, 500 horses and 2,000 guns to advance the Trans–Thanlwin areas where there were some disturbances broke out due to the invasion of Chaing Mai. King Badon instructed Naymyo Kyaw Htin Thin Hkaya to consult all events with the local chiefs of Cis-Thanlwin Shan areas. Another order was passed on 8 August 1787 regarding the military operation against Siam. The second column was to suppress the rebels led by Kawila of Chiang Mai who have received the help of Siam and they had made a disturbance in fifty- seven districts of Chiand Mai. The city guards were left behind when the armies had advanced to Siam. Maha Thiri Thihathu was left as rearguard in Dawe to guard the town and to collect provisions for the advancing forces.

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[1] Maung Maung Tin, *Konbaungzet I*, p.311
[2] Maung Maung Tin, *Konbaungzet I*, p.211
[3] G.H,Luce, *Chinese Invasion of Burma in the 18th Century*,Bangkok, Myanmar Book Center and Book Promotion and Service Ltd,1998(Reprint), p.119 (Hereafter cited as Luce, *Chinese Invasion*)
[4] Maung Maung Tin, *Konbaungzet I*, p.316
[5] Maung Maung Tin, *Konbaungzet I*, p.312

On 29 August 1787, the Myanmar King sent an army to advance to Chiang Mai in order to maintain law and order there.[1] Since the time Myanmar retreated from Siam at the second battle, King Rama I decided to stage a war against Myanmar. He divided two columns. One was sent to the north to relieve Lampang. The second column was headed by the King himself and advanced to Dawe and staged an offensive attack on Dawe but he did not win over it. In the above situation, Myanmar King made arrangements to counter attack the Thai.

Meanwhile Kawila, King of Chiang Mai, decided to revive the north. His first attempt was to repopulate and resettle the Chiang Mai and Lamphun region. Secondly, he had to raid into the northern and western Shan regions controlled by the Myanmar. He came back to Chiang Mai in 1796. The war started again between Myanmar and Siam. On 29 October 1797, Chiang Mai campaign started.[2] It was because Kawila was reestablished in Chiang Mai twice, once in 1797 and later in 1802. Thai army also helped Chiang Mai to join attack on Myanmar forces. On 31 March 1798, Chiang Mai and the Thais jointly attacked the Myanmar forces. So, Myanmar forces retreated from Chiang Mai.[3]

In 1802, Kawila invaded Kyaing Tong and carried off many families from there. They all were resettled at farther south. In 1803, the Thais attacked Keng Tung and a large number of people from Kyaing Tong were carried away to Chiang Mai. These people themselves wished for swaying to the Thai sides because they hoped that they would achieve better treatment from the Thais sides than from the Myanmar. This belief made a difficult situation for Myanmar to achieve the strength of the Shans. In 1805, Kawila drove out the Myanmar from Chiang Saen. From 1807 to 1808, the tension mounted between Myanmar and Chiang Mai. The King issued a number of orders[4] concerning Chiang Mai campaign. On 23 October 1807, the King passed an order to advance to Chiang Mai under the command of Prince Pakhan. Min Kyaw Thiha and Naymyo Nawrahta were appointed as *Sitke*, Regimental Officers for Chiang Mai campaign. Recording to the Royal Order of 26 September 1808, Chiang Mai campaign would be started on 31 December 1808.[5]

On 30 September 1808, the King ordered Banya Thi to reconnoiter the route of Hsipaw to ascertain which route had to be used in his campaign against Chiang Mai. Moreover, the King also ordered to inform about his campaign to the *Sawbwa* and Chiefs of Kung Ma, Mong Khine and Mong Wun. In October 1808, the King called upon the men who were familiar with the route of Chiang Mai well. On 5 November 1808, the King ordered Mong Nai Commander and Regimental Officers to investigate one of the four envoys who came from Chiang Mai.[6] The military operation against Chiang Mai was proclaimed on 26 September 1808. On 2 December

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[1] Maung Maung Tin, *Konbaungzet Maha Yazawindawgyi*,Volume II, Yangon, Yabyay Press, 2004 (Reprint) p.52 (Hereafter cited as Maung Maung Tin, *Konbaungzet II*)

[2] Maung Maung Tin, *Konbaungzet II*, p.99

[3] Maung Maung Tin, *Konbaungzet II*, pp.p.100-1

[4] The Royal Orders dated 23 October 1807, 26 September 1808, 30 September 1808, 1 October 1808, 3 October 1808 and 5 November 1808. Than Tun, Royal Orders of Burma (AD 1598-1885), Part VI (AD 1807-1810), Kyoto, CSEAS, Kyoto University, 1987, pp.89-90, p.124, pp.128-9, pp.131-2, p.162 (Hereafter cited as Than Tun, *ROB VI)*

[5] (a) Than Tun, *ROB VI*, pp.89-90, p.124
(b) Dr Yi Yi, "*Myanmar Thamaing Atauk-Atar-Myar 1143-81*" (Historical Documents of Myanmar 1781-1819), *Historical Research Paper* I Yangon, Myanmar Historical Research Department, 1977, p.106 (Hereafter cited as Yi Yi, *Historical Documents*)

[6] Than Tun, *ROB VI*, p. 162

1808, the King ordered the Crown Prince to launch an attack Chiang Mai by the way of Mong Nai. The King himself advanced to Chiang Mai on 31 December 1808.[1]

Main causes of Chiang Mai expedition were to subdue Chiang Mai King Kawila and his plan to expand his influence into Trans-Than Lwin areas. Particularly Kawila would like to install a new Sawbwa on throne of Kyaing Tong. Meanwhile Myanmar troops gave priority to depose Sao Maha Khannam, Sawbwa of Kyaing Tong. Then they advanced to Lan Na where 4300 troops of Kawila stationed. In 1811 Maha Khannam went across Mekong River to ask help from Lamphung and Chiang Mai. This war prolonged to 1812 when Myanmar troops retreated under shortages of food.[2] They took people from Mong Yong, Mong Phyat, Mong Lin, Mong Kaing, and Keng Khan as prisoners. Sao Maha Khannam was detained in Chiang Saen.[3] Although King Badon enabled to control Keng Tung, he worried upon the stability of his influence on Sao Maha Khannam. At the end of 1812 Sao Maha Khannam was met by his servant Sao Khannam who told him King Badon would like to negotiate for keeping Keng Tung as subordinate alliance.[4] Other source mentions that Maha Khannam sent his two servants to King Badon to offer terms of peace. As King Badon rejected the offer, Maha Khannam went to Amarapura and submitted twelve elephants. King Badon offered the title of "Sao Phalong Khemarahta Mahathiha Pavarathnddhamaraja Burneindadipatiraja." The eastern Than Lwin area was pacified with the reinstatement of Sao Maha Khannam on throne of Kyaing Tong.

In February 1845 Chiang Mai invaded Kyaing Tong. Maha Min Hla Min Hkaung Kyaw was appointed as a Commander-in-Chief and sent to Chiang Mai from with 200 horses asn 2,500 men by the way of Mong Nai.[5] Kyaing Tong was situated between Myanmar, Lanna and Yunnan. Because of this situation, he offered tributes to those Kingdoms.[6] At the beginning of 1850s, the significant events changed Thai-Myanmar relations. Chakri Dynasty, centered at Bangkok, expanded its power to neighbouring states of present-day Cambodia, Malaya and north Kingdom of Lan Na.[7] Meanwhile, Myanmar's control over Lan Na and Kyaing Tong area was gradually loosened.

When Myanmar suffered military defeat in Second Anglo-Myanmar War, Thai took opportunity and invaded into Keng Tung. King Mongkut appointed Krommaluang Wongsathiratsanit, his younger brother, and Chaophraya Yommarat, at the head of two armies to invade Keng Tung. While they were advancing to Keng Tung, Thai forces recruited men from Nan, Phrae and Lomsak, Chiang Mai, Lamphun and Lampang. Meanwhile Cao Maha Khanan and Myanmar troops prepared to defend the city. Royal capital sent Bala Zeyakyaw and his troops. Local ethnic people such as Tai Yai and Tai Lu collaborated with Maha Khanan.[8] On 2 May 1852 Thai armies besieged Kyaing Tong. Twelve days after besieging, Thai forces retreated due to suffering of fever and shortages of food, Myanmar armies seized captives and elephants

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[1] Yi Yi, *Historical Documents*, p.106
[2] Smith, *Chaing Tung Wars*, p.44
[3] Wyatt and Aroonrut, *Chiang Mai Chronicle*, pp.193-194
[4] Mangrai, *Padaeng Chronicle*, p.259
[5] (a) Maung Maung Tin, *Konbaungset Mahayazawindawgyi* (Great Chronicle of Konbaung-Dynasty), Vol. III, Yangon, Yarpyi Book Shop, 2004, (Reprint) p. 47 (Hereafter cited as Maung Maung Tin, *Konbaungset III*)
(b)Thongchai Winichakul, *Siam Mapped: A History of the Geo-body of a Nation*, Thailand, O.S Printing House, 1994, p. 97
[7] Smith, *Chaing Tung Wars*, pp.51-2
[8] Smith, *Chaing Tung Wars*, p.115

from invaders.[1] Furthermore on 5 April 1850 *Sitke*, Regimental Officer of Mong Nai informed the news of the Than Lwin River which would be made to be a frontier of Chiang Mai. Therefore, the forces led by Maha Thiha Min Htin advanced to Chiang Mai with 10,000 men. The Thanlwin River was marked as a boundary of Chiang Mai by the side of Chiang Mai. This was informed to the Myanmar King by Mong Nai *Sitke*, Regimental Officer on 5 April 1850. Therefore, a force was sent to crush them.[2] When the Second Anglo-Myanmar War started on 2 April 1852, the *Sawbwas* who took refuge in Siam gave their aids to the British.[3]

When Myanmar faced with the British annexation of Bago after the Second Anglo-Myanmar War of 1852, Siam also started their invasion again. Although the Thais invaded Kyaing Tong twice, in 1852 and in 1853, they failed to capture the town. The younger brother of Hsenwibwa, the Lord of Sipsonpanna,[4] took refuge under Thai King Rama III and asked for help to attack Keng Tung.[5] Siam wanted to possess Sipsonpanna, which was under the suzerainty of Myanmar through Kyaing Tong.[6] In this campaign, Thai King sent his younger brother named Kyauk Thiwayit with twenty-four battalions to Keng Tung front. A total strength of 5,000 men from Mong Pon and the Chief of Anan (Nan) marched to Kyaing Tong. The Chief of Mong Han followed behind the main column. The three forces within the city commanded by three commanders namely Mingyi Maha Min Hla Min Htin Kyaw, the *Sawbwa* of Kyaing Tong and Min Kyaw Tasaung simmultaneously came out of the city and attacked the enemies stationed at Pyaingsanyat, south of Keng Tung. After seriously fighting with each other, Sao Wanna, the younger brother of the Chief of Chiang Mai and a brother of the Chief Lampang were falled in the field. The Thai forces had to withdraw from Kyain Tong.[7]

Son Hit Kunmun, the Crown Prince of Kyaing Tong and Wunsar Diya Htanit were sent to Keng Tung from with 20,000 men by King Rama IV (1851-1868) of Siam. Mingyi Maha Nawrahta had informed to the capital Amarapura about the invasion of Thai forces to Kyaing Tong. The reinforcements force[8] jointed hands with Myanmar and defended the enemies.[9] Myanmar forces within the city were well prepared for counter attack on the Thai forces and tried to halt the enemies in order not to approach the city. Therefore, Myanmar forces prepared three defensive actions of guerilla defensive action, outer perimeter defensive action and close defensive action around the city. Within the city of Kyaing Tong, one hundred musketeers were stationed as a close defensive action. The Lord of Mong Late was responsible to defend the city. So, he was stationed inside the city. The Chiefs of Kyephogyi and Baarpaung were stationed at the south of Mobye in order to intercept the Thai forces from Chiang Mai route. As a far beyond defensive action, another column was stationed at Mong Nyaung (present Mong Yawng). At Mong That (present Mong Hsat), a force of 3,000 men under the head of Min Hla Min Hkaung

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[1] Mangrai, *Padaeng Chronicle*, p.262

[2] Maung Maung Tin, *Konbaungset III*, *69*

[3] Bo Kyaw Tint, *Yadanapon-khit Myanmar Naingngancharr Setsanye 1853-78* (Myanmar Foreign Relations During Yadanapon Period 1853-78), Yangon, Dobamar Book Shop, 1975, p. 16

[4] Northern Lu state of Chiang Hung

[5] U Ponnya (Sale), *"Yodaya Naing Mawgun"* (Victory over Yodaya (Thailand) which was recorded in the sacred Myanmar Literature called Mawgun), Universities Historical Research Centre Collection (Type Script), No Date, Stanza-23 (Hereafter cited as Ponnya, *Yodaya Naing*)

[6] Ponnya *Yodaya Naing*, Stanza-32

[7] Ponnya, *Yodaya Naing*, Stanza-23, 24, 25, 26, 28

[8] *Sawbwa* forces from the Eastern Shan States.

[9] Ponnya, *Yodaya Naing*, Stanza-31, 34, 36

Kyaw was stationed as well. At Mong That (present Mong Hsat) the Myanmar forces and Chiang Mai forces seriously fought with each other. Finally, Chiang Mai forces retreated with defeat. A Thai force successfully attacked Mong Nyaung (present Mong Yawng) and then they besieged the town of Kyaing Tong.[1]

The Lord of Mong Late and his forces came out of the city and repulsed the Thai forces outside the city. Thai forces retreated in disorder. As they could not continue to stand to meet the Myanmar forces, Thai forces halted for three days and reinforced their forces. Myanmar forces inside the city changed their tactic from defensive to offensive. Before they attacked, Keng Tung *Sawbwa* himself led his forces and came out of the city and seriously fought the Thai forces. Finally, Myanmar forces successfully repulsed Thai forces. Mingyi Maha Nawrahta, off the supplies line of the Thai Uparit's elephant forces so that the fighting would be ceased. All the Thai forces retreated to their land. They were followed and attacked by Mong Nai *Sawbwa*. On 26 March 1853,[2] the ethnic people of Myanmar and Shan joined hands with each other and repulsed the Thai forces from Myanmar.[3] This was informed to the King on 27 April 1853.[4]At a second time, the Chief of Chiang Mai, Lamphun, Phrae and Nan invaded Kengyonegyi (Kenghung) and Kyaing Tong. Therefore, an army was sent there on 6 June 1854 to suppress the enemies. Since 1852 these towns had been invaded by the Thais. King Mindon sent armies Myanmar army to drive the rebels out of Kyaing Tong on 19 June 1854.[5]

Conclusion

As Kyaing Tong is located on the crossroad linking among Thailand, China, Laos and the west of Than Lwin areas, it was invaded by her eastern neighbors since its establishment. The Chinese Empire considered Kyaing Tong as her tributary state. Chiang Mai at the pinnacle of its power also regarded Kyaing Tong as her subordinate state. After the conquest of eastern Than Lwin areas by King Bayinnaung, Kyaing Tong fell under the suzerainty of successive Myanmar Kings. The successive Kyaing Tong sawbwas stood as the subordinate alliances of Myanmar Kings. During Konbaung period, the Kings made attempts to defend Kyaing Tong from invasions of Chiang Mai, China and Ayutthaya. They referred Kyaing Tong as the important garrison of the East. Although the kings after Badon lost control over the whole of Lan Na area,it is found that they made utmost effort to defend Kyaing Tong. The subordinate alliance of Kyaing Tong continued to exist until the rise of King Thibaw.

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[1] Ponnya, *Yodaya Naing*, Stanza-32, 37, 40, 41, 42, 43, 44
[2] Maung Maung Tin, *Konbaungset III*, pp.116-7
[3] Ponnya, *Yodaya Naing*, Stanza-36, 45, 47, 50, 55
[4] Maung Maung Tin, *Konbaungset III*, pp.116-7
[5] Maung Maung Tin, *Konbaungset III*, p.143, pp.147-8

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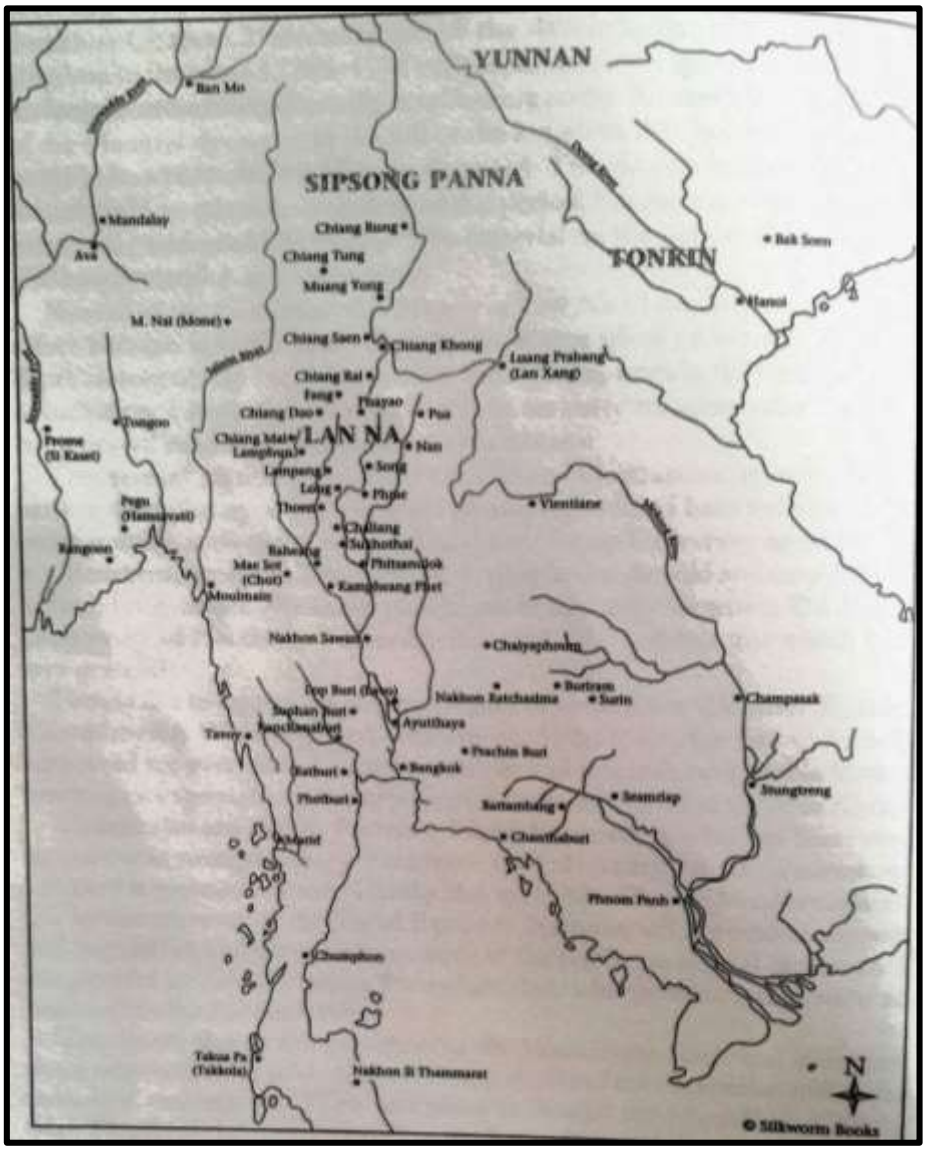
Appendix I

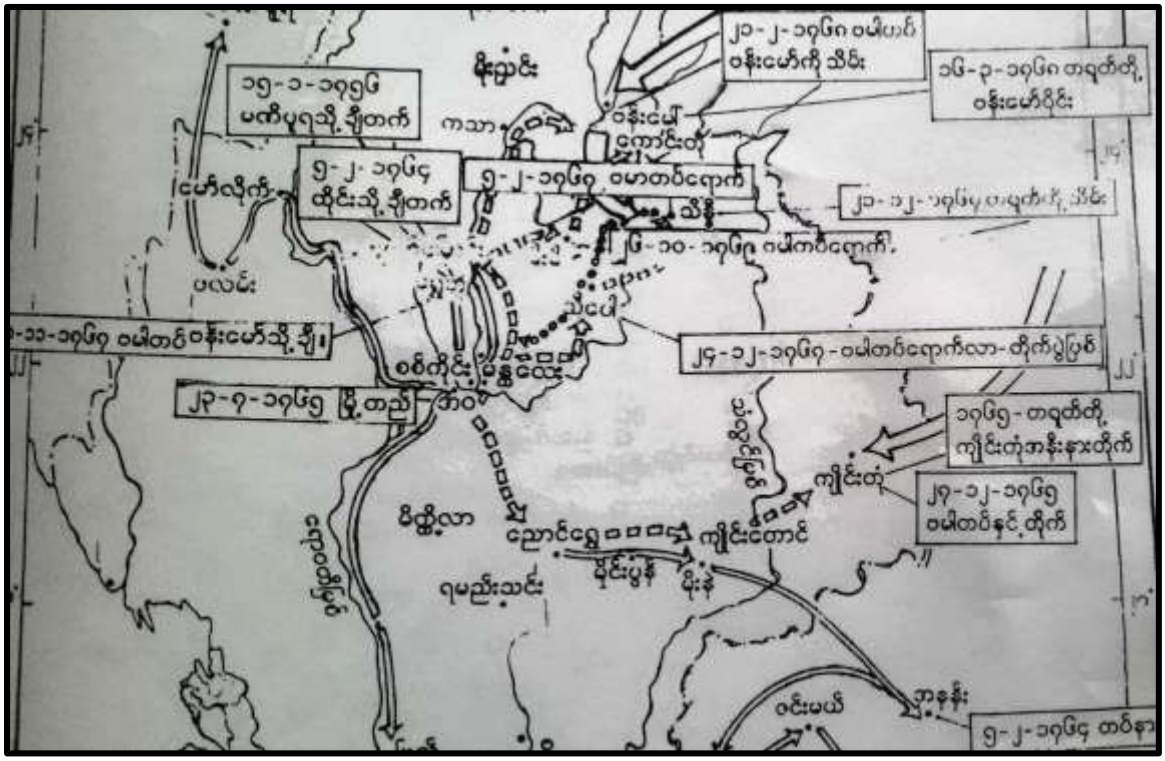
Map of Lan Na



Source: Ongsakul, *History of Lan Na*, Chaing Mai, Silkworm Books, 2004, p. xvi

Appendix II

Map of Kyaing Tong in King Hsinbyushin's War



Source: Than Tun, *Myanmar Thamaing Myeponmya*,(Historical Atlas of Myanmar) , Yangon, Myanmar Historical Commission, 2005, p.101

RELATIONSHIP BETWEEN EMPLOYEES MOTIVATION AND JOB SATISFACTION OF TEXTILE PALACE CO., LTD IN HMAWBI TOWNSHIP*

Thaung Kyi[1]

Abstract

Job satisfaction is the result of various attitude about his or her work and life in general. Job satisfaction of industrial workers are very important for the industry to function successfully. This research paper investigates the relationship between Employees motivation and job satisfaction in Textile Palace Co., Ltd at Hmawbi Township. For this investigation, a sample size of 173 participants such as 40 males and 133 females has been determined. Their age was ranged from 18 to 60 years. The paper also explores the various factors that contribute to Job Satisfaction Scale (JSS) and Work Extrinsic and Intrinsic Motivation Scale (WEIMS), including intrinsic motivation, integrated regulation, identified regulation interjected regulation, external regulation and amotivation. WEIMS was developed by Tremblay M.A & et al (2009) and JSS was developed by Spector P.E. (1994). WEIMS and JSS had 18 items and 36 items respectively. In this study, stratified proportionate sampling was employed. The questionnaire was used to gather the primary data. Thus, the collected data were analyzed using statistical tool namely percentage, central tendency (mean, standard deviation), the t-test, Pearson's correlation coefficient and regression. According to the results, there were not significantly differences between two age groups, between males and females, between marital status and between two groups of length of service based on job satisfaction and motivation. The result of the study indicates a positive correlation between work motivation and job satisfaction were significantly correlated in this study. Then Employee's Motivation will strongly predict job satisfaction.

Keywords: Job Satisfaction, Intrinsic Motivation, Extrinsic Motivation, Amotivation, Employee.

Introduction

The relationship between job satisfaction and motivation in the organization has become one of the widely researched areas in the management field. People differ by nature, not only in their ability to perform a specific task but also in their will to do so. In the current business environment, organizations in all industries are experiencing rapid change, which is accelerating at an enormous speed (Khan, 1997). The word motivation is derived from motive, which is defined as an active form of a desire, craving or need, which must be satisfied. According to Finck et al, (1998), companies must recognize that the human factor is becoming much more important for organizational survival, and that business excellence will only be achieved when employees are excited and motivated by their work.

Nowadays, the most important organizations' problem in developing countries is the lack of specialist, the absence of motivation and job satisfaction among employee's motivation theories emphasize that some job factors result in satisfaction, while others may result in dissatisfaction. Some factors cause an increase in individual's motivation and some others play less important roles in increased motivation.

Today, extremely competitive and globalized business environment demands a strategic approach to direct and evaluate the organization in a right path. Human resource management is

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one of the major fields in successful organizations. Motivation is one of the most significant subjects in Human resource development.

Motivation is a value-based, psychobiological stimulus driven inner urge that activate and guides human behavior in response to self-other, and environment of basic human drives, perceived needs, and desired goals. Motivation is a basic psychological process. Employees' motivation and job satisfaction are studied through different motivation theories such as need based theories, reinforcement theories and process theories. Organization liveliness comes from the motivation of its employees, whether the company is public or private.

The previous researches suggest that there is a gender difference in work motivation. Reif et al (1976) found that gender was the determining factor of appreciation of the value of reward. According to Goodermen et al (2004), men prove to be much more financially motivated than man do.

Job satisfaction has been associated with many psychosocial issues ranging from leadership to job design. Thus, it is known as one of the most researched variables in the area of workplace psychology. Most of the job satisfaction theories are derived from motivation theories. Herzberg's two factor theory, Maslow's Hierarchy of needs, Equity theory, Job Characteristic theory, and Expectancy theory are among the theories that were used to provide theoretical explanation on employee's attitudes toward their jobs.

Employee motivation and job satisfaction complement each other and respond to different organizational variables like productivity and working conditions. The relationship has long been ignored by researchers, although a very strong relation exists, that can be supported by previous literature such as Hoole and Vermeulen (2003) found that the extent to which people are motivated by outward signs of position, status and due regard for rank, is positively related to their experience of job satisfaction Chess (1994) reported that certain motivational factors contribute to the prediction of job satisfaction.

Objectives

The aim of this research is to investigate the relationship between work motivation and job satisfaction among employees in Textile Palace Co., Ltd.

Hypotheses

H1: There will be differences in gender on motivation

H2: There will be differences in gender on job satisfaction

H3: There will be differences in marital status on motivation

H4: There will be differences in marital status on job satisfaction

H5: There will be differences in service on motivation

H6: There will be differences in service on job satisfaction

H7: There will be positive relationship between work motivation and job satisfaction.

H8: The effect of motivation will be on job satisfaction

Literature Review

Motivation Theories

There are various motivation theories that influence the way organizations manage employees to achieve the motivated work force. **Maslow's Hierarchy of Needs Theory** is one of the content theories. Maslow (1943) states that people are motivated to achieve certain needs. When one need is fulfilled, a person seeks to fulfill the next one, and so on. He suggests that human needs can be classified into five categories and these can be arranged in a hierarchy of importance. These include physiological, security and safety, love and social, esteem and self-actualization needs. According to Maslow's Theory, low order needs take priority they must be satisfied before higher order needs are activated. The first three level needs at the bottom are known as "deficiency" needs, white the top two sets of needs are termed "growth needs" because they are concerned with personal growth, development and realization of one's potential.

ERG Theory is a simplification of Maslow. It suggested three categories of needs such as existence needs, relatedness needs and growth needs. ERG theory suggests that of a person is frustrated in satisfying his needs at a given level, he will more back to the lower level needs. Vroom (1964) suggested that people are motivated by how much they want something and how likely they think they are to get it he suggests that motivation leads to efforts. These efforts combined with employee ability together with environment factors that interplay's resulting to performance. This performance interns lead to various outcomes, each of which has an associated value called valence.

Herzberg's Two-factor Theory suggested that there ae two factors in a job, which causes satisfaction. They are called intrinsic factors (motivations) and the other factor he refers to as dissatisfies (hygiene factors). According to Herzberg, the employees become motivated and hence perform higher if the motivational factors are met. Herzberg believed that when motivators are absent, workers are neutral to work, but when motivators are present, workers are highly motivated and satisfied. Thus, these different two factors influence motivation. Understanding Herzberg's theory recognizes the intrinsic satisfaction that can be obtained from the work itself.

Adams (1965)'s **Equity Theory** suggest that people are motivated to seek social equity in the rewards they receive for high performance. Equity and fairness in the work place is a major place in determining the motivation and job satisfaction (Lewis et al. 1995).

Self-Determination Theory SDT focuses on the "nature" of motivation, that is, the "why of behaviour." The underlying assumption is that "human beings are active, growth-oriented organisms who are naturally inclined toward integration of their psychic elements into a unified sense of self and integration of themselves into larger social structures".

Consequently, SDT distinguishes between *intrinsic motivation* (i.e., doing an activity for its own sake because one finds the activity inherently interesting and satisfying) and *extrinsic motivation* (i.e., doing an activity for an instrumental reason). There are different types of extrinsic motivation that can be relatively controlled by external factors or that can be relatively autonomous (i.e., self-regulated through an individual's acquired goals and values). These types of motivation can be aligned along a continuum, that is, a quasi-simplex pattern (Ryan & Connell, 1989) representing the degree to which goals/ values have been internalised (Ryan & Deci, 2002). The low-end lies *amotivation* (AMO) in which individuals either lack the intention to act or act passively. Next along the continuum is *external regulation* (ER), namely, doing an

activity only to obtain a reward. Next is *introjected regulation* (INTRO), namely the regulation of behaviour through self-worth contingencies (e.g., self-esteem, guilt).

Then there is *identified regulation* (IDEN), which refers to doing an activity because one identifies with its value or meaning, and accepts it as one's own. Finally, there is *integrated regulation* (INTEG), which refers to identifying with the value of an activity to the point that it becomes part of the individual's sense of self. This is the form of extrinsic motivation that is most fully internalized and hence is said to be autonomous. Identification, integration, and intrinsic motivation are the prototype of self-determined motivations whereas amotivation, external regulation, and introjection are categorized as nonself-determined motivations. SDT does not presuppose that the self-determination continuum is a developmental one in the sense that individuals progress along it in specific stages. Rather, a new behaviour may be internalised at any point along the continuum depending on factors such as organisational context and an individual's prior experiences (Ryan, 1995).

Job Satisfaction Theories

Job satisfaction is a concept that has a close relationship with motivation and activity. Job satisfaction has been a subject to scientific researchers with "Hawthorne" studies in 20th centuries. As the concept of job satisfaction is multifaceted, a number of theories are advanced to explain what it means and how the theories could be applied to enhance employee performance.

A meta-analysis has confirmed a significantly positive correlation between job satisfaction and performance, though the relationship sometimes was weaker than expected (George and Jones, 1997). A qualitative approach suggested that research about job satisfaction should be based on the evaluation of expectations, needs, motivations and work conditions (Bussing et al., 1999). Though studies have demonstrated that many factors affect job satisfaction, the most notable are "intrinsic job characteristics" (Saari and Judge, 2004). Research have showed that when employees were asked to evaluate the facets of their job, the nature of the work itself including job challenge, autonomy, variety, and scope emerged as the most important. Some measures of job satisfaction assessed certain dimensions of the job, while others measured a single overall perception of the job (Saari and Judge, 2004).

Most of the job satisfaction theories are derived from motivation theories. These theories were used to provide theoretical explanation on employee's attitudes toward their jobs. According to Fincham and Rhodes (1992), "by borrowing motivation theory, some researchers can specify in advance the variations in work satisfaction that employees report in their jobs".

Relationship between Employee Motivation and Job Satisfaction

Employee motivation is the driving force to pursue and satisfy one's needs while job satisfaction is an individual's emotional response to his or her current job condition. Employee motivation and job satisfaction are linked to each other. Motivation and satisfaction are inter-dependent and inter-linked. People spend a large part of their life at work and understanding what makes them happy at the workplace is crucial.

Relationship between employee motivation and job satisfaction at workplace are important. Employee motivation is the level of commitment, energy and innovation that a

company's staff hold during the working day. Without it, companies experience reduced productivity, lower levels of output and it is likely that the company will fall short of reaching important goals too.

Relationship between employee motivation and job satisfaction can enhance work performance of employees. Internal and external motivation both drive work performance. When an employee is satisfied with his job duties, pay level and work, he is most likely to perform well in the organization. When employee motivation is a cause, job satisfaction is a final state. Satisfaction achieved by the individual is likely to motivate the individual to continue the activity and thus obtain new satisfactions. Job satisfaction is the level of contentment employees feel with their job.

Employee motivation and job satisfaction are symbolic concepts. High job satisfaction is directly tied to high motivation and vice versa. The more satisfied and content employees feel in a particular job role, the more motivated employees are to manage job responsibilities are to manage job responsibilities effectively. Surveys of various industries suggest that employees with a high sense of motivation also report a stronger sense of job satisfaction. Therefore, increase job satisfaction leads to a heightened sense of both personal and professional motivation, and likewise, strong motivation results in more satisfaction in a particular job.

Method

Participants

A total number of 173 people was used as participants. They are 18 to 60 years of age. Male and Female participants were 40 and 133 respectively. The participants were employees of Textile Palace Co., Ltd.

Instruments

There are two scales such as Work Extrinsic and Intrinsic Motivation Scale (WEIMS) and Job satisfaction on scale (JSS). The WEIMS which had 18 items included intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation and motivation. The rating of WEIMS was range from 1 (not at all), 2 (very little), 3 (a little), 4 (moderately), 5 (strongly), 6 (very strongly) and 7 (exactly). It was found that internal consistency (Cronbatch Alpha) was 0.82. This scale was developed by Tremblay, M.A, et al. (2009).

The other scale named Job Satisfaction Scale (JSS) was used as an instrument which had 36 items and 9 subscales. It consisted of positive and negative item. It was originally developed by Spector, P.E (1994). This scale is 6point Likert Scale ranging from 1 (disagree very much) to 6 (agree very much). These two scales were translated and adapted into Myanmar version by the researcher.

Results and Discussion

Table 1. Demographic Characteristics of Respondents (N = 173)

Demographic Variables		Frequency	Percent
Age			
	≤ 25 years	97	56.1
	> 25 years	76	43.9
Gender			
	Male	40	23.1
	Female	133	76.9
Marital Status			
	Married	77	44.5
	Single	96	55.5
Service			
	≤ 3 years	114	65.9
	> 3 years	59	34.1

In table 1, there are two age level such as 25 and under 25 years old (56.1 %) and over 25 years (43.9 %). Males and female participants were 23.1 % and 76.9 % respectively. Marital status included married persons (44.5 %) and single persons (55.5 %). Two kinds of service level including under 3 years (65.9 %) and over 3 years (34.1 %) were used as participants.

Table 2. Showing the differences in genders for variables.

Factors	Male (N = 40) Mean (SD)	Female (N = 133) Mean (SD)	t-value
Motivation	59.00 (12.65)	58.09 (16.92)	0.314 (NS)
Job Satisfaction	138.20 (19.62)	130.65 (23.27	1.860 (NS)
Intrinsic Motivation	10.83 (3.922)	10.73 (4.10)	0.131 (NS)
Integrated Regulation	11.28 (3.45)	9.87 (3.80)	2.088*
Identified Regulation	9.53 (3.17)	9.10 (4.17)	0.579 (NS)
Introjected Regulation	8.88 (3.92)	9.42 (4.05)	0.752 (NS)
Extrinsic Motivation	10.80 (2.68)	10.41 (3.81)	0.598 (NS)
Amotivation	7.70 (3.19)	8.56 (3.40)	1.414 (NS)

* = P < 0.05 ** = P < 0.01

As shown in table 2, male participants were 40 and females were 133 respondents. The mean scores (Standard deviations) of motivation for gender were 59 (12.65) and 58.09 (16.92)

respectively. The t-value is 0.314, that is, there were not significantly differences between males and female participants in accordance with work motivation.

Table 3. Difference mean and standard deviation in marital status for motivation and job satisfaction

Factors	Married (N = 77) Mean (SD)	Single (N = 96) Mean (SD)	t-value
Motivation	60.51 (16.76)	56.53 (15.22)	1.631 (NS)
Job Satisfaction	135.81 (22.10)	129.67 (22.83)	1.782 (NS
Intrinsic Motivation	11.17 (4.16)	10.42 (3.95)	1.215 (NS)
Integrated Regulation	11.00 (3.91)	9.55 (3.52)	2.556*
Identified Regulation	10.01 (4.09)	8.54 (3.37)	2.464 (NS)
Introjected Regulation	9.79 (4.15)	8.90 (3.88)	1.462 (NS)
Extrinsic Motivation	10.74 (3.46)	10.31 (3.67)	0.780 (NS)
Amotivation	7.79 (3.16)	8.81 (3.47)	1.997*

* = P < 0.05 ** = P < 0.01

According to table 3, married persons and single persons were 77 and 96 respondents respectively. The t-value of integrated regulation and amotivation were 2.556 and 1.997. It was found that married person was more in integrated regulation factor than single respondents. On the other hand, according to amotivation factor, single people were higher than married persons based on amotivation factor.

Table 4. Differences in length of service among variables

Factors	≤ 3 years **(N = 114)** Mean (SD)	> 3 years **(N = 59)** Mean (SD)	t-value
Motivation	58.05 (16.08)	58.79 (15.98)	0.282 (NS)
Job Satisfaction	130.18 (21.84)	136.68 (23.74)	1.799 (NS)
Intrinsic Motivation	10.68 (4.10)	10.88 (3.99)	0.392 (NS)
Integrated Regulation	10.15 (3.63)	10.29 (4.02)	0.230 (NS)
Identified Regulation	8.96 (4.02)	9.66 (3.83)	1.111 (NS)
Introjected Regulation	9.23 (4.13)	9.42 (3.82)	0.303 (NS)
Extrinsic Motivation	10.40 (3.67)	10.69 (3.41)	0.507 (NS)
Amotivation	8.63 (3.21)	7.83 (3.62)	1.488 (NS)

In Table 4, all variables were not significantly differences between two groups of service level.

Table 5. Correlation Analysis between Motivation and Job Satisfaction

	Job Satisfaction
Motivation	.286**

* = P < 0.05 ** = P < 0.01

Table 5 shows correlation analysis between motivation and job satisfaction. The correlation is significant at 0.01 level. Since the coefficient 0.286 is positive value, it can be conducted that there is direct positive correlation of motivation on job satisfaction. Thus, there is positive relation between motivation and job satisfaction in Textile Palace Co., Ltd at Hmawbi Township, Yangon.

Table 6. Regression Analysis of the Motivation and Job Satisfaction

Model	B	Std. Error	B	t	Sig
Constant	108.832	6.270		17.358	.000
Motivation	0.404	0.104	0.286	3.897	.000

R^2 = .286 R^2 = .082

Dependent Variable = Job Satisfaction

Table 6 showed that dependent and independent variables were job satisfaction and work motivation. In the ANOVA method, F-value is 15.186 and significant level is 0.0001. Work motivation predicts job satisfaction. Thus, model is explained 8.2% of the variance of dependent variable (job satisfaction) and with independent variable (motivation). Independent variable influence dependent variable. Therefore, the higher the motivation, the more the job satisfaction will be.

Discussion

This study is to examine relationship between Employees motivation and job satisfaction of Textile Palace Co., Ltd at Hmawbi Township. The participants were divided into gender, age groups, marital status and lengths of service.

Hypothesis 1 “There will be differences of gender on motivation” is not supported because there will be slightly differences of gender. Especially, one of the subfactor of motivation is integrated regulation which was significantly differences between male and female participants. Male respondents were higher in integrated regulation than female. Hypothesis 2 “There will be differences of gender on job satisfaction” was not accepted in this study. Male respondents were slightly higher on job satisfaction than female participants.

Hypothesis 3 “There will be differences of marital status on motivation” was not accepted because integrated regulation and amotivation factors were significantly differences between married and single person. Married person were higher an integrated regulation than single persons. And then, single persons were higher on amotivation than married persons.

Hypothesis 4 “There will be differences of marital status on job satisfaction” was not confirmed because there was not significantly difference between two groups of participants.

Hypothesis 5 “There will be differences on service on motivation. It was not confirmed in this study based table 4.

Also, hypothesis 6 was not supported in this paper based on Table 4.

Hypothesis 7 is “There will be positive relationship between work motivation and job satisfaction”. It is accepted because work motivation and job satisfaction were significantly correlated based on table 5. The more the job satisfaction, the higher the work motivation will be.

Hypothesis 8 is “The effect of work motivation will be on job satisfaction”. This hypothesis 8 was confirmed in this study. Work motivation predict job satisfaction significantly. The results indicate that standard coefficient (Beta) of motivation has positive value. Therefore, the independent variable (motivation) is positive relationship with job satisfaction. According to the results, there is positive relationship between employee motivation and job satisfaction. The higher the employee’s motivation, the higher to get job satisfaction in working conditions. These findings are consistent with previous researchers (Brown and shepherd, 1997). Efficient and effective top management should know and sense what makes their employees motivated and should place the right ways to achieve organizational objectives.

The results of this research show that there is a very significant positive correlation between work motivation and job satisfaction of the academic staffs. This finding supports the previous research which found that there is a significant correlation between work motivation and job satisfaction [Okpara,J.O. et. Al 2005]. Maharjan’s research [Mahajan,S 2012] also showed that work motivation correlates with the job satisfaction. Meanwhile, Lam & Gurland [Lam, C.F. and Gurlan, S.T. 2008] mentioned that job satisfaction is an outcome of the work, which is expressed through work motivation. Work motivation is one of the factors that influence individual satisfaction at work, so it is very important to pay attention to for the sake of employee welfare [Okpara,J.O. et. Al 2005]. Roos and Edden [oos, W. and Eeden, R.V. 2008] stated that individuals are motivated in work will likely to achieve work standards that have been set in order to obtain maximum results, in which will also improve their job satisfaction. Furthermore, according to Cascio [Cascio, W.F. 2003], individual work motivation to finish his tasks is an important part of the job itself, after the needs are met, it will give the satisfaction impact to the employee.

Conclusion

In an attempt to investigate the relationship between Employees motivation and job satisfaction are measured. Textile Palace Co., Ltd is a joint venture company for Manufacturing garments. Thus, Employees motivation and job satisfaction plays a crucial role for the achievement of export targets.

There is a positive direct effect between work motivation and job satisfaction. The greater the motivation of employees at work, the higher the level of job satisfaction. Therefore, it is important for managers of organization to improve their employees’ motivation. Employees who have great work motivation will be able to make the best contribution to the organization by carrying out their jobs at the very best they can, and the positive results obtained will give satisfaction to their work.

Employees need to motivation such as reward, benefits, promotion, good working conditions, and safety. The top management needs to consider motivation factors such as good supervising and leadership, and the level of responsibilities at work. To conclude, finds of the study illustrate that employee's motivation improves job satisfaction. The research findings suggest that employers need to care and support their employees by focusing on motivation factors. In this way, employee's will have the higher job satisfaction for the organizational achievements.

Limitations

This study is limited to the relationship between motivation and job satisfaction among employers in Textile Palace as Co., Ltd at Mawbi Township, Yangon. This study is done in one garment factory in Yangon area only. Thus, this research may not representative for all garment factories in either Yangon or the whole Myanmar because we only collected the data by convenient sampling in Yangon Region.

Further Research

Further studies should carry out at many garment factories in other parts of Myanmar to represent the whole understanding of relationship between motivation and job satisfaction among employees. This understanding will improve effectiveness of Industrial and Organizational Psychology theory as well as the objective of organization's success.

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POVERTY AND DELINQUENCY: A QUALITATIVE STUDY ON SELECTED JUVENILE OFFENDERS IN YANGON REGION

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Abstract

The major objective of this study was to investigate the effect of poverty on the delinquent character and behavioral development of children in Myanmar. To achieve this objective, the present research looked into the effects of three primary themes that were highly associated with poverty and were known to increase crime: miserable family conditions, school failure, and affiliation with deviant peers. From the Thanlyin Juvenile Training School in the Yangon region, 17 juvenile offenders between the ages of 13 and 17 were chosen using the purposive maximum variation sampling technique. We used a variety of qualitative data collection methods, including in-depth case interviews, observation, and document analysis. The data collected were interpreted using a thematic content analysis. Results showed a high correlation between children's delinquent character and behavioral development and three primary themes that poverty enhances crime. It has been discovered that poverty can cause serious financial difficulties, family stress and suffering, strained parent-child relationships, family conflict, parental divorce, school failure, and association with undesirable people, all of which can be harmful to children. The findings from this study will help understand the real-life experiences of juvenile offenders, particularly those who are suffering from extreme deprivation. The insight gained from this study is anticipated to help implement prevention and intervention programs for juvenile delinquent behavior in Myanmar.

Keywords*: Poverty, Juvenile Delinquency, Qualitative study, Myanmar*

Introduction

Numerous societies view juvenile delinquency as a social problem (Arthur, 1996; Junger-Tas *et al*., 2010). Juvenile delinquency is one of the major societal problems faced by all populations, and through numerous interventions, not only has their occurrence not decreased, but it has also increased and grown (Nourollah, Fatemeh & Farhad, 2015). In the United States of America, 400000 cases were conducted by courts with juvenile jurisdiction in 1960. An estimated 818,900 delinquent cases were handled in 2017 by juvenile courts. Therefore, it can be seen that the 2017 juvenile court delinquency caseload was almost double the 1960 caseload (Hockenberry & Puzzanchera, 2019).

According to the available data in Myanmar, over 1000 cases were conducted for each year from 2001 to 2006 respectively. In 2015, however, a total of 2459 cases were conducted by the Township Courts and Juvenile courts (Ministry of Social Welfare Relief and Resettlement [MSWRR], 2006). These statistics showed, in Myanmar, almost double the increase in a decade. Currently, 489 juveniles are detained in Thanlyin Juvenile Training School. To deter future delinquency, the prevention and provision of formal and effective treatment for offenders is essential. Successful preventive strategies cannot be established without knowing the factors behind the participation of young people in criminal activity.

Poverty is an increasingly pervasive issue in today's society. As stated by Haughton and Khandker (2009), the World Bank defines poverty as a severe deprivation of well-being. According to the World Bank's definition of poverty, people are considered poor if their income is below what is required to maintain the average standard of life in the society, they live in. The

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national poverty line in 2017 was 1590 kyats per adult equivalent per day, or roughly USD 1.18, according to the Myanmar Living Conditions Survey Poverty Report (2019). A household in Myanmar is considered to be poor if its per adult equivalent consumption level in kyats is below the threshold required to meet the country's minimal standard of living. Poor people are those whose daily consumption is at or below 1590 kyats. According to estimates from the 2017 Myanmar Living Conditions Survey (MLCS), 11.8 million people, or 24.8% of the total population, are considered to be poor, down from 48.2% in 2015. About 1 in 4 people are nonetheless beneath the poverty line in Myanmar (CSO, UNDP & World Bank, 2019).

Due to the United Nations Convention on the Rights of the Child (UNCRC, 1989), juvenile refers to a person below the age of 18 years. When a person commits offenses before the age of 18, it is called juvenile delinquency and the offender is called juvenile delinquent. Consistent with the UNCRC, Myanmar's reformed Child Rights Law (2019) defines a juvenile or a young offender as a child who has not attained the age of eighteen at the time of committing the offense. The age of criminal responsibility is 12 years. Juvenile delinquent activities can vary from less extreme actions such as violation of school laws, absenteeism, school truancy, cigarette smoking, and vandalism to more serious crimes such as theft, burglary, misuse of drugs, rape, and possession of guns (Choon *et al.*, 2013).

Juvenile delinquency not only originates from people's motivations internally and individually but also takes effect from social and environmental factors. An enormous collection of research has been amassed over the previous decades about associates and indicators of juvenile delinquency (Farrington & Welsh, 2007). Over the different areas, the most examined factors are individual characteristics and family factors (Derzon, 2010; Piquero *et al.*, 2009).

Criminologists have paid a great deal of attention to the socio-economic status-delinquency relationship. According to the Strain Theory, crime is caused by the difficulty faced in achieving socially valued goals with legitimate means by those in poverty (Merton, 1969). Studies have found that children from poor and low-class backgrounds are much more likely to engage in delinquent behavior (Shamim *et al.*, 2009). According to research, childhood poverty, and low socioeconomic position are significant risk factors that have long been linked to substance misuse, criminal activity, and delinquency (Galloway & Skardhamar, 2010). This clearly explains why children from low-income homes are more likely to drop out of school, affiliated with disruptive peers, and engage in antisocial behavior.

Poverty is intimately connected to adolescent delinquency since it can result in a variety of delinquent behaviors (Prochnow & Defronzo, 1997). It results in stressful living situations and creates environments that encourage antisocial behavior. If the causes of delinquency can be determined, action can be taken to correct the causes of delinquency.

The Yangon Region, which is the center of Myanmar's economy, has a substantial disparity in social status and a sizable proportion of its population lives in poverty (World Bank, 2020). As a result, there are more juvenile delinquency cases in the area. However, there is a lack of qualitative research that examines the circumstances and lived experiences that link juvenile criminal activity and poverty in this setting. By conducting an extensive qualitative investigation on a chosen group of juvenile offenders in the Yangon Region, this study aims to fill a research gap. This study aims to investigate the effects of poverty and how it affects children's behavioral and character development in light of its negative effects on children.

Methods

Participants

As participants, 17 young offenders from Thanlyin Juvenile Training School in Yangon region were used in this study. The ages of participants range from 13 to 17 years. Participants were recruited by purposive maximum variation sampling technique. This sampling technique allowed to the selection of participants based on 1) having participants with age differences and 2) selecting offenders who are new arrivals as well as the old ones in the training school. Participants' length of stay ranges from 2 weeks to 2 years. A short description of respondents' profiles can be seen in Table 1.

Table 1 Short description of respondents' profiles

Name	Sex	Age	Race/ Religion	Crime Committed	Parents' marital status	Edu-cation Level	Work experience
P1	Male	16	Burmese/ Buddhist	Rape	Remarried	KG	Mason
P2	Male	14	Burmese/ Buddhist	Drugs possession	Widowed	Illiterate	Plastic collector
P3	Male	16	Burmese/ Buddhist	Theft	Widowed	Grade 8	Mason
P4	Male	15	Burmese/ Buddhist	Theft	Married	KG	Waiter
P5	Male	17	Burmese/ Buddhist	Drugs dealing	Married	Illiterate	Fruit selling
P6	Male	17	Burmese/ Buddhist	Theft	Remarried	Grade 9	None
P7	Male	15	Burmese/ Buddhist	Drugs dealing	Remarried	Grade 8	Water seller
P8	Male	17	Chin/ Christian	Murder	Married	Grade 8	Welding, Motorcycle taxi
P9	Male	17	Burmese/ Buddhist	Rape	Married	Grade 4	Mason, Welding
P10	Male	13	Burmese/ Buddhist	Theft	Widowed	Grade 4	Waiter
P11	Male	17	Burmese/ Buddhist	Theft	Married	Grade 10	Wiring, Sales stuff
P12	Male	13	Burmese/ Buddhist	Theft	Married	Illiterate	None

Name	Sex	Age	Race/ Religion	Crime Committed	Parents' marital status	Edu-cation Level	Work experience
P13	Male	17	Burmese/ Buddhist	Robbery	Married	Grade 10	Bicycle repair
P14	Male	15	Burmese/ Buddhist	Drugs possession	Married	Grade 8	None
P15	Male	17	Burmese/ Buddhist	Drugs dealing	Divorced	Grade 9	Painter
P16	Male	16	Burmese/ Buddhist	Drugs possession	Married	Grade 5	Factory Work, Car wash
P17	Male	13	Muslim/ Islam	Theft	Married	Grade 5	None

Approach and Method for Conducting Research

In this study, a qualitative research approach was used. With the use of this approach, the researchers were able to obtain a deeper understanding of the phenomenon being studied by drawing on the experiences of young offenders in natural settings. Additionally, it gave a more complete grasp of the issue under inquiry, giving the voices of juvenile offenders a chance to be heard. In this study, the researchers sought to comprehend how poverty affected the character and behavioral development of children from Myanmar who were growing up in challenging family environments, performing poorly in school, and hanging out with deviant peers. This study used a case study method with numerous cases.

Procedure and Instruments

Before the collection of the data, permission was asked from the head of the Department of Social Welfare, Yangon Division. For the purpose of gathering data, this study included observation, document analysis, and face-to-face, in-depth, unstructured case interviews. The participants were recruited using the purposive maximum variation sampling technique. The unstructured interview guide was used to gather information about how poverty impacts children's character and behavioral development. Participants were asked about their demographics before each interview session. Between 30 and 50 minutes were allotted for the interviews.

Data Analysis

Once data collection was complete, all audiotaped interviews were transcribed at full length by listening to the recording, replaying the recording, and rereading the transcript as the audio played. Thematic content analysis was used as a means to analyze the data collected. Relevant codes were used to categorize into themes. Each narrative was analyzed and coded several times to ensure that all the important details were captured in the overall theme selection process. Key themes have emerged after the data was analyzed.

Results and Discussion

The participant's experiences with the three main crime-enhancing factors or themes that were triggered by poverty are summarized and discussed in the section that follows. These themes are miserable family conditions, school failure, and association with deviant peers. This study indicated that, based on the experiences of 17 young people, having a challenging family environment, failing in school, and being surrounded by deviant peers because of their family's poverty were all significant factors in the development of their delinquent behaviors.

Miserable Family Conditions

Economic deprivation is a central feature of children's poverty experiences. Children from poor families tend to use illegal means to get what they want as they are commonly unsatisfied with their financial circumstances, and they do not get sufficient pocket money from their parents. Children from poor homes want things that their parents cannot provide for them, or they want more money so that they can do whatever they want. Today's children have a lot of desires compared to their predecessors. They need money to buy mobile phones, or to play games at game shops and to hang around with their friends. To join in peer society, they have to use unlawful means and take certain significant risks, hence putting themselves in a highly precarious position. In addition to financial problems at home, most of the children have witnessed domestic violence and some have experienced child abuse. As they are not happy at home, they run away and live in the streets which provides them the opportunity to constantly associate with deviant peers. This was demonstrated in the lives of our participants, as they were all dealing with some sort of financial issue and some kind of conflict in their families. An example can be seen in Participant 1(P1).

Despite a daily income of 5000-8000 kyats per day, P1’s stepfather consumes alcohol every day for which most of his income is spent and only 2000-3000 kyats of his income is left for the family. His mother usually earns 7000-8000 kyats, but her income is not stable. With four children to support and debt to repay, P1 has to forego many of life's luxuries. P1’s mother only gave him 200-300 kyats as pocket money per day and he stole from other people to supplement his pocket money:

Interviewer: Were there times that your pocket money was not enough?

P1: Yes, almost always.

Interviewer: If so, what did you do?

P1: I sneaked out of the houses, stole phones, and sold them.

When asked how he spends his money, P1 stated that he needs it for snacks and to play games when he hangs around with his friends.

After being abused and kicked out of his home by his stepfather at the age of 12, P1 was provided with more opportunities to affiliate with deviant peers and participated even more actively in antisocial activities, hence he ended up in a juvenile detention training school. The temptation to steal was too strong to resist, especially when he needed money to survive. Regarding the abuse he has experienced, P1 stated:

> "I was often beaten by my stepfather for playing around with my friends. At one time, he pulled my hair and hit me with the flip-flop while I was watching my friends who were playing cane ball. He often hit and kicked me out of the house, so I ran away from home in the morning while my mother was going out to work. My mother came to find me at night".

His mother's second marriage was not helpful to P1 at all and instead, he was abused by his stepfather. Running away from home was the only option for him to stop that situation. By living away from home and having no money, he had to find other means of survival and crime was his only alternative. Therefore, it can be seen from the narratives of P1 that it was poverty that had brought serious negative consequences for the children.

As for Participant 4 (P4), his situation was even worse than others. He committed theft due to his desire to survive and possess something that his parents could not provide. With a family income of 6000-7000 kyats per day and 5 children to support, there was not enough money even for consumption. P4's family had struggled to make ends meet with the meager income of his father. Because of insufficient financial situation, their family members had to eat only one time instead of 3 meals for breakfast, lunch, and dinner in a day and P4 had to forego many luxuries in life. He decided to steal because of the desire to supplement his pocket money and to buy a mobile phone that his parents couldn't afford to give him. As a result of his family's inability to provide for him, he turned to crime to meet his needs:

Interviewer:	What led you to be detained in this training school?
P4:	I went to the factory to steal cable wires with my three friends. We were caught on the way. Two of my friends and I are here. Another one is in Insein Prison.
Interviewer:	Why did you steal them?
P4:	Because we want money to supplement our pocket money and to buy a mobile phone to play games.

It can be seen from the story of P4 that it is the desire to possess something that they could not afford forced the children to engage in delinquency. As children know that they cannot get what they want from their parents, they try to find alternative ways and take significant risks to get what they want. It is also true for Participant 3 (P3) and Participant 13 (P13) who committed the crime because they wanted to possess something that their family could not support.

Participant 11(P11) is in a similar situation. P11's father usually earns 8000 kyats as average income per day, but part of his income is used for alcohol. P11's mother sells salads in the school's canteen and usually earns 10000 kyats including capital per day, but it is not a regular income as she cannot sell on weekends and holidays. As P11's family struggled to make ends meet mostly on his father's meager income, there were days that they had nothing to eat when his father was sick and could not work. P11 had a poor relationship with his father, and he was often abused by him for no good reason. His father consumes alcohol every day and tends to beat and throw things at his mother whenever he is in a drunken state. He shed tears and seemed to be very sad every time he talked about his family's situation. Regarding the abuse he had experienced from his father, he stated:

> "He loses his temper when he becomes angry. He never understood me, and I was often scolded and beaten for no good reason. I was punched for coming home late from work due to overtime, wearing jean pants and boots, and playing games. At those times, living at home was so stressful (crying). I did not want to live at home, especially with my father. When I grow up, I will work hard to earn money and live with my mother."

After dropping out of school, P11 worked as a salesperson and supported his family however, he later had to quit his job. After leaving his job, he spent most of the time with his friends at the tea shop to avoid his father. In addition to losing his job and having a poor relationship with his father, he argued with his mother one day and this led him to run away from home and to stay with deviant peers.

Our study showed that many parents vent their frustrations at their children without realizing what sort of psychological damage they are inflicting. They not only yell at their children but also indulge in verbal and physical violence. When a parent is constantly angry at a child and scolds him/her even for small things, a child can feel worthless and depressed. If parents mistreat their children, some of them may become combative, rebellious, and persistently misbehave. Participant 8 (P8), for instance, has been abused by his father harshly. Whenever P8 gets into fights, his father ties him with a rope and beats him with a belt. His father's punishment has, in turn, converted his aggression to getting into fights more frequently and ending up in a police station. Finally, he was detained in this training school and was charged with committing murder.

The cited instances show what horrible living situations our participants had to deal with as a result of their poverty. As mentioned in the above narratives of the participants, it was found that all the participants in this study came from a low socioeconomic background, and none of the respondents' parents had completed high school. The parents of the interviewees had poor occupations and occasionally were unemployed due to their lack of education and skills. All seventeen of the participants in the study stated that they had engaged in theft because they were unable to meet their needs when they were children or students.

The results of our investigation agreed with those of earlier ones. Children from impoverished broken, or single-mother families are expected to suffer poorly in life if poverty can have such significant consequences on poor children from intact families (Burrell & Roosa, 2008). According to a few studies, losing a mother's employment can have a significant impact on how children behave (Hill *et al.*, 2011; Kalil & Wightman, 2011), especially in families with single mothers. In this study, it is found that 17.6% (3 out of 17) were stepchildren and 23.5% (4 out of 17) were children of single parents. According to Jeynes (2006), children raised in stepfamilies experience equivalent or worse stress than children reared in single-mother families.

Moreover, economically disadvantaged parents are usually unable to pay attention to the importance of parental care and cannot devote time to monitoring their children as they struggle to meet the basic needs of their families. Parental monitoring can influence delinquency by restricting teenagers' access to unsupervised activities while also indirectly influencing delinquency by reducing association with deviant peers (Patterson & Dishion, 1985; Patterson *et al.*, 2000). Adolescents from low-income households, on the other hand, appear to have the opposite experience.

Furthermore, this study indicates that most of the participants have been abused by their parents and/or witnessed domestic violence, prompting them to flee their homes and take shelter on the streets, making them vulnerable to deviant peers for companionship. Poverty is frequently regarded as the single strongest predictor of child maltreatment, particularly child neglect, and it is associated with a wide range of detrimental outcomes. It was observed that 76.5% of the participants (13 out of 17) had been exposed to maltreatment (physical abuse and neglect) at home. In this study, it was also found that 58.8 percent of the participants' fathers are alcoholics (10 out of 17).

In addition, this study revealed that 47.1 percent of respondents (8 out of 17) have witnessed domestic violence (physical) by their parents. The evidence supports this finding, demonstrating that poverty can be considered a factor in the escalation of domestic violence and that low-income families are substantially more likely to experience domestic turbulence and the stress that goes along with it (Purvin, 2007). This is in line with the findings of a large-scale quantitative study (Zinzow *et al.*, 2009), which indicated that children who observed parental violence had a 77 percent higher chance of engaging in delinquency than those who had not. This confirms the findings of Maas et al. (2008), who discovered that physical abuse is the form of familial violence that consistently predicts juvenile crime.

Poverty has negative consequences not only on a child but also on the whole family. It can be seen that parents' failure to monitor their children's behavior and incompetent way of handling them has led their children to run away from home, providing more opportunities to associate with deviant peers. Even an upright individual may be tempted to make a mistake in a life that is severely lacking in everything, not to mention innocent children.

School Failure

Poverty tends to be associated with lack of access to education or lower test scores and higher dropout rates. It was found that 9 out of 17 participants have dropped out of school and 3 out of 17 participants were expelled from school. It was found that many adolescents disliked attending school and preferred to spend their time with their peers. Among all participants, three of them (P12, P2, P5) had an absolute lack of access to education because of poor parenting and the economic situations of their families. For instance, Participant 2 (P2) didn't even get a chance to go to school. Being nurtured by his single mother who is illiterate and has a daily income of 3000 kyats, his mother did not afford to send P2 to school due to their family's difficult financial situation.

Interviewer: What is your highest education level?

P2: I've never attended school.

Interviewer: Why didn't you go to school?

P2: My mother didn't send me to school since I was young.

Interviewer: Have you ever asked your mother if you want to go to school?

P2: Yes, I did. But she only sends my younger sister to school.

Interviewer: Do you know why she doesn't send you to school?

P2: Yes, she just told me that because she doesn't have money.

Most of the participants have attended school but they also dropped out or were expelled from school. For instance, Participant 8 (P8) always failed the exams and got low grades at school:

Interviewer: Can you study on par with other students at school?

P8: No, I'm not intelligent.

Interviewer: Did you perform well in the exams?

P8: I always fail the exams.

Interviewer: Which subjects did you fail?

P8: English and Mathematics

Interviewer: Did your class teacher pay attention to your results? I mean, discuss with you or your parents about your low grades and then move you to another class or send you to an extra class?

P8: No, they don't. Because the teachers are afraid that I will fight with other students in other classrooms. They know that I am not on good terms with students from other classrooms and I have problems in controlling my anger.

P8 was often in trouble at school. He got himself into a lot of trouble because he couldn't control his temper. P8 would frequently go into full-blown temper tantrums and become violent. An example of this can be seen in an incident that occurred when he was in the 5th grade. As a result of this incident, he was suspended from school for three months with his three friends. He completely lost interest in his academics due to the low family income and the lack of parental supervision, and he started skipping school to hang out with his bad friends. He began smoking and started abusing alcohol in Grade 5 by imitating his girlfriend who abused alcohol and became addicted to it. When his parents found out that he abused alcohol, he was tied with a rope and beaten harshly with a belt until the rope was untied. As the pocket money he gets from his parents is only 100 kyats, he does not have enough money. He joined a gang and became fully immersed in the gang lifestyle and participated in criminal activities with other gang members. He charged a line fee from the shops and restaurants. Fighting was not an uncommon occurrence for P8. He had a bad temper and was eager to blow out at anyone who offended him. When he was in Grade 8, he was expelled from school as a result of fighting which led him to be charged, and ended up in this training school for the first time. This is the second time of being arrested and currently, he is charged with committing murder.

Participant 3(P3) also attended school however, he dropped out of it after Grade (8). P3's mother passed away when he was in Grade 7 and his father lived away from him. P3 lived with his sister and uncle's family. Their family has become indebted since his mother was hospitalized. He got 300 kyats as pocket money, but he has a habit of stealing money from his sister to supplement his pocket money. At school, like P8, he could not perform well in English and Mathematics and mostly got Grade C. He was frequently punished by his uncle for not studying. He used to be truant with his friends and secretly smoked. He was punished and had to sign a behavior contract for getting into a fight with other students at school. Losing interest in

his studies and knowing that he could not perform well at school, he dropped out of school and started fishing with his brother-in-law. After dropping out of school, he hung out with deviant peers from the neighborhood which led him to commit theft and to be detained in this training school. The school experiences of Participant 13 (P13) and Participant 16 (P16) were also similar to P3 as both of them had little interest in education and dropped out of school without completing high school.

Therefore, the fate of participants in this study indicates that poverty and lack of access to education or failure at school were directly interrelated as it seemed that many children followed the path of least resistance instead of trying too hard in school, and many poor Myanmar parents could not keep their children at school due to their life's demands. As parents themselves are illiterate or have a low level of education, their perceptions and attitudes toward education are less positive. Instead of sending their children to school, they expect their children to help their family in some way.

This study also found that children's school failure or lack of access to education was associated with their parent's poverty. It was discovered that the majority of the respondents 82.4% have poor test scores (14 out of 17), 52.9% (9 out of 17) of the participants dropped out of school, 17.6% (3 out of 17) were expelled from school, and that 17.6% (3 out of 17) did not have access to education. It was revealed that 64.28 percent of respondents attending school (9 out of 14) have a truancy problem. The dropout children sought employment to support their parents and meet their own needs. Because many poor parents did not spend enough time monitoring their children's academic performance and could not afford to pay for their tuition and necessary books, children's scholastic progress was jeopardized by the stress of poverty. Some of these poor parents were only too glad that their children had stopped attending school and were helping to support the family. Thus, socioeconomic circumstances indirectly influence children's academic success by way of parents' beliefs and behaviors (Davis-Kean, 2005). Studies have demonstrated that frequent parental supervision and homework help significantly improve children's academic achievement (Lowe & Dotterer, 2013; Patall *et al.*, 2008; Voorhis, 2011), while the converse appears to be true for children who lack any academic guidance.

Association with Deviant Peers

One of the circumstances that explain some participants' involvement in juvenile delinquency has emerged as deviant peer association. Most of the participants stated that the peers with whom they came into contact were the ones who got them engaged in criminal activity. Their relationship with these deviant peers persuaded them to use illegal means to get out of trouble, which led to their detention. When children from poor families tend to have a lack of access to education or fail at school, they tend to turn to their peers as a source of behavioral guidance. Children from lower socioeconomic classes do not interact with those from higher socioeconomic classes since friendships are restricted by class. When struggling students from low-income families band together, there is a good chance that they will commit delinquent acts like robbery, theft, or break-ins to raise money for the items that their parents cannot afford.

For instance, P1 started stealing after being threatened by an older guy who was into stealing. He broke into homes and stole phones because he had mastered the art of stealing through regular interaction with deviant friends. He also used to get into fights with his friends in

groups. P10 was no different from P1 as he also committed a theft due to the suggestion of his deviant friend who has a habit of stealing and abusing drugs. P13 committed robbery as his cousin suggested to do so.

Similarly, P11 stole a bicycle as the older guy he lived together with suggested he steal. In the same way, P4 stole wires with his friends as they wanted to buy a mobile phone. It can be observed that as young individuals interact with their delinquent companions, their perspectives on life change to meet their needs and objectives, leading to more sophisticated antisocial behavior.

Finally, this study found that poverty encourages children to hang out with their delinquent friends. This is because poorer children's peer interactions were limited to children from similar socioeconomic backgrounds. The results of this study demonstrated that to meet their particular requirements, youngsters engaged in criminal activity such as theft, robbery, drug sales, murder, or trafficking. However, since young people who engaged in criminal activity were not acting alone but rather belonged to a variety of peer groups, bad group association was considered a significant contributor to youth criminality. McGlolin and Shermer's (2009) findings captured in the literature review, suggest that youth become delinquents as a result of their interactions with peers who support delinquency rather than those who oppose it.

When poor children who have to struggle in school band together, there is a good chance that they will commit crimes including theft, burglary, drug abuse, drug sales, or even murder to gain the goods their parents can't afford for them or to fulfill their desires. Parental monitoring can have a direct impact on delinquency by preventing children from engaging in unsupervised activities. It can also have an indirect impact by preventing contact with friends who engage in criminal activity (Patterson & Dishion, 1985; Patterson *et al.*, 2000). The opposite appears to be true for children of low-income parents.

Conclusion

This study presented insight into the experiences of young offenders and poverty-related factors that exacerbated children’s delinquent behavior. The results of this study could help policymakers in Myanmar reevaluate the existing economic circumstances of families living in poverty and develop strategies to address the problem. Parents should be sent to parenting skill courses to enhance their methods of parenting because poor parenting can have negative effects on children. To keep children busy with worthwhile activities at school and shielded from the damaging effects of outside influences, schools should also play a role in the prevention of crime and delinquency through intervention programs like extracurricular activities. Additionally, interventions that address parental drinking should be undertaken to promote family functioning reduce family conflict, and thereby protect children. Evidence-based services and support should also be used to enhance protective factors that reduce the impacts of maltreatment and to equip families and communities with the tools to prevent maltreatment from occurring.

Some limitations can be found in this study. First, as this study used juvenile offenders who are still on trial, this could have affected participants’ responses as the data collected were dependent on the participants’ willingness to disclose accurate and honest information. In addition, as this study used juvenile delinquents who are still on trial, the important focus of future research should be replication of the current study using young juvenile offenders who

have already been sentenced**.** The second limitation is the sample of participants. As this study used young offenders from only one juvenile training school, this limited the range of participants' experiences. Hence, future research should utilize samples from diverse juvenile training schools. The last limitation is the researcher's biases. Because data collection, transcription, coding, analysis, and reporting are all dependent on the researcher's understanding and interpretation, they are likely to be influenced by the researcher's preconceptions and biases. This limitation can be minimized by employing a quantitative or mixed-method research design in future research.

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THE RELATIONSHIP BETWEEN COACH'S LEADERSHIP STYLE AND ELITE ATHLETES' COMPETITIVE STATE ANXIETY IN MYANMAR

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Abstract

The purpose of this study is to examine the relationship between the leadership style of coaches and the competitive anxiety of elite athletes of the Myanmar National Sports Team before the 31st SEA GAMES. This study also attempts to identify the leadership styles of coaches and to describe the competitive anxiety level of athletes in the Myanmar National Sports Team. Participants were 105 elite athletes from the Myanmar National Sports Team. Participants completed a battery of questionnaires, including Leadership Scale for Sports (LSS) developed by Chelladuria and Saleh (1990), the Competitive State Anxiety Inventory-2 (CSAI-2) introduced by Martens et al. (1990b), and the demographic variables. The results of the descriptive analyses most of the participants perceived their coaches from Myanmar National Sports Team have the tendency to engage in training/instruction behavior, positive feedback behavior and democratic behavior of leadership style. Additionally, most of the elite athletes reported significantly low levels of both cognitive and somatic anxiety and high level of self-confidence. Further, the results of the multiple regression analyses reveled that a coach's training/instruction behavior decreased athletes' cognitive anxiety levels, and autocratic behavior and social support behavior increased athletes' cognitive anxiety levels. The coaches' autocratic behavior and democratic behavior also increased athletes' somatic anxiety. However, the research findings indicated that the positive impact on athletes' self-confidence from coaching behaviors such as training, instruction, social support, and positive feedback, as well as the negative effects resulting from autocratic and democratic behaviors, did not reach statistical significance. The current study has important implications and practical assistance to sports coaches, athletes, sports psychologists, and coaching education.

Keywords: *leadership styles, competitive state anxiety, elite athletes*

Introduction

Nowadays, there is little difference between winning and losing in the current sports world (Birrer & Morgan, 2010). Some studies have revealed that psychological matters are becoming more necessary for causes. Athletes in every sport and at all levels face competitions that lead to an increase in anxiety.

It is made clear that an athlete's psychological and emotional capacities are the predominant factors in sports performance. Some researchers proposed a dramatic decrease in sport performance when self-expected standards are generally achievable (Mesagno & Hill, 2013). It is the result of increased anxiety under perceived psychological pressure, which may be the main reason for substandard athletic performance (Potgieter, 2009). This leads to an increase in anxiety when anticipating any achievement situation, especially in sports competitions. Competitive anxiety in athletes occurs before athletes compete in a game and during matches, which affect an athlete's peak performance. Some investigator suggested that if an athlete wants to achieve optimal performance, he must have the ability to overcome his anxiety (Satiadarma, 2000). The Anxiety that occurs in athletes usually interferes with his appearance. Some researchers proposed that, the athlete has a fear of failing in the match or has the moral burden if he does not win the match (Husdarta, 2010; Rajan and Pushparajan, 2011).

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Consequently, athletes are more likely to feel anxiety in competition, and this is called competitive anxiety.

This is unsurprising, as sports psychology researchers have somewhat unanimously agreed that competitive sport has the potential for high levels of stress and anxiety (Hanton et al., 2015). Equally, practicing and employing a range of psychological strategies to combat potential negative emotional states such as sport-related anxiety has become an integral part of a competitive athlete's preparation (Hanton, et al., 2015; Weinberg & Gould, 2015). Anxiety is assumed to deteriorate the athletes' results in a reduction in overall performance (Hanin, 2000).

This unanticipated dimension of competitive anxiety is getting more attention in the psychology of games and exercise. It was found that "sports psychologists have believed that high intensity of anxiety in the course of competition is harmful, worsening performance and even a significant factor to drop out" (Raglin & Hanin, 2000). Usually, anxiety has the propensity to intimidate the well-being of a person because it elevates someone's worries and uncertainties (Landers, 1997). The athlete's overall performance in the sports is affected by anxiety (Raglin & Hanin, 2000).

Although the athlete's overall performance in the sports is affected by anxiety (Raglin & Hanin, 2000), anxiety should not always be perceived as a bad emotion; rather it could motivate the player to more focused and alert performance (Robinson & Freeston, 2015). For example, an athlete who manifests anxiety before and during the competition will experience an elevated level of arousal and feelings of tension and apprehension.

In sport psychology, some sport-specific instruments such as the Sports Competition Anxiety Test (SCAT; Martens, 1977) and Competitive State Anxiety Inventory (CSAI; Martens, Burton, Rivkin, and Simon, 1980) were also found to be better predictors of competitive anxiety than existing general measures such as the State-Trait Anxiety Inventory (STAI; Burton, 1998). Spielberger (1966) described state anxiety as varying from moment to moment and fluctuating proportionately to the perceived threat in a situation. Another conceptual advance was the separation of anxiety into the components of cognitive and somatic anxiety (Schwartz, Davidson, and Goleman, 1978; Wine, 1971).

Drawing on multidimensional anxiety theory (MAT) in sports psychology, Martens and colleagues (Martens, Vealey, Burton, Bump, and Smith, 1990) developed the Competitive State Anxiety Inventory-2 (CSAI-2) to measure the intensity of performers' cognitive and somatic responses, and also self-confidence. Cognitive anxiety is related to negative expectations or thoughts about performance, while somatic anxiety is how the nervous system becomes stimulated by the anxiety-including situation, resulting in a physiological response (Martens, Vealey, & Burton, 1990). Self-confidence is "one's belief in meeting the challenge of the task to be performed" (Woodman & Hardy, 2003). Subsequent research employing the CSAI-2 has provided evidence to support the separation of cognitive and somatic components as a function of antecedents (Jones, Swain, and Cale, 1991), temporal characteristics (Martens et al., 1990), performance outcomes (Parfitt and Hardy, 1993), goal attainment expectancies (Krane et al., 1992) and in response to interventions (Burton, 1990; Maynard and Cotton, 1993).

Leadership style has been identified as a crucial factor of competitive anxiety (Bum, 2013; Hong, 2008; Yeom, 2009). Furthermore, leadership is an indispensable part of human resource administration (Pyun, Kwon, Koh, & Wang, 2010). Leadership in sports also has a

considerable effect on athletes' success and failure (Ch'ng & Koh-Tan, 2006). More specifically, a coach's leadership style has an impact on athletes' psychological and emotional qualities and their development (Chelladurai, 1993).

Chelladurai's (1978) Multidimensional Model of Leadership Styles, provides an interactional approach to conceptualizing the leadership process which applies specifically to sport. In this model, athlete satisfaction and performance are viewed as the products of the interaction of three components of leadership: actual leader behavior, leader behavior preferred by the athlete and prescribed leader behavior. Actual leader behavior are those behaviors that leader exhibits irrespective of the norms or preferences of the team. Preferred athlete behaviors are those behaviors that are preferred by the athlete. Finally, prescribed leader behaviors are those that conform to the established norms of the organization. The degree of congruence among these three factors determines athlete's satisfaction and performance.

The Leadership Scale for Sports (LSS) was developed by Chelladurai and Saleh (1980). The LSS has been used in a variety of contexts to measure leadership in sport and the relationship between leadership and other variables. This measurement is made up of the five-dimensions of leader behavior, such as training/instruction, autocracy, democracy, social support, and positive feedback. Chelladurai and Saleh (1980) described the five-dimensions of leader behavior as follows: (a) training and instruction behavior is more likely to give importance to boosting athletes' performance by providing training and passing down strategies, skills, and techniques; (b) autocratic behavior is prone to restrict athletes' participation in the decision-making process and power over them; (c) democratic behavior is a participative leadership style in which athletes take an active participative role in the decision-making process on the game, strategies, goal settings, and so on; (d) social support behavior tends to focus its attention on the athletes' welfare, helping their personal problems, and building a sport part of enjoyment environment of the athlete's life; and (e) positive feedback is a pattern of behavior that reinforce to an initial act to be a strong behavior for an athlete's successful performance.

In the sports field, there have been relatively few studies that look into a link between coaches' leadership styles and competitive state anxiety in their athletes. In some studies, there were found that a coach's training/instruction and positive feedback behavior reduced athletes' cognitive anxiety levels (Hong, 2008), but autocratic behavior increased the anxiety level of athletes (Bum, 2013). Additionally, the more a coach displayed training/instruction behavior, democratic behavior, and social support behavior, the more athletes felt confident. Other researchers found that training/instruction and autocratic behavior from coaches were more likely to lower the cognitive anxiety levels of the college bowlers in Korea (Yeom, 2009). On the other hand, coaches' democratic behavior related to lower levels of self-confidence (Yeom, 2009).

From the above review and discussion, it is recognized that a coach's leadership style has an impact on athletic performance. However, it seems complicated to demonstrate precisely the possible relationship between a coach's leadership style and an athlete's competitive anxiety. In this regard, an effective coaching style can be depended upon a variety of situational factors in a sports setting. In Myanmar, the role of coaching style can be a variable that affects the competitive anxiety of athletes; nevertheless, there is a few study of systematic investigation of the relationships between leadership styles of coaches and athletes' competitive anxiety. In an attempt to illuminate these issues, the purpose of this study is to examine the relationship between the leadership style of coaches and the competitive anxiety level of elite athletes of the

Myanmar National Sports Teams before the 31st South-East Asian Games (31st SEA Games). In addition, this study also attempts to identify the leadership styles of coaches in the Myanmar National Sports Teams and to describe the competitive anxiety level of elite athletes in the Myanmar National Sports Teams.

More specifically, based on the previous literature reviewed, we generated the following hypotheses:

Hypothesis 1: There will be an effect of coaches' different leadership styles on the cognitive anxiety levels of athletes.

Hypothesis 2: There will be an effect of coaches' different leadership styles on the somatic anxiety levels of athletes.

Hypothesis 3: There will be an effect of coaches' different leadership styles on the self-confidence levels of athletes.

Method

Participants

Surveys were distributed to 127 elite athletes of martial arts and non-martial arts team in Gold Camp, Naypyidaw, Myanmar National Sports Team. A total of 105 usable data were returned; including 54 males (51%), 51 females (49%), who were between 17 and 39 years old. About 12.2% of the athletes were A-grate, 33.7% were B-grate and 54.1% were C-grade.

Measures

Leadership Scale: Leadership Scale for Sports (LSS) (Chelladurai, 1990) was used to measure a coach's leadership style. According to Chelladurai (1990), the LSS is classified into three versions that are (1) coaches' perceptions of their own behavior, (2) athletes' perceptions of their coaches' leader behavior, and (3) athletes' preferences for specific leader behaviors. In this study, the version of athletes' perceptions of their coaches' leader behavior was used to quantify a coach's leadership style.

The LSS was made up of five dimensions of coaches' leadership styles with 40 items. The LSS is broken down into 5 subscales: training/instruction behavior (TI), autocratic behavior (AB), democratic behavior (DB), social support behavior (SS), and positive feedback behavior (PF). Each item is rated on a 5-point Likert scale that ranges from *never (1), seldom (2), occasionally (3), often (4), and always (5)*. In this respect, when calculating the mean of the items for each of the five dimensions, the scores are respectively computed. The LSS has reasonable internal consistency reliability (Hastie, 1995), with subscale Cronbach's alpha ranging from .72 to .77. Bum and Shin (2015) also reported the coefficient alpha that is for training/instruction .92, democratic behavior .87, Social support .84, Autocratic behavior .74, and Positive feedback .75. Cronbach's alpha indicated acceptable for the LSS in current study, .87 for training/instruction, .68 for autocratic behavior, .83 for democratic behavior, .89 for social support behavior, and .92 for positive feedback behavior.

State Anxiety: The Competitive State Anxiety Inventory-2 (CSAI-2) constructed by Martens et al. (1990b) was employed to measure an athlete's competitive state anxiety level. It comprises 27 items that are rated on a four-point Likert Scale ranging from not at all (1),

somewhat (2), moderately (3), to always (4). Stated in detail, nine items account for each of three dimensions: cognitive anxiety, somatic anxiety, and self-confidence. The average score of each dimension is calculated and indicates that the higher the average score, the higher the athlete's cognitive anxiety levels and self-confidence before the game. In this study, internal consistency reliability (Cronbach's alpha) was to be found .85 for cognitive anxiety, .67 for somatic anxiety, and .80 for self-confidence.

Demographic Variables: This questionnaire included demographic variables of particular interest as control variables, that is, age, sex, education level, sport event, tenure, and sport performance status. Sport performance status is divided into three grades: A, B, and C. Athletes who have competed in the Southeast Asian and Asian Championships and have won gold medals are rated *A*-grade. She or he competed in the Southeast Asian and Asian Championships and won silver and bronze medals, and while those who have never won a medal are given a B-grade. Athletes who have reached the elite level and are training at the camp are given a *C*-grade.

Procedure

This sample was selected using a convenience sampling method, one of the non-probability sampling methods. Because of the nature of this study, it was difficult to select a random sampling technique. Permission for research with the participants was first obtained from Director General from Ministry of Sports and Youth Affairs in Naypyidaw. In April 2022, survey questionnaire was administered the 127 elite athletes of martial arts and non-martial arts, who Myanmar National Sports Team will compete in the 31th Sea Games at Vietnam, in May 2022. All data were collected at a period of rest time of athletes in accordance with each sports event. Before the survey, they were informed the purpose of the study and prospective research benefits, expected time duration, their survey was anonymous, they could refuse any time if the wished and confidentiality was also ensured. Valid responses were obtained from 83% of the respondents 105 elite athletes.

Results

Descriptive Statistics

Perception of the both martial arts and non-martial arts athletes, training/instruction dimension's average mean values are much higher than the theoretical value of 3 and democratic dimension's average mean values are only more than theoretical value of 3. As a results of non-martial arts athletes, positive feedback dimension's average mean value is much higher than the theoretical value, whereas as a results of martial arts athletes, positive feedback dimension implies only more than the theoretical value. According to the result of non-martial arts view, social support dimension's average mean value is only more than the theoretical value. However, social support dimension is lower than the theoretical value in view of martial arts athletes. Besides, considering the results of athletes from both events, there are low theoretical values in autocratic behavior dimension of coaches' leadership style in Myanmar. (See in Table,1). According to this survey, the most athletes perceived their coaches have the tendency to engage in training/instruction behavior, positive feedback behavior and democratic behavior of leadership style in Myanmar National Sports Team.

Additionally, as shown in table 2, the both martial arts and non-martial arts athletes reported significantly lower levels of both cognitive anxiety and somatic anxiety, but on the other hand both groups have higher level of self-confidence.

Table 1: The Mean Score of Athletes' perception of Coaches' leadership Style

	TI	AB	DB	SS	PF
Martial Arts	4.14 (.60)	2.84 (.80)	3.49 (.76)	2.95 (.90)	3.44 (.84)
Non-Martial Arts	4.42 (.41)	2.30 (.67)	3.93 (.57)	3.75 (.81)	4.35 (.64)

Notes*:* TI = training/ instruction, AB = autocratic behavior, DB = democratic behavior, SS = social support, PF = positive feedback.

Table 2: The Mean Score of Athletes' Cognitive Anxiety, Somatic Anxiety and self-Confidence

	CA	**SA**	**SC**
Martial Arts	1.98 (.55)	1.70 (.42)	3.20 (.47)
Non-Martial Arts	1.83 (.55)	1.70 (.33)	3.23 (.38)

Notes*:* CA = cognitive anxiety, SA = somatic anxiety, SC = self-confidence

Correlation Analysis

As shown in Table 3, cognitive anxiety was significantly negative correlation with training/instruction behavior ($r = -.20$, $p<.05$), however, there was positive correlation with autocratic behavior ($r = .26$, $p<.01$). Additionally, regarding somatic anxiety, significant positive correlation was found with autocratic behavior ($r = .22$, $p<.05$). Nevertheless, self-confidence was not significantly correlation with any leadership styles ($r = .13$, ns, $r = -.12$, ns, $r = .03$, ns, $r = .09$, ns, $r = .10$, ns).

Regression Analysis

In order to test our hypotheses, multiple regression analyses were conducted. Firstly, coaches' leadership styles accounted for 15% of the variance in athletes' cognitive anxiety ($R^2 = .15$, $F = 3.34$, $p<.01$). It was shown in Table 4, coaches' training and instruction behavior ($\beta = -.45$, $p<.01$) had negative effects on athletes' cognitive anxiety levels. Conversely, coaches' autocratic behavior and social support were shown to have the statistically positive effect on elite athletes' sense of cognitive anxiety ($\beta = .26$, $p<.01$; $\beta = .32$, $p<.01$) before the 31st SEA GAMES. It was described that coaches' democratic behavior and positive feedback behavior did not statistically have a significant impact on athletes' level of cognitive anxiety.

Secondly, multiple regression analysis was conducted to find out whether a coach's leadership style significantly predicted elite athletes' somatic anxiety before the game. Athletes' perception of coaches' leadership styles explained 11% of the variance in athletes' somatic anxiety ($R^2 = .11$, $F = 2.33$, $p<.01$). Coaches' autocratic behavior and democratic behavior were positive predicators to somatic anxiety ($\beta = .30$, $p<.01$; $\beta = .34$, $p<.01$) before the competition. Nevertheless, coaches' training and instruction behavior, social support and positive feedback behavior were not statistically significant effect on athletes' experience of somatic anxiety.

Lastly, regression analysis was performed to investigate whether a coach's leadership style could account for the elite athletes' self-confidence level. Athletes' perception of coaches' leadership styles explained 4% of the variance in athletes' self-confidence level (R^2 = .04, F = .68, p<.01). Surprisingly, all of the coaches' leadership styles did not statistically have a significant impact on athletes' level of self-confidence.

Table 3: Correlations of Leadership Styles and Competitive Anxiety

	1	2	3	4	5	6	7	8
1. TI	-							
2. AB	-.48***	-						
3. DB	.76***	-.49***	-					
4. SS	.72***	-.37***	.62***	-				
5. PF	.75***	-.48***	.66***	.73***	-			
6. CA	-.20*	.26*	-.06	.00	-.14	-		
7. SA	-.09	.22*	.05	.02	-.03	.56***	-	
8. SC	.13	-.12	.03	.09	.10	-.20*	-.00	-

Note*:* *p<.05, **p<.01, ***p<.001, TI = training/instruction, AB = autocratic behavior, DB = democratic behavior, SS = social support, PF = positive feedback, CA = cognitive anxiety, SA = somatic anxiety, SC = self-confidence.

Table 4: Results of multiple regression analysis with Coaches' Leadership Style as predictor of Elite Athletes' Cognitive Anxiety, Somatic Anxiety, and Self-Confidence

Predictor	**B**	**SE**	***β***	***t***
Cognitive Anxiety				
(Constant)	2.23	.61		3.66***
Training and Instruction	-.45	.18	-.45	-2.50*
Autocratic Behavior	.17	.08	.26	2.15*
Democratic Behavior	.21	.12	.28	1.78
Social Support	.19	.09	.32	2.08*
Positive Feedback	-.07	.11	-.10	-.63
Somatic Anxiety				
(Constant)	1.40	.43		3.28***
Training and Instruction	-.23	.13	-0.33	-1.81
Autocratic Behavior	.14	.06	.30	2.53*
Democratic Behavior	.18	.08	.34	2.16*

Predictor	**B**	**SE**	***β***	***t***
Social Support	.05	.06	.11	.70
Positive Feedback	.02	.07	.05	.32
Self-Confidence				
Constant	3.00	.51		5.94***
Training and Instruction	.17	.15	.21	1.10
Autocratic Behavior	-.05	.07	-.10	-.80
Democratic Behavior	-.12	.10	-.20	-1.18
Social Support	.01	.08	.01	.07
Positive Feedback	.01	.09	.02	.12

R^2 = .15, F = 3.34**, R^2 = .11, F = 2.33*, R^2 = .04, F = .68, *p <.05, ***p <.001

Discussion

The primary purpose of the present study was to examine the purpose of this study is to examine the relationship between the leadership style of coaches and the competitive anxiety level of elite athletes of the Myanmar National Sports Team before the 31st SEA GAMES. This also attempts to identify the leadership styles of coaches and to describe the competitive anxiety level of athletes in the Myanmar National Sports Team.

The first important finding of our research is that most of the participants perceived their coaches have the tendency to engage in training/instruction behavior, positive feedback behavior and democratic behavior of leadership style in Myanmar. Additionally, most of the elite athletes reported significantly lower levels of both cognitive and somatic anxiety. Also, they attained better results on the self-confidence subscale, which is regarded as an essential trait that leads to achievement performance.

The second finding showed that coaches' leadership styles significantly impact athletes' cognitive anxiety. The results of this study pointed out that a coach's training/ instruction behavior decreased athletes' cognitive anxiety levels. This finding supports previous research that the training/instruction behavior of a coach reduces the athletes' cognitive anxiety (Hong, 2008; Yeom, 2009), and it has appeared that athletes can get the psychologically and emotionally stability through accurate instructions from their coaches to overcome their stress and cognitive anxiety before the game (Bum, 2013). Furthermore, it was shown that autocratic behavior and social support behavior increased athletes' cognitive anxiety levels. That is, the autocratic behavior of coaches may result in stress and psychologically instability that could produce a high level of athletes' cognitive anxiety (Bum, 2013). And the curious findings in the current study also support the reciprocity theory (Uehara, 1995). Empirical evidence suggests that the receipt of social support for some individuals may be perceived as pressure, burden or annoyance (Reinhardt, Boerner, & Horowitz, 2006). Regarding democratic behavior and positive feedback behavior of leadership style, this result also supports the previous study of Bum's (2013) research on Korean junior golfers. Thus hypothesis 1 was supported.

Next, the third finding pointed out that regression analysis revealed the positive effect of coaches' autocratic behavior and democratic behavior on athletes' somatic anxiety, providing

support for hypothesis 2. According to Multidimensional Anxiety Theory (Martens et al., 1990), competitive anxiety would seem to have a cognitive way in terms of mental concerns as well as a somatic form like physiological and muscular activation. There are significantly predicted the occurrence of Somatic Anxiety, Worry, and Concentration Disruption when athletes perceived their coaches as authoritarian and coercive and they do not feel autonomous towards making sport-related choices (Isoard-Gautheur et al., 2012). Besides, Khan et al., (2015) proposed that democratic leadership should not be used when there is not enough time to get everyone's input (Khan & Jacob, 2015). In Myanmar National Sports Team, there was a decrease in the amount of training time for the 31st SEA GAMES because of COVID-19 restriction. Additionally, some researchers suggested that democratic behavior is preferred in Western societies (Schoel, Bluemke, Mueller & Stahlberg, 2011).

The last findings pointed out that there were no effects of coaches' any leadership styles on the self-confidence level of elite athletes in Myanmar National Sports Team. The results found that the training and instruction behavior, social support, and positive feedback of a coach positively impact the athletes' self-confidence level but are not statistically significant. In parallel, coaches' autocratic behavior and democratic behavior have negative effects on athletes' self-confidence levels but are not statistically significant. Thus hypothesis 3 was rejected. These findings contradict the previous findings that coaches' training and instruction and positive feedback increase self-confidence level of junior athletes (Bum & Shin, 2015; Hong, 2008). It is assumed that there are significant differences between elite and non-elite athletes with many factors. Elite players may be more aware of their strengths and weakness, and are better able to have strong self-confidence and self-efficacy (Druckman & Bjork, 1994). Meanwhile, research looking for differences in Big Five personality traits between various sports, successful athletes show higher scores in the Big Five personality dimensions than non-athletes (Steca, Baretta, Greco, Addario, and Monzani, 2018). Based on the results of several studies, it shows that more successful athletes are more likely to have awareness, emotional stability, and self-confidence by themselves than less successful athletes. This study also suggests that elite athletes have their internal motivation and regulation of their behavior in everyday lives.

Conclusion

The current study has important implications and practical assistance to sports coaches, athletes, sports psychologists, and coaching education. Firstly, we can describe the leadership styles of coaches and the competitive anxiety level of athletes in the Myanmar National Sports Team. The effective leadership styles in our society can be identified that help us to become more and more achievement in the status of our sport. The results further highlight the importance of considering coaches' different leadership styles on the effect of athletes' competitive anxiety levels. This study provides coaches with information about which leadership style is the most likely to reduce athletes' competitive anxiety level in Myanmar society. It is hoped that the current findings can assist sport psychologists who are performing a foundation for developing systematic educational programs for leadership training and psychological skill training. Therefore, if the sports psychologists identified the effective leadership skill and psychological skill training program, our coaches and athletes could use these skills and strategies to adjust the optimal level of arousal and emotion during the competition.

In spite of the promising the present study has several notable limitations. The potential problem is that coaches' any different leadership styles have not significantly effect on athletes' self-confidence levels. This may due to the lack of statistical power related to the sample size. The importance of the sample size is crucial, and researches have proposed method to determine adequate samples sizes in order to obtain power in regression studies (Kelley & Maxwell, 2003). Increasing the sample may be helpful if this study is replicated.

Moreover, Chelladurai's Multidimensional Model (MML) theory was employed in this study. This theory proposes that "group performance and member satisfaction are considered to be a function of the congruence among three states of leader behavior – required, preferred, and actual" (Chelladurai, 1990, p. 329). Another potential problem is the leadership style measure used only a coach's actual behavior, as perceived by their athletes in this study. Consequently, further studies may be necessary to examine how concurrence in those three states of leader behavior will affect an athlete's competitive state anxiety level.

The current study conducted with the survey and quantitative method, which count on quantitative data. However, quantitative research methods have some limitations. Therefore, we should use a growing interest in qualitative research methods, such as observing participants, interviewing techniques, and analyzing documents in the follow-up studies.

A further limitation is that convenience sampling, one of the non-probability sampling methods, is used in this study. This method has a limit for generalization. A further hindrance is that the generalizability of the findings to the elite athletes' population is also limited. Additional research using a probability sampling procedure and other types of samples is necessary to ensure the generalizability of the results.

Lastly, the current research demonstrates the relationship between coaches' leadership styles and the athletes' competitive anxiety. Hence, future research may wish to test a meditational model to explore how affect competitive anxiety level (cognitive anxiety, somatic anxiety, and self-confidence) might mediate the link between coaches' leadership style and athletes' performance level.

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EXAMINING THE ROLE OF GENDER AND SOCIO-ECONOMIC STATUS IN EMOTIONAL INTELLIGENCE OF SOME MYANMAR EARLY ADOLESCENTS

Ei Ei Chaw[1], Nilar Kyu[2]

Abstract

The purpose of this study was to examine the role of gender and socio-economic status on the emotional intelligence of early-adolescent youth in Myanmar. The relationship between demographic variables (gender and socioeconomic status) and emotionality factors (adaptability, general mood, intrapersonal stress, interpersonal stress, and stress management) was examined using a non-experimental correlational design. The simple random sampling technique was used to select 382 students (197 males and 184 female) from three high schools in Mandalay. Early adolescent fifth graders, who ranged in age from 10 to 13, made up the participants. The participants were administered the Myanmar version of the Bar-On Emotional Quotient Inventory and a demographic questionnaire. The demographic sample was described using descriptive statistics. The relationship between the Bar-On EQI scales was examined using a Pearson correlation. The significance of the gender difference in the Bar-On EQI scales was determined using a t-test analysis. The significance of the difference in total emotional intelligence among socioeconomic status (SES) was assessed using an analysis of variance (ANOVA). The findings showed that in terms of intrapersonal stress skills, interpersonal stress skills, adaptability, mood, and overall emotional intelligence, girls generally score higher than boys. The higher socio-economic status group reported greater adaptability, mood, and overall emotional intelligence.

Keywords: Emotional Intelligence, gender, socio-economic status, early adolescents, Myanmar

Introduction

Without the proper coping skills, children around the world are dealing with a variety of stressors (Wang, Haertel, & Walberg, 1993). This is especially true for the early adolescent group (ages 10 to 13), as they go through biological, cognitive, and social-emotional changes as they establish relationships with peers, parents, and teachers and adjust to a new school (Jose & Kilburg, 2007; Roeser, Eccles, & Sameroff, 2000). According to research, social- emotional development between genders differs during childhood and adolescence. Gender differences in behavior problems, such as aggressive behavior and antisocial behavior (externalizing problems), during childhood and adolescence, are reported by Kelley, et al. (2000) and Lahey, et al. (2000), with boys showing greater rates of these problems than do girls. According to Hampel, Meier, and Kummel (2008), early adolescent girls are more vulnerable to interpersonal pressures that cause internalizing problems like depression.

It is becoming more and more clear that the early adolescent age group has a disproportionately high rate of academic and emotional failure as a result of their inability to identify, handle, and manage stress. According to Roeser, Eccles, and Sameroff's estimation from 2000, 25 to 50% of all young people between the ages of 10 and 17 are at risk of having their possibilities in education, employment, and other spheres of life reduced as a result of high levels of stress brought on by ineffective coping strategies and/or stress management. Additionally, it has been stated that between 60 and 80 percent of young people who are at risk originate from low socioeconomic situations (Roeser, Eccles, & Sameroff, 2000).

Evidence-based educational programs targeted at teaching stress management and useful coping skills to young adolescents may be beneficial, according to a growing body of research (Durlak & Wells, 1997). However, schools should carry out school and community risk and

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needs assessments to identify specific social and emotional demands before initiating intervention and prevention programs (Zins, Elias, & Greenberg, 2003). There is now an increasing number of research on the development and management of stress in middle and late adolescence as well as in adult populations. There is, however, little study on gender, stress, and coping as they relate to elements including socioeconomic status, level of education, race, and transitions in schools. The early adolescent group could be better understood through self-report and additional research on these ideas, which can then help school districts provide appropriate interventions.

Teachers believe that stress in kids can cause a range of behavioral issues, many of which are considered barriers to receiving a quality education (Beebe-Frankenberger et al. 2005; Webster-Stratton et al. 2004). Children who, for a variety of reasons, find themselves unable to manage interpersonal stressors, peer pressure on the playground, and the demands of learning in a classroom are particularly disadvantaged, as studies have shown that teachers frequently react negatively to the misbehaving child (Lane, Givner, & Pierson, 2004). In the past, teachers used to think that students who struggled in class were either mentally unfit or simply disruptive, and they would penalize them accordingly. As suggested by a growing body of research, many children who are "failing" in school are doing so because they have not yet fully developed their social and emotional skills and are unable to identify or manage stress (Chandler, 1984). In modern society, the idea that kids struggle with their incapacity to handle stress is not at all implausible. Previously considered to be an adult issue, researchers are now coming to the opinion that a particular youngster might be severely impacted by a variety of social challenges and alterations in family dynamics (Appleyard, et al. 2005).

Children today more than ever have to deal with a variety of parental and social issues, including parental separation and divorce, growing up in single-parent families from birth, poverty, and experiencing family dysfunction, including substance abuse in the home, domestic abuse, and even child abuse. Research has shown that problems like substance abuse and domestic violence are not only a problem for poor socioeconomic family units (Anshel & Delany, 2001; Bradley & Corwyn, 2002; Garmezy, 1983) and that even children in average mainstream homes can be affected by family dysfunction. It is less probable that the child will receive help for their problems in a home where the parents are most likely stressed out when the family unit is also affected by poverty. Parents who are under stress may engage in inconsistent or unstable parenting behaviors, particularly when it comes to setting up boundaries for their kids' safety or supporting them while they're under pressure (Anthony et al., 2005). In these circumstances, the child must learn coping mechanisms for the stressors they experience at home and school.

However, intervention programs during a child's life can and do improve that child's capacity to react to stress more positively and deal with the effects of stressors they cannot control, according to more researchers (Hampel, Meier, & Kummel, 2008; Zins, Elias, & Greenberg, 2003). As a result, the outcome for these children does not necessarily have to be negative. School-based initiatives that have been proven to be effective include Capable Kids (De Wolfe & Saunders, 1995), Youth Understanding and Managing Stress (Romano, Miller & Nordness, 1996), and the Rochester Child Resilience Project (Pincus & Friedman, 2004). Data collection is a crucial step in the design of any intervention program and can be carried out through tools such as student self-reports (Zins, Elias, & Greenberg, 2003). The needs of the people being served are identified through this procedure. While a child's home environment and personality traits will always be mitigating factors in intervention programs, several research findings indicate that the school environment is particularly beneficial in enhancing psychological adjustment and subsequently improving academic outcomes for particular children (Brooks, 2006; De Wolfe & Sanders, 1995).

A great deal of literature regarding the thoughts of children on stress and social skills is fairly extensive. Taxis et al. (2004) found that self-reporting among young children about stress was not very effective in that many children described situations relating to feeling ill rather than to any major stress factors. This was attributed to the fact that young adolescents have distinct worldviews than younger children, and this difference needs to be taken into account when constructing interventions. While McGinnis and Goldstein (1997) held that enhancing interpersonal and stress-management abilities is crucial to achieving better outcomes for youth, Nettles, Mucherah, and Jones (2000) came to the opposite conclusion, concluding that the intervention must also focus on increasing access to resources and the development of adaptive processes. Adaptability, interpersonal stress, intrapersonal stress, general mood, stress management, and overall emotional intelligence were the emotionality factors that this study looked at to examine if there were any relationships between demographic factors like gender and socioeconomic status and these emotionality factors. The following research queries were addressed in more detail.

1. How do gender and the Bar On EQ-I scale's raw scores correlate?
2. What connection exists between socioeconomic status (SES) and the raw Bar On EQ-I Scale scores?

Method

Participants

The Participants in the study were 382 fifth–grade students (198 male students, 184 female students) from No (5) B.E.H.S, San Hein Education Private High School, and Kantetkone Monastic Education High School in Chanayethazan and Mahaaungmye Townships, Mandalay. Their age ranged from 10-13 years. The students in this sample had a 10.97-year-old mean age. To take part in the study, every student volunteered.

Procedure

Permission for the participants to take part voluntarily in the study during school times was obtained from the headmaster, principal, and Abbot of No (5) B.E.H.S, San Hein Education Private High School and Kantetkone Monastic Education High School. A prospective sample of 382 fifth-grade students was pooled and survey questionnaires were administered to all fifth–grade students present in the school on the scheduled day.

Measures

Myanmar Version of the Bar-On Emotional Quotient Inventory

Based on a translation of Bar-On's (1997) original instrument, this study tried to create the Bar-On Emotional Quotient Inventory (Bar-On EQI) for use in Myanmar. Each fifth grader was administered the Bar-On Emotional Quotient Inventory, Myanmar version, during their routine guidance class. The BarOn EQ-I is a self-report rating scale used to assess emotional intelligence, according to Baron & Parker (2000). Bar-On added on to state that the questionnaire's six scales-total emotional intelligence, interpersonal stress, intrapersonal stress, adaptability, stress management, and general mood—help analyze the emotional, personal, and social dimensions of emotional intelligence. The ability to deal with demands and pressures from the environment is ultimately determined by these emotional, personal, and interpersonal

characteristics. The Bar On EQ-i in Myanmar version has 121 items that participants are asked to rate on a 5-point Likert scale, ranging from "Very seldom or Not true of me" to "Very often true of me or True of me." Reliability coefficients were determined to be .81 for total emotional intelligence,.60 for intrapersonal stress,.61 for interpersonal stress,.64 for stress management,.57 for adaptability, and .62 for general mood according to the reliability analysis results of this study.

Socioeconomic Status

Sociologists and social scientists use the word "socioeconomic status" to refer to the individual's or a group's position in a hierarchical social structure. Socioeconomic factors such as parental education, family income and occupation, housing facility, and material belongings are used to assess this position (Adler et al., 1994). To determine the socioeconomic status of the parents in the current study, the researcher also considered their level of education, occupation, income, place of residence, and material possessions, such as a car, motorcycle, telephone, television, video, refrigerator, sewing machine, bicycle, radio, and cassette player. Each variable was given a numerical value, and for each study subject, the total SES score was computed. Considering the socioeconomic status of their parents, three groups were created out of all study participants. The classification was based on percentile values. Therefore, we discovered that the Low SES group was defined as having a score of less than 19 (up to the 25th percentile), the Average SES group as having a score of 19 to 28 (26th to 75th percentile), and the High SES group as having a score of more than 28 (above the 75th percentile).

Results

These results were reached after administering the Bar-On EQI Myanmar Version test to a sample of 382 respondents. Descriptive statistics about gender and socioeconomic status (SES), the Bar-On EQI scale, and the results of statistical tests of difference for gender and socioeconomic status are all included in the findings, which are organized into four categories.

Descriptive Statistics

Four basic characteristics that offered demographic information about the participant group were collected. Age, gender, socioeconomic status (SES), and ethnicity are some of these characteristics. In further investigations, socioeconomic status and gender are included as differentiating factors. A frequency table for each of these characteristics is shown in Table 1. According to a general analysis of the descriptive statistics, the majority of the participants (n = 158) are under the age of 10, and the majority of the remaining participants (n = 115) are between the ages of 10 and 11. Male students make up the majority of respondents (n = 197). The SES distribution is normally distributed, with the average group comprising a sizable number of individuals (n = 194). When it comes to ethnicity, the majority (n = 303) are Bamar, with the minority (n = 79) being largely Pa-O (n = 19) or Shan (n = 17) in number.

Bar-On EQI Test Scores

The results of the Bar-On EQI test for the entire group make up the second set of descriptive statistics that are presented. These scores are provided in their raw forms, and to illustrate how these scores relate to one another, a correlation table for the scale scores has also been created using the raw scores. Tables 2 through 7 include this information. The coefficient of

variation in the raw scores (Table 2) reveals that EQ and intrapersonal stress varied the least, while interpersonal stress and stress management varied the most. Significantly positive correlations between all of the variable pairs are shown in Table 3. While stress management and interpersonal stress had the least significant correlation (.122), EQ and intrapersonal stress have the largest link (.830).

Gender Differences

The first set of inferential tests, which relate to research question 1, concentrated on gender distinctions. The t-tests employed in this analysis were for comparing gender differences in EQ, intrapersonal stress, interpersonal stress, stress management, adaptability, and mood. The raw scores were used for these analyses. Data from the t-test analysis for the overall EQ and subscales for intrapersonal stress, interpersonal stress, stress management, adaptability, and mood when broken down by gender are shown in Table 4. Table 4 demonstrates the results of the test for between-subjects effects, which revealed significant mean differences by gender for five of the six variables. Although there were differences in means of stress management as well, they were not approached significantly. According to Table 4, girls had higher mean scores on the EQ scales for mood, adaptability, intrapersonal stress, and interpersonal stress. The results of these tests allow us to respond to research question 1 as follows. Out of the subscales, only stress management revealed no significant variation in means depending on gender, while intrapersonal stress, interpersonal stress, stress management, adaptability, and mood did. In general, girls outperformed boys in the areas of intrapersonal stress, interpersonal stress, adaptability, mood, and total EQ, demonstrating that they may have somewhat better skills in these areas. As a result, the first research question has received an affirmative answer.

Table 1 Age, gender, socioeconomic status, and ethnicity of participants' frequency distribution (n = 382)

	Frequency	Percent
Age		
10	158	41.4
11	115	30.1
12	70	18.3
13	39	10.2
Gender		
Male	197	51.6
Female	185	48.4
SES		
Low	94	24.6
Average	194	50.8
High	94	24.6
Ethnicity		
Bamar	303	79.3

	Frequency	Percent
Pa-O	19	5.0
Shan	17	4,5
Palaung	10	2.6
Danu	10	2.6
Chinese	5	1.3
Wa	4	1.0
Chin	3	0.8
Kachin	3	0.8
Indian	3	0.8
Muslim	2	0.5
Naga	1	0.3
Rakhine	1	0.3
Mon	1	0.3

Table 2. Results of the Myanmar Version of the Bar-On EQI test with descriptive statistics (N=382)

	Mean	Median	Mode	Standard Deviation	Coefficient of	Range
Intrapersonal	110.62	109.00	102	12.764	.11	7
Interpersonal	68.29	68.00	74	9.464	.13	9
Adaptability	72.22	71.00	67	9.384	.12	5
Management	42.41	42.00	42	8.420	.19	4
Mood	109.58	110.00	112	12.732	.11	7
Total EQ	376.82	371.50	344	36.981	.09	208

Table 3. Raw Score Correlations in the correlation matrix (n=382)

	1	2	3	4	5	6
1. Intrapersonal Stress	-					
2. Interpersonal Stress	.393***	-				
3. Stress Management	.585***	.122*	-			
4. Adaptability	.564***	.415***	.401***			
5. Mood	.410***	.569***	.151**	.446***	-	
6. Total EQ	.830***	.679***	.602***	.765***	.707***	

Table 4 Myanmar's version of the Bar-On EQI scales: estimated marginal means by gender

	Male (n=197)		Female (n=185)		
	Mean	SD	Mean	SD	t value
Intrapersonal stress	108.78	(12.076)	112.59	13.208	-2.947**
Interpersonal stress	66.09	10.109	70.64	8.115	-4.839***
Stress management	42.04	8.174	42.81	8.677	-0.899
Adaptability	70.50	8.957	74.05	9.506	-3.754***
Mood	107.26	12.799	112.04	12.220	-3.724**
Total EQ	368.37	34.880	385.82	37.122	-4.736***

Table 5. socioeconomic status, intrapersonal stress, interpersonal stress, stress management, adaptability, and mood tests of between-subjects effects

Scale	D f	F	Sig
Intrapersonal Stress	2	1.172	.311
Interpersonal Stress	2	2.680	.070†
Stress Management	2	.985	.374
adaptability	2	3.089	.047*
Mood	2	5.271	.006*
Total EQ	2	3.623	.028*

Note: *Indicates that the test is significant at the $p < .05$ level. † Indicates that the test is significant at the $p < .10$ level.

Socioeconomic Status Differences

The second area of investigation involved determining if socioeconomic status (SES) affected the results of the component scales or the respondents' EQ scores. Low, average, and high SES were categorized according to percentiles. The remaining respondents were split between the two factors, with the majority of them reporting having an average socioeconomic level. The results of a one-way ANOVA between SES and the dependent variables (intrapersonal stress, interpersonal stress, stress management, adaptability, mood, and total EQ) are shown in Tables 5 and 6. The effects of adaptability ($F (2, 382) = 3.089$, $p=.047$), mood ($F (2, 382) = 5.271$, $p =.006$), and total EQ ($F (2, 382) = 3.623$, $p =.028$) were significant at p .05 and.01 in the test of between-subjects effects (Table 5). However, interpersonal stress did approach statistical significance ($F (2, 382) = 2.680$, $p =.070$, meeting the criteria of p .10). This would suggest that the results of this between-subjects effects test could be significant in a larger or more representative sample.

The descriptive statistics by SES are shown in Table 6 for each scale. Table 6 also demonstrates that scores on the total EQ scale, the mood scale, and the adaptability scale all tend to increase with SES. A more detailed post-hoc analysis that highlights differences between the groups is provided in Table 7 (using Tukey HSD analysis). Only the results for adaptability, mood, and total EQ are presented in Table 7, which includes Tukey HSD tests for group comparison. This is because only these variables significantly differed between groups. With a mean difference of -3.298, ($p =.042$), -5.127, ($p=.004$), and -11.845, ($p =.029$), these results demonstrate that the only statistically significant differences were between the low and high groups in adaptability, between the average and high groups in mood, and between the average and high groups in total EQ. The results of these tests provide an answer to Research Question 2. Only adaptability, mood, and Total EQ were found to have significant differences between SES

categories among the five scale variables (intrapersonal stress, interpersonal stress, stress management, adaptability, and mood), though the interpersonal scale variable approached significance (and could achieve significance in a larger or more representative sample).

Table 6 Intrapersonal stress, interpersonal stress, stress management, adaptability, and mood- descriptive information for SES groups

Scale	Socioeconomic Status group (Family Income)	Mean	Standard Deviation	N.
Intrapersonal Stress	Low	110.82	11.768	94
	Average	109.76	12.196	194
	High	112.20	14.702	94
	Total	110.62	12.764	382
Interpersonal Stress	Low	68.06	11.188	94
	Average	67.48	8.063	194
	High	70.20	10.087	94
	Total	68.29	9.464	382
Stress Management	Low	41.53	8.085	94
	Average	42.43	8.058	194
	High	43.26	9.423	94
	Total	42.41	8.420	382
Adaptability	Low	70.84	8.703	94
	Average	71.96	8.613	194
	High	74.14	11.192	94
	Total	72.22	9.384	382
Mood	Low	109.34	12.156	94
	Average	107.98	12.483	194
	High	113.11	13.228	94
	Total	109.58	12.732	382
EQ	Low	374.15	35.496	94
	Average	373.82	33.328	194
	High	385.67	43.961	94
	Total	**376.82**	**36.981**	**382**

Table 7 Results of post hoc testing for adaptability, mood, and overall EQ by SES, including Tukey HSD and Games-Howell

Dependent Variable	(I) SES	(J) SES	Mean Difference (I – J)	Std. Error	Sig.	95% Confidence Interval	
						Lower boun	Upper Bound
Adaptability	1	2	-1.118	1.173	.607	-3.88	1.64
		3	-3.298	1.361	.042*	-6.50	-0.09
	2	1	1.118	1.173	.607	-1.64	3.88
		3	-2.180	1.173	.152	-4.94	0.58
	3	1	3.298	1.361	.042*	0.09	6.50
		2	2.180	1.173	.152	-0.58	4.94
General Mood	1	2	1.361	1.582	.666	-2.36	5.08
		3	-3.766	1.837	.102	-8.09	0.56
	2	1	-1.361	1.582	.666	-5.08	2.36
		3	-5.127	1.582	.004*	- 8.85	-01.40
	3	1	3.766	1.837	.102	-0.56	8.09
		2	5.127	1.582	.004*	1.40	8.85
EQ	1	2	0.324	4.616	.997	-10.54	11.18
		3	-11.521	5.357	.081	-24.13	1.08
	2	1	-0.324	4.616	.997	-11.18	10.54
		3	-11.845	4.616	.029*	-22.71	-0.98
	3	1	11.521	5.357	.081	-1.08	24.13
		2	11.845	4.616	.029*	0.98	22.71

Notes: Differences with an asterisk (*) signify that they are statistically significant at p .05.

So, in response to research question 2, will children in the higher SES category do better in terms of adaptability, mood, and overall EQ? It is possible to respond positively. Following is a general summary of the analysis findings. First, in response to Research Question 1 (How do gender and the Bar On EQ-I scale's raw scores correlate?), it was discovered that there was a difference between the genders in terms of intrapersonal stress, interpersonal stress, adaptability, mood, and total EQ, with girls reporting statistically significantly higher scores than boys in these areas. The only difference observed in adaptability, mood, and overall EQ was in Research Question 2 (What connection exists between socioeconomic status (SES) and the raw Bar On EQ-I Scale scores?). The highest SES group in this case reported a considerably greater adaptability score than the average and lowest SES groups, as well as higher scores in the mood and overall EQ categories. The interpersonal variable approached to be significant, but it fell short of being significant.

Discussion

The current study aims to learn more about emotional intelligence and how it affects the development of male and female early adolescent youth in Myanmar. The following two major research questions served as the basis for the study's key findings:

1. How do gender and the Bar On EQ-I scale's raw scores correlate?
2. What connection exists between socioeconomic status (SES) and the raw Bar On EQ-I Scale scores?

The five subscales (Intrapersonal Stress, Interpersonal Stress, Adaptability, Stress Management, and Mood) as well as the total EQ score were used to test these research issues. SPSS was used to produce these research results. The sample (n = 382) consisted mostly of male

respondents who were 10 to 13 years old. Bamar made up the majority of the responders. Most responders had SES levels that were about average. Regarding the distribution of scores, intrapersonal stress and total EQ exhibited less variability in the raw scores, while interpersonal stress and stress management showed a higher degree of variation. All of the comparisons of the variables revealed statistically significant relationships, with EQ and intrapersonal stress having the highest connection (r =.83). One-way ANOVA was used to conduct inferential tests on the connection between gender and socioeconomic status as demographic categories and EQ and its subscales.

Testing for gender revealed significant differences in Intrapersonal Stress, Interpersonal Stress, Adaptability, Mood, and Total EQ, with girls scoring higher. By gender, there was not a significant distinction in stress management. When SES was tested, only Adaptability and Mood reached significance for the subscales. For intrapersonal stress, interpersonal stress, and stress management by SES, there were no significant differences. When SES was tested, it was shown that there was a considerable difference in total EQ, with the high SES group having higher EQ ratings.

The results of this study confirm a significant correlation between demographic factors like gender and socioeconomic status and the outcome of the Bar-On EQI scale scores or overall score. This implies that significant demographic disparities among early adolescents can be identified using this score. The differences in individual performance can be assumed to be primarily the result of individual variations in intrapersonal stress, interpersonal stress, adaptability, mood, and emotional intelligence, allowing for more careful targeting of assistance for children in need. Even though these findings are illuminating in terms of differences between adolescent groups, they do provide an excellent opportunity for practice. Without question, ongoing stress can hurt an adolescent's development, as study has amply demonstrated. Some children who experience stress, nevertheless, may not always suffer negative consequences. These children are resilient and able to deal with stress in the right way and adapt to it. The reasons why the respondents may have scored highly on the emotional intelligence scale may have been related to their awareness of stress and ability to cope with it, which may have made them more "stress-resistant" and better able to benefit from supportive role models, supportive parents, or supportive social networks (Dubow & Tisak, 1989; Garmezy, 1983).

Initially, it is important to be able to recognize in each child the impacts of interpersonal stress and their capacity for problem-solving to prevent harm that might be irrevocable. Several studies that highlight the effects of emotional intelligence on academic achievement and school experience (Beebe-Frankenberger et al., 2005; Webster-Stratton, Reid, & Hammond, 2004) outline the need for the ability to identify whether a given child is experiencing interpersonal stress strains or excessive degrees of stress, as tested by the Bar- On EQI scale. Due to their frequent struggles with problem-solving in the classroom and social situations outside of it, these children may particularly encounter unfavorable responses from teachers (Lane, Givner, & Pierson, 2004). Thus, this has a detrimental impact on the child's academic success as well as the teacher's readiness to help with the environment's adjustment for learning and social interaction. The literature began to acknowledge in the middle of the 1980s that children who had previously been seen as disruptive or acting out were having trouble solving interpersonal conflicts (Chandler, 1984).

However, social issues, changes in family dynamics, and learned personal coping mechanisms are among the issues that children face and that may adversely affect their ability to function; as a result, they may not be recognized by the teacher or classroom assistant (Appleyard et al., 2005; Anshel & Delany, 2001). Therefore, schools must be able to transform behavioral observations, such as acting out, into more tangible causes, including family stress, social stress,

the impacts of poverty, or social or physiological problems. According to research, children may develop these types of emotional intelligence abilities and resilience best in the context of a school setting where they are already adjusted to structured teaching and learning activities (Brooks, 2006; De Wolfe & Sanders, 1995). The school will need tools to use, though, to accomplish this.

The current study provides evidence that demographic factors, such as gender and socioeconomic status, can be utilized to predict aspects of emotional intelligence in any particular way. Significant correlations existed between the EQI score's various subscales and these demographic factors. A difference in test outcomes based on known differences in emotional intelligence depending on these demographic variables is also supported by the literature currently in existence. The research's conclusions were therefore not necessarily unexpected. The greatest evidence is in the gender category, where it was shown that women had much greater emotional intelligence skills than men (the four important categories). Numerous research examining the relationship between gender, adaptability, and stress indicators revealed a link between the EQI subscale scores, overall score, and gender. The biological stress indicators have received a lot of attention in these distinctions. This implies that women may be naturally more resilient to stress than men.

Male babies displayed a higher stress reaction than female newborns, including symmetrical brain activity and outward stress symptoms, such as crying, according to a study done on newborns (Fox, Bell, & Jones, 1992). These findings weren't, however, conclusive. Although the reasons for this stress reduction were not evident, observational research done on preschool children in China revealed that female children displayed fewer apparent signs of stress than male children. According to a study conducted at the primary school level, girls were found to be more likely than boys to adopt change management strategies (adaptability), such as social support or problem-solving. However, several studies have revealed that in unusually stressful circumstances, there is no proof that female children are more able to handle stress (Ruckman et al., 1999; Smith & Prior, 1995).

Overall, the results confirm the claim made in the literature that girls are slightly more capable of managing change (adaptability) and social skills than boys. According to several studies, girls typically have superior problem-solving skills than boys, in large part because they are more able to ask for support by receiving assistance and using active coping to lessen or eliminate the stressor. Boys, on the other hand, frequently employ stress-free avoidance techniques (Gilbert & Orlick, 1996). Additionally, the results provide evidence that girls do not feel as much stress as boys do, particularly in the areas of interpersonal and intrapersonal stress. This provides evidence in support of infant physical studies that point to a lowered physical stress response in female newborns.

Between children from families with low socioeconomic level (SES) and those from families with high SES (i.e., the groups with the lowest and highest SES), there is only a difference in adaptation and mood. There are several potential risk factors for SES-based differences in social skills. Although parent education level was not considered a mediating factor in this study, it is significant to note that families with lower SES tend to have lower educational levels (i.e., high school) in comparison to families with higher SES (i.e., graduate degrees) (Rutter, 1985). In their study of young adolescents, Ristkari et al. (2008) concluded that lower parent educational levels were connected with poor self-coherence, which can diminish the ability to handle obstacles in life and manage stress.

Additionally, lower-SES households may experience resource constraints, such as food scarcity and other circumstances, which put children under physiological stress (Bradley & Corwyn, 2002). Early physical stress—such as malnutrition or food scarcity—could lead to

emotional stress as well as dysregulated hypothalamic-pituitary-adrenal axis activity, which could lead to hyperactivity and hostility in behavior, a weakened immune system, and dysregulated serotonin systems (Bradley & Corwyn, 2002). The evidence also supports the idea that parental practices can have a detrimental effect on an adolescent's emotional health (Webster-Stratton et al., 2001; Webster-Stratton & Reid, 2003). According to Bradley & Corwyn (2002), parents who have highly strict or extremely loose parenting practices might cause low self-esteem and improper social adjustment in their adolescent children. When psycho-social interventions are implemented, positive parenting among children with behavioral difficulties produces favorable outcomes, as suggested by Webster-Stratton et al. (2001). However additional research on the subject of children's stress response (Anshel & Delany, 2001) has not revealed a difference in response to stress in different situations.

Because ethnicity was included in this study primarily to ensure demographic accuracy, this response was not surprising. There are still a few potential problems with this finding, though. Specifically, it is shown in these results that internalized stereotyping may amplify perceptions of disparities in stress reaction and behavior attributed to variations in ethnicity. Conversely, it can be difficult to identify cultural and racial differences, especially from a psychological or developmental standpoint. The idea that childrearing practices might be fundamentally different from one culture to the next is supported by research, nonetheless. Badri (1978) studied child-rearing practices in a patriarchal Sudan study where the parents had little tolerance for their energetic, inquisitive, and inquiring children. Instead, they required that their children be submissive and silent. Grotberg, Badri, and King (1987) found considerable differences in childrearing practices. The researchers watched parents helping their children feel protected, showing them how to handle difficulties, and encouraging their children to talk and express their feelings. Planning change management and social-skills interventions for individuals or groups should take cultural considerations into account.

Conclusion

Several statistically significant correlations between the EQ scores and subscale scores (raw scores) and demographic variables like gender and SES were found in this study, which had a high level of statistical findings. Given the previous research, which suggests that these demographic variables may have a variety of effects that could alter the results, this discovery was anticipated. These results mostly support the body of research that demonstrates how demographic factors can affect conditions that alter intrapersonal stress, interpersonal stress, adaptability, mood, and coping mechanisms as well as the pressures that children can reasonably be expected to experience. However, even though these results are rather underwhelming in terms of identifying possible variations in teenagers' coping skills generally, they do have significant practice-related consequences. If the Bar-On EQI scale scores vary depending on demographic factors, in particular, this suggests that the instrument will be accurate in determining emotional intelligence and its various components, such as adaptability, mood, and other significant variables, for a wide range of adolescents. To effectively provide services to help with stress management, it is crucial to effectively screen adolescents for stress and coping abilities. As such, this is a potentially important area of practice that might be improved or strengthened.

Implications

As was previously mentioned, children may have trouble managing their stress and developing coping mechanisms, but this does not mean that nothing can be done to help them.

According to numerous studies, intervention programs that teach resilient behavior and emotional traits, like stress management, can have a significant positive impact on the development of effective coping skills (Hampel, Meier, & Kummel, 2008; Zins, Elias, & Greenberg, 2003).

Children's social and academic outcomes can be improved in particular through enhancing interpersonal, intrapersonal, and stress management abilities as well as access to stress-management tools (Nettles et al., 2000). A strategy for identifying students who need intervention and help must be in place before children may be offered intervention programs. This data is gathered using a variety of methods, the majority of which rely on student self-reports of emotional traits and states (Zins, Elias, & Greenberg, 2003). Self-reporting, however, is frequently unsuccessful, especially in younger children who may not be able to accurately characterize the symptoms of stress or associate physical signs of stress with illnesses (Taxis et al., 2004). Therefore, there needs to be a more thorough process for identifying which children need social learning abilities.

Limitations and Future Research

This study's design and measurement have a few limitations that could have impacted the results. The study's limited sample size of fifth-graders from three high schools in two townships is one of its shortcomings. Because of this limitation, It is challenging to generalize the results to other grade levels, other schools (e.g., suburban vs. urban), other parts of the country, or other ethnically or culturally diverse populations. The data set's inability to examine external stressors to correlate with emotional stability is another limitation. The researcher has no way of knowing which external factors may have boosted or decreased each emotionality measure in this study without using external stressors.

Given the results of this study, the main suggestion for practice is that the Bar-On EQI test be taken into consideration for use as a screening tool to identify which children need more social support. Naturally, this cannot be used as the only screening approach because other psychological and physiological disorders that may also affect social function must also be taken into consideration. Additionally, more study needs to be done to confirm that this method is successful in identifying children who need more social skills training. This is especially pertinent given that this study did not attempt to categorize specific behaviors or relate these behaviors to EQI scores; further research is required to confirm the validity of the Bar-On EQI test in identifying children who require additional social skills intervention. A subsequent study could be conducted to establish the effectiveness of the Bar-On EQI test as a screening instrument. The construct of emotional intelligence was noted earlier to be of controversy, as is its operationalization. The current investigation used the self-report or trait approach to EI assessment, and it would be interesting if an ability EI assessment approach would be able to replicate these results, as some inconsistencies between these two assessment approaches have been indicated in other research studies (Emmerling, Shanwal, and Mandal, 2008). Thus, further research is needed in this area.

Another theoretical consideration for future research includes the examination of gender differences in terms of biological sex as well as socialized gender roles. As suggested by Bornstein's (1994,1998) classification described earlier, other aspects of gender were not evaluated in the present study, in part because of a lack of validated assessment instruments. Researchers need to be cautious about confounding the different aspects of gender which has resulted in sociological differences being construed as biological. Theoretically, the results suggest that males and females appear to be innately less alike in terms of their coping styles, while the extent to which they have internalized stereotypically feminine and masculine

characteristics has a stronger influence on individual differences in coping behavior. Validated assessment instruments that evaluate the different aspects of gender are required.

Future research may wish to consider the influence and possible interactions of socioeconomic status, education, and cultural differences along with gender. For example, perhaps more well-educated men have more feminine characteristics than less well-educated men, which may affect their emotional competencies and coping styles.

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GEOPOLITICAL PERSPECTIVE ON STRATEGIC SIGNIFICANCE OF MYANMAR*

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Abstract

Myanmar's geographical situation is strategically significant in considering foreign policy and foreign relations. In accordance with its geographical profile and position, Myanmar can hardly be ignored as strategically important for regional powers and players like China and India. Being situated between two big neighbouring powers, Myanmar attempts to navigate its strategic important in line with its geopolitical context. This study will focus on the explanation revolved around the concepts of pivot and gateway that reflects the strategic significant. The main objectives of this paper are to examine the strategic significance of Myanmar from a geopolitical perspective and to provide a better understanding of Myanmar's strategic importance and its nature. Specifically, the questions of this paper are what factors explain the strategic significance of Myanmar in its geopolitical context, and how does geostrategy of Myanmar play a crucial role in positioning itself favorably among geopolitical players like China and India. This study found that Myanmar's geostrategic position and geostrategy identify whether it is a favorable or a menace to its national interests in line with the geopolitical context by navigating its strategic role in the geopolitical context.

Keywords: Foreign Policy, Geostrategy, Strategic Significant, Pivot, Gateway

Introduction

Myanmar's geostrategic situation is strategically significant in the Southeast Asia region. It is the largest state in mainland Southeast Asia and is bordered by the five neighbouring countries: Bangladesh, China, India, Laos and Thailand, as well as by the Andaman Sea and the Bay of Bengal. Its land boundary is adjacent to five countries, including two strategic giants, China and India. India is a nuclear power that dominates the South Asian subcontinent; on the other hand, China is reaching global power status. In accordance with its geographical profile and position, Myanmar can hardly be ignored as strategically important for regional countries like China and India. This paper aims to examine the strategic significance of Myanmar from a geopolitical perspective and to provide a better understanding on the nature of Myanmar's strategic importance. Specifically, this paper sought answer to questions such as: what factors explain the strategic significance of Myanmar in its geopolitical context, and how does geostrategy of Myanmar play a crucial role in positioning itself favorably among geopolitical players. The pivot and gateway are the two key geopolitical concepts needed to accomplish the research objective and the research questions. This study uses a qualitative descriptive method, and secondary data will be used. Based on this background, this study composed of five portions including introduction and conclusion parts. Firstly, it explains overview on the geopolitical characteristics of pivot and gateway concepts. Secondly, it examines Myanmar's geographical profile and its significant briefly. Finally, it assesses China and India's geopolitical ambitions to Myanmar by identifying the Myanmar's foreign policy considerations and its geostrategy.

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Overview on Pivot and Gateway: Geopolitical Characteristics and Significance

Halford Mackinder initially used the term "pivot" in the early 1900s, and he stated that the pivot is not a state as much as it is a region occupied by an important power. Later, this term is used for the various incarnations that refer to different security roles for the countries and regions that have been politically and physically involved in the context of great power disputes. He assumed that the state's geographic position made itself a geopolitical pivot that could deny major powers access to resources or vital areas.

As for the concept "pivot", Brzezinski (1997) also stated "Geopolitical pivots are the states whose importance is derived not from their power and motivation but rather from their sensitive location and from the consequences of their potentially vulnerable condition for the behavior of geostrategic players". In addition, Sweijs, T., et al. (2014) stated that "Pivot states possess military, economic or ideational strategic assets that are coveted by great powers. They are caught in the middle of overlapping spheres of influence of these great powers. A change in a pivot state's association has important repercussions for regional and global security."

In explaining the geopolitical pivot, making considerations on the role of the players who wish to project its power or interest around the pivot is also important. From the perspective of Brzezinski's aspects, the four major powers in the Indo-Pacific region are the United States, China, Russia, and India, of which the regional major powers are China and India, considered "geostrategic players." He defined the geostrategic players who project its power around the pivot as "Active geostrategic players are the states that have the capacity and the national will to exercise power or influence beyond their borders in order to alter the existing geopolitical state of affairs. They have the potential and/or the predisposition to be geopolitically volatile."

Concerning players around the pivot, Sweijs, T., et al. (2014) pointed out that role of pivot states in regional and global security and stability is very important because of their geostrategic position and strategic goods. If the position of pivot states is shifted, regional peace, stability, and balance of power can be upset. They stated that "Pivot states are critical points around which great powers' actions revolve and they can pivot or wings round from one great power or another or, merely as pawns in the schemes of great powers who shape the security environment through policies."

The influence of great powers in pivotal states can cause conflicts that are difficult to resolve and turn into harmful stalemates. When great powers encroach on each other's spheres of influence, pivot states will fall victim to them. Pivot states can create durable and close-knit relationships with great powers through ties that bind, which consist of military treaties and trade agreements, as they can build bridges and gateways between different great powers. Pivot states can have more peaceful and friendly relations with the key regional security actors by changing their behavior. If the policymakers of pivot states understand their important roles and formulate policies well, they will shape their security environment.

Another geopolitical concept is gateway also known as bridge countries. For reasons of security, investments, and energy-industrial resources, these countries or regions encourage outside or external power's entry into and through them into more expansive regions and continents. Brzezinski, for instance, perceived Western Europe as "the crucial geopolitical pivot point between the United States and the Eurasian continent," whereas Saul Cohen, an American geographer, envisioned these regions as epicenters of commerce and finance.

Gateway states play a novel role in linking different parts of the world by facilitating the exchange of peoples, goods, and ideas in the overall context of their strategic economic locations or in the adaptability of their inhabitants to economic opportunities. They are distinct politically and culturally and may often have separate languages or religions as well as relatively high degrees of education and favorable access to external areas by land or sea. The gateways function as the transmission belts connecting the regional and global levels. Gateway states serve as crucial intermediaries in connecting different parts or regions of the world by enabling the exchange of people, commodities, and idea in the context of their strategically advantageous economic positions or in the ability of their residents to react to economic possibilities. If the gateway role is complemented by political power or hegemony, the respective state will be the core or the central entity of a geopolitical region.

These two geopolitical concepts: pivot and gateway are relevance to explain in assessing Myanmar strategic significance in dealing with its neighbouring states like China and India which are identified as the geostrategic players.

Myanmar's Geographical Profile and its Significance

Myanmar's geostrategic location at the tri-junction of East Asia, Southeast Asia and South Asia is important for the major powers like China and India in the region. Myanmar possesses a long coastline and is also one of the littoral states of the India Ocean. From a strategic point of view, Myanmar is located on routes that go from the Indian Ocean to the Southwest sea to China. Moreover, it has influence upon the sea approaches of Bangladesh and the West and Southwest of Thailand and hence possesses a commanding position. Myanmar's territories in the Bay of Bengal and the Adaman Sea are sensitive spots because their position is closed to the commercial lanes. Furthermore, strategic consideration on the security of the India Ocean and the competition for the control of it by the regional powers for their own military and economic stratagem more or less, affects the security and diplomatic relations of Myanmar. For geostrategic perspective, being situated between two most populous nations: China and India, Myanmar has a key linchpin in relations between these two giant rival states. In addition, Myanmar's strategic position at the crossroads of South Asia and Southeast Asia has bestowed it with a dual role in Southeast Asian geopolitics.

Myanmar can be considered as a geopolitical pivot because it could dictate the behaviour of geostrategic players like China and India at one point or another. For Brzezinsk, active geostrategic actors possess the capability and determination of their national wills to exert power or influence beyond their territorial boundaries to alter the existing geopolitical status. China can be identified as an active geopolitical and global player. India can be solidified its position as a regional power, a potentially significant global actor, a competitor to China and a regional hegemon in South Asia. Furthermore, it operates as a nuclear power, which it acquired not only to intimidate Pakistan but also to counterbalance China's possession of nuclear arsenal. India has a geostrategic vision on its regional position in dealing with its relationships with neighbouring countries and its influence in the Indian Ocean.

China and India's Geopolitical Ambitions in Myanmar

China Geopolitical Ambitions

Being situated between the active geostrategic players, the two asymmetric neighbouring states, China and India, their strategic considerations and geopolitical ambitions become crucial in Myanmar's external interactions. Based on their geopolitical ambitions and strategic considerations, Myanmar's geopolitical situation can be considered a pivot and gateway.

In assessing China's geopolitical ambition in Myanmar, this paper mainly focus on Belt and Road Initiative (BRI) and China's Two Ocean Strategy. The BRI, is also known as One Belt One Road (OBOR) " the Silk Road Economic Belt and the 21st century Maritime Silk Road, and it was announced by the Chinese President Xi Jinping in October 2013. The primary goal of BRI is to promote trade and connectivity between Europe, Africa, and Asia. In line with its geostrategic nature, economic security is at the core of BRI's new national security concept. If its ambitions were to be achieved, it would shape the global geoeconomic order. In the military dimension, it would address China's economic security concerns, including the imperative to ensure the stability of oil supplies and the safety of SLOCs. China has undertaken its geostrategic aspirations in a systematic manner, that is starting with economic expansion and later bolstering it with a naval presence or access. These endeavours mostly focus on protecting China's economic interests.

As for China, the Indian Ocean has distinct geopolitical significant because it is vital for China's geopolitical ambition of Two Ocean Strategy. The ultimate goal of this strategy is to gain the political influence over both the Pacific and the India Oceans for power balancing to its adversaries in the Asia- Pacific Region. It also aims to expand and project its power regionally and globally. China's vision of increasing commercial and logistical interests in the Indian Ocean supports its goals to become a more powerful force in the far seas. The OBOR initiative proposed by Xi Jinping defined the geopolitical scope of the People's Liberation Army Navy's (PLAN) mission in the Indo-Pacific region. As a result, it is being incorporated into the navy's operation of Two Ocean Strategy. People's Liberation Army (PLA) analysts discussed about the necessity to establish a "pearl chain" extending towards the Indian Ocean and other regions. This concept diverges from the commonly referred to string of pearls strategy. The pearl chain primarily focuses on establishing secure logistical support locations for the growing number of PLAN warships transiting through the area, while the string of pearls strategy is more focused on combat-oriented involving deployment of strategic navy and air force assets for significant blue water operations.

In this context, Myanmar's geographic location and geopolitical reality become distinct in China's strategic framework. Myanmar plays a crucial role for BRI, which is China's ambitious infrastructure project in the 21st century. The most of BRI projects in Myanmar were formally agreed upon during President Xi's visit to Myanmar in 2020. In the context of BRI projects for connecting China's southwestern interior to the Indian Ocean, Myanmar possesses geographically pivotal position.

Myanmar's geographical location, which borders China and has direct access to the Indian Ocean, makes it a significant country where China's two important geopolitical goals, the 'Two-Ocean' and the 'String of Pearls' strategies, intersect. China's BRI projects in Myanmar are economically and geopolitically significant particularly the Kyaukphyu Deep Sea Port as an

example. This port is of great importance to China's extensive economic and geopolitical interests, as well as its strategic plans.

India's Geopolitical Ambition

The Indian Ocean region functions as a highly important hub for both global trade and the transportation of essential energy resources. India's control of the Andaman and Nicobar Islands strengthens its position as a regional power. In these islands, India's military presence includes port facilities and air bases and has a significant influence on the balance of power in the Indian Ocean region. In dealing with military and security concerns, China's military presence and its power projection in the Indian Ocean region are critical for India. For instance, China's String of the Pearls' strategy in the Indian Ocean has strategically encircled India by establishing military and commercial outposts in the region. This strategy aims to encompass India's neighbouring countries in China's strategic orbit and simulate India's motivation to counterbalance strategies with China. In this context, Myanmar, the geostrategically vital neighbour of China, came under India's strategic considerations.

Myanmar's long coastline on the India Ocean and the Bay of Bengal, as well as its proximity to the Andaman and Nicobar islands, make India's relationship with Myanmar of vital importance for the security of these islands and India's strategic interests in the Indian Ocean and Bay of Bengal. Safeguarding India's territorial integrity in its distant North-Eastern area, situated between Bangladesh, Bhutan, Tibet Autonomous province of China and Myanmar, is crucial for India, North East region is geographically distant form India's core area. If Myanmar is hostile towards India or strategically influenced by China, it would be extremely difficult to maintain the North-East States as part of India. As for India, Myanmar's proactive collaboration is essential for the elimination of the persistent insurgencies in the North-Eastern states. Therefore, the immense strategic importance of Myanmar for India's territorial integrity in the distant Northeast becomes obvious.

India implemented its Look East Policy (LEP) in the early 1990s to strengthen its economic ties and diplomatic engagement with the prosperous economies of Southeast Asia. India's economic and diplomatic engagement with Southeast Asia, as well as its broader security and defence relations across the Asia-Pacific region, greatly influenced its international relations. Additionally, this kind of international relations strategy served as a driving factor for India's strategy of external balancing against China. LEP significantly influenced India's involvement in the Asia-Pacific region for more than twenty years and also strengthened India's economic, institutional, and security connections. In 2014, Prime Minister Narendra Modi elevated the LEP to 'Act East Policy (AEP)' to strengthen India's active and influential strategic position in East and Southeast Asia. It also signifies the long-term economic and strategic advantages of fostering deeper ties with the Asia-Pacific region. Specifically, while China strengthens its ties with India's neighbouring countries in the Indian Ocean, the strategic importance of India's linkages with adjacent Asian nations in the Pacific Ocean also increases.

The 1600-kilometre India-Myanmar border serves as a gateway to Southeast Asia. The seven states of India's Northeast—Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura—represent India's physical presence in the eastern region. In addition to these geographical considerations, the successive governments in India have recognized the need

to prioritizes the Northeast region as the main beneficiary by implementing an effective programme. Hence, the Indian government prioritizes commerce and infrastructure development as crucial elements for the development of border areas.

The North-Eastern states are the sole sustainable foundation for India's internal security and stability in the long run. Complete and extensive economic collaboration with Myanmar is absolutely necessary to guarantee this. In terms of the Northeast region, Myanmar has historically been a more economically viable option for these northeastern states to obtain consumer goods and daily necessities. This is preferable to relying on the costly, time-consuming transportation of these goods from other parts of India. Myanmar's proactive collaboration is essential for the eradication of the persistent insurgencies in the north-eastern states. Myanmar serves as the sole terrestrial connection linking India and the ASEAN nations. Indian authorities should regard India's North-East as the starting point of Southeast Asia. Consequently, Myanmar has a crucial position and significance as gateway for India's strategic approach to East and Southeast Asia.

Myanmar's Foreign Policy Considerations and its Geostrategy

In identifying Myanmar's geopolitical situation as a pivot and gateway for two neighbouring geostrategic players, the formulation of Myanmar's geostrategy plays essential role to enhance its national interests in dealing with China and India.

According to Grygiel, J. J. (2006), the term geostrategy refers to the geographical direction of a nation's foreign policy. Geostrategy denotes to the deliberate allocation of a state's resources and efforts towards the projection of military force and the direction of diplomatic activities. The geostrategy of a state is based on ideological reasons, interest groups, or simply the whims of its leader.

Regarding the foreign policy in its external relations, Article 41 of the 2008 Constitution of Myanmar states that 'the Union practices independent, active and non-aligned foreign policy aimed at world peace and friendly relations with nations and upholds the principles of peaceful co-existence among nations'. Myanmar practices the Independent and Active Foreign Policy in accordance with the following principles:

(1) respect of and adherence to the principle of equality among peoples and among nations and the Five Principles of Peaceful Co-existence;

(2) taking a non-aligned, independent and just stand in international issues;

(3) maintaining friendly relations with all nations, and good-neighbourly relations with neighbouring countries;

(4) continued support of, and active participation in, the United Nations and its affiliated organizations;

(5) pursuance of mutually beneficial bilateral and multilateral cooperation programmes;

(6) regional consultation and beneficial cooperation in regional economic and social affairs;

(7) active participation in the maintenance of international peace and security and the creation of an equitable economic order and opposition to imperialism, colonialism, intervention, aggression and hegemonism;

(8) acceptance of foreign assistance which is beneficial to national development, provided there are no strings attached.

The fundamental principles of Myanmar's foreign policy had formulated in the 1950s. The implementation of its principles laid an indispensable role in effectively handling the nation's security issues. The foreign policy strategy of Myanmar and its diplomatic orientation can be characterized as 'diversified' during the AFPFL era and as 'isolationist' during the Revolutionary Council era. By the mid-1970s, the foreign policy of "isolationism" was discarded but the extent of openness and diversification in its foreign relations was far from determined. The Burmese Socialist Programme Party (BSPP) government prioritized the self-reliance principle by maintaining limited engagement with the international community. The country maintained an equal distance in its relationship with both superpowers, as well as with neighboring big powers like China and India.

According to some observers and foreign policy experts, Myanmar's foreign policy stance could depend on China, as both sides had strengthened their relations based on strategic imperatives and Myanmar perceived escalation of Chinese influence within the nation. Therefore, to maintain its 'independent, active, and non-aligned' foreign policy and to avoid excessive dependence on China, Myanmar utilized its geographical position and its natural resources as key assessors in its diplomatic manipulations. In the early 2000s, Myanmar bolstered its ties with Russia, primarily through arms sales, in order to gain an alternative veto power apart from China at the United Nations Security Council (UNSC). In addition, Myanmar enhanced its relations with India, Japan and other regional countries. In 2011, the USDP government implemented a foreign policy approach that carefully manages the strategic interests of the major powers within the country. This approach primarily focuses on maintaining amicable relations with near and far, while also prioritizing multilateralism through regional cooperation and institutions. The NLD administration committed to the "independent, active, and non-aligned foreign policy" by realizing the reality of great-power politics and the country's security needs. It delicately practiced balancing her relations with China, Japan, the United States and the European Union.

Myanmar's foreign policy has primarily been neutral and non-aligned since its independence, aiming to heal colonial pains and avoid a bipolar international order. Myanmar's foreign policy has been significantly influenced by its geographical, historical and influenced by domestic political factors Myanmar collaboratively seeks to maintain friendly relations with neighbouring countries and with those in the international arena. The geopolitical context of the country has a crucial role in shaping Myanmar's foreign policy. The political elites in Myanmar recognize that their country is situated between two densely populated states, China and India. They are aware of the geopolitical reality of the asymmetry of power between Myanmar and two neighbouring states. Therefore, what has greater significance for the Myanmar government is not only the size and population of these countries but also their geopolitical interests and influence in the region.

The long-standing distrust between China and India enhances the mutual suspicion, while they assume that the geopolitical reality of Myanmar as pivot and gateway for their strategic

considerations in dealing with India Ocean and the Bay of Bengal (BoB) as a significant battleground in their rivalry for energy resources, maritime routes etc. The two countries extend their regional influence into each other's neighboring areas in which Myanmar is strategically important. The rivalry between China and India in the context of Myanmar mainly concerned with their border regions, India' North East and China' South West Yunnam province that are adjacent to Myanmar. These regions are economically weak and both China and India have respective economic and strategic plans for the development of these regions.

As a component of BRI, China and Myanmar signed the MoU for the China-Myanmar Economic Corridor (CMEC) in September 2018. The corridor, spanning approximately 1,700 kilometers, will connect Kunming, the capital of China's Yunnan Province, and Myanmar's key commercial checkpoints via Mandalay in central Myanmar, and then extend eastward to Yangon and westward to the Kyaukphyu Special Commercial Zone (SEZ). Under the MoU, the governments agree to collaborate on various sectors, including basic infrastructure, construction, manufacturing, agriculture, transport, finance, and human resources. The India-Myanmar-Thailand Trilateral Highway, 1,300 km long, connects Moreh in Manipur, India, and Mae Sot in Thailand, passing through Myanmar. In 2018, to enhance connectivity with Myanmar, the Moreh-Tamu land route was operated. The Kaladan Multimodal Transit Transport Project encompasses a convergence of land, river, and sea routes by connecting the Kolkata port in India and the Sittwe port in Myanmar. Additionally, it can establish a connection between Sittwe and Paletwa in Myanmar via the Kaladan River and can connect Paletwa to Mizoram, India.

In identifying the geopolitical reality of Myanmar as pivot and gateway by two asymmetric neighbours, understanding the geostrategy of Myanmar become essential. When pivot states endure encroachment by big powers into each other's spheres of influence, the likelihood of power confrontation and conflict increases. Major powers can rival for controlling different kinds of interests in areas by frequently utilizing a strategy known as brinksmanship, either to alter or to maintain the status quo. In this context, pivotal states can also competent at taking part in brinkmanship. It can be considered as rouge pivot if they behave irresponsibly while depending on the opposing major power to intervene and rescue them.

The strategic manipulation of pivot states also presents a legitimate risk of direct or indirect conflict between great powers. This approach seems clear: refrain from becoming the pivotal state to entangle in a significant battle. This kind of strategic maneuvering can be seen in Myanmar's geostrategy and its foreign policy practicing circle. Positioned between two formidable neighboring countries, China and India, every Myanmar diplomats and foreign policy commentators consistently asserts that Myanmar has pursued a deliberate strategy of maintaining equidistance from both nations

Conclusion

All in all, this study realized that the determinant factors for Myanmar strategic significance are mainly based on the existence of its geographic position in favorable tactical position among neighbouring states. Due to the two asymmetric neighbouring powers' strategic considerations and their geostrategy in practice, the geopolitical reality of Myanmar can be identified as a pivot and gateway. In studying the nature of the pivot position, it is not permanent. The policy formation and geostrategy of the pivot state determine whether it will change to a

rouge pivot or not. Changing to a rouge pivot or brinksmanship will have implications for regional security. In implementing its geostrategy, Myanmar utilized its geographical position as key assessors in its diplomatic manipulations. In general, every successive Myanmar governments' policy practices and geostrategy in dealing with two asymmetric neighbours can be assessed as not one-sided although there were very close ties with China during 1988–2010. But this administration also diversified its foreign relations to some extent. In the context of the geopolitical reality of Myanmar, the manifestation of rivalry between two asymmetric neighbouring states is mainly concerned with their border regions: India's North East and China's South West Yunnam province. Myanmar diversified its relations by cooperating both China's BRI programs and CMEC and India's Mulit transport projects. It is found that Myanmar's geostrategic position and geostrategy identify whether it is a favorable or a menace to its national interests in line with the geopolitical context by navigating its strategic role in the geopolitical context.

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THE UN'S ACTIVITIES IN MYANMAR'S EDUCATION DEVELOPMENT (2011-2020)

Kywel Kywel Oo[1]

Abstract

The United Nations (UN) has adopted the Sustainable Development Goals (SDGs) in 2015 to meet crucial environmental, political and economic challenges. Its main theme is to end poverty by improving health, education, economic growth, reducing inequality, tackling climate change and preserving oceans and forests. It is a global partnership including both developed and developing countries to sustain the Earth Planet. Myanmar also takes part in accomplishing the 2030 SDGs Agenda. Among the SDG 17 goals, Goal 4- Quality Education is the utmost important as a driving force in poverty eradication, human and social capital development. This research aims to explore Myanmar's way of achieving SDG 4 in cooperation with the UN specialized agencies such as the UNESCO and the UNICEF. These two agencies have assisted in Myanmar's education development by funding, training and material support under the guidelines of the Myanmar government and internationally accepted principles. Even in COVID-19 period, their cooperation continued through online learning programmes. Their cooperation is no string- attached and catalyst to Myanmar's continuous education platform. This research analyzes how these two UN agencies have contributed to Myanmar's education development during the period of 2011- 2020. The qualitative and descriptive method is used in the research by analyzing the primary and secondary data.

Keywords: SDGs, SDG 4, UN, UNESCO, UNICEF, Myanmar's education

Introduction

The United Nations (UN) was founded in 1945 with the vision to improve economic, health and social conditions through international collaboration. At the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012, the Sustainable Development Goals (SDGs) were born with the objectives of producing a set of universal goals to meet crucial environmental, political and economic challenges. In 2015, the UN Sustainable Development Summit adopted the 2030 Agenda for Sustainable Development which is a bold and universal agreement to end poverty, and commit to tackle some processing challenges with interconnected goals by all states' participation for safer, more sustainable and prosperous planet for all humanity.

The 2030 Agenda for Sustainable Development Goals (SDGs) is a global partnership which has seventeen goals going hand in hand to end poverty while improving health, education, reducing inequality, spurring economic growth, tackling climate change and working to preserve oceans and forests. The SDGs were built on the millennium development goals (MDGs). This research mainly discusses for the SDG 4: Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Under the SDG 4 main theme, there are seven targets including three sub- objectives with indicators in each target. In implementing the SDGs in Global South countries, the UN has been taking an initiative role as a development partner for the interest of Global South countries. As Myanmar is one of the Global South Countries, the UN's support in the SDGs implementing process is very beneficial for the recipient state.

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Since 2011, Myanmar government has initiated the education reform with the support of international partners such as the UN specialized agencies, the Japan International Cooperation Agency (JICA), the Australian Aid (AusAid) and other partners. This research analyzes the cooperation of two UN specialized agencies: United Nations International Children's Emergency Fund (UNICEF) and United Nations Educational, Scientific and Cultural Organization (UNESCO) with Myanmar government in Myanmar's education development process from 2011 to 2020.

The significance of the study is to explore the implementation process of the Goal 4 in Myanmar and the effectiveness of the cooperation of the UNESCO and UNICEF in the education sector. The research question is to which areas the cooperation of UNESCO and UNICEF reached in accomplishing the Goal 4 in Myanmar. It addresses that the education development progress in Myanmar from 2011 to 2020 has been a support to the UN SDG 4 and the UN agencies' assistance focused on primary, secondary and non- formal education sectors with technical, material and human capital assistance, for instance - in policy planning and implementation and less support on the higher education sector.

Method of the Study

This research is based on the qualitative and descriptive method. This research uses primary and secondary data collected the reports of the UNESCO and UNICEF, government and non- governmental organizations (NGOs), seminar workshops, published research scholarly articles and books. After collecting the data, the researcher acknowledged and analyzed the role of the UN specialized agencies' cooperation in Myanmar's education sector development progress from 2011 to 2020 and the challenges these agencies had faced in implementing their programmes.

Findings and Discussion

Education Policies and Programmes in Myanmar (2011-2020)

Myanmar government has been functioning educational reform processes under five policies: 2008 Myanmar Constitution, 2014 National Education Law (NEL) and its amendment in 2015, National Education Strategic Plan (NESP) from 2016 to 2021, 2018 Myanmar Sustainable Development Plan (MSDP), and Basic Education Law and its amendment in 2019. In Myanmar education arena, there are five sectors. They are Early Childhood, Care and Development (ECCD), Basic Education, Alternative Education, Technical and Vocational Education and Training (TVET) and Higher Education. In these five areas, two successive Myanmar governments (2011-2020) had formulated policies and laws and also tried to implement training programmes, scholarships and stipends till it reached a targeted level in Myanmar's education development progress by benefitting individuals and the whole community. In 2011, among Myanmar government's various reforms, the education reform stood at the fourth place and the government also put urgent and long term effort in education reform process focusing on three areas: access, quality and management. Myanmar's education policy stated that it aims to create an education system which can generate a learning society capable of facing the challenges of the knowledge age.

In March 2011, then President U Thein Sein announced the ten- point education reform agenda at the Parliament. In the Basic Education Sector, National Education Promotion 20- year- long- term- plan (2011- 2031) was written comprising the enhancement of access to education by implementation of free, compulsory primary education program and awarding stipends for students from needy families. In July, 2012, the Myanmar government implemented the Comprehensive Education Sector Review (CESR) in collaboration with development partners focusing on seven areas with three phases: Rapid Assessment, In Depth Analysis and Development of overall national education sector plan. The government increased the budget allotment for education, and removed the public school fees for primary schools since 2010- 2011 followed by the middle school in 2013- 2014. In October 2013, an Education Promotion Implementation Committee (EPIC) and eighteen thematic groups were formed by the government to formulate policies and plans for pragmatic education reforms. The CESR's main task was to recommend the education system reform process and the EPIC's main purpose was to draft policies of the implementation of the reforms. In the basic education sector, the government introduced the KG+12 in 2016- 2017 Academic Year in line with ASEAN countries.

The NEL claimed to strengthen the quality, effectiveness and efficiency of the national education system, recognizing non- formal education in Myanmar and its amendment intended to establish standards- based education quality assurance system, expansion of the basic education system to thirteen years and support to learn ethnic language and culture. In 2014 NEL, it defined key issues such as university autonomy, right to form unions and rights of universities to formulate their own curriculum in the higher education sector.

In 2015, the National League for Democracy (NLD) government activated a sixteen-point reform agenda to implement quality assurance systems in all educational sectors for inclusive education and decentralization. The NESP was adopted as an inclusive approach to improve teaching and learning, and provided as a vehicle for Myanmar to achieve the Goal 4 for Education which was a program from 2016 to 2021. In 2016, NESP addressed three strategies for Higher Education reform: to strengthen higher education governance and management capacity, to improve the quality and relevance of higher education and to expand equitable access to higher education.

In 2015- 2016, in order to produce teachers with right values, skills, and knowledge and provide theoretical foundations and the process of teaching, the Myanmar Teacher Competency Standards Framework (TCSF) was developed by national professional education experts and UNESCO education specialists. In 2016, the TVET Council was established because the vocational education was the first priority according to the government's policy and under the NESP Framework.

According to the MSDP, education plays a critical role for healthy economy. The MSDP's strategy 4.1 aims to improve equitable access to high quality lifelong educational opportunities. In 2018, Transforming Higher Education in Myanmar was set up by the Ministry of Education (MoE) and international partners related with research. On 22 November 2019, the Alternative Education Subsector Framework was launched to guide and design the implementation of alternative education initiatives for out-of-school children in line with MoE's policy of leaving no child behind and helped in achieving MSDP and NESP. Its ambition was for children and youths who have difficulty in accessing formal education, especially those in remote areas, conflict and disaster- affected areas, on the move, disabilities and chronic health problems.

The NLD government also set up the Education Promotion Committees at both Houses in the Myanmar Parliament. The National Education Policy Commission (NEPC) was a statutory body established by the National Education Law 2014 and the National Education Law Amendment 2015 to provide policies in education for the promotion of national development. It was formed on 28 September 2016 with twenty one members who were academics and educationists form various sectors of education with deep knowledge and extensive experience in their respective field. Its primary functions were setting national education objectives and formulating national education policies; and evaluating the functioning of the education system, the implementation of education policies, programmes and projects, and making suggestions for the improvement.

Under the NEPC, there were three committees: the National Curriculum Committee, the National Accreditation and Quality Assurance Committee (NAQAC) and Rectors' Committee (RC). The NCC was formed in November 2016 with fifteen members who are curriculum specialists with great experience. Its primary functions were developing curricula of international standards to meet the needs of national development and nurture good citizens: and making continual review of curricula to keep them in line with international trends and national education policies. The NAQAC was formed on 16 January 2017. It was composed of twenty members with high expertise in the quality assurance of education. Its primary functions were developing and implementing a comprehensive quality assurance system in education; and assessing and providing accreditation to educational institutions and programmes. The RC, formed on 6 April 2018, has members all Rectors and Principals of public higher education institutions. The RC's primary functions were coordinating the affairs of higher education institutions on the basis of policies laid down by the NEPC; helping to enhance the quality of teaching, research and management in higher education institutions; giving guidance to higher education institutions in the transition to autonomy; and providing advice to higher education institutions for increasing revenues to support their development. In 2020, due to COVID-19 pandemic, Myanmar government's education development progressions had been run through online programmes.

UNESCO's Activities in Myanmar's Education Sector

In Myanmar, the UNESCO is committed to a holistic and humanistic vision of education, in belief that everyone has the right for quality education for human, social and economic development. It is the only UN Agency that takes a leadership role to fulfill the SDG 4 Education 2030 Framework for Action. It has supported the MoE in Myanmar in three areas: the development of the Education Management Information System (EMIS Data Base/ Education Portal), geospatial mapping of all basic education schools and capacity development for education program (CapEd). In assisting to implement Goal 4 in Myanmar, the UNESCO partnered with the MoE in the form of private- public partnership.

Firstly, the CapEd programme started since 2012 in partnership with the Department of Education Research, Planning and Training (DERPT), MoE to strengthen national capacities in sector- wide policy and planning based on international frameworks through comprehensive training programs at the union and sub- national levels. It has provided broader capacity development building and support in education sector planning and budgeting. In 2014 – 2015, the UNESCO and its partners launched the information technology (ICT) for Education as ICT in teaching in rural areas, ICT pedagogy integration in classrooms which was a first time project in

Myanmar. The UNESCO programme officers trained the Myanmar government officials how to use the ICT for innovative teaching approaches and better ICT skills.

In accomplishing the Myanmar Quality Basic Education Programme (QBEP), the UNICEF was responsible for policy and the UNESCO had duty on curriculum and management. Strengthening Pre-Service Teacher Education in Myanmar (STEM) was the component 2 of the QBEP and started in 2014 to improve pre- service teacher education, especially in technical and capacity development assistance in accordance with the NESP and the MoE's guidelines. STEM Phase I and II focused on four specific areas with operational objectives. They were contextualized and quality teacher policies, reformed teacher curriculum, better management of education colleges and an integration of inclusiveness across all the project's objectives.

In the sector of the curriculum development, the UNESCO engaged in the pro- active support by responding to immediate needs, cooperation with stakeholders and solving emerging implementation problems. In the STEM project, the UNESCO mobilized the expertise, supported in terms of advocacy, strategic advice, generation of evidence, capacity development, work planning, drafting, editing, translating policy documents, monitoring, evaluation, steering Committee Progress Review Accountability and implemented their activities with other developing stakeholders in line with Myanmar government's policies and as a component to fulfill the SDG 4 under the ownership of the Myanmar government. In the Phase II of the STEM, the UNESCO helped in comprehensive teacher policy based on international standards, norms on human rights, gender equality, teachers' rights, and national teachers' competency standard framework (TCSF).

The MoE and the UNESCO organized a high level consultation to strengthen the country's Education Management Information Management System (EMIS) which aimed to support the decision- making, policy analysis, formulation, planning, monitoring and management at all levels of the education system and discussed EMIS Strategic Plan for 2016-2021 on 16 March 2015 under the strong ownership of Myanmar government. To develop teacher policies, the UNESCO has provided technical support under three topics: the establishment and validation of the TCSF beginning teachers, the establishment of the Teacher Education Council (TEC) and the development of the teacher education policy. The TCSF validated in May 2020 and accepted the MoE's approval in August 2020. Concerning with the TEC, the UNESCO has assisted the capacity development of key persons and the comprehensive teacher education policy is still in progress.

To strengthen the management of the education colleges, the UNESCO International Institute for Education Planning (IIEP), the United Nations Population Fund (UNFPA) and the UNESCO Regional Office in Bangkok Team for Planning partnered with Department of Higher Education (DHE), the Ministry of Education for the mainstream inclusiveness. The IIEP supported to develop a simulation model for projects on the need for qualified teachers and monitored the implementation of project's components with regard to technical quality, soundness of policy and sustainability of outcomes.

As a support to the MoE's agenda, the UNESCO and the Department of the Educational Research, Planning and Training hosted a Policy Dialogue on Education for Peace and Sustainable Development under SDG 4.7. In the TVET Sector, the UNESCO cooperated with the German Development Cooperation, GiZ to conduct a comprehensive system review in identifying the development and challenges of the TVET and policy options for strategic

planning and implementation of the TVET reforms in Myanmar. The UNESCO hopes that the demand- driven TVET sector can contribute the country's sustainable development, so it delivered workshops, capacity development training on skills assessment, and forecasting in the labour market.

During COVID- 19 period, Myanmar faced a huge difficulty because the curriculum development progress was ongoing and the UNESCO assisted to move the workshops online, supported the MoE's sector- wide COVID- 19 Response and Recovery Plan for the continuity of the education by safe school openings and preparation of the education system for the future emergencies. The UNESCO facilitated a multimedia package for curriculum trainings, a dedicated E-library for two thousand faculty members in twenty- five educational colleges, established a psychosocial support focal point system for the health, safety, well- being of teaching, non- teaching staff and student teachers with the MoE's support.

The UNESCO has supported Myanmar's education development progress in multiple ways such as organizing a series of policy forums, supporting the pre- service and in service teacher competence development, contribution to applying learner- centered and inclusive approaches in education based on the TCSF and 2019 Basic Education Law. It also actively engaged with the country stakeholders such as the Myanmar Education Consortium (MEC), Mon National Education Committee (MNEC), and Myanmar Special Education Association (MSEA) in implementing its activities.

To sum up, the UNESCO put a lot of great effort in Myanmar's education development process from 2011 to 2020 in line with Myanmar government's guidelines. It partnered with other UN agencies, international donors in Myanmar, local government and NGOs and civil society organizations (CSOs) in policy formulation and programme implementation. Its cooperation in Myanmar's education sector has aimed to achieve SDG 4 in 2030 with the programme- based assistance but could not cover all targets under the SDG 4. Moreover, its cooperation did not impact on the whole country and targeted only to needy areas, mostly in border regions.

UNICEF's Activities in Myanmar's Education Sector

In Myanmar, the UNICEF purposes to help every child in humanitarian assistance, legal assistance and alternative learning opportunities. Since 1988, the UNICEF has been working in Myanmar. Under Myanmar's education reform processes to achieve the SDG 4, the UNICEF has contributed a lot in technical, expertise and project oriented ways and in partnership with other development partners under the guidelines of the Myanmar government. Furthermore, in implementing its programmes, the UNICEF cooperated with other UN specialized agencies, Save The Children, the local NGOs and the government's ministries.

In 2012, the UNICEF partnered with Australia in establishing the Joint Education Sector Working Group (JESWG) by the MoE for policy dialogue between the government and the development partners. In CESR sector, the UNICEF education specialists helped with technical assistance in its core areas namely, quality primary education, non- formal education and teacher education. Under the UNICEF's Learning Together Initiative, the UNICEF ran head teacher training, management and instructional leadership through a cascade model of training in Rakhine State.

The UNICEF's SITE Project was part of the QBEP 2 by piloting a program of school-based professional development for existing primary teachers in Mon State in 2012 through a series of self- study distance learning modules, drawing their classroom experiences and helping them collaborate with other teachers in inter- school clusters. Education in Emergencies (EiE) was programmed by the UNICEF with the support of Japan and Korea to provide quality basic education for children aged between three and seventeen in northern Shan, Rakhine, Chin and Kachin States starting in 2012. The Myanmar Education in Emergency Sector was drafted with the UNICEF's assistance which acts as a common advocacy role in increased government's allocation for volunteer teachers' salaries and textbook provisions in temporary learning classrooms in internally displaced persons (IDP) camps.

Under the programme of Education Post Flood Response, the UNICEF and Japan government worked together with the MoE for the construction, repair and rehabilitation of schools in Rakhine and Chin states after the Cyclone Komen in 2015. In conflict- affected areas, the UNICEF played the dual role, providing response and supporting coordination. In providing alternative education to out- of- school children, the UNICEF supported by training facilitators, provision of non- formal primary education textbooks and paying incentives to the facilitators. Since late 2016, the UNICEF has been supporting the Department of Alternative Education (DAE) to develop Alternative Education Subsector Framework and support to deliver non-formal primary and middle school education in three states: Kachin, Kayah and Rakhine States.

In addition, in late 2016, the Education and Technical and Vocational Education and Training Sector Group (ETVSCG) was established to discuss key issues in education sector between ministries and development partners. The Building on Quality Basic Education Program (BoQBEP) was initiated by the MoE with the assistance from the European Union (EU), UNICEF and Denmark to improve access to quality learning for disadvantaged children. The NESP was launched from the QBEP's effort which aimed to guide a national framework for quality and inclusive education for all children in Myanmar. Since 2017, this programme has directed to children in Rakhine State for all-inclusiveness and finalized the Alternative Education Subsector Framework in November, 2018.

In the Report about the Country Programme between the Government of Myanmar and the UNICEF from 2018 to 2022, five programmes were described and among them, the Education Programme outcome focused on all children, mostly for the most disadvantaged children for knowledge and skills in an inclusive, safe, quality learning environment to complete pre- primary, primary, transition to secondary and complete lower secondary education. This report concentrated on three outcomes: (1) preschool and kindergarten, (2) inclusive quality education for all girls and boys and contribution to social inclusion and cohesion and (3) alternative education for out-of-school children and education in emergencies.

For the output 1, the UNICEF supported in drafting the first- costed ECCD Strategic Plan and amendment of the ECCD law through technical support to the Women and Children's Rights Committee of the Parliament. In the Early Childhood Intervention (ECI) services, the UNICEF collaborated with the ministries of Myanmar: the Ministry of Social Welfare, Relief and Resettlement (MoSWRR), Ministry of Health and Sports (MoHS), Ministry of Education (MoE), and Ministry of Home Affairs (MoHA).

Concerning the second sector, the UNICEF gave assistance in school construction in Rakhine State, disaster risk- sensitive Township Education Sensitive Plans (TEIP)s in thirty five

townships where seventeen townships were finalized. The UNICEF encouraged innovation in assessment under the Southeast Asia Primary Learning Metrics (SEA- PLM) initiative in transforming the current assessment from the memorization focus to competencies focus. In developing local curriculums, the UNICEF's assistance went to Chin, Mon, Kayin, Kayah, Kachin and Chin States.

In the third one, for the access to non- formal primary education (NFPE), the UNICEF supported in concluding the Alternative Education Subsector Policy Framework. In the EiE Sector, the UNICEF has been a co-leader and advocated the Myanmar government in the payment of salaries for the volunteered teachers and the provision of textbooks in IDP camps. Since 2018, the MoE has increased its engagement in EiE sector. The UNICEF Education Team managed the QBEP following the comments from the MoE. To strengthen the monitoring of the QBEP's activities, the UNICEF developed a monitoring assessment and evaluation plan. The UNICEF Education Field Team tried to cover various aspects of monitoring, evaluation and reporting related to the QBEP.

Technically, the UNICEF supported the ministries of Education, Planning and Finance to issue the yearly education budget briefs. In March, 2020, the UNICEF Chief of Education and Association Director, Mr. Robert Jenkins, urged Myanmar government for quality education available and accessible to every child in Myanmar. During COVID- 19 pandemic, the UNICEF delivered its support to nationwide focusing especially on mountainous regions, Rakhine State, and Yangon Region aiming its support to reach to poorest children at rural and acute areas, IDP camps and hard- to- reach regions.

Overall, the UNICEF Project Office in Myanmar has used its funds in salaries of educators, early childhood intervention pilots (ECI)s, development of materials in ethnic language, support in service teacher education, development of head teacher competency framework, local curriculum development, SEA-PLM and non- formal education in IDP camps. Practically, it provided learning materials for primary and middle school children, supporting teacher trainings for ethnic language and distribution of storybooks in local language. Specifically, the UNICEF cooperation in Myanmar's education sector emphasized on basic learning opportunities, and teaching materials to children in remote areas, conflict and crisis places and IDP camps.

In all, the UNESCO's education assistance focused on primary and secondary sector because it is a child focused agency. Its assistance is a programme- based and provided aid in policy drafting, trainings to teachers, curriculum development and education for all focus programs. Its assistance partnered with Myanmar government, international donors, local NGOs and CSOs in implementing its programs. It chose target areas where assistance could be given, so its assistance did not overwhelm the whole country. However, it helped in implementing SDG 4 in Myanmar for primary, secondary, non- formal education and teacher training rather than higher education sector.

The UN Specialized Agencies' Obstacles in Implementing SDG 4 in Myanmar

In implementing the programmes, these specialized agencies faced a difficulty in collecting data, analyzing the situation on the actual needs, and providing support to the children. As most of the assistance went to the conflict- prone regions, the ground condition was different from what it seemed when the project officers went really. In these places, security and safety

was not enough for all staffs, teacher and children where sometimes harmed the access to education. Moreover, these agencies faced a complicated process with numerous layers of State and Union levels and lack of clarity in specific roles to implement the programme activities.

Due to poor security and needs, these agencies needed to change places in constructing the schools in those areas. Some programmes have been cancelled in the implementation process, due to the recipient government's decision changes based on "Do not harm" principle. In the budget arena, there was limited funding by the international donors to these agencies and they had only few partners. There was also coordination issue among Myanmar's working departments at the education sector and occasionally, no substantial progress arose due to their different mandates.

As Myanmar education system is a top- down process, many clashes occurred between the central policy makers and leaders of the teachers' unions and student unions in policy making process. Because of internal weakness, the UN agencies could not actively and practically involve in the development progress and stood at the advisory role. Moreover, in running these programmes, there was not sufficient practical classroom experience, insufficient IT access and training during pandemic time. As pandemic was immediate incident, there was not enough time for preparedness and teachers had to struggle in the cost of phone bills and internet difficulty. Therefore, instead of Child- Center Approach (CCA) method, the teaching method distribution has become the teacher centric, not really effective on ground condition.

Conclusion

From 2011 to 2020, Myanmar's education development progress was in momentum and throughout the history, it has reached the high level during that time because of the reform process, international support and active participation by policy- makers and practitioners on ground. And, all these development processes aimed to SDG 4 for inclusive and quality education. Among its development partners, the UNESCO and the UNICEF's cooperation has been no-string attached and really beneficial to Myanmar community. Most of its cooperation went to hard-to-reach and conflict-prone regions holding human rights principle and respecting Myanmar's sovereignty.

The UNESCO and UNICEF positively cooperated in implementing the UN SDG 4 in most areas. These two agencies chose target areas and accomplished their commitments both in policy making and practical working. Both are operating agencies in Myanmar funded by western countries and directed the in- country program implementation in collaboration with local government's departments, international and local NGOs and CSOs. In implementing their goals, both followed the international guidelines in assistance, for instance, the Global Partnership for Effective Development Cooperation (GPEDC) and local guidelines such as Naypyitaw Accord for Effective Development Cooperation, Framework of Economic and Social Reforms (FESR) and MSDP.

According to the Goal 4 of the MSDP Pillar 3, People and Planet, human resources and social development is important for 21st century society. The UN agencies' cooperation benefitted Myanmar's education development progress not only in the government- led education progress but also to the local society directly with the government's permission for all-inclusiveness. However, in reality, due to the above challenges, their assistance could not fully

support the education reform process and sometimes, had to halt their programmes. In details, their cooperation mostly focused on four sectors in Myanmar's education: ECCD, basic, alternative and TVET but less on the higher education sector both in policy- making and implementing programmes. At last, their cooperation benefitted the community development, better social and human capital resource in Myanmar not just for the country but also for the individual in the country.

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CHINA'S WATER DIPLOMACY IN LOWER MEKONG BASIN COUNTRIES

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Abstract

China has practiced water diplomacy in the lower Mekong countries by using Lancang-Mekong Cooperation (LMC) framework in order to solve the transboundary water issue. China altered its use of water sovereignty to water diplomacy. This research focuses to explore the reasons of the paradigm shift in Chinese policy on Mekong sub-region and the unique characteristics of China's water diplomacy. The research finds out that the internal factors as well as external factors leads China's cooperation with lower Mekong basin countries in the water issues. Moreover, LMC is a framework with greater flexibility and has its own unique characteristics focusing on economic and development rather purely water resources management.

Keywords: Water Diplomacy, LMC, lower Mekong basin countries, transboundary water issues

Introduction

Water issues or water conflicts have been focused by states from non-traditional security aspect since the past few decades. In Southeast Asia region, the Mekong water conflict has been emerged as a concern for regional peace and stability. China is located as an upstream state. Therefore, China has the opportunity to practice in the use of Mekong River, although China, Myanmar, Laos, Thailand, Cambodia and Vietnam share the river. China's massive dam constructions on the main course of Mekong River have been criticized as the major cause for the destruction of the good condition of the Mekong River involving severe drought by the riparian countries. China was largely accused of neglecting the 'international dimension of river flow' or transboundary aspect of river flow and focusing and prioritizing the hydrological engineering through 'water sovereignty'. China only utilized the notion of territorial sovereignty when it came to the jurisdiction over the water resources of the international watercourse like Mekong River. Moreover, Beijing stayed away from the transboundary water management regime such as the Mekong River Commission (MRC) associated by the Mekong basin countries (Laos, Cambodia, Thailand, Vietnam). This overall situation has created the occasion for the external powers to involve in the hydro-politics of Mekong region and available for the greater presence in the region. In 2010, severe drought in Mekong River was pointed as the cause of China's upstream dams. Since 2014, Beijing attempted to practice water diplomacy upon the Mekong basin countries concerning with the governance on the resources of the Mekong River. As a result, in 2016 Lancang-Mekong Cooperation (LMC) was introduced between China and the five lower Mekong basin countries such as Myanmar, Laos, Cambodia, Thailand and Vietnam. Based on the background, the research tries to analyze the factors that lead China to practice its soft water diplomacy on the Mekong basin countries and the unique characteristics of LMC.

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Materials and Method

This research uses descriptive research method by using primary sources such Joint Communiques, Memorandum of Understanding (MoU), Newspapers and reports and, the secondary sources such as research articles, government official websites and books.

Research questions and Research premises

1. What factors explain China's practice of water diplomacy in the Lower Mekong basin countries?
2. How has the China's water diplomacy been practiced?

To answer the above research questions this research focuses on the China's water diplomacy. This study emphasizes on dams' construction of China and its environmental impacts, China's water sovereignty and its shift to water diplomacy, influencing factors that led to the practice of water diplomacy and China's initiatives on LMC.

Dams' construction of China and its impacts on the riparian states

Mekong River does not entirely run through a single country. It starts in China's Tibetan Plateau and flows to the south winding its way through Southeast Asia, crossing multiple countries such as Myanmar, Laos, Thailand, Cambodia and finally through the river's delta region in southern Vietnam. Eventually, it ends up into the South China Sea. Mekong river is 4500 kilometers (km) long which is the primary source of fresh water for nearly 70 million people across Southeast Asia while simultaneously providing almost 20 percent of the entire world's freshwater fish supply. Therefore, the river is very important for the entire region. Mekong River can be divided into two separately distinct areas. Lower Mekong basin in the south that begins near the Laos-China border that encompasses a broad mass of tributary rivers that cover the majority of Laos, Cambodia and significant amount of Thailand and Vietnam. Upper Mekong basin to the north is almost entirely just within China where the river is known as Lancang. This part of the river stretches from the high peaks of Tibet down towards the lower elevation of Southeast Asia. In the upper Mekong basin, the river flows across a much steeper geography than it does further downstream and the water flows very rapidly in this part of the river. Since Lancang is full of intense falls and rapids, it cannot be used for navigation. However, Lancang is one of the most ideal locations for dam constructions and harvesting hydroelectric power for massive population.

Since 1990s, China has built dams across the entire country. China's hydropower potential is the largest due to its possession on numerous rivers and vast mountain ranges. In 2021, the International Hydropower Association's report recognized that the world largest hydroelectric power producer was China due to its intensive work on dam buildings. According to China's Ministry of Water Resources, China has more than 98,000 dams. Among them about 22,000 dams are 15 meters tall. When there were surges in economic growth along with a spur in air pollution during the 1990s, huge mega dams were built for clean energy. In the early 2010s, China's hydro-generating capacity was doubled. Among the Chinese provinces, Yunnan province located in Southwest China is one of the world largest hydro-power-producing regions. Yunnan's has six major river systems such as Yangtze River (Jinsha River), Lancang (Mekong River), Ayeyarwaddy River, Nujiang River (Salween River), Pearl River (Nanpan River), Red River

(Yuanjiang River). Except Yangtze, the five basins are international. Eleven dams have been constructed on the river Lancang. The 12th dam is under construction. All these dams have been built directly across the river's primary course and not along any of the tributaries. Among these dams, two dams are classified as large storage dams and they hold back a massive volume of water. These 11 dams generate 31,605 megawatts of power.

Along the Yunnan's large streams, the development of massive hydropower development carries implications for geopolitics. Such implications involve the difference perspectives on basin development and different governance and legal contexts between upstream and downstream states. Some scholars believed that the downstream community was profoundly affected by the upstream hydrological investments in compare to the negative effects received by the upstream Yunnan province.

Dam constructions have been popular engineering activity not only in the upper Mekong basin but also in the lower basin. (Vietnam, Laos, Cambodia - dam construction 200). More than 200 dams in total have been constructed or are planned to be constructed across the southern basin throughout Thailand, Laos, Cambodia and Vietnam. Most of them are smalls in scale and are located on the Mekong's various tributary rivers that feed into the main section. However, only two of them have been built across the main section of the lower Mekong basin such as Xayabouri dam and Don Sahong dam located in Laos. However, this was not the case in upper Mekong basin.

Due to the dams' constructions of China, there have been negative economic and environmental impacts on the Mekong River basin. Several researchers pointed out the environmental impacts involving land inundation, hydrological regime alteration, reservoir-triggered seismicity, sediment trapping, habitat fragmentation and resettlement, and geological instability. Hui Fan, Daming He and Hailong Wang (2015) investigated environmental consequences of dam construction on the Lancang-Mekong River. They focused the dams' effect on the 'hydrological regime', 'water quality', 'aquatic fauna' (phytoplankton, zooplankton, zoobenthos and fish resources), reservoir siltation and sediment trapping. They found out that the river's hydrology was significantly affected by the dams and their adjoining reservoirs, specifically in the five important components of water flow such as rate of change, magnitude, frequency, timing and duration. The natural flow regime was substituted by the post-dam hydrological regime. According to L. Waldron Davis (2006), the upstream dams' constructions were concerned by the downstream communities since this could lead to the destruction of the good conditions of the river. These consequences involved lower the water level, changed in the natural flow of the river, blockage of sediment, and effect on water temperature due to unplanned and unusual releases of water from the Chinese dams.

Decrease in the water level has negative economic and environmental impacts. Mekong River produces abundance of marine resources and almost all of the inhabitants of Mekong basin directly depended on the river for their nourishment, livelihood and transportation. Most of the downstream community use Mekong River as a liquid road for navigation and the lower in water level can have obstacles in navigation and can be non-navigable at all. Moreover, there can be harmful impact on agriculture: less flowing fresh water can lead destruction in the irrigation; the dams trap the nutrient rich sediment that is essential for fertilizing agricultural soil; increase erosion by sediment hungry water scouring downstream banks; harming the health of fisheries; and reducing flow let the salt water intrusion from the South China Sea to the Mekong delta

damaging the agriculture lands. The ecosystems and biodiversity of Mekong River can have detrimental effects as well.

Several researchers have explored the correlation between mainstream water projects and severe droughts but there was no strong evidence to proof such argument. In 2019, the drought severely hit the Mekong basin countries. The downstream countries suffered through an unprecedented wet season drought. It was due to the restriction blockage of more water by the dams although much of Lancang the portion of river received high to average level precipitation for most of 2019. In order to produce substantial amount of hydropower, China's dams released nearly all of their water between January and June 2019 and the restriction began after that. The United States of America (USA) based research institute, Eyes on Earth (EoE), the environmental watchdog, produced two reports in 2020: "*Quantity of water flowing through the upper Mekong basin under natural conditions"* and "*Mekong River wetness anomalies in the 2019 monsoon season".* These studies raised concern about the correlation between the negative water flow changes and Chinese upstream dams. By using the satellite images, the report estimated the actual water flow of Mekong River and concluded that the natural flow of the river is altered due to upstream dams. Although the credibility of the report was assured by the authors by comparing its study models with the MRC hydrological data, many scientists expressed their concern on the misinterpretation of its findings. Moreover, there was doubtful point (suspicious strategic intension) since US led Lower Mekong Initiative (LMI) funded the study. Another report produced in 2020 by US based research institute, Stimson also expressed its most significant findings. According to the research, if the dams did not withhold the water, the water levels of much of the lower Mekong would be above average between June 2019 and March 2020. There was enough amount of rainfall and snowmelt in China during 2019.

China's water sovereignty and its shift to water diplomacy

In order to prevent conflicts, protect ecosystems and maximize socio-economic benefits, legal frameworks guiding over the use of transboundary water resources are required. To foster cooperation among the countries with international watercourse, international water law involving principles, rules and treaties were created. Among them the following three are considered as the universal legal frameworks on transboundary water:

- In 1966, "Rules on the uses of Water of International Rivers" were adopted by International Law Association and regulating "the use of an international drainage basin". These rules are known as **Helsinki Rules**.
- In 1997, the United Nations (UN) convened UN Convention on the Law of Non-Navigational Uses of International Watercourses and the first international law on transboundary water resources was codified. This law is known as **UN Watercourse Convention.** Due to the slow ratification process, it was only on 17 August 2014, the Convention entered into force.
- In 1992, Convention on the Protection and Use of Transboundary Watercourses and International Lakes (**UNECE)** was adopted and came into force in 1996. Originally it was only for the European region but in 2016 it was opened to all UN member states.

There are several universal principles governing the use of shared waters. Among them, the key principles are 'the principle of equitable and reasonable utilization', 'the obligation not to cause significant harm', 'the duty to cooperate' and 'the ecological protection'. In Mekong region, there is one legal framework among the four lower Mekong basin countries (Cambodia, Laos, Thailand and Vietnam). In 1995, the four countries signed **Mekong Agreement**- an "Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin".

Although China belongs to parts of many international rivers, it is not party to either of the international water conventions. Over water resources of all watercourses in its territory including Mekong, China exercised its sovereignty and jurisdiction. China stayed away from regional or global water governance regime. China made binding agreements with its Northeast and Northwest neighbors. However, there have been limitations in the agreements with its Southwest neighbors. China's concluded treaties on transboundary water primarily based on bilateral basis rather than practicing basin-wide approach. China voted against the 1997 UN Watercourse Convention. In Mekong context, China did not involve in Mekong Agreement and Beijing only took the role of dialogue partner in the MRC.

According to Hong Thi Ha (2022), China's insistence on water hegemony or sovereignty was based on three basic factors such as geography, history and economy. Geographically, China possesses the upstream position which gives China the opportunity to practice the maximalist approach to its hydrological development and water sovereignty and has no incentive in cooperation in regional watercourse regime. Historically, the international dimension of Lancang river was neglected and few Chinese people knew the Lancang river extends beyond Chinese border. In 2004 Evelyn Goh's report, the negligence of Chinese studies on the environmental cost of the downstream was expressed. Moreover, for Chinese nation-building, hydrological engineering plays significant role. Chinese people have the mindset that "men must conquer nature" and, the ability to conduct water management successfully is seen as a strength to rule. Through hydrological engineering, China practiced development centric approach in the past three decades.

China's past policy was mainly based on prioritization of unilateral development while limited in multilateral cooperation in dam building. This policy focus was described as 'right protection'- protecting China's rights to build dams freely within its territory and 'stability maintenance'- reducing negative impact of upstream dams to the minimal level and maintain stable relations with the downstream states and improve its international image. Obviously, it was 'right protection' that was a predominant China's objective in the past. This past China's Mekong River policy was largely criticized by the regional and international community by expressing their concern on China's unilateral hydrological activities. Moreover, China refused to join MRC and only became the dialogue partner of MRC in 1996. China convinced its overall relations with the downstream states and its international image were threatened by those countries' criticism and concerns. Moreover, this also allow more space for external powers in its immediate neighbors. Therefore, there have been notable changes in China's Mekong River policy since 2016. China has prioritized 'stability maintenance' over Mekong River issue with the downstream riparian states. There are internal and external factors for the changes of its water diplomacy.

Internal and external factors that led to China's water diplomacy

Internally, the three factors shaped China's policy shift in its Mekong River policy. Firstly, China's neighborhood policy and Belt and Road Initiatives (BRI) pushed China to develop water diplomacy. China aims to secure its periphery stable and friendly. Consequently, in 2012, under Chinese President Xi Jinping, a highly proactive neighborhood diplomacy was prioritized aiming to shape community of common destiny or community of shared future. Generally, China has initiated its good neighborhood policy (Peripheral Policy) over Southeast Asian countries since Deng Xiaoping era. For advancing its neighborhood diplomacy and achieving a community of common destiny in Southeast Asia, the most visible platform is Belt and Road Initiative (BRI). For constructing China-Indochina Peninsula Corridor as part of the 21st Century Silk Road, Mekong River basin was important and through water cooperation, important functions and tasks can be undertaken. Therefore, transboundary water cooperation was designed to coordinate BRI projects and to advance its economic and political ambition in Mekong region.

Secondly, transboundary water cooperation which can give China enormous economic opportunities from hydropower dams and river navigation. Indeed, it was the Yunnan provincial government that was actively seeking to cooperate with the downstream states in water cooperation in order to fulfil the economic need of the province. Originally, Yunnan had two major goals over Mekong River and region: developing hydropower in Lancang river within its territory and developing commercial navigation along the Mekong River. In China, the second largest usable hydropower resources are located in Yunnan province. For the national development, Yunnan hydropower development was very important. Therefore, the political influence grew over dam construction, and hydropower development in Lancang-Mekong River was prioritized. Yunnan provincial government anticipated Yunnan to become the energy storage place not only for China but also for the Southeast Asia. Moreover, Yunnan expected employment opportunity and economic growth through the dam businesses. Therefore, hydropower was promoted as the number one pillar of the province's economy. Since 2012, there has been oversupply of electricity due to rapid development of hydropower stations in Yunnan. In 2015, Yunnan province produced electricity (roughly 262 Terrawatt hours (TWh)) which far exceeded the provincial energy consumption (roughly 167 TWh). The province exported the excess amount mostly to Guangdong province in China (93.5 TWh) and downstream Mekong countries (1.4 TWh). Gradually, the energy demand from the domestic market became saturated and Guangdong's further demand for Yunnan electricity reduced. Consequently, Yunnan was increasingly seeking its market in the Mekong region and there have been increased presence of Yunnan power companies in Southeast Asia. This new trend brought a notable change in the China's water policy on Mekong.

Yunnan's other goal such as the development of commercial navigation along Mekong River is not a new one. In 1989, the development of the Lancang-Mekong River international navigational channel was proposed by the Yunnan Navigation Management Bureau. With the support from the Yunnan Provincial Transportation Department (YPTD), the relevant scholars, experts and department-initiated discussions and studies on the commercial navigation. In April 1992, a delegation of Yunnan was sent to Beijing to present the progress and lobby the central government. In June 1992, review over the commercial navigation presented by Yunnan was made and recommended 13 points for further development. Later on, joint inspection focused on

dry-season navigation was conducted among China, Laos and Myanmar. In 1994, China-Laos Agreement on Commercial Navigation on Lancang-Mekong River was signed between Laos and China. In 1995, over RMB 42 million was allocated by China for the major river clearance programmes in Laos and Myanmar. In 2000, Quadripartite Agreement on Commercial Navigation on Lancang-Mekong River was signed among China, Laos, Myanmar and Thailand. However, the prioritization of hydrological development among the two objectives led YPTD's original plan on international commercial navigation scaled back significantly. YPTD planned to develop a 3200 km long navigation channel from midstream of the Lancang river (Gongguoqiao, Yunnan) to the South China Sea (Vietnam). When the hydropower concentration policy started to alter, the commercial navigation resurfaced. Yunnan realized that it was a huge potential for the tourism sector by developing international commercial navigation. According to 2017 Yunnan Gross domestic product (GDP), tourism took part 7.5 percent of the total GDP of the province and hence the sector was important for the province economy. Therefore, Yunnan researchers recommended to develop sub-region tourism corridor along the Lancang-Mekong River between China and the four lower riparian countries. Such corridor would allow the multilateral navigation cooperation among the Mekong riparian countries and help to tackle the region water issue. This would also allow Yunnan to be connected with the lower riparian countries and create provincial socio-economic development. It is obvious that the action of international commercial navigation of Mekong requires multilateral cooperation, and the bilateral effort cannot be adequate enough to conduct the action. This led Yunnan provincial government to lobby the development of transboundary water cooperation and the creation of LMC. Later on, the adoption of water diplomacy in Mekong River basin was advocated by the vice minister of water resources, Jiao Young. Chinese researchers in Yunnan pointed out the acceleration of Yunnan economic growth through water diplomacy which can open up the opportunities for Yunnan cross-border trade, the commercial navigation and hydropower market.

Moreover, China uses water diplomacy as a tool to counter in its rivalry with the external powers. The use of water sovereignty in the past gave room to the external powers in the region raising the water issue narrative between China and the five lower Mekong riparian countries. Especially, the US, EU and Japan are the major external powers involving in Mekong sub-region water issues. The US was the major doner of Mekong Committee (MC) which was the former form of MRC during the 1950s. In terms of Cold War politics, the Mekong region was important for Washington and the US intended to spread the development strategy to the liberal Southeast Asian countries in order to deny the influence or dominance of the communist. However, during the 1960s and 1970s, the US lost interest in Mekong region due to its defeat in Vietnam war and the establishment of communist region in Cambodia and Laos. The Chinese ascendancy giving geopolitical evolution and the US responded by giving commitment in Mekong Region. In 2009, the democratic government refocused the Mekong region importance and the LMI was established between the US and the five lower Mekong basin countries including Myanmar, Laos, Thailand, Vietnam and Cambodia. Under this US-led initiative, six pillars were prioritized involving agriculture and food security; energy security; connectivity; environment and water; education; and health, gender, and other cross-cutting issues. The most important pillar has been the environment and water pillar covering water resources management and climate change. It was due to the recognition that the increases in flooding throughout the region was because of the climate change and there have been negative effects on food production and food security. Moreover, the LMI funded researches concerning with environment and water especially

transboundary water management and the impact of Chinese upstream dams and negative water flow for instance the EoE Study. Since 2009, the LMI has received positive feedback from the riparian countries in addressing non-traditional security issues. The Ministerial Meetings of the LMI were convened yearly until 2019. The US provided financial assistance worth US D 3.5 billion during the eleven years of LMI. In September 2020, LMI was replaced with Mekong-US Partnership (MUP) as an expansion of the LMI and advanced its goal to create integrated subregional partnership. The US recognized the importance of the countries involving in Mekong Partnership since they were part of US Indo-Pacific strategy and its vision of free and open Indo-Pacific region. Through MUP, US attempted to redefine its Southeast Asia agenda under its overall strategic rivalry with China.

The motivations behind the US' action to revitalize the existing LMI can be assumed as follows. Firstly, the MUP could counter the influence of China in Mekong region and serve as an alternative to BRI. Secondly, under US' ASEAN engagement strategy, the MUP could increases US' engagement with the five lower Mekong basin countries. Thirdly, through MUP, US could address the emerging challenges in the lower Mekong region involving cyber security, pandemic responses and transboundary water management. Therefore, MUP has focused three main goals to achieve. Firstly, it aims to build regional capacity to increase transparency, sustainable development and good governance. Its second aim is to strengthen private and public connectivity between the US and the five riparian countries and finally it aims to collaborate with international partners in order to find and identify answers for major challenges of the region. The MUP aims to provide US D 153 million for the regional cooperation focusing on seven areas: upgrading energy systems; energy infrastructure and energy markets; emergency health to combat COVID-19 pandemic; law enforcement and justice; disaster relief exercises; regional governance based on water security, increased transparency, women's economic empowerment, and East-West connectivity; and policy dialogues.

The MUP signaled the greater emphasis of US government over the sustainable river basin development in Mekong region. After the reporting of the EoE research findings, the American officials used the results of the research in their speeches. Those actions can be assumed as the US's attempt to increase political pressure on the Chinese government. In April 2020, US Secretary of State Michael Pompeo's statement referred to EoE Study findings and raised about the Chinese dams and demanded further information about them. The US Ambassador to Thailand Michael DeSombre also highlighted US achievements in the Mekong basin and asked "why more water did not flow from China". To a more sensitive extent, in June 2020, the US Secretary of State David R. Stilwell said that Chinese dams contributed to droughts because they used dams to store water. In September 2020, Stilwell asked for better transparency of China's hydrological data and accused Chinese action as the manipulation of the water flow for its profit. In December 2020, the MUP launched the Mekong Dam Monitor (MDM) in collaboration with Stimson Research Centre. The MDM aimed to improve the transparency hydrological data and raised awareness to public about the transboundary water management and supplied hydrological data sharing with MRC. The MUP has been serving as an active institution in warning gradual water flow changes, making possible meetings for multi-stakeholder, and motivating journalists' surveillances on the situation.

Japan has committed its development policy in the Mekong region since the end of Cold War. In 1993, Japan created the Forum for Comprehensive Development in Indochina in order to

facilitate the Mekong subregion's socioeconomic development. In 1994, Japan established ASEAN Economic Mechanism and Japan's Ministry of International Trade and Industry (AEM-MITT) Working Group of Economic Cooperation for Indochina and Myanmar. It was aimed to facilitate infrastructure development and market economy. Japan-Cambodia, Laos and Vietnam (JCLV) framework was created to discuss the subregional development scheme. Under this framework, summits and foreign ministers' meetings were held annually from 2006 to 2008.

In 2007, Japan launched Japan-Mekong Region Partnership Program between Japan and the five lower Mekong countries. Japan's socioeconomic focus began to shift. The program prioritized economic integration in the region and beyond, the expansion of trade and investment between Japan and the region and, pursuant of the universal values and the common goals of the region. Through Japan-Mekong framework, regular Foreign Minister Meetings were held from 2008, and summits were held from 2009. Under this framework, regional strategic issues such as China's growing influence in the region were incorporated.

Since 2010, Japan has used Japan-Mekong framework to emerge rule based subregional order and to support US rebalancing strategy and LMI. A series of new strategic regional visions were adopted: 2015 Partnership for Quality Infrastructure (PQI) to boost its assistance in Mekong subregion, 2016 free and open Indo-Pacific strategy and 2016 Japan-Mekong Connectivity Initiative. There has been limited cooperation between Japan and the US in Mekong sub-region before 2018 although both countries participated in Friends of Lower Mekong Ministerial Meetings from 2011 to 2015. Only in 2019 both countries entered into joint cooperation through Japan-US-Mekong Power Partnership (JUMPP). This project supports the practice of Mekong region's energy security, the development of quality energy infrastructure, the promotion of a more sustainable energy sector, and the emerging of free, open, stable, rules-based electricity markets.

European Union (EU) has extensive diplomatic relations with all the lower riparian countries. EU has promoted cooperation with MRC through foreign direct investment (FDI). Concerning with the water issues such as sustainable water management involving flood risk control and cooperated river basin management, EU ministers confirmed their engagement to address the issues during the Asia-Europe Meeting. There was encouragement for tangible cooperation such as transboundary, sub-regional and bi-regional cooperation in water-related issues between Mekong and Danube regions. Moreover, similar water diplomatic activities have been launched by Korea, India, and Australia in Mekong sub-region.

China's practice of Water Diplomacy and its initiatives on LMC

The policy and academic communities have grown their attention in the concept of water diplomacy. At the international level, water diplomacy has been largely supported by the UN in order to solve the transboundary water problems as an important policy instrument. Although government officials, scholars, journalists frequently use the term water diplomacy, it is still ambiguous. Indeed, there is no consensus as to the definition of water diplomacy. According to Li Zhang and Hongzhou Zhang (2021), "water diplomacy is difficult to define because the term means different things and suggests diverse courses of action for organizations and individuals acting different sectors". According to Van Genderen and Root defined that "water diplomacy is all contacts between non-state actors and a least one state or international organization

concerning transboundary fresh water resources". Moreover, in addition, Huntjens et al., "water diplomacy includes all measures by state and non-state actors that can be undertaken to prevent or peacefully resolve conflicts and facilitate cooperation related to water availability, allocation or use between and within states and public and private stakeholders". Although different definitions on water diplomacy, the scholars agreed upon on one thing, "water diplomacy is different from water cooperation". Water diplomacy is a process involving higher level of political engagement. The concept of water diplomacy is also defined in different way: "offensive water diplomacy" and "defensive water diplomacy". If a country uses water rights, water negotiations, and water resources in order to check and balance other countries, it is offensive water diplomacy. On the other hand, if a country uses various diplomatic methods and measures in order to promote the development and integration of water cooperation projects, it is defensive water diplomacy. This study argues that China uses defensive way in practicing water diplomacy in lower Mekong basin countries.

In 2012, Thailand proposed to form ministerial-level dialogue between China and Mekong sub-region countries. However, at the 17th China-ASEAN leaders' meeting in 2014, Chinese premier Li Kequang proposed the establishment of the Lancang-Mekong Cooperation Framework and the five Mekong River countries welcomed the proposal. In November 2015, the foreign ministers of the six riparian countries held the 1st LMC Foreign Ministers' meeting and issued the Joint Press Communique' of the meeting. This meeting introduced the 3+5 cooperation model. The meeting committed to conduct cooperation with the existing water cooperation mechanisms and adopted early harvest projects.

In March 2016, Vietnam requested Beijing to release water from Chinese dam to alleviate prolonged drought. Chinese government released water from Jinghong hydropower dam. Moreover, Chinese government promised to share more hydrological data. The Chinese action was portrayed in various ways. While some saw as Chinese goodwill, the other examined this as geopolitics move to gain influence on the lower Mekong sub-region. Moreover, this move was seen as China's persuasiveness before the official launching of LMC. On 23 March 2016, the 1st LMC leaders' meeting was held in Sanya of China's Hainan Province and adopted Sanya Declaration. The theme of the meeting was "Shared River, Shared future".

In the same meeting the thematic joint working groups were planned to established in order to coordinate the LMC agenda. As a result, in accordance with the 3+5 cooperation models, the six Joint Working Groups (JWG) were established: JWG on Water Resources Cooperation (March, 2016), JWG on Poverty Reduction (June, 2016), JWG on Connectivity (June, 2016), JWG on Production Capacity Cooperation (September, 2016), JWG on Cross-border Economic Cooperation (July, 2017), and JWG on Agriculture (Sept, 2017). Moreover, the LMC Special Fund (LMSF) was established. LMSF committed to support the projects (small and medium size) initiated under LMC framework. The 2nd LMC Foreign Ministers' meeting was held in December 2016 and the Joint Press Communique of the meeting was issued. The meeting reviewed LMC progress and discussed LMC earlier harvest projects, planned to establish LMC cooperation centers and introduced the Green-Lancang Mekong Initiative.

In March 2017, LMC China Secretariat and Lancang-Mekong Water Resources Cooperation Center (LMWRCC) or LMC Water Center was launched for information sharing and promote further collaboration. In addition, Lancang-Mekong Environmental Cooperation Center (LMECC) was established in November 2017. When the 3rd LMC Foreign Ministers'

Meeting was held in December 2017, the meeting reviewed LMC progress and discussed to reform the 3+5 model and the Joint Press Communique of the meeting was released.

In January 2018, the 2nd LMC Leaders' meeting was held and Phnom Penh Declaration and Five-Year Plan of Action on Lancang-Mekong Cooperation (2018-2022) were adopted. The 3+5 cooperation model was reformed and launched the new 3+5+X cooperation model by broadening areas such as digital economy, environmental protection, and custom and youth. The six working groups which have been established and completed one after another after the Five-Year Plan of Action. Moreover, 132 new LMC joint projects were approved. For water resources management, the 1st Lancang-Mekong Water Resources Cooperation Forum was launched. In December 2018, the 4th LMC Foreign Ministers' meeting reviewed LMC progress and committed to collaborate other cooperation mechanisms. The meeting issued the Joint Press Communiqué of the 4th Lancang-Mekong Cooperation Foreign Ministers' Meeting.

In 2019, severe drought hit Mekong region and Mekong River was registered as critically low water levels and MRC reported that water levels had fallen to among the lowest record. The drought and fall in water level was mainly caused by EL Nino (a meteorological phenomenon in the Pacific Ocean that affects the climate all over the Pacific basin). China's Ministry of Water Resources notified MRC that the outflow of water from the Jinghong dam would be fluctuating from 5 to 19 July 2019 in order to do the maintenance work. Many pointed out that the withhold of water for two weeks by Jinghong dam exacerbated the situation and caused a massive decline in water levels. Moreover, Laotian action on testing its newly built Xayabouri hydropower dam was also blamed for the water level drop. In addition, in northern Thailand, the change in color of the river from brown to blue was first witnessed. Many speculated that it was caused by shallow, slower moving waters. Mekong River was used to be the fast-flowing river, which helped transport sediments across the region. The sediments also gave the river muddy brown appearance. However, the lower Mekong River has turned unusual aquamarine color due to the drop of the sediment loads. There has been the debate about the impact of upstream dam over the change in the river color.

As a result, the 1st Ministerial Meeting of Lancang-Mekong Water Resources Cooperation was convened and issued the Joint Statement of the 1st Ministerial Meeting of the LMWRC in December 2019. The meeting focused on the facilitation of the transboundary water governance by reviewing progress in transboundary water resource management. For strengthening existing cooperation, the meeting introduced principles and framework. The launching of this meeting was Chinese government's response to the rising concerns about the impact of upstream hydropower dams on the water flows. The Memorandum of Understanding (MoU) under the JWG on Water Resources Cooperation was signed between the six countries on 5 June 2019. Under this MoU, China committed to provide hydrological data in flood season from Jinghong and Man'an stations. In addition, MoU between MRC Secretariat and LMWRC was signed in Beijing, China on 17 December 2019. The MoU focused to "seek to ensure effective upper and lower Mekong River basin management for future sustainability and shared benefits". As an initial step, both sides agreed to conduct joint study on the hydrological impacts of Lancang hydropower cascade on downstream's extreme events.

The 5th LMC Foreign Ministers' Meeting was held in February 2020 and the meeting focused on advancing health security cooperation (COVID-19), deepening water cooperation and hydrological data sharing, promoting the connection between LMC and BRI, and closer

collaboration with other mechanism (MRC, GMS and ASEAN). The 3rd LMC Leader's Meeting was held in August 2020 and Vientiane Declaration of the 3rd LMC Leaders' Meeting was adopted. China committed to fund the LMC projects during COVID-19, and to share year-round hydrological data. Moreover, Lancang-Mekong Water Resources Cooperation Information Sharing Platform was established. When the COVID-19 pandemic outbreak in early 2020, the LMC effort in transboundary water governance was negatively affected.

Water fluctuations in Mekong River was witnessed by Mekong Mainstream Dam Monitor (MDM) in early 2021. Some pointed out that LMWRC could not explain the prolonged water fluctuation due to the communication shortcomings experienced by LMWRC. Some criticized that LMWRC as incompetence. On the other hand, LMWRC advanced its cooperation with MRC and in March 2021, LMWRC-LMC online meeting was held. Moreover, in April 2021, in the 3rd International Forum on Water Security and Sustainability, the cooperation program between MRC and LMWRC were discussed. In June 2021, the 6th LMC Foreign Ministers' Meeting was convened and the foreign ministers focused on the fight against COVID-19 and promote recovery after the pandemic. The meeting also discussed works on water resources. China was being accused of prioritizing economic relations and COVID-19 cooperation through LMC rather than on water cooperation. Concerning with the water cooperation, the 2nd LMC Water Cooperation Forum was held on December 7, 2021 and China proposed four factors for future water resources cooperation among six countries. They were promotion of green and sustainable development while coordinating economic development and ecological protection, building a community with shared future, working together through common vision and developing knowledge and information sharing platform. The meeting also adopted Joint Statement on Enhancing Sustainable Development Cooperation of the Lancang-Mekong Countries.

The 7th LMC Foreign Ministers' Meeting was convened in Myanmar in July 2022 and the Joint Press Communique of the 7th Mekong-Lancang Cooperation Foreign Ministers' Meeting was issued. The meeting encouraged LMC to coordinate with BRI and to respect for UN charter and International Laws. Moreover, the meeting expressed the progress of the 2018-2022 Five-Year Action Plan and planned to adopt new Five-Year Plan of Action (2023-2027). LMC Special Fund (2022) and lists of projects were also introduced. The countries were encouraged the development of the transparent, consistent and timely water data sharing under LMWRC Information Sharing Platform. The joint research between MRC and Lancang-Mekong water Center was launched in 2022 titled Joint Study on the Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin. The study was published in October, 2023. The Lancang-Mekong Environmental Cooperation Strategy was adopted and the strategy was implemented by the Lancang-Mekong Environmental Centre (LMEC) through the promotion of Lancang-Mekong Environmental Cooperation projects.

The 8th LMC Foreign Ministers' Meeting was convened in Beijing, China on 7 December, 2023. The progress of the LMC and the views were exchanged for future direction of LMC. China proposed to convene the 4th LMC Leaders' Meeting in December 2023. The concept of Three Future was proposed involving enhanced future connectivity, building better future and develop future growth engines. The three draft documents were agreed to submit to the 4th LMC Leaders' Meeting. The documents were Five-Year Plan of Action on LMC (2022-2027), Nay Pyi Taw Declaration and Joint Initiatives on the LMC Innovation Corridor Development.

Analysis on LMC

LMC Framework is a tool to practice China's water diplomacy. Under this framework, China has practiced its diplomacy through diverse sectors and cooperation. LMC was designed to show China's soft power approach in handling the water issue. China's approach can be defined the following characteristics. The most prominent characteristic of LMC is the building of common identity and leading to a community with shared future. When Chinese Foreign Minister Wang Yi proposed to initiate LMC, he expressed to construct a community with shared future. The ideal of common destiny in the region has been promoted by China since the official launch of the LMC. China stressed that "LMC was born of water, connected by water and thrived by water". The vision of shared community was clearly expressed in the theme of the 1st LMC leaders' meeting, which was "Shared River, Shared future". Moreover, Chinese Premier Li Keqiang reiterated this idea in the 3rd LMC Leaders' Meeting. Primer Li stated that "drinking water from the same river, we, the LMC countries, were close as one family living in a community with a shared future". From this action of common identity construction, China expected two things. Firstly, except the Vietnam, all the four riparian counties were not claimants in the South China Sea disputes. Therefore, by building common identity, China could alter the attention of the countries from South China Sea to Mekong cooperation. Secondly, China wanted to signal the external power such as US and Japan that China and the five lower riparian countries share common identity based on water. That means the affairs of the Mekong should be solved by the people of Lancang-Mekong region.

Another characteristic of LMC is its state-centric framework in which Chinese government is engaging with the governments of lower Mekong countries. The approach involves political and policy dialogues, development assistance and economic cooperation. This top-down approach was clearly expressed in 2016 Sanya Declaration by using the phrases such as "government-guided model and leader-guidance". Under this model, the meetings have been conducted by countries' leaders and foreign ministers. Again, in 2018-2020 LMC Five-Year Plan of Action (POA), the notion of top-down approach was also put forwarded. Enhancing official exchanges and visits, and political dialogue were indicated. Moreover, the POA also revealed to carry out the cooperation among the top level of the LMC countries. In order to discuss about the sustainable water resources and utilization and water resources policy dialogue, sharing information about the water resources was critical point for the LMC cooperation. However, some scholar pointed out that all the important platforms for doing such work was administered by the Chinese officials. The headquarters of such frameworks as the Lancang-Mekong Water Resources Cooperation Information Sharing Platform (LMWRC-ISP) and the institutions like the LMEC and LMWRC (LMC Water Centre) are located in China. It is obvious that the voices of local civil society groups and riparian communities have been neglected in Mekong water issues, although the Sanya Declaration referred to "broad participation" or "multiple participation". Therefore, some scholars pointed out that under China state-centric approach, the outcomes were narrated.

The third characteristic of LMC can be noted that it is a project-based approach rather than the water resources management regime. The framework has been operating under 3+5 model and remodeled as 3+5+X cooperation model. The three pillars cover political and security issues, economic and sustainable development and social, culture and people to people exchange. The five priority areas cover connectivity, production capacity, cross-border economic

cooperation, agriculture and poverty reduction, and water resources. These five areas have progressed dramatically with prolific results. Firstly, under connectivity framework, the railway projects have been launched one after another such as China-Laos railway, and China-Thailand railway. Moreover, agreement has reached to construct the connecting line between China-Thailand and China-Laos railways. In addition, there have been extension of air-routes in all directions. Secondly, concerning with the protection capacity, more than 40 major projects have been supported by China involving Kyaukphyu Deep Sea Port and Industrial Park in Myanmar and the Vinh Tan Coal-fired Power Plant in Vietnam. Another core industry for protection capacity is textile and garment. The 1st LMC Textile and Apparel Summit was held in 2019 between the six countries' textile and garment association. The summit issued a joint statement and Lancang-Mekong Textile and Garment Industry Dialogue's the long-term cooperation mechanism was established.

Thirdly, under cross-border economic cooperation area, cross-border economic cooperation zone has been constructed. For instance, the Ruili-Muse and Lincang-Chinshwehaw ports between China and Myanmar; the Mohan-Bo Ding port between China and Laos; and Dongxing-Mang Cai, Pingxiang-Dong Dang, Hekou-Lao Cai, and Long Bang-Tra Linh ports between China and Vietnam. Fourthly, under the LMC in agriculture and poverty reduction sector, a series of projects have been implemented with the support of Lancang-Mekong Special Fund. The cooperation platform has brought significant progress in the area of industrial development and enhancement investment and trade promotion policy dialogue capacity building. Fifthly, water management has been conducted under water resources framework. Although LMC is born out of water, in all-round LMC cooperation, water security is not only and central concern. According to LMC 3+5 model, it was clear that LMC mainly focuses on economic development by initiating the projects in the Mekong Basin countries. This project-based approach gave incentive to the riparian countries, and it is the main prism for the cooperation. The four goals of POA pointed out this fact. Such aims involved "economic and social development of sub-regional countries, enhancing well-being of the people, narrowing the development gap within the regional, building a Community of Shared Future of Peace and Prosperity among LMC". Therefore, it can be assessed that LMC prioritizes economic and development rather than environment, water resources management, and sustainable development.

The last characteristic of LMC Forum is that the framework is not based on the development of international law. In general, all the LMC instruments are not legal binding, these instruments do not use the language that show binding force such as "Shall" rather vague words are used such as "promote", "advance" and "strengthen cooperation on" water resources management. LMC puts strong emphasis on Five Principles of Peaceful-Coexistence. However, international law is generally recognized in LMC instruments but limited mentioning of specific agreements. For instance, the recognition of international law could be seen in the Vientiane Declaration, which included "respect for the UN Charter, ASEAN Charter, international laws, as well as in accordance with domestic laws and regulations, and procedures of each member country".

With regards to LMC and its significant for Myanmar, the following points are discussed. Out of the lower Mekong riparian countries, Myanmar has very little interest in Mekong because it belongs to the least percentage of river portion and hence it has the lowest percentage of

damage. Therefore, Myanmar has not been a member of MRC although it is a dialogue partner of the organization. However, being one of the members of LMC, Myanmar has got the same opportunity from China's water diplomacy under 3+5+X framework. For instance, under cross-border economic cooperation area which is one of the five priority areas of LMC, the Ruili-Muse and Lincang-Chinshwehaw ports between China and Myanmar has been constructed. Many more other frameworks of cooperation are being conducted under LMC involving the cooperation in the security sector, for instance, tackling the issue of human trafficking.

Conclusion

To Sum up, China's focus on the water sovereignty was shifted and launched water diplomacy. By using soft approach, China designed LMC. The driving forces for paradigm shift in China's policy in solving transboundary water issue were based on domestic push factors and external pull factors. Internally, LMC helped to coordinate China's BRI and fulfil its peripheral - good neighborhood policy. Moreover, the economic need and development of Yunnan province led the Yunnan provincial government's endeavors to cooperate with the downstream riparian countries. China's negligence on water cooperation with the lower Mekong basin countries gave space for the external powers, holding the narrative of supporting transboundary water issues and countering the Chinese increased influence in the lower Mekong region. LMC is a tool used by China in competition with the US in the region. China leads LMC as multilateral approach based on cooperation in diverse projects. Although water cooperation is partly focused through various frameworks and mechanisms, LMC is not the transboundary water resources regime. LMC is not a binding mechanism and none of LMC instruments is legal instrument but rather is based on flexible approach. However, LMC recognizes international law and regional principles. LMC is based on top-down approach which means governments' officials of the member countries are central to the discussion and decision making. Through LMC, China also tries to create or construct shared idea and identity to emerge regional community with the shared destiny. It is obvious that with soft and positive approach, China tried to promote itself as a regional architecture or leader as well as promote its international figure. There have been positive responses from the lower Mekong riparian countries, especially Cambodia and Laos that warmly welcomed China's water diplomacy. Some claimed that China's promotion on hydropower development in the lower riparian countries changed the perception of those countries. Vietnam was the strong opponent of Laos' mainstream dams' construction, especially Xayabouri dam. However, Vietnam shifted its position and became one of the dam-investors. Indeed, China's water diplomacy has got momentum in recent years under wider project-based cooperation.

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LOCAL ECONOMY: MAIZE CULTIVATION AND ITS ECONOMIC RETURN OF LASHIO TOWNSHIP*

Naw Paw Thaw Thaw[1], Tun Aung Kyaw[2], Nyein Win Kyaw[3], Nang Khin Lake[4]

Abstract

Lashio, one of the townships of Northern Shan State, is located along Mandalay Muse Road. It is composed of twelve wards and 75 village tracts including 490 village tracts. Like other places of Myanmar, its economy mainly based on agriculture activities. Major crops grown in this township are paddy, maize, groundnut and beans etc. This paper mainly stresses on maize cultivation. In the study area, maize cultivation has boomed up since last 15 years. In 2021-22 the area under maize cultivation was 27,252.93 hectares (67,342 acres) represent 47.15 percent of the total agricultural land. The aim of this paper is to study net economic return of maize cultivation supporting the economy of cultivators in Lashio Township. The objectives are to investigate the favourable conditions for maize cultivation, to examine spatial distribution of maize cultivation and to explore strength, weakness, opportunity and threat of maize cultivation in Lashio Township. Primary data and secondary data were applied in this research paper. Primary data were acquired through field observation, informal talks and discussion with farmers and the responsible persons of the departments concerned. Secondary data such as climatic data, maize cultivated area, productivity and population were derived from the department concerned. Cost-benefit analysis and SWOT analysis were applied in presenting the paper.

Keywords*:* agriculture, maize cultivated area, economic return, cost-benefit, SWOT

Introduction

Myanmar is an agricultural country, and the agriculture sector is the backbone of its economy. The agriculture sector contributes 37.8 percent of gross domestic product (GDP), accounts for 25 to 30 percent of total export earnings and employs 70 percent of the labour force. One major economic objective is "Development of agriculture as a base and all-round development of other sectors of the economy as well" (FAO, 2017).

Myanmar is a maize producing and exporting country among 171 **maize** producing countries in the world (MPBSMA, 2021). Maize (Zea mays L.) is an important cereal crop in world after wheat and rice and hybrid maize was introduced to Myanmar in the mid-1990s by Thai agro-industrial conglomerate Charoen Pokphand (CP) and maize production has boomed since this time (FAO, 2019), to supply a burgeoning export market to China and a rapidly growing domestic animal feed industry in Myanmar. Maize is food for man and feed for animal and it can be cultivated throughout the year (Choudhri, et al, 2018).

The country exports maize to China (mainland) and Thailand. Most maize production is concentrated in upland areas of Myanmar. Shan State occupies approximately half of the country's total planted area of maize (USDA, 2019).

Agriculture activity especially maize cultivation is extensively grown in Lashio Township. About 70 percent of the township's population engaged in maize cultivation. To study

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maize cultivation, Lashio Township was selected as study area for the purpose of presenting net return of maize cultivation by using cost-benefit analysis.

Study Area

Lashio is one of the townships of Northern Shan State. The total area of Lashio Township is 4,230.5 square kilometres (1,633.4 square mile). It is made up of twelve wards and 75 village tracts. In 2022 the total population of the township was 300,966 persons of which 145,479 persons or 48.34 percent were urban population and 155,487 persons or 51.66 percent rural population.

Aim

To study net economic return of maize cultivation supporting the economy of cultivators in Lashio Township.

Objectives

- To investigate the favourable conditions for maize cultivation
- To examine spatial distribution of maize cultivation and
- To explore strength, weakness, opportunity and threat found in maize cultivation of Lashio Township

Data and Method

Primary data such as cost, price, income, benefit, etc were collected through field observation, informal talks and discussion with farmers and authorized persons of the department concerned.

Secondary data were obtained from the respective departments, relevant books, journals and magazines.

In presenting the paper, cost benefit analysis was applied to illustrate net return from maize cultivation and SWOT analysis was applied for the purpose of upgrading maize cultivation in Lashio Township.

Results and Findings

The Favourable Conditions for Maize Cultivation
Physical Factors

Lashio Township is located in the Northern Shan State lies on the Mandalay-Muse motor road. It is located between North latitudes 22° 35″ 53′ and 23° 04″ 27′ and between East longitudes 97° 31″ 10′ and 98° 22″ 48′ (Figure 1.a , 1.b).

The Lashio Township boundary is 232 miles long. The township boundary is partly demarcated by streamlet, streams, rivers, mountain divides and valleys. The area of the township is 4,230.5 square kilometre (1,633.4 square miles). It is composed of 12 urban wards and 75 village tracts (Figure 2).

Source: Myanmar information Management Unit

Figure (1.a) Location of Shan State in Myanmar

Source: Myanmar information Management Unit

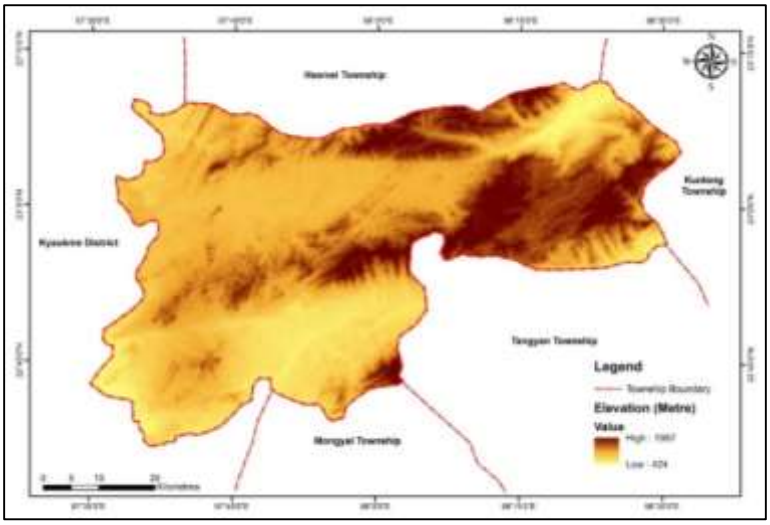
Figure (1.b) Location of Lashio Township in Shan State

Source: Department of Agriculture and Land Management Statistics, Lashio Township

Figure (2) Urban Area and Village Tracts of Lashio Township

Nearly the whole region with rugged, mountainous and moderately to steeply sloping area, and narrow alluvial plain are general characteristics of the township topography. Comprising some parts of the alluvial plain is a flat. However, the majority of the areas are undulating and rolling topography (Lwai Shwe Poung, 2014). Thus, relief of the study area favours maize cultivation (Figure 3).

The elevation of the northern edge of the township is about 660.91 metre (7,114 feet) above mean sea level and it is the highest peak in the township.



Source: Digital Elevation Model

Figure (3) Relief of Lashio Township

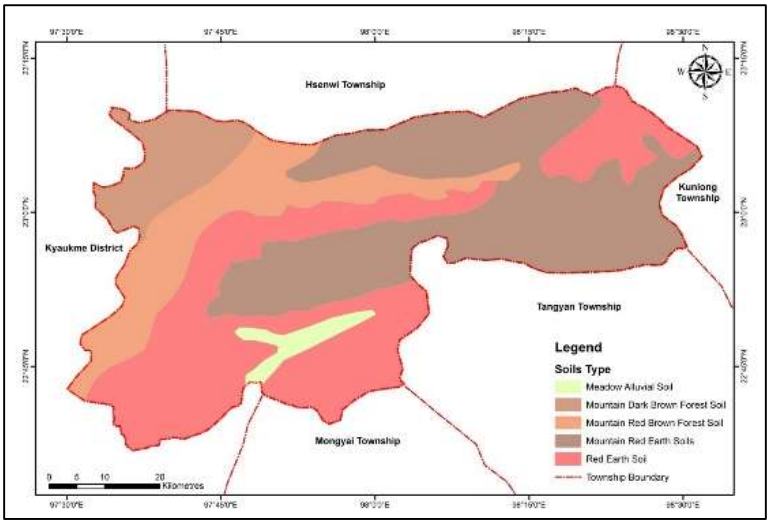
Among the physical factors, climate is quite significant and it determines the cultivated area, harvest area and yield per unit. Various impacts of climate change especially rainfall variability affect various agricultural activities and crop loss is caused by temperature and rainfall variability (Klein, Schipper & Dessai, 2005).

Maize is grown over a wide range of climatic conditions because of its many divergent types. Global agriculture including maize cultivation is facing the probable impact of global warming. Recent studies suggest that the production of major commodities has declined since 1980 due to global warming (Lobell et al 2011).

During 12 year period from 2010 to 2022, the average maximum temperature was 26.32°C (79.38°F) and average minimum temperature was 16.59°C (61.86°F). Average mean temperature was 19.90°C (67.82°F).

Average annual rainfall was 1,236.48 mm (48.68 inches). Rainfall was highest in July with 232.16 mm (9.14 inches) and lowest in February with 8.89 mm (0.35 inches). According to Koppen's Climatic Classification, the study area experiences Cwa type of climate (Subtropical Monsoon Climate).

Depending on the parent material, the underlying rock, climatic condition and natural vegetation, types of soil varies from place to place. Five main types of soil are found in Lashio Township.



Source: Myanmar Survey Department, Yangon

Figure (4) Soils of Lashio Township

They are: Meadow Alluvial Soil, Mountain Red Brown Forest Soil, Red Earth Soil, Mountain Dark Brown Forest Soil and Mountain Red Earth Soil (Figure 4) and most soils are favourable for maize cultivation.

In brief, physical conditions such as relief, climatic conditions and soils are suitable for maize cultivation.

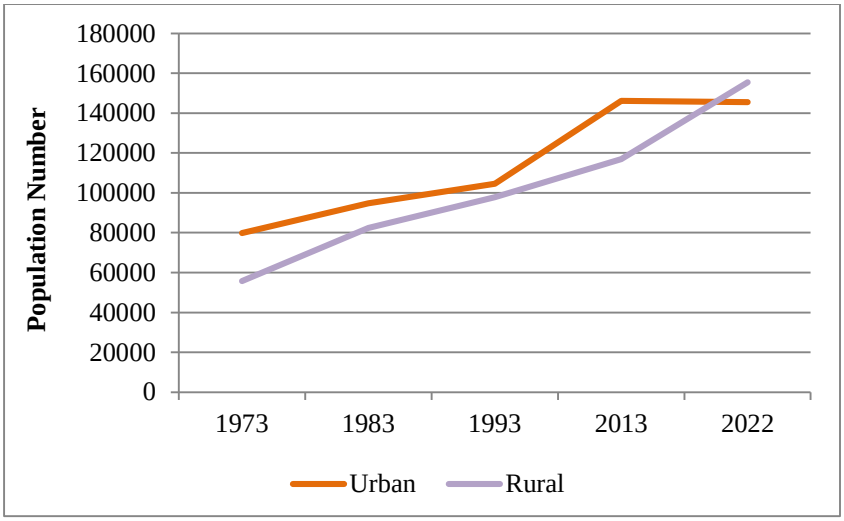
Social Factors

In 1973, the total population of the township was 135,565 persons. Out of the total population, rural population represented 41.08 percent and urban population 58.92 percent. In 2022, total population of the township was 300,966 persons and the number of rural population was 51.66 percent while urban population 48.34 percent. Unlike other places of Myanmar, rural population is lower than urban population. This is partly due to some of the native people migrate to neighbouring area for better job opportunities. Nevertheless, about 70 percent of the township's population depend on agriculture activities for their livelihood. This witnessed the role of primary sector of the study area (Table 1 and Figure 5).

Table (1) Urban and Rural Population of Lashio Township

No	Year	Urban	Percent	Rural	Percent	Total population
1	1973	79,874	58.92	55,691	41.08	135,565
2	1983	94.839	53.50	82,433	46.50	177,272
3	1993	104.546	51.68	97,763	48.32	202,309
4	2013	146.117	55.55	116,900	44.45	263,017
5	2022	145,479	48.34	155,487	51.66	300,966

Source: Immigration and Man Power Department of Lashio Township



Source: Based on Table (1)

Figure (5) Urban and Rural Population of Lashio Township

Economic Factors

Major crops grown in Lashio Township are rice, maize, groundnut and beans etc. Maize is one of the most important crops grown in the study area and one of the important income generating activity. The area under maize cover 47.15 percent of total agricultural land which is the largest among other crops area.

Market is one of the significant determining factors for the development of agriculture sector. In 2017-18, price per viss of maize was between 450 and 600 kyats and increased to between 960 and 1150 kyats in 2021-22. In Lashio Township, majority of maize are sold to foreign market especially China. Depending on market demand and the quality of maize, price fluctuates from time to time. The instability of price is, to some extent, affects maize growers of Lashio Township.

Maize Cultivation

In 2012-13, the area under maize was 18,230.27 hectares (45,047 acres) and production was 80,529.38 tons (3,170,448 baskets). 2016-17 onward, maize cultivated area has appreciably increased due to high market demand. In 2021-22, maize cultivated area further increased to 27,252.93 hectares (67,342 acres) and production was 120,918.50 tons (4,760,571 baskets) (Table 2 and Figure 6).

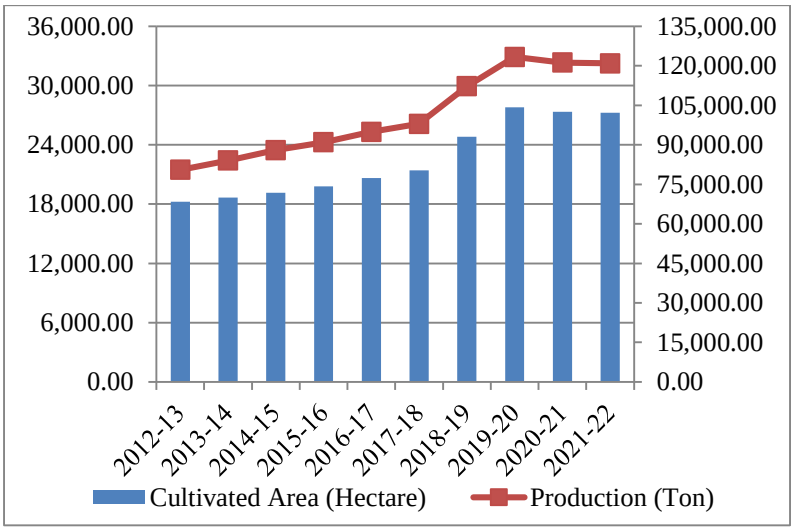
In 2021-22 maize cultivation was practiced in the whole township but the area under maize varies from place to place. In 2021-2022, the total area under maize cultivation was 27,252.93 hectares (67,342 acres) representing 47.15 percent of the total agricultural land. In 2021, the largest maize area above 1,000 hectares (2,471 acres) were found in five village tracts: Man Pwe (Lon), Sai In, Nam Paung, Naung Phaw and Nam Tune located in the southwestern of the township except Nam Tune Village Tract. These village tracts occupied largest maize cultivated area due to lower part of the township. The second largest maize cultivated area between 750 hectares (1,853.25 acres) -1,000 hectares (2,471 acres) were found in four village tracts and they were located in the southwestern part of the township. Maize cultivated area less than 250 hectares (617.75 acres) were found in 37 village tracts and most of these village tracts

lie in the middle and eastern part of the study area (Figure 7). Due to located in the higher part of the township, these village tracts possess small cultivated area.

Table (2) Change in Maize Cultivated Area and Production of Lashio Township

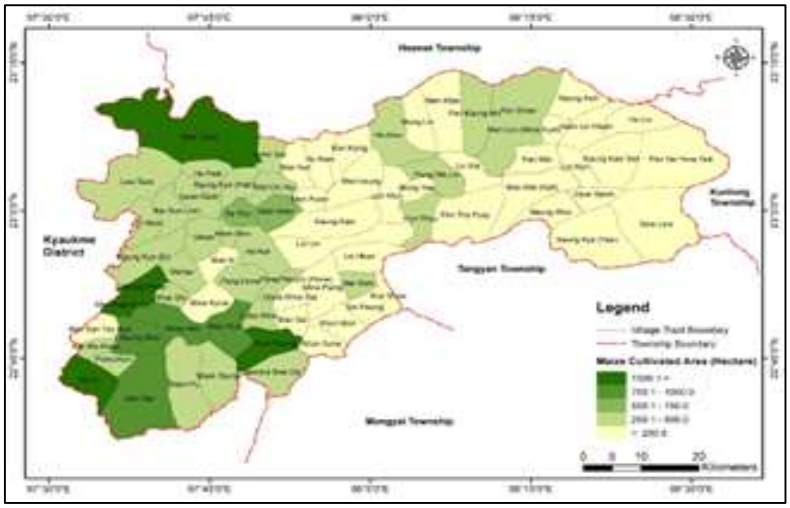
Year	Cultivated Area (Hectare)	Production (Ton)
2012-13	18,230.27	80,529.38
2013-14	18,667.75	84,049.54
2014-15	19,146.90	87,995.40
2015-16	19,799.27	90,943.66
2016-17	20,649.94	94,924.52
2017-18	21,418.86	97,959.75
2018-19	24,808.17	112,206.43
2019-20	27,804.13	123,384.18
2020-21	27,350.06	121,222.21
2021-22	27,252.93	120,918.50

Source: Department of Agriculture Land Management and Statistics, Lashio Township



Source: Based on Data From Department of Agriculture and Land Management Statistics, Lashio Township

Figure (6) Change in Maize Cultivated Area and Production, Lashio Township



Source: Based on Data from Department of Agriculture and Land Management Statistics, Lashio Township

Figure (7) Spatial Variation of Maize Cultivation by Village Tracts

Cost Benefit Analysis

Firstly, land preparation was made in the first week or second week of May to cultivate maize and it costs 50,000 kyats for per acre of land for once. After land preparation, fertilizer was applied to maize field and then maize seed were dropped at the same time. During seed dropping period, five labourers are required for per acre of land and labourer charges is 50,000 kyats. Price per bag of maize seed is 85,000 kyats and it is enough for per acre of land. At that time, only one kind of fertilizer was used. After three weeks later, weeding is made again and fertilizer is applied second time. At that time, the cultivaters mixed two kinds of fertilizer, Kabarlone and Pale (urea) used in maize cultivation. Price per bag (50 Kg) of pale fertilizer is about 110,000 Kyats.

After four months of cultivation, harvesting is made. Depending on the cultivators and cultivation season, harvesting time varies. Harvesting season is between the end of October and December and plucking maize is mostly done by female workers. Threshing is carried out by machine and it costs 90,000 kyats for per acre of land. Majority of farmers grow 808 maize variety due to better appearance. Yield per acre is 35 baskets (dry maize seed). Weigh per bag of maize seed is 33 viss. In 2022, price per viss of maize seed was about 1,000 Kyats.

Therefore, the cultivaters earned 1,155,000 kyats. Total cost for maize per acre of land was 610,000 kyats. Benefit for cultivators was 545,000 kyats per acre of maize land. Depending on the location, maize varieties, farmer's attitude, input use and capital investment, not only the production but also the expenditure and benefit differ from one place to another. Cost benefit analysis was calculated based on the price of 2022.

Table (3) SWOT analysis of Maize Cultivation in Lashio Township

Strengths	**Weaknesses**
- Favourable relief and climate - Less risk and durable after per month of plantation - Earn income within a short period - Can store for along time - High market demand	- Rely on foreign market - High investment - Market instability - Lack of advance technology - Lack of innovation
Opportunities	**Threats**
- Creation of MSME if the government can support advance technology - Job opportunities for native people - Gaining more profit and can stay at home	- Seed controlled by foreign countries especially China - Soil degradation caused by continuous cultivation and chemical fertilizer uses

Source: Field Observation, 2022

Conclusion

In general, physical factors especially relief, social factors and economic factors are the supporting factors for the growth of maize cultivation. As Lashio Township lie on mountainous area and possesses rolling topography that is free from water logged, the area is suitable for maize cultivation. Regarding with social factors, the township located in rural area, majority of the local people rely on agricultural activities.

In respect to economic factors, maize cultivators earn profit in a short period. The cultivaters sometimes encountered loses, unfortunately when demand is low and price fluctuation created by traders and entreprenures. Spatial distribution of maize cultivated area strongly related on geographical factors.

To boost maize cultivation as well as production, sufficient agricultural loans should be disbursed to farmers to buy necessary inputs, implements and machineries, etc. Besides, local farmers should be trained and educated to use improved and suitable farming method and suitable amount of inputs as well as high yield varieties.

In the future, maize requirements will be increased due to constantly increasing population. Increased use of chemical fertilizer for higher production will cause environmental problems especially soil, air and water pollution. Therefore, it is needed to do further agricultural researches on soil suitability, price and demand, risks on maize cultivation, etc for the purpose of reducing pace of environmental pollution.

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IMPACT OF OVERPASS BRIDGES ON LAND VALUES ALONG THE PYAY ROAD AND KABARAYE PAGODA ROAD IN YANGON CITY

Aye Su Han[1], Mya Moe Wai[2]

Abstract

Yangon City is situated in the southern part of Myanmar between Yangon, Bago and Hlaing rivers. It is the commercial hub of the country and the domestic and foreign companies have invested in it since 2005, generating job opportunity for the local youth. The population of the city has been increasing as well as its areal extent. The expansion of the city has oriented towards the north as it is separated by the river in the south. Although a greater number of the population are residing in the new satellite towns, whole sale markets such as Theingyi Market, Nyaungpinlay Market, Large shopping centres, wholesale markets and recreation centres are located in the downtown area in the south. Therefore, a greater number of the residents have to go to the downtown area for purchasing goods, recreation, worksites and per suit of education. As such the main roads linking satellite towns and downtown area have become more important. Pyay and Kabaraye Pagoda roads connect the downtown area and satellite towns. The problem of traffic congestion and traffic jam occurs every day along these main roads, especially at the traffic light posts. Under the supervision of YCDC, overpasses have been constructed at suitable places to reduce traffic jam and accident. This research paper studies the positive and negative impacts of overpass bridges on the local people. The change before and after the construction of the overpass bridges will be studied with GIS and satellite images along the areas concerned.

Keyword: Overpass bridges, land value.

Introduction

This research work will study the impact of the construction of overpass bridges on the land value of the areas under the bridges. The upgrading of transport infrastructure is necessary with the expansion of settlement wards. Investment on transport infrastructure supports economic development. Transport infrastructure is a main factor for economic development (Carleigh Ghent, 2018). Smooth transportation is indispensable for the improvement of economic, social and health conditions of the country. Among the 8 overpasses in Yangon, there are 5 overpasses located on the two main roads are under study. The changes of land-use type also changes the value of land. With high population density and job opportunity, traffic jam problem occurs everyday along the main roads of Yangon City. The main roads that connect from east to west are Bogyoke, Anawyahtar, Maha Bandoola, Merchant and Kannar roads. The roads that run from north to south are Pyay, Kabaraye, Insein, Bayintaung, Baho, Lower Kyemyindaing, Lower Mingaladon and Waizayantar roads. These roads join the downtown area and the new satellite towns. Among these main roads of Yangon City this research focuses on the study of the changes in the value of the land plots adjacent to Pyay and Kabaraye Pagoda Roads. In order to solve the problem, YCDC has upgraded the transport infrastructures with Intelligent Traffic System (ITS) and Traffic Impact Assessment (TIA) methods, by installing more traffic light posts and construction of overpass bridges. Overpass bridges were constructed at Hleden road junction in 2014, at Myanigone junction in 2014 and at Kokkine junction and 8 mile junction in 2015. Road infrastructure public service facilities, industrial structure and transportation affect the value of

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land (Lastina Fojor Prastion, 2022). This research paper will study the changes in land values and economic activities under the overpass bridges construction.

The construction of overpass bridges causes noise pollution around the area. Noise pollution is a major health problem these days. Millions of people are exposed to high noise pollution levels leading to health effects. Noise pollution causes sleep disorder, learning impairment, hypertension, ischemic heart disease and annoyance. Therefore, noise measurement plan is necessary when constructing overpass bridges. Noise occurs from car types and vehicle speed. Level of noise decreases with the increasing height of the bridge. If the population density is high, the use of car increases for education, health and economic activity, increasing the road of more transport infrastructures. So it is necessary to build overpass bridge at some points to reduce traffic jam. Infrastructure is one of the important aspects in national growth. If more capital is invested on road transport, economic sector will improve. Leading to regional economic growth, the land value will rise of the transportation is good. Transport infrastructures affect land values (Nicolous Tideman 2017). However, after the construction overpass bridge, one of the transport infrastructures, the land values around the bridge on decrease markedly and the economic activities are retarded. This research paper will find the means to reduce the fall of land values and negative impact of the overpass bridge.

Research Background

The accelerated pace of urbanization with rapid growth of population and diverse economic activities demands more land for the construction of transport infrastructure, residential and commercial buildings. This has led to the extension of urban area of Yangon City. Accordingly, the transport routes between the newly established towns and the downtown area have become more significant. This study essentially focuses on annual changes in land values and the causes of spatial variations in land use changes along Pyay Road and Kabaraye Pagoda Road. Although new towns were established within Yangon City, most townships did not have full urban infrastructural facilities. Most townships have to depend on the commercial hub of the city, located at the southern extreme. Under such situation, the main connection lines between the northern townships and business centre of the south have become more important and the land values of the wards adjacent to the main roads have risen sharply and changed drastically. Out of the total number of overpasses in Yangon, there are 5 overpasses along Pyay Road and Kabaraye Pagoda Road, which is why those 2 highways were chosen as the study area. Land value are considered as the key driving force behind regional development. The change in land-use type also changes the value of land. With high population density and job opportunity, traffic jam problem occurs everyday along the main roads of Yangon City. In order to solve the problem, YCDC has upgraded the transport infrastructures with Intelligent Traffic System (ITS) and Traffic Impact Assessment (TIA) methods, by installing more traffic light post and construction of overpass bridges. This paper will study the impact of overpass bridges on land values and economic activities along the Pyay and Kabaraye Pagoda Roads.

Aim

To examine the impact of overpass bridges on land values along Pyay and Kabaraye Pagoda Road in Yangon City area.

Study Area

Yangon City is located between north latitudes 16˚ 44″ and 17˚ 5″ and between east longitudes 96˚ 00″ and 96˚ 44″. The areal extent of Yangon City in 2023 is 896 square miles (2320.6 square kilometre) and the population is over 6 million. It is the only megacity in the country. It is bordered with Hmawbi Township on the north, Hlegu Township on the northeast, Thanlyin Township on the south, Twantay Township on southeast and Htantapin Township on the west. The Yangon river and Bago river flow in the southwest and Hlaing, Yangon, Bago rivers and Ngumoeyeik creek flow through the city. Yangon City constitutes 33 townships. The overpass bridges along Pyay road and Kabaraye Pagoda road in Yangon City will be studied in details. Pyay road starts from the Thayettaw traffic light post and ends at Khayepin junction. Kabaraye Pagoda road starts from the U Htaung Bo round and ends at 8-mile junction of Mayangone Township. There are 8 townships that adjacent with Pyay road and 3 overpasses Mayanigone overpass bridge in Sanchaung Township, Hledan overpass bridge in Kamaryut Township and 8-mile overpass bridge in Mayangone Township. Four townships are adjacent to Kabaraye Pagoda road. The road has two overpass bridge and these are Shwegondaing and Kokkine overpass bridges located in Bahan Township. This esearch focuses the causes of the fall of land value after the construction of overpass bridge

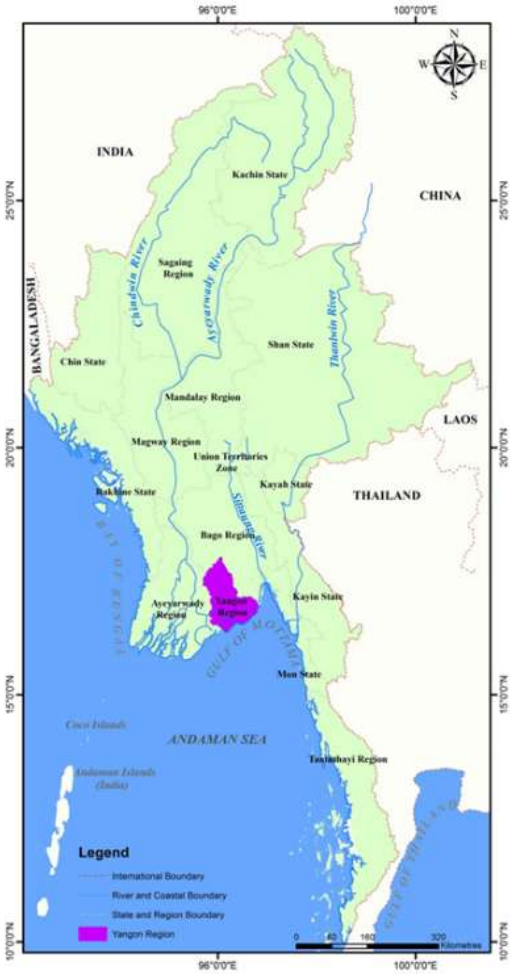

Figure 1. Location of Yangon Region in Myanmar

Source: Myanmar Survey Department

Figure 2. Location of Study Area in Yangon City

Source: Yangon City Development Committee (YCDC)

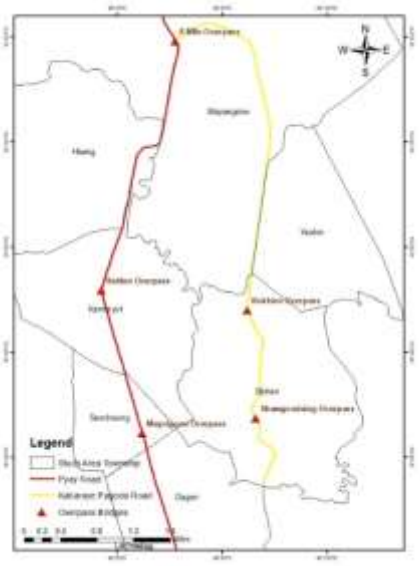

Figure 3. Location of Overpass Bridges in Study Area

Source: Yangon City Development Committee

Methodology

This research focuses the fall of land values and the changes of economic activities along Pyay road and Kabaraye Pagoda road due to the construction of overpass bridges. It will use both primary data and secondary data. Primary data include the responses of the real estate dealer and land owners, the local residents to know the price of land value change, the construction of overpass bridges and the entrepreneur to know the economic conditions before and after the construction of overpass bridges. The secondary data includes the recognition of Pyay and Kabaraye pagoda road the years, objectives and method used in the construction of the bridges, and the government fixed prices of the areas concerned from the Department of Human Settlement and Housing Development. The changes of land use before and after the construction of overpass bridges will be identified by field observations and satellite images. The land use changes of the approach road sections of the overpass and the road junctions that have no overpass bridges will be studied in overpassing before and after the construction of the bridges. It will also study how the changes of land use affect the value of land. 3D Analysis based on field observation, satellite images and building heights acquired from YCDC. Moreover, the controlling factor of the difference in the land values of the road sections with overpass and that with no overpass is the presence of overpass, identified by using partial correlation method.

Results and Findings

Prior to the construction of overpass bridges on Pyay road and Kabaraye Pagoda road, the areas at these road sections were festive with buyers and sellers of different levels and provision of services, comparatively more developed than other areas. The prices of land were highest along the two main roads. The prices of land value around Maynigone junction, Hledan junction and 8th mile junction were higher by 50000 kyats to 80000 kyats per square feet than other

sections of these roads. However, after the construction of overpass bridges the land prices of these areas have fallen by 50000 kyats to 100000 kyats per square feet.

At the junction point between Pyay road and Barkayar road had City Mart and Dagon Centre 1 and it was crowded with buyers and other economic activities prior to the construction of the overpass bridge and the land values around the junction point was much higher than other places. The construction of the bridges was complete in 2014. By that time there was no change in the land use patterm around the bridge. However, the land use of the area between Pyay road and Manawhari road has changed. Since August, 15, 1994 the height of building was limited not to construct any building higher than the skyline of the Shwedagon Pagoda in the area of People Park and supreme legislative body building which are parts of the approach road of the bridge. As no large and high rise condominium cannot be constructed there, the land prices of these areas were not much higher than other road junction areas.

After the construction of the Bridge, Pyay Garden and Jasmin Palace emerged between Barkayar road Hantharwady Round. The area around Hledan Overpass Bridge was a festive place. After the construction of the Bridge, several international universities were established around the area. However, there learning centres had to close down due to difficulty for car parking and being distant from the bus-stops. After the construction of Hledan and 8th mile overpass bridges, the area between the two overpass bridges have developed rapidly with the emerging Market Place, Lotteia Hotel, Kantharyar Hospital and Shwehinthar Condominium smooth transportation to Yangon International Airport. To improve the transportation service, the government installed more traffic-light posts by using Traffic Impact Assessment method.

Improvement in transportation can change the land use patterm. The change of land use patterm also changes the price of land. Before the construction of Kokkine overpass bridge, Traffic jam usually occurred around the junction of Kabaraye Pagoda road, Saya San road and Kokkine overpass bridge, Myanmar Plaza and Mellia Hotel emerged beside the approach road of the bridge due to smooth flow of transport vehicles. The staff of their Plaza and Hotel relocated in area near their worksites, increasing the land price of the nearby wards.

The objective of the construction of Shwegondaing overpass bridge was to reduce the problem of traffic jam. After the construction of the bridge, the transportation is smooth along the road, but the price of land decreases around the area and it has also affected the economic activities, due to having no space for car parking and other essential purposes and high level of noise pollution, causing negative impact to the local residents around the Bridge. Future construction of overpass bridge should consider meticulously mot to affect negative impact over the residents of the nearby area. When comparing the land price of the land where the flyover is located and the land price of the land without the overpass, the land price of the land located in the area where the flyover is not built is found to be around 50,000 to 100,000 more per 1sq ft compared to other intersections along the road before the construction of the overpass. When the overpass was built, the land price of those areas decreased significantly by 50,000 to 100,000 per 1 sq ft compared to the land price of the land at the intersection without the overpass. Therefore, the partial correlation method was used to control the changes in the land price according to the location along those main roads.

The land use type along Pyay and Kabaraye Pagoda Roads has changed during the study period. The change is manifested by vertical expansion or high-rise buildings due to more investment both by domestic and foreign entrepreneurs. However, the road sections around the

overpasses have no vertical expansion. The road sections with vertical expansion are presented, based on building height data, field observation and satellite images which are analyzed by 3D Analysis. As shown in Figure (4), there has been no change along the Myanigone overpass after the construction of the overpass. Figure 5 shows the road section between Hanthawady round and Myanigone overpass before the construction of the overpass. Figure 6 shows the vertical expansion along that section after the construction of overpass. Figure 7 shows the road section around Hledan overpass and figure 10 shows 8th mile overpass. Figure 9 is the road section between Hledan and 8th mile overpass which includes the wellknown frame of Inya Lake before the construction of overpasses. Figure 8 shows the emerging of high-rise buildings between the two overpasses after the construction of their overpasses, pretended by using 3D Analysis. Figure 11 shows the location of Kokkine overpass on Kabaraye Pagoda Road and Figure 12 presents the location of Shwegondaing overpass. Figure 13 and 14 are the road sections between No 1 Industry Road and Kanbae Road. Figure 13 shows the cindition of land use along Kabaraye Pagoda Road before the construction of overpass and figure 14 shows the change of land use with vertical expansion after the construction of overpasses.

In Pyay Road the relationship between Servant Leadership (SL) Life Satisfaction (LS) was explored using partial correlation while controlling for experience. There was a weak positive partial correlation between SL and LS, controlling r = .316, n = 76, P< .005 with increase in road section, significantly related to higher overpass. An inspection of the zero-order correlation (r= .841) suggested that controlling for overpass had very little effect on the strength of the relationship between these two variables. Table (1)

In Kabaraye Pagoda Raod the relationship between Servant Leadership (SL) Life Satisfaction (LS) was explored using partial correlation while controlling for experience. There was a moderate positive partial correlation between SL and LS, controlling r = .695, n = 34, P< .001 with increase in road section, significantly related to higher overpass. An inspection of the zero-order correlation (r= .726) suggested that controlling for overpass had very little effect on the strength of the relationship between these two variables. Table (2)

Table 1 Partial Correlation of Pyay Road

Control Variables			LandValue	RoadSection	Overpass
-none-[a]	LandValue	Correlation	1.000	.841	.876
		Significance (2-tailed)	.	.000	.000
		df	0	77	77
	RoadSection	Correlation	.841	1.000	.877
		Significance (2-tailed)	.000	.	.000
		df	77	0	77
	Overpass	Correlation	.876	.877	1.000
		Significance (2-tailed)	.000	.000	.
		df	77	77	0
Overpass	LandValue	Correlation	1.000	.316	
		Significance (2-tailed)	.	.005	

Control Variables			LandValue	RoadSection	Overpass
		df	0	76	
	RoadSection	Correlation	.316	1.000	
		Significance (2-tailed)	.005	.	
		df	76	0	

Source Field Observation

Table 2 Partial Correlation of Kabaraye Pagoda Road

Control Variables			RoadSection	LandValue	Overpass
-none-[a]	RoadSection	Correlation	1.000	.726	-.814
		Significance (2-tailed)	.	.000	.000
		df	0	35	35
	LandValue	Correlation	.726	1.000	-.453
		Significance (2-tailed)	.000	.	.005
		df	35	0	35
	Overpass	Correlation	-.814	-.453	1.000
		Significance (2-tailed)	.000	.005	.
		df	35	35	0
Overpass	RoadSection	Correlation	1.000	.690	
		Significance (2-tailed)	.	.000	
		df	0	34	
	LandValue	Correlation	.690	1.000	
		Significance (2-tailed)	.000	.	
		df	34	0	

Source Field Observation

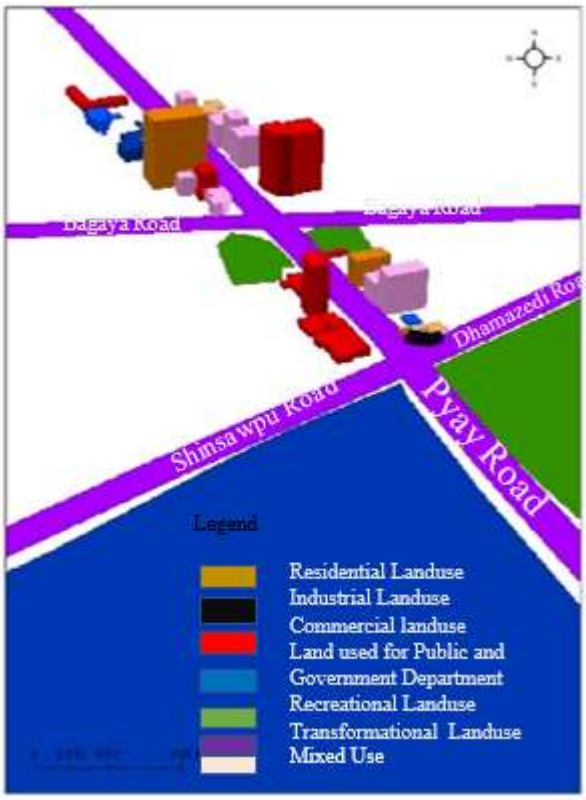

Figure 4. Myaynigone Overpass Bridge

Source: Yangon City Development Committee

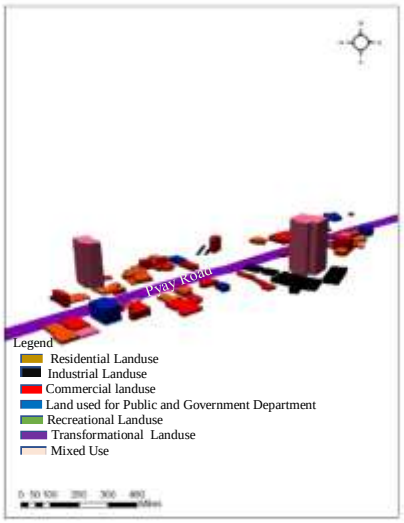

Figure 5. Prior to the Construction of the Overpass Bridge around Hantharwaddy Circle and Pyay Garden

Source: Yangon City Development Committee

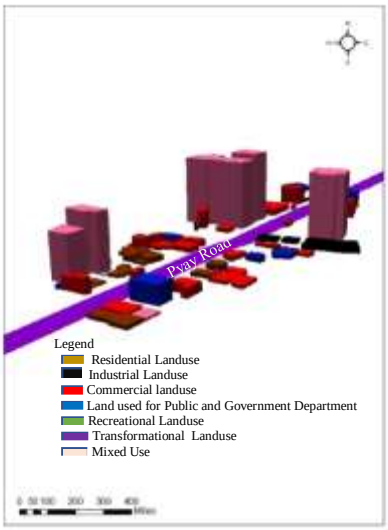

Figure 6. After the Construction of the Overpass Bridge Around Hantharwaddy Circle and Pyay Garden

Source: Yangon City Development Committee

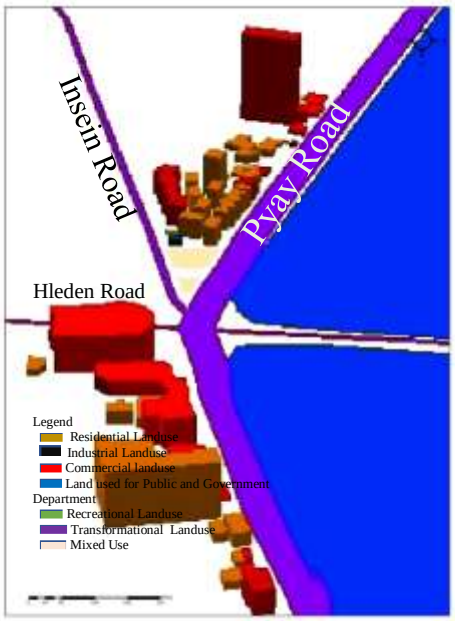

Figure 7. Hleden Overpass Bridge

Source: Yangon City Development Committee

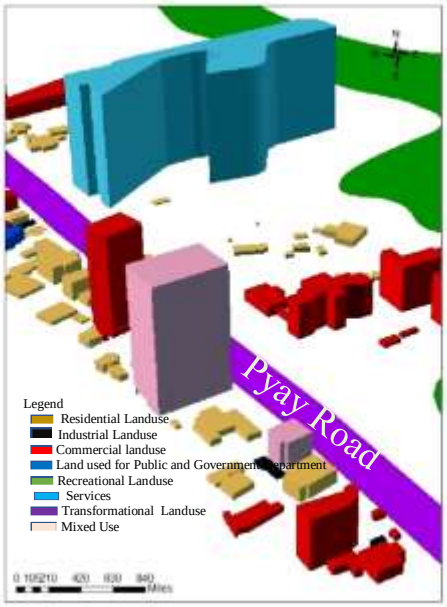

Figure 8 After the Construction of the Overpass Bridge around 7th mile area

Source: Yangon City Development Committee

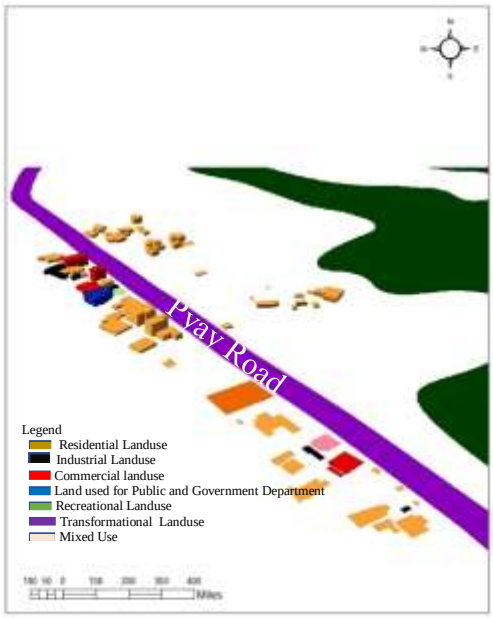

Figure 9. Prior to the Construction of Overpass Bridge around 7th mile area

Source: Yangon City Development Committee

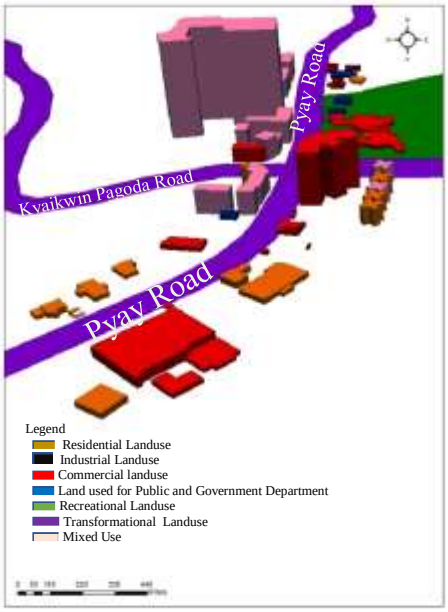

Figure 10. 8th mile Overpass Bridge

Source: Yangon City Development Committee

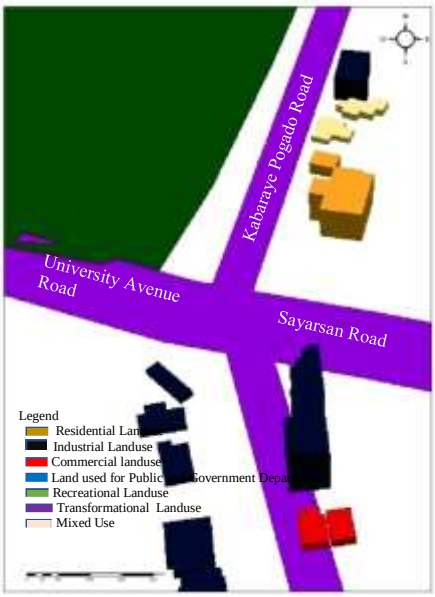

Figure 11. Kokkine Overpass Bridge

Source: Yangon City Development Committee

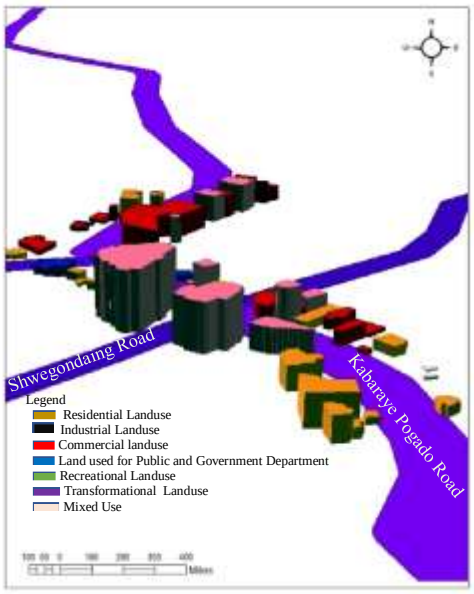

Figure 12. Shwegondaing Overpass Bridge

Source: Yangon City Development Committee

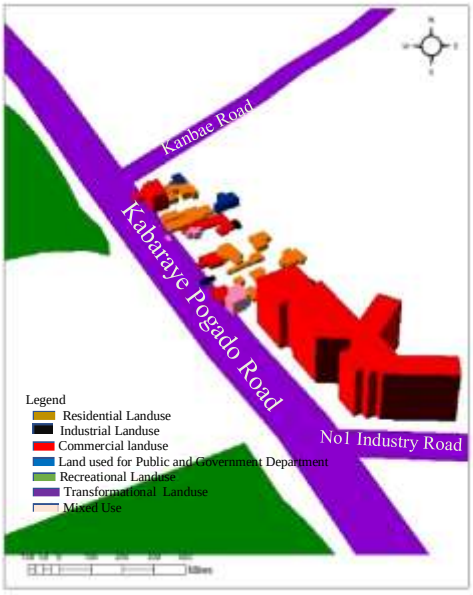

Figure13. Prior to the Construction of Overpass Bridge around Myanmar Plaza

Source: Yangon City Development Committee

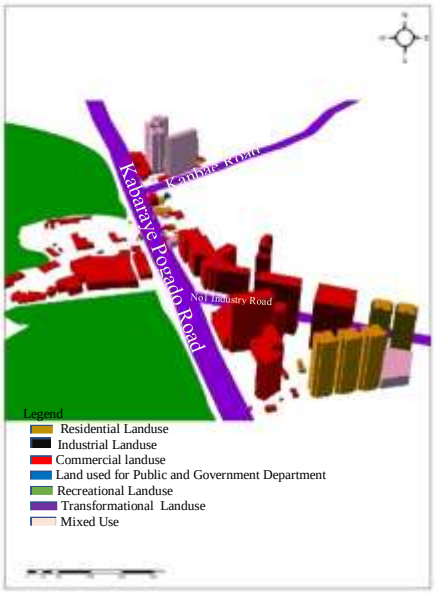

Figure14. After the Construction of Overpass Bridge around Myanmar Plaza

Source: Yangon City Development Committee

Conclusion

In constructing overpass bridges, it affects the price of nearby land and economic activities because of having no vacant space between the bridge and residential area. The road junctions along Pyay road and Kabaraye Pagoda road were festive and land value was much higher before the construction of overpass bridges. After the construction of bridge, the road infrastructures have improved and cars can move smoothly and it supports the development of economic activities. However, it causes negative impact on the price of land and economic activities in areas close to the bridge having no space for car parking, obstruction of visibility and being distant from the bus-stops. The land-use pattern of the area close to the bridges has not changed

Noise pollution is felt more at the upper stories than the ground floor. Noise pollution is caused by different building materials and different heights of overpass. It is learned that if the height of the overpass increases the level of noise decreases. Therefore, overpass bridge should be constructed in accord with the noise measurement plan. Then only will there be no negative impact of noise on the residents living close to the bridge and on the social and economic activities and on the value of the land. The installation of traffic lights has made traffic more convenient, and businesses have increased on that stretch of road. As the population in Yangon, the business capital of Myanmar, has increased, the city area has also expanded to provide housing, which is what people want to live in. Therefore, the highways that connect the satellite town and the downtown area have also become important. Overpasses have been built to facilitate traffic on those highways and to solve traffic problems. However, air pollution and noise pollution measurement plans should be systematically measured. However, due to the fact that there is no systematic consideration of the positive and negative impacts that will be caused by the overpasses, it has been observed that there are negative effects on business activities and land prices under the overpasses. However, due to the systematic use of ITS and TIA technology in the installation of traffic lights as transport infrastructure, transportation will become easy and convenient, and the commercial activities of the plots of land in that section will change, and the land use pattern will change, and the land price of those plots will increase from 30,000 to 50,000 per 1 sq ft. Therefore, in supporting transport infrastructure, which is essential for urban development, the positive and negative impacts that may affect the interests of the local people should be carefully considered. The aim of construction of overpasses along the main roads in Yangon City is to enhance smooth transportation and to reduce traffic congestion problem. Although overpasses reduce traffic jam the area around the road junctions that have overpass have retarded the economic development momentum and decreased the value of land. The road sections that have no overpasses as the area between the overpasses have developed rapidly with more investment leading to the emergence of Shopping Mall, Condominiums, Hotels and Hospitals. As a result, these road sections encounter the problem of traffic congestion. This research work mainly presents the effects of overpasses which reduces traffic conjestion around the overpasses, but not along the approach road sections of the overpasses.

As mentioned earlier, the presence of overpasses increases the noise pollution level to the residents living around the areas, and the luck of space for car parking is also a problem. Therefore, the authority concerned should take consideration to reduce the negative impact when constructing overpasses.

Acknowledgements

I am very much grateful to Dr Nay Win Oo, Rector, East Yangon University, for his systematic guidance and valuable suggestions in this research. I also thanks to Dr. Zin Nwe Myint, Professor and Head, Department of Geography, Yangon University, provided to the research by her suggestions and advices. I would like to express my great indebtedness to Dr. Nyein Nyein Win, Professor and Head, Department of Geography, East Yangon University, for her permission to carry out this field training and research work.Many special thanks to Yangon City Development Committee (YCDC) for providing in data collecting work.

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မဟာရန်ကုန်မြို့ပြဖွံ့ဖြိုးမှု မဟာဗျူဟာစီမံကိန်း၊ YCDC ၂၀၁၃။

ရန်ကုန်တိုင်းဒေသကြီး ဖွံ့ဖြိုးတိုးတက်မှု မဟာဗျူဟာစီမံကိန်း၊ ရန်ကုန်တိုင်းဒေသကြီးအစိုးရအဖွဲ့၊ ၂၀၁၉။

IMPACT OF RAINFALL VARIABILITY ON PADDY CULTIVATION AND PRODUCTION IN HLEGU TOWNSHIP, YANGON REGION, MYANMAR

Tin Tin Mar[1]

Abstract

According to the 2014 census, the total population of Myanmar is (51,486,253) persons of which about 70 percent are rural dwellers, Myanmar is agro-based country. Paddy is the main crop in Myanmar. About 80 percent population of Hlegu Township are engaged in agricultural. Paddy is the main crop cultivated in rural areas of Hlegu Township. Seasonal variability of rainfall effects on paddy cultivation and local farmers' livelihood are study area of Hlegu Township. Rainfall Variability results in low productivity. As a consequence, it is important to know the socio-economic characteristic of paddy farmers and their linkage with agricultural productivity as well as farmers' livelihood. The primary data were collected through focus group discussion and semi-structured questionnaire surveys to understand farmers' perceptions of Climate Change and its impacts. The research paper was presented by using quantitative and qualitative methods. The results obtained from this research project is significant in planning sustainable agriculture and rural, regional development of the study area.

Keywords: Rainfall, Seasonal variability, paddy production, local farmers' livelihood, rural areas

Introduction

The UN Intergovernmental Panel on Climate Change (IPCC) stated significant scientific proofs in its 4th report on Climate Change (2007) and there have become clearly recognized worldwide. Literature on the economics of Climate Change suggests that global crop production may be boosted slightly by global warming in the short term but it will ultimately turn negative over the longer term.

Myanmar mainly produce the most common crops such as rice, pulses and beans, and maize. Rice is the main staple food crop, cultivating nearly 50% of Myanmar's agricultural land (NAPA, 2012). The majority of the farmers are small-scale landholders with an average lot size of 2.27 ha (5.60 acres). Small-scale farmers face a series of challenges, to which Climate Change will be risk multiplier. Agricultural production directly depends on weather and Climate Change. (Seinn Seinn,2015)

At the national level, Myanmar produces a food surplus. However, as a result of geographical differences there are many areas or villages suffering from inadequate food supplies. Agriculture and crop production in Myanmar are strongly affected by rainfall as crop cultivation is mostly rain-fed (NAPA,2012).

Agriculture plays a vital role in economy of Myanmar and contributes around (20.9%) of the total GDP and is a source of employment for rural population of the country (European Chamber of Commerce in Myanmar, 2019). The Climate Change largely affects Myanmar agriculture and have become a challenge for future agricultural production in Myanmar (Agriculture Guide, 2020) due to the reason that Myanmar is one of the top ten nations prone to Climate Change and extreme events like drought. Frequent extreme weather events have caused a decrease in productivity of agriculture and thereby leading to decrease in GDP and household income as well as a decrease in food security (Myanmar National Census Report, 2014). Tin Hlaing (2004), revealed that the country's agricultural sector is still characterized by: (a)

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consisting of small farmers,(b) deteriorating soils, water and forest resources, (c) diverse farming system, (d) decreasing farmlands due to non-agricultural uses, (e) limited farm capital, (f) limited research and extension programme, (g) limited agricultural support services such as credit, marketing, and post-harvest facilities, (h) low yield, (i) low technology inadequate farm inputs; eg. Fertilizer, pesticides etc., (j) lack of agricultural diversification.

In Hlegu Township, rainfall variability or unreliable (untimely) rainfall is one of the major factors affecting agriculture and crop cultivation. The farmers encounter crop damage due to Climate Change and heavy rain in the harvest time. Rainfall variability or untimely rainfall brings about low paddy production in the study area and accordingly this situation will lead to low quality of paddy, low paddy price, less income, less profit and/or no profit to the farmers and their families. This will eventually impact the socio-economic life of peasants' families so that they are unable to get out of the vicious circle of poverty. All these conditions encourage research project on the relationship between Climate Change and rainfall variability or untimely rainfall and paddy cultivation in Hlegu Township of Yangon Region in Myanmar.

Research Question

How do rainfall variability effect on the paddy cultivation and production of the study area?

Aim and Objectives

The main aim is to focus on the relationship among rainfall variability, paddy cultivation, production and socio-economic life of the farmers. The objectives are to assess the impact of rainfall variability on paddy cultivation and production, to discover the influencing factors for paddy production in Hlegu Township and to examine the linkage of between rainfall variability, paddy production and local farmer's livelihood.

Data and Methods

This study is in-depth study to determine the impact of rainfall variability or untimely rainfall on paddy cultivation and local farmers livelihood in Hlegu Township, Yangon Region, Myanmar. This study mostly relies on primary data that will be collected from a field survey on paddy farmers in the selected villages. Secondary data are taken from the various departments concerned: agriculture data are obtained from the Department of Agriculture, Hlegu Town; irrigated acres gathered from the Department of Irrigation, Hlegu Town; meteorological variables received from the Kabaraye Weather Station, Yangon City. The reason for taking the Thirty -year (1994-2023) period is that the farmers of the study area have witnessed five consecutive years for the adverse effect of Climate Change. The Climate Change causes heavy rain once in 5-year period, particularly by the end of October, November and early December, the harvest time of paddy in the study area, causing problem to the farmer. Untimely rain causes difficulties in harvest of ripening paddy in the field.

In Hlegu Township, there are 52 village tracts in which 20 village tracts are selected. Questionnaires are distributed to 10 households in each village tract for the purpose of getting the primary data. To get a thorough understanding on paddy cultivation, open interviews and focus group discussion were conducted with farmers who have cultivated paddy for more than 20 years and authorities of the village tract as well as authorities of the Department of Agriculture. This study is an in-depth study to determine the impact of rainfall variability or

untimely rainfall on paddy cultivation. The data obtained are analyzed by using tabular form, the quantitative and qualitative methods are based on the survey data.

Results and Findings

General Background of the Hlegu Township

Hlegu Township, is located in the Hlegu District, Yangon Region. It is composed of 5 wards of urban area and 52 village tracts including 167 villages in the rural area. The main of township area is 577.73 sq km. The total population of Hlegu Township is 268321 persons in 2022. The relief of the northern part of the township is characterized by mountain sparse and low hill of Bago Yoma and the area under paddy cultivation is verry limited. The main streams of the study area are Ngamoeyeik and Bala creeks. Paddy is cultivated extensively and intensively grown in the low plain of the southern part in Hlegu Township. The study area experiences Tropical Monsoon (Am), according to Koppen's Climatic Classification. The soils of Hlegu Township are classified as 10 types in which alluvial soils and alluvial meadow soils are most suitable for paddy cultivation in Hlegu Township.

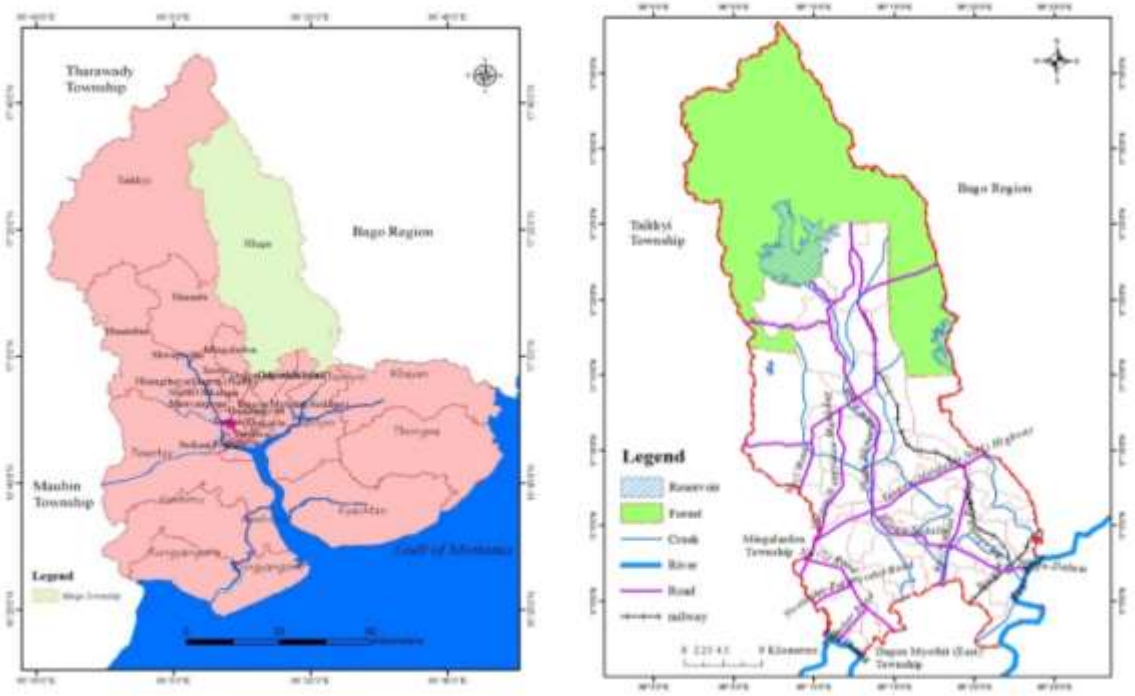

Figure 1. Hlegu Township in Yangon Region, Village Tracts in Hlegu Township

Source: Myanmar Survey Department, Naypyitaw

Climatic Conditions of the Hlegu Township

Although the amount of daily rainfall is recorded within the study area, other climatic data is accquire from Hmawbi which is 20 km away from Hlegu. The climatic regime of the study area is largely controlled by the seasonal shifting of monsoon wind and partly by location and low relief. The temperature and rainfall distribution of Hlegu Township has been analyzed by taking 30 year from Hmawbi Weather Station.

Table 1. Temperature and Rainfall of Hlegu Township (1994-2023)

Temp/Rainfall Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg/total Rainfall
Maximum Temperature(°C)	31	35	37	38	34	30	29	29	30	31	30	31	32.08
Mean Temperature(°C)	24	26	28	31	29	27	27	27	27	27	26	24	26.92
Minimum Temperature(°C)	16	17	20	23	25	24	24	24	24	23	21	17	21.50
Rainfall(mm)	7	5	15	36	283	503	564	502	381	174	51	8	2529

Source: Hmawbi Station, Department of Meteorology and Hydrology, Yangon

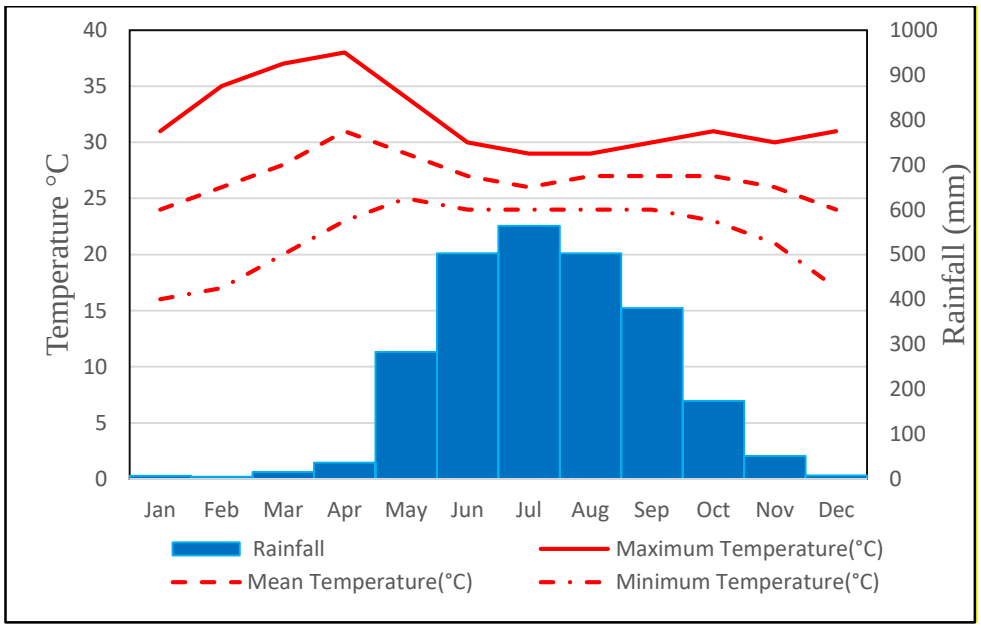

Figure 2. Climograph of Hlegu Township

The average annual mean temperature is 27°C (80.6°F). The mean monthly temperature is the highest temperature in April with 38.00°C (100.4°F) and lowest in January with 16°C (60.8°F). Therefore, the annual range of temperature is 22°C (71.6°F) and the low range of temperature is due to being fairly close to the sea. Temperature is usually high in the daytimes of hot dry period, often reach 40°C (104°F). The monthly mean maximum temperature is the highest temperature in April with 38°C (100.4°F) and lowest temperature in July with 29°C (84.2°F) due to thick cloud covers.

The average annual rain fall is 2529 mm (99.88 inches) during the thirty years period, received mostly in the period from May to October from the southwest summer rain-bearing monsoon wind. Climate Change is manifested by unseasonal rains, heavy rain in the late rainy season, early on late on- set of southwest monsoons, early on late retreat of monsoon and heavy rain in the harvest time of paddy, resulting in the low paddy production that affects the socioeconomic life of the farmer. The climate change causes heavy rain once in 5-year period,

particularly by the end of October, November and early December, the harvest time of paddy in the study area, causing problem to the farmer. Examining the rainfall of the graph and table, there is more rain in the months of September, October and November. More rain in the months of October and November causes farmers to face difficulties during the harvest time and reduced paddy production. Rainfall variability, untimely rainfall, less rain, heavy rain and floods are the effects of Climate Change.

Rainfall Distribution Patterns in Hlegu Township during 30 Years

Table 2. Total Rainfall of 30 Years (1994-2023) in Hlegu Township

Year	Total Rainfall(mm)	Year	Total Rainfall(mm)	Year	Total Rainfall(mm)
1994	2722	2004	2900	2014	2390
1995	2452	2005	2341	2015	2272
1996	2744	2006	2250	2016	2395
1997	2696	2007	3011	2017	2642
1998	2004	2008	2668	2018	2583
1999	2939	2009	2410	2019	2333
2000	2348	2010	1892	2020	2017
2001	2526	2011	2680	2021	2434
2002	2837	2012	2738	2022	2249
2003	2314	2013	2997	2023	2624

Source: Department of Meteorology and Hydrology, Yangon

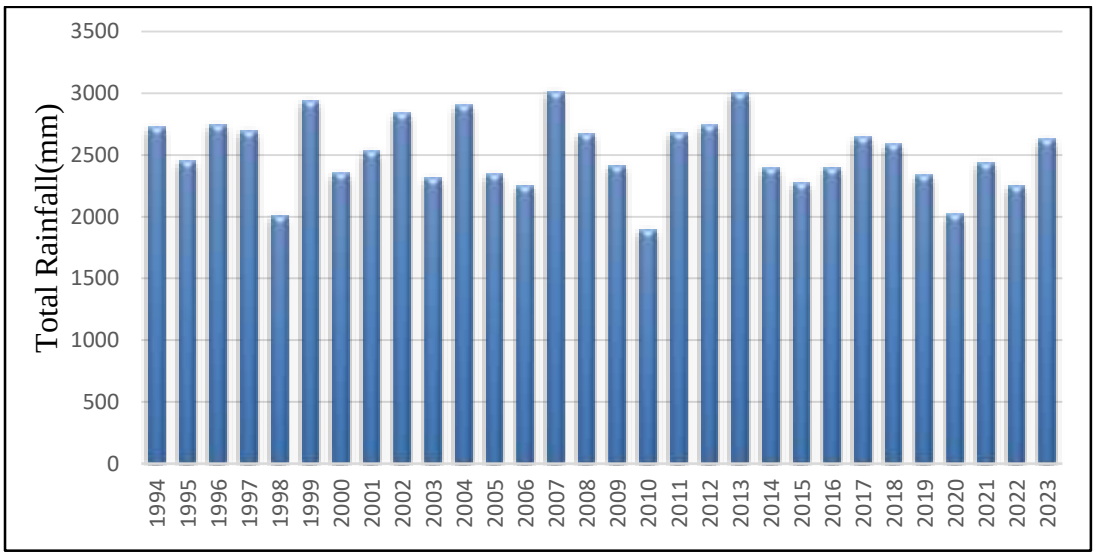

Figure 3. Total Rainfall of 30 Years (1994-2023) in Hlegu Township

Source: Department of Meteorology and Hydrology, Yangon

Figure 3 and table 2 show the rainfall distribution pattern that varies years by years from 1994 to 2023.During the 30-year period, the lowest total rainfall was 1892 mm in 2010. In 1998 with a total rainfall is 2004 mm. In 2020, the total rainfall is 2017 mm with due to reduce of rain, there will be no irrigation water to grow summer paddy in Hlegu Township. The highest rainfall is 3011 mm in 2007. After that, the rainfall decreased until in 2012 and rises again in 2013 with the total rainfall of 2997 mm. After 2013, rainfall decreased and in 2023, 2624 mm rainfall was received in Hlegu Township. In Hlegu Township, rainfall variability or untimely rainfall is one of the major factors affecting agriculture and crop cultivation. In the past 30-year period from 1994 to 2023, the average annual rainfall was 2532mm. In that period the rain began from February and ended in December with relatively high amount of monthly rainfall. The rainfall pattern in the 30-year period from 1994 to 2023 has changed. Although the on-set of monsoon was late and the retreat was early in the past decades, the amount of rainfall after the retreat of monsoon was fairly high.

Paddy Cultivation and Production in Hlegu Township

Table 3. Cultivated, Harvested and Production of Paddy, Hlegu Township

Year	Cultivated (acre)	Harvested (acre)	Yield per acre (basket)	Total production (basket)
2012-2013	89061	88860	68.75	6109125
2013-2014	89029	89029	68.83	6127899
2014-2015	89056	89056	68.84	6130616
2015-2016	88831	88831	68.13	6052056
2016-2017	83625	83625	64.71	5411101
2017-2018	83629	83324	63.88	5322418
2018-2019	83257	83055	64.3	5340639
2019-2020	81918	81329	62.93	5118034
2020-2021	81991	81991	66.56	5457714
2021-2022	82123	82123	66.79	5485754

Source: Department of Agriculture, Hlegu Township

According to the table 3, figure 4 and 5, Paddy cultivated area and yield per unit area slightly decreased in Hlegu Township. According to interviews and field observation, climatic variability especially rainfall variability such as untimely rain and irregular rain affect paddy productivity. After the adoption of market-oriented economic policy, a number of factories were established within and around the study area. Some small holder's family members left the farm and engaged in the factories as employees. As the land price was high, they sold off their lands.

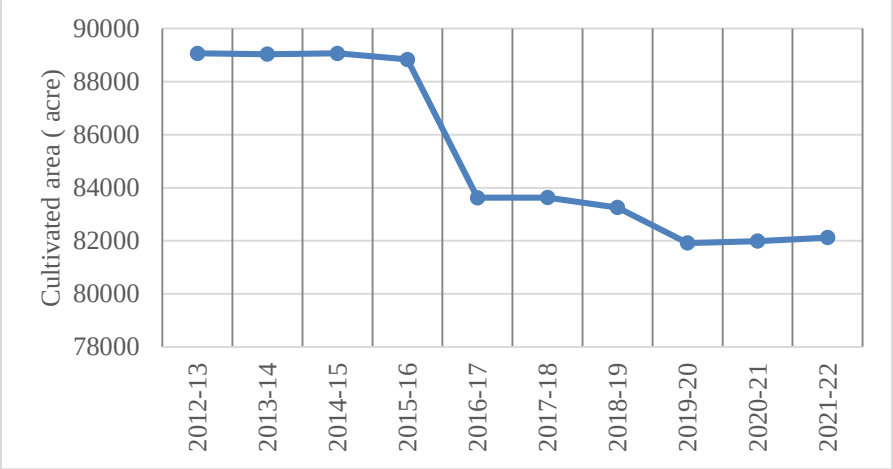

Figure 4. Paddy Cultivated Area of Hlegu Township (2012-2022)

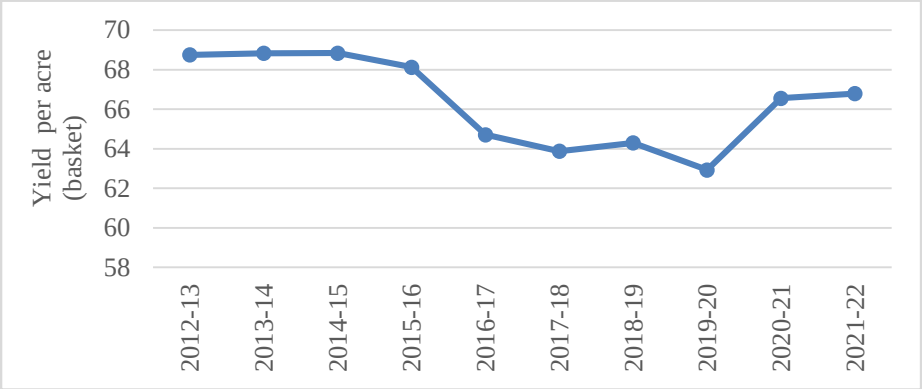

Figure 5. Yield of Paddy in Hlegu Township (2012-2022)

Source: Based on table 3. 2)

In Hlegu Township, about 80 percent of the farmers are small holders of paddy land. Rainfall pattern affects the yield of paddy, but the yield mostly depends on inputs: rainfall, Chemical fertilizer, Pesticide, quality of paddy seeds and the soils are the determining factors of the yield of paddy. In the past 10 years, the yield per acre of paddy was between 30 and 40 baskets. In recent times, the choice of paddy varieties that conform with the changing rainfall pattern has recently resulted in the increase of yield to 50 and 69 baskets per acre, see the table 3.

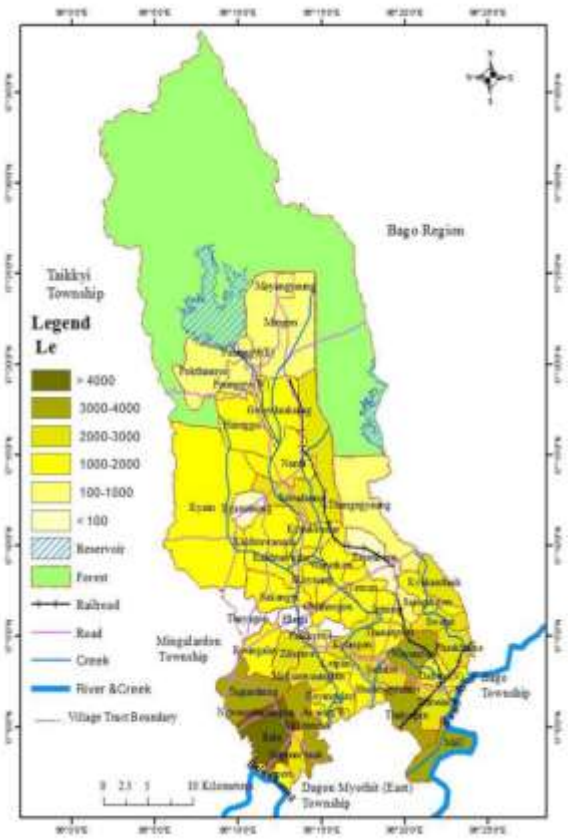

Figure 6. Distribution of Le Land in Hlegu Township (2023)

Cultivation Methods in Hlegu Township

In the past, most farmers practiced transplanting method due to easy availability of workers, low cost, comparatively high yield, and high weather resistance. The recruitment of workers has recently been difficult and most farmers practiced broadcasting method which needs lower amount of seeds, low labour for cultivation and hence low cost. A few farmers have been practicing seeding method, but it represents only 3 percent of farmers.

In transplanting method, paddy seedlings are pulled out when they are quite mature for transplanting and thus the plants can resist the negative effect of extreme weather conditions. As 4 to 5 seedlings are planted at a spot, they can stand upright and resist wind whipping. The plants can bear more seeds increasing the yield. Broadcasting method cannot resist extreme weather conditions and the yield is comparatively low, but the cost is much low, only half the cost of transplanting. At present, most farmers practice broadcasting method due to scarcity of labour.

Plate 1. Broadcasting plot

Plate 2. Transplanting plot

The Changes of Paddy Varieties

Table 4. Varieties Grown, 2010 and 2023 in Hlegu Township

Paddy Varieties (2010)	Paddy Age	Paddy Varieties 2023	Paddy Age
Taungpyan,	150	Taungpyan	150
Yarkyaw,	135	Pawsan	150
Shwewartun,	120	Thaiglutinus rice	130
Manawthuka	120	Byauthtun	120
Pawsan	150	Thaihnankauk	120
Ngasein	130	90 days	90
Mawbisan	125	Sinthuka	120

Source: Field Observation and Questionnaire

People all over the world are witnessing the negative effect of Climate Change due to global warming. The farmers have to face the impact of rainfall variability. The farmers change the variety of paddy to cope with the changing rainfall pattern. In the 10 years, most farmers of the study area cultivated long-live variety which matured in 150 days. Besides, they also cultivate Shwewarhtun, Manawthukha, Hmawbisan and Ngasein group which matured in 120 days. With the changing pattern of rainfall, the farmers choose to grow Thai Sticky rice, Byauthtun and Thaihnankyauk varieties.

The Causes of Low Paddy Production

There are four main causes of low yield in paddy production. Based on the responses to questionnaires, the yield decrease is 31 percent if it rains in pollination period, 50 percent due to unavailability of sufficient fertilizer, 10 percent because of the heavy rain at the harvest time and 9 percent being unable to harvest in time. These above- mentioned percentages indicate that insufficient fertilizer and rainfall in pollination period on paddy itself is high nutrient absorber. Since 1995 the main cause, both monsoon paddy and summer paddy are grown on the same

fields, thus rapidly exhausting the soil fertility. In order to boost the yield, it needs more fertilizer.

If the chemical fertilizer is applied in the rainy season; it drains out of the fields with floodwater. So, the farmers have to adjust the use of chemical fertilizer. Usually, they apply only a small amount in the cultivation of monsoon paddy, reducing the yield per unit area. More fertilizers are used in growing summer paddy. Small holder usually witnesses small amount of profit and even losses due to small land size, high cost of cultivation, lack of sufficient capital, low inputs and the negative effect of rainfall variability. Therefore, their socio-economic status is rather low.

Plate 3. Pollinating

Plate 4. Insufficient Fertilizer

Plate 5. Rain during the Harvesting period

Plate 6. Paddy cannot be Harvested in time

Focus on Group Discussion of Case Studies in Hlegu Township

The results of group discussion with the farmers of Thanutpyin village Tract, for detailed study Thanutpyin village tract is chosen which usually grow both monsoon (rainy season) paddy and summer paddy. The village has 809 households and 243 farmers with a total population is 3725 persons. The sown area of monsoon was 1953 acres (790.37 hectare) in 2019 and that it summer paddy 1953 acres (790.37 hectare). The on-set of monsoon usually being in the third week of May, but it has been burry uncertain in the recent year. If it set in early, the

summer paddy would be somewhat destroyed. The late retreat of monsoon and heavy unseasonal rain in the post- monsoon period would, to some extent, destroy the monsoon paddy. Unseasonal rains have been more destructive to the paddy cultivation. In the cultivation of monsoon paddy, the on-set of monsoons is important. If the on-set is late, preparation of nursery bed is late. So only short-lived varieties are suitable to grow. The early retreat of monsoon results in insufficient water in the paddy fields. By experience, most farmers learn how to grow monsoon paddy suitable to the changing rainfall pattern.

In the first phase of climate change, most farmers could not use agriculture machines. In recent years, they have used large machine in ploughing the land and short- lived varieties in growing and combined harvester in harvesting, trashing and winnowing. With the rising prices of nearly all useful things, the farmers have to spend more capital for paddy production. Although farmers with large area of land have their own capital and agriculture machine, the small holders have to hire such machine increasing the cost of production. As a result, the income as profit gained from the land is low for small holders leading to low socioeconomic status. Some small holders have already sold out their lands and some are waiting for the rise of the price of land.

Plate 7. Focus Group Discussion in Thanutpin Village Tract

Table 5. Changes in Precipitation, Agricultural Inputs and Practices between 2000 and 2022

Sir No.	Activities	2000-2005	2006-2010	2011-2015	2016-2022
1	Precipitation				
2	Fertilizer				
3	Rain-Fed	0 baskets	40 baskets	50 baskets	60 baskets
4	Summer paddy	75 baskets	80 baskets	85 baskets	85 baskets
5	Temperature				
6	Irrigation water	50 %	100 %	100%	100%
7	Pesticides				
8	Garment Worker	3 %	13%	30 %	60 %

Source: Based on Focus Group Discussion

For a comprehensive understanding of the changes based on group discussion, the 2000-2022 period was divided into 4 sub- period. In the 2000-2015 period the amounts of annual rainfall were high, until 2010. In the subsequent years the amount decreased, particularly in 2013, 2014 and 2015. The amount of rainfall was also low in 2016 and 2022, according to discussion and the available data.

The use of chemical fertilizer was one bag per acre during the period from 2000 to 2005. One and a half bags of chemical fertilizer were applied in the 2006-2010 period and 2 to 3 bags from 2011 to 2022. Repeated cultivation of paddy exhausted the soil fertility. In cultivating monsoon paddy only a few amounts of chemical fertilizer were used, as it would be lost somewhat with the floodwater. The farmers used more fertilizers in growing summer paddy, usually 2 to 3 bags per acre. The yield of monsoon paddy per acre was 60 baskets for short-lived varieties and 40 baskets for long-lived varieties.

The yield of summer paddy was 80 to 100 baskets per acre for short-lived varieties. In the 2000-2005 period, most rural people earned their living only on the farming. There were 15 people engaged in the factories,30 in the 2006- 2010 period and 60 in the 2016-2022 period. At present most rural inhabitants know the impact of Climate Change, the rise in temperatures particularly after 2010.

Farmer's Perception

According to Interview and Focus Group Discussion, unseasonal rain due to Climate Change, and heavy rain in the post-monsoon period caused difficulties to the farmers. They started to notice the change in climatic condition since ago. Such rainfall variability occurred in every 5- year time destroying the natured paddy. Therefore, they chose to grow the variety that could resist the impact of Climate Change. In the past, only a few farmers used machines. As the farmers could not harvest in time with manual labour, more farmers came to use agriculture machines in the subsequent years. To overcome the effect of Climate Change, the farmers practice suitable farming techniques and grow new short-lived varieties suitable to the changing conditions. They also come to share suitable varieties among them, decreasing the damage caused by rainfall variability.

Currently the farmers grow paddy varieties which can reduce the impact of extreme climatic conditions. Thai sticky rice and Byauthtun are such varieties. These varieties have hard stalk. The farmers also want to learn new scientific farming techniques. Seeding method (SRL) has to use only a small amount of paddy seeds. But only 3 percent of the farmers in Hlegu Township have such tool. In this period of Climate Change, most farmers hope to get better seeds that can resist the extreme climate with high yield potential, sufficient loan, sufficient support of fertilizers, purchase the paddy produced with fair price, hiring the necessary agriculture machines and seeding tool. These are the responses of farmers during field surveys.

Conclusion and Suggestions

Climate is the most important factor in crop cultivation. In Hlegu Township, about 80 percent of the farmers are small holders of paddy land. In Hlegu Township, paddy is a major crop and both monsoon paddy and summer paddy are cultivated. In order to reduce the negative

impact of rainfall variability, the followings measures should be taken. According to field surveys, the farmers and the personnel of the department, concerned should follow the following suggestions; the farmers should listen to the daily climatic news broadcast; the grower should choose and cultivate the paddy species that can resist the impact of extreme climatic conditions and that yield high amount of paddy, based on climatic conditions; the Department of Agriculture should help when to start growing to become 'Climate Smart Agriculturalists", in order to get paddy species competent to the changing climate; the Department of Agriculture should conduct research and the resultant species should be distributed to all the paddy growers. As more farmers grow both monsoon paddy and summer paddy, the soil fertility of le land has exhausted. The soils tests should be carried out to know exactly the deficiency of certain minerals in the soils to supply proper chemical fertilizer.

The development of agriculture sector will heighten the volume of gross domestic product (GDP) which is one of the basic criteria for evaluating a country's level of development. Rainfall variability due to Climate Change, heavy unseasonal rain and rainfall in the harvesting time have led to low yield of paddy and rural poverty. The low yield was also on account of low inputs and low price of paddy at the time of harvest. Although small holders had to face such problems, the farmers with large paddy land can somehow resist the changing conditions. They can use agricultural machines, they have sufficient capital for purchasing necessary inputs, they can apply sufficient chemical fertilizers, pesticide and used killer and they can store the paddy produced to be sold when the price is high.

Most farmers of the study area own small paddy land. Likewise, the average land holding of Myanmar is only 2.2 ha. So, the development of paddy production depends on the small holders. By providing sufficient loans to farmers with low interest rate, selling agriculture machine by installment and by fixing on controlling the price of paddy, and upgrading the roads in the rural remote areas, the small holders can increase the yield and earn more income from paddy production. If the socioeconomic status of the rural farmers has become somewhat higher, the study area as well as rural area of other parts of the country will witness speedy and higher development momentum. As such, this research paper may be somehow helpful in implementing the rural development projects being carried out by the government. This research paper is aimed to discover advance technology, quality of seeds and practicable solutions to mitigate the negative impacts of Climate Change on farmers' lives. The findings obtained from this research project will be of significance in planning sustainable agriculture and rural, regional development of the country.

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ကျော်မြင့်၊(၁၉၉၈)၊ မြန်မာနိုင်ငံ၏ဆန်စပါး တိုးတက်စိုက်ပျိုးထုတ်လုပ်ရေးအတွက် ခေတ်ကာလအလိုက် ကြိုးပမ်းဆောင်ရွက်ချက်များ၊ လယ်ယာစိုက်ပျိုးရေးနှင့်ဆည်မြောင်းဝန်ကြီးဌာန၊မြန်မာ့စိုက်ပျိုးရေးလုပ်ငန်း။

SUSTAINABLE URBAN DEVELOPMENT AND INFORMAL SETTLEMENT OF YANGON: A REVIEW ON HLAINGTHARYAR TOWNSHIP

Zin Nwe Myint[1]

Abstract

More than half of the world's population is living in urban areas and the global urban population is projected to grow by 2.5 billion between 2018 and 2050 according to UN reports. One of the most prominent consequences of rapid urbanisation in developing countries is the persistence and ongoing growth of informal settlements in major cities that challenge the sustainable urbanisation of the developing countries. Yangon is the largest city and main economic hub of Myanmar with a population of more than 4.7 million according to the Census 2014. About 10% of the total population of Yangon is now living in informal settlements (DUHD, 2016). Due to a lack of proper housing schemes, informal settlement largely took place in many parts of the new towns that were established in the urban fringe areas of Yangon during the last three decades. Currently, the informal settlement in new townships of Yangon had increased (World Bank, 2019). Among them, the largest informal settlement of Myanmar can be found in Hlaingtharyar Township. Against this background, the main aims of this research are to understand the controlling factors for the growing informal settlement in Yangon, to assess the housing policy regarding informal settlements and to find feasible solution. This is a primary approach mainly based on secondary data and literature. However, many interviews had done during 2012, 2015 and 2017. Intensive literature search and analysis were made. The limitation of this research is difficulties to conduct field work due to pandemic and security issues related to recent political changes. To substitute this gap, extensive media review was conducted. This study found that community participation is the best to solve the informal settlement problem of Hlaingtharyar in line with the sustainable urban development goals of Yangon.

Keywords: sustainable urban development, informal settlement, squatter, Hlaingtharyar

Introduction

Urbanisation is an inevitable process in developing countries. One of its consequences is the increasing informal settlements in major cities. Nowadays, slum and squatter have been an integral part of urban landscape especially in prime city of the developing countries like Myanmar. Upgrading of slums and squatter is now globally accepted as one of the priorities of sustainable urban development (Myint Naing and Nitivattananon, 2020). As urbanization accelerates in Myanmar, the number of people living in informal settlements within cities like Yangon is expected to rise. Addressing the housing and infrastructure needs of this growing population will be a crucial aspect of Myanmar's urban development agenda, requiring innovative policies and investments to ensure sustainable urbanization that benefits all residents. Looking ahead to 2050, Yangon is anticipated to experience significant population growth, estimating that its will exceed 10 million. This burgeoning urban landscape, however, also carries historical challenges related to informal settlements.

Research Questions

Against this background, this research aims to investigate, first of all, the urbanisation processes of Myanmar, secondly, the development of informal settlement through the history of

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Yangon and thirdly, the general principles and strategies of urban sustainability under sustainable development goals (SDG) are reviewed. Special focus will be put on informal settlements in Hlaingtharyar. Finally, it summarises the challenges and better solutions to solve the informal settlement of Yangon. Thus, the guiding research questions are:

1) What are the key factors that accelerate the expansion of the informal settlements in Yangon?
2) How is the situation of informal settlements in Hlaingtharyar Township?
3) What are the major challenges and how may the informal settlement problem in Hlaingtharyar be solved?

Aims

The main aims of this study are:

- To understand the spatial distribution pattern and phases of informal settlements in Yangon
- To understand the controlling factors for the growing informal settlement in Hlaingtharyar Township and its situation
- To assess the housing policy regarding informal settlements and to find feasible solution in line with SDG goals

Material and Methods

With an analysis of secondary data, from international and national sources, this study is based on intensive literature analysis as field work is limited due to Covid-19 pandemic and security reasons after the dramatic political change in February 2021, especially in the informal settlement areas of Yangon. A comprehensive review of international, national literature and planning documents of the Department of Urban and Housing Development (DUHD) and Yangon City Development Committee (YCDC) are thoroughly reviewed. Apart from it, reports on INGOs and NGOs related to surveys on squatters in Yangon City are examined.

About 30 qualitative interviews were conducted during 2012 and 2020, allowing for a deeper understanding of the phenomena, processes and endeavor of government institutions to solve the problem of informal settlements in Yangon. Knowledge, perceptions and evaluations of different stakeholders and experts on the urbanisation processes were collected and recommendations were drawn based on the expert interviews and survey reports of NGOs and INGOs. Due to difficulties to conduct field work, media content analysis related to informal settlement in Hlaingtharyar was made.

Concept of informal settlements

Informal settlements have become one of the prominent issue around the world in the discourse of population growth. It is a noticeable phenomenon, and the concept of informal settlements includes multiple terms, such as slums, squatters, shantytowns, and many more, making it difficult to settle on one definition (Taher and Ibrahim, 2014). Informal settlements, often referred to as slums or squatter settlements, are a common feature of many urban areas in developing countries.

The UN-Habitat (2015) defines informal settlements as: 1) inhabitants have no security of tenure to land or dwellings they inhabit, ranging from squatting to informal rental housing; 2)

neighbourhoods usually lack basic services & city infrastructure; 3) the housing may not comply with planning and building regulations, often situated in environmentally hazardous areas.

Whereas, **slums** are defined as most deprived form of informal settlements characterized by poverty, large agglomerations of dilapidated housing often located in most hazardous urban areas, lacking basic infrastructure and services, public space and green areas, and constantly exposed to eviction (UN-Habitat, 2015). However, in Myanmar and in Yangon, slums are not always illegal and not squatting on other lands.

Squatters are the residential areas, which has developed without legal rights to the land or permission from the authorities concerned to build. As a result, of their illegal status, provision of infrastructure and services are usually inadequate (UN-Habitat 2015).

In this study, the term 'informal settlement' primarily refers to squatters which lack legal rights to their residential areas, and these terms will be used interchangeably.

Findings and Discussion

Urbanization in Myanmar

After the end of British colonial rule, the urban population as a percentage of the total population fluctuated considerably, falling from 12.3% (947,000 persons, 1891) to 9.3% (991,000, 1901), 9.3% (1.13 million, 1911) and 9.8% (1.3 million, 1921) and then rising to 10.4% (1.52 million, 1931). Improvements in the agricultural economy had a strong effect on migration and more efficient census data gathering in rural areas is also likely to be reflected in the statistics (Hla Tun Aung 2003: 204-205). Like other Southeast Asian states, Myanmar is facing a continuous urbanisation process since its independence in 1948 with growingly rapid urbanisation dynamics in the last decade. The urban population has risen from 13.5% (2.6 million, 1953), 23.6% (6.8 million, 1973) and 24% (8.5 million, 1983) to 28.8% (13.1 million, 1996) (Hla Tun Aung 2003: 205). Over the last decade, it rose from 28.9% (14.5 million, 2010) and 29.7% (15.4 million, 2014) to 31.4% (17.4 million, 2021) (UN-DESA 2019). Urban growth accelerated with the introduction of a market-oriented economy in the late 1980s and early 1990s which has transformed the urbanisation trend of Myanmar (Kraas, *et al*, 2010).

According to Census 2014, the total population of Myanmar was about 55 million and about 30% of this population lives in cities and towns, while the rest are rural population. Urbanization in Myanmar is primarily concentrated around Yangon, the nation's largest city and economic hub. The Yangon Region has a population of more than 7.83 million and the Yangon City proper has a population of over 5 million according to 2019 inter-censal survey (Department of Population, 2020: 45). In general, about 10% of the total population of Myanmar is concentrated in Yangon (Global New Light of Myanmar, 10-5-2020). It is expected that by the year 2050, the population of Yangon will be 10 million. Urbanisation in Myanmar is expected to increase with a faster rate. With the increase of population in Yangon, population living in informal settlements will also increase.

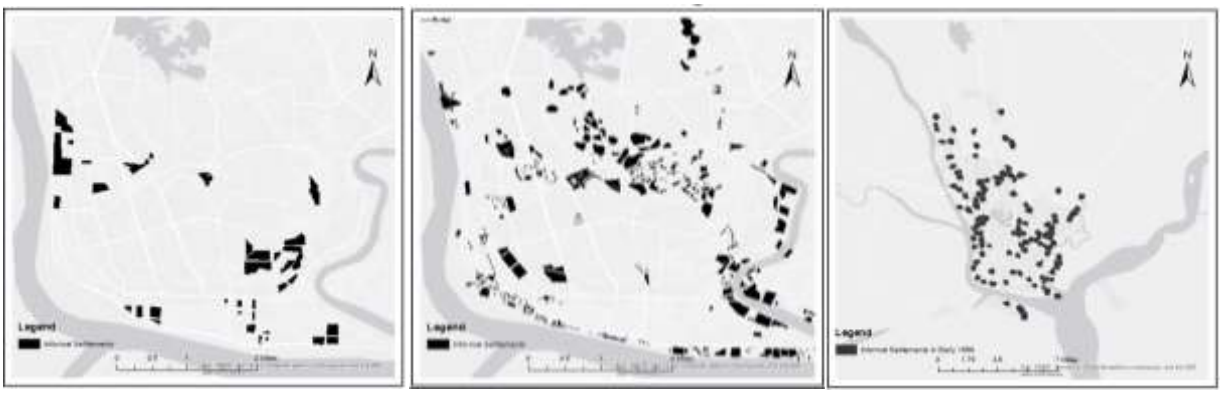
Phases of Informal Settlement in Yangon

Yangon has a long history of informal settlements, characterized by inadequate housing, limited access to basic services, and tenure insecurity. The development of informal settlement in Yangon can be divided into four phases.

The earliest and the first phase of informal settlements in Yangon began in the colonial era until the close of the 19th century. A noteworthy trends emerged due to foreign immigrants, particularly Indians, played a pivotal role as a vital labor force. This influx of immigrants was a key driver behind the rapid growth of squatters during this period. The population increased from 92,000 in 1872 to a staggering 400,000 in 1931. The initial signs of informal settlements began to take shape in the eastern part of Yangon, particularly in the vicinity near east Theinbyu, alongside the railway tracks. There was no discernible or specific policy in place to address the issues associated with slums and squatter settlements during British colonial rule (Nyi Linn Maung et al, 2020).

The second phase of the development of informal settlements in Yangon began shortly after Myanmar gained Independence. It was the impact of World War II and civil war between the government and rebel groups. Thousands of people from other towns and insurgency-prone areas migrated to Yangon. The annual population growth between 1953 and 1955 was nearly 8% (Yin May, 1963). The city was severely destroyed during the war and housing stock in Yangon was unable to support the increasing population. As such, slums and squatters grew across the city. In 1958, the Care Taker Government and municipality has its activities for squatter clearance by establishing three new towns, Thakata, North Okkalapa and South Okkalapa, where 70,000 land plots were provided (Myint Naing and Nitivattananon, 2020).

The third phase of informal settlement in Yangon occurred during the period between 1960s and 1980s. The natural growth of population in rural areas and construction of factories especially in Yangon were the main causes. This third phase of informal settlement in Yangon was different from that of the previous phase and the Housing Corporation had tried to relocate the people in new towns and upgrade the squatter wards as land readjustment. However, it was not successful, as only 9290 households were relocated and four wards of Yangon was upgraded. There were 66162 households and 259237 squatter populations in 26 townships of Yangon in 1988 (Myint Naing and Nitivattananon, 2020).



Informal settlements of Yangon in 1916 | Informal settlements of Yangon in 1945 | Informal settlements of Yangon in early 1990s

Figure 1. Distribution of informal settlements in Yangon during the period from 1916 to early 1990s. (Source: Nyi Linn Maung et al, 2020)

With the change of government after 1988, large scale extension took place by establishing 6 new towns around Yangon. The majority of the squatters were moved to these new towns by force under resettlement programme. Another squatter clearance programme was "Hut to Apartment" programme. This was an implication of China model from 1993 to 1998. Under these schemes, the government implemented many relocations and resettlement as 34 projects of hut to apartment which could provide 6654 apartments for slum dwellers. However, this programme no longer continued at late 1990s due to the impact of 1997 economic crisis.

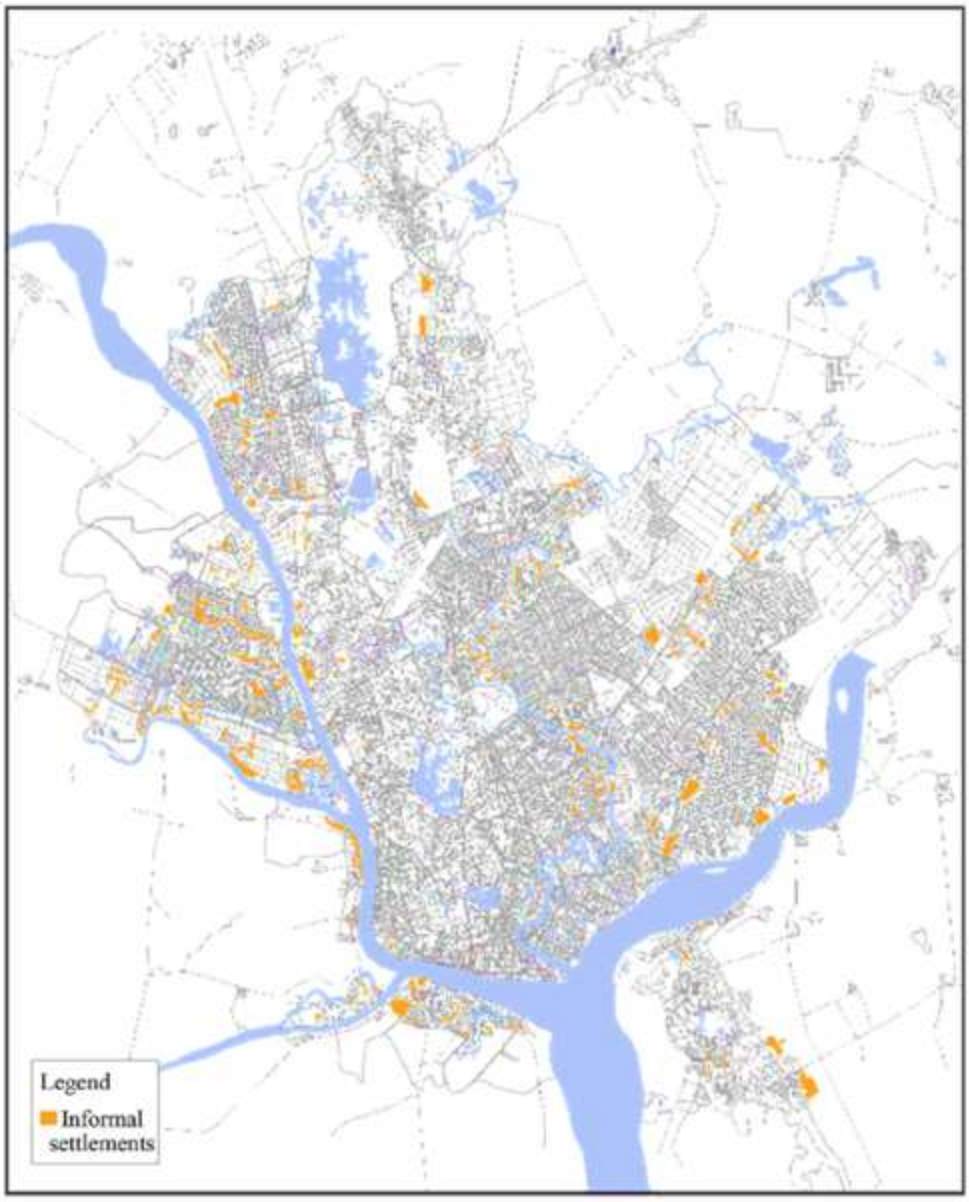


Figure 2. The distribution of informal settlements in Yangon (2020)

(**Source:** Myint Naing and Nitivattananon, 2020: 403)

The current phase can be assumed since 2011 as the migration to Yangon has rapidly increased due to socio-economic reasons, such as job opportunities and better quality of life. It was also related to government policy changes and consequences of establishing industrial zones in new towns early 1990s, which had given higher incentive for migrating to Yangon. However, other prominent reason was the natural disaster and insurgency at the remote areas. Cyclone

Nargis of 2008, flooding in 2015 and insurgency in remote rural and border areas were also driving forces to migrate to urban areas especially to Yangon. It was estimated that total squatter population can be over half a million in Yangon. of these, Hlaingtharyar is the biggest squatter area with a population of over 120,000.

During 2016 and 2020 Yangon Region Government started to manage the squatter problem as an important urban agenda and set up three phases for relocation, registration, screening and classification, and counter measures of slum formulation. Screening had already started on September 2016 to July 2017. All data are stored and maintain by digitization with finger print for further steps. Within Yangon Region, there were 8 townships had no squatter, 37 township have many squatter settlements (Myint Naing and Nitivattananon, 2020). Figure 2 shows the current distribution of informal settlements in Yangon City.

Informal Settlements in Hlaingtharyar Township of Yangon

Hlaingtharyar Township was established on the western bank of Hlaing River as a new town of Yangon in 1985 by relocating the fire-victims. It has an area of 76.4 sq. km. the total population was 163,493 in 1994 and it increased up to 687869 in 2014 (Zin Nwe Myint, 1998, Department of Population, 2015). Figure 3 shows the location of Hlaingtharyar. Industrial Zones were established in Hlaingtharyar in 1995 in order to support job opportunities at that time. Nowadays, there are 13 industrial zones which are attracting a significant influx of rural migrants in search of job opportunities. This has led to the development of the largest informal settlement of Myanmar in Hlaingtharyar.

The number of squatter households in Hlaingtharyar was 24508, having 97568 people and this account for 14.21% of the total township's population in 2015 (Htay Htay Naing, 2018). The rate of squatting in Hlaingtharyar Township had increased rapidly and there are 181 informal settlements of various sizes within Hlaingtharyar Township. The total households of informal settlement become 24865 with an estimated population of 124325 in 2016 (UN-Habitat, 2020). The population of informal settlement in Hlaingtharyar increased up to nearly 200,000 in 2019 (Frontier Myanmar, 6-11-2019).

A study shows that the main reason to live in slum and squatter areas of Yangon are childhood home (4.9%), cheap rental (19%), affordable to buy (24.4%), closer to work (14.6%), relatives and friends (22.8%) and able to squat (14.4%) (Nyi Linn Maung et al, 2023). However, the main reasons of increasing squatter in Hlaingtharyar Township are: natural disaster (Cyclone Nargis in 2008, people from Ayeyarwady Region mainly migrated to Hlaingtharyar after the cyclone due to nearness and job opportunities), government policy (relocation from other areas), marriage, family migration, limited income and lack of employment at origins (former workers in agricultural sector at rural areas changed their occupation) and job transfer. These are the push factors and the main pull factors to Hlaingtharyar are, better job opportunities (68%), to live with their parents and for better education opportunities (Htay Htay Naing, 2018).

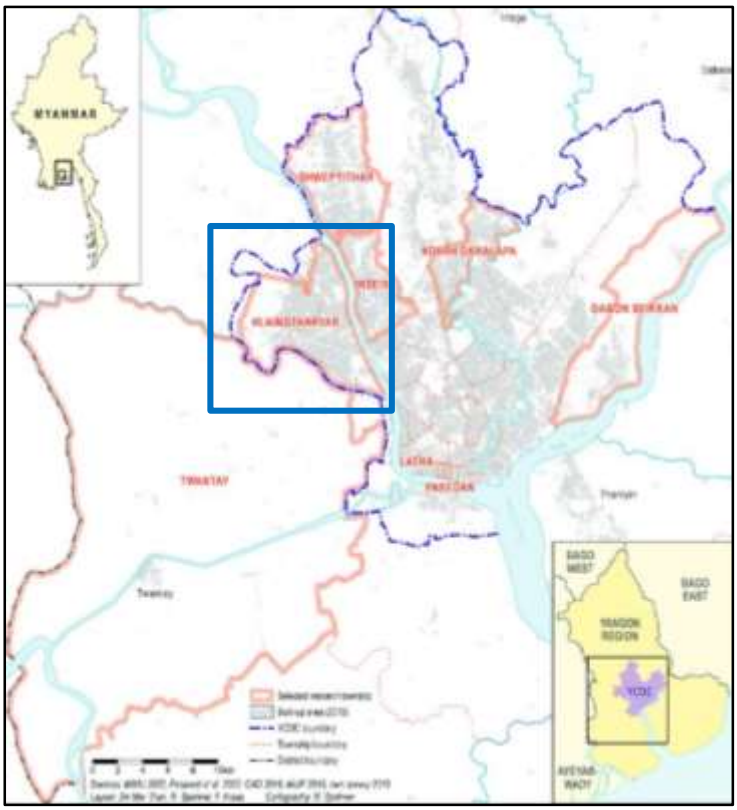


Figure 3. Location of Hlaingtharyar Township in Yangon City (Zin Mar Than *et al*, 2023)

As a consequence of such large informal settlement, Hlaingtharyar is facing many economic, social, environmental and political problems. Obviously Hlaingtharyar is known as a "vice city" due to its high rate of crime and insecurity (Kyed, 2019: 65, Frontier Myanmar, 6-11-2019). It is believed that poverty is the main cause for high crime rate and according to a study, the 54.3% of the informal households are below the poverty line (1.9 US$ per person per day as a new global standard) (Thet Htwe, *et al*. 2017: 2499). Further, informal settlers are most affected by limited infrastructure and services and are often highly prone to natural hazards (World Bank Group, 2019: 21). During Covid-19 pandemic in 2020-2021, these people are unable to follow public health directives to reduce the spread of coronavirus as they are living in crowded slums, where several families might share a house, making social distancing impossible (Frontier Myanmar, 24-6-2020).

The rate of squatting in Hlaingtharyar Township had increased due to recent changes in land legislation, professional and opportunistic squatters since the election of democratic government in 2015 and chronic shortage of affordable housing in Yangon. Although recognizing the importance to solve the growing problem of informal settlement, the Government currently has no proper policy for informal settlement (World Bank Group, 2019: 39, Forbes, 2019: 96). The authorities perceived them as threats to urban development planning and worried of larger influx of migrates. Thus, practice of eviction continues until now and conflicts always occurred due to the protest of squatters (Forbes, 2019: 109). This is forcing to move one illegal settlement to another perpetuating the cycle rather than solving or reducing the squatter problem. Forbes (2019) suggested that authorities need to be aware that squatters usually have rational choice for squatting.

Sustainable urban development and informal settlement

Substantial effort had made for sustainable urban development of Myanmar especially focus on large cities. Special guideline and plans have been drawn from international discussions. The 'Myanmar Agenda 21' (1997) already addressed key principles of sustainability which were later included in the 'National Sustainable Development Strategy for Myanmar' (2009) and the 'Myanmar Sustainable Development Plan' (2018), these were applied in urban strategies in Myanmar inspired by the Millennium Development Goals (MDGs) and especially the Sustainable Development Goals (in particular: SDG 11) and the New Urban Agenda (2016). Government already accepted that the informal settlement problem is one of the key priorities for solution.

Among many resettlement programme, participatory slum upgrading programme are most successful and practiced in many developing countries, as well as in Southeast Asia. Participatory slum upgrading is a methodological approach that aims to improve slum dwellers' living by letting them engage with all key urban stakeholders – all levels of government, community representatives, civil society, non-government organizations, academia and private sector. This multi-stakeholder platform is considered to be more likely to promote the necessary partnerships, governance arrangements, institutional structures and financing options which result in inclusive planning and sustainable outcomes. Informal settlers, in particular, have important knowledge, skills and capacity to contribute, direct and own the upgrading process, and an inclusive approach towards the improvement of their living conditions (UN-Habitat, 2018).

The Baan Mankong (Secure Housing) Program through the Community Organisations Development Institute (CODI) in Thailand since 2003 is a good example. It is a program that the government encourages the community of informal settlers to be involved in construction of housing projects, forming their cooperatives and take the community loan to pay for the land they had purchased or granted for long-time lease. Such strategies solved the housing problems of the poor without fully depending on the government (Kuek, *et al*, 2016: 4-5). It had already recognized that there are abundant innovative solutions developed by the poor to improve their own living environment (Taher and Ibrahim, 2014: 70) and policy makers were more than ready to accept such practices (Fox and Goodfellow, 2016: 141).

Challenges and Future Directions

Sustainable urban development and addressing informal settlements are critical challenges for many rapidly growing cities around the world, including Yangon, Myanmar. The more migration to Yangon means more informal settlements in Yangon, and the majority of these migrants will reside in Hlaingtharyar which offers high job opportunities in industrial zones. Thus, a balanced national urban policy that is interconnected with local plans and law enforcement at local levels is a necessity.

To solve the informal settlement problem in Hlaingtharyar Township in line with sustainable urban development goals, the challenges can be concluded as follows:

- **Rapid urbanization:** The township has experienced rapid population growth due to rural-to-urban migration, which has outpaced the capacity of the local government to provide formal housing and infrastructure.

- **Lack of land use planning:** The absence of effective urban planning and land use regulations has allowed informal settlements to develop haphazardly, often in hazard-prone areas.
- **Limited access to basic services:** Informal settlements in Hlaingtharyar often lack access to clean water, sanitation facilities, healthcare, and education, leading to poor living conditions.
- **Vulnerable communities:** Many residents in these settlements are vulnerable and marginalized, facing economic and social challenges.
- **Urban Planning:** Developing a comprehensive urban plan that integrates informal settlements into the formal urban fabric and promotes mixed-use zoning.
- **Infrastructure Development:** Investing in infrastructure projects to provide basic services, such as water supply, sanitation, and electricity, to informal settlements.
- **Affordable Housing:** Promoting affordable housing initiatives and upgrading existing housing in informal settlements to improve living conditions.
- **Community Engagement:** Engaging with the local community to understand their needs and involve them in the planning and development processes.
- **Resilience and Disaster Preparedness:** Addressing the vulnerability of informal settlements to natural disasters and implementing measures to enhance resilience.
- **Economic Opportunities:** Creating job opportunities and income-generating activities for residents to reduce poverty and improve livelihoods.
- **Land Tenure Issues:** Many residents in informal settlements lack formal land titles, leading to tenure insecurity and hindering development initiatives.
- **Resource Constraints:** Limited financial resources and capacity constraints of local authorities can impede the implementation of sustainable development projects.
- **Political Stability:** The political situation in Myanmar can impact the stability of urban development initiatives.
- **Environmental Sustainability:** Ensuring that development is environmentally sustainable is crucial to avoid further degradation of the township.

To solve the informal settlement problem of Yangon City, it is necessary to develop an alternative solution. Participatory slum and squatter upgrading method will be the best to apply as national and local government institutions cannot fully support to solve the problem. Besides, there are many evidences of successful program in neighbouring countries applying this method to solve their informal settlement problems. The most feasible solution is to build community groups for self-help upgrading of informal settlers in Hlaingtharyar, like *Baan Mankong* programme of Thailand. For this, policy provisions for participatory informal settlement upgrading and operational guidelines are urgently needed. Actors of this mechanism are municipalities, land developers and informal settlers. To be able to encourage the self-help low-cost houses, further detail and in-depth analysis on housing and land use policies is needed. Without proper policy and guidelines, informal settlement problems cannot be solved in line with SDGs goals.

Conclusion

Addressing informal settlements and promoting sustainable urban development in Hlaingtharyar Township is a complex and ongoing process. It requires a holistic and multi-pronged approach that combines urban planning, infrastructure development, community engagement, and poverty reduction efforts. Collaboration between government agencies, NGOs, and the community is essential to make progress in this endeavor. Additionally, politically willingness and long-term commitment to sustainable development are crucial to solve or reduce the informal settlement problems of Hlaingtharyar Township and the future of Yangon.

Acknowledgement

My sincere gratitude to the Alexander von Humboldt Foundation for their generous support of this research project through the Return Fellowship in 2020 (Ref 3.5 - 1189435 – MMR-GF-E). A special thank goes to Prof. Dr. Frauke Kraas for her strong encouragement and my extended thanks are to YCDC and DUHD for supporting data.

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MORPHOLOGICAL CHANGE OF AYEYARWADY RIVER FROM CHAUK TO MAGWAY

Saw Thandar[1], Cho Cho Lwin [2]

Abstract

The Ayeyarwady River is the main artery and an important source of multipurpose. Compared to its historical condition, the Ayeyarwady River's morphology has undergone significant changes as a result of erosion and deposition. These natural processes have shaped the river's landscape, altering its course and creating new land formations along its banks. Of all river sections, the Ayeyarwady River from Chauk to Magway area is the most affected by human impacts. Remote Sensing (RS) and Geographical Information Systems (GIS) are widely used for change detection in rivers caused by erosion and deposition. Digital image processing techniques and GIS analysis capabilities are used for detecting temporal variations in erosion and deposition characteristics of the Ayeyarwady River from Chauk to Magway areas during the years 1990, 2011, and 2022. The study aims to assess spatial variation in the Ayeyarwady River in the periods 1991, 2011, and 2022. Landsat satellite images for the years 1990, 2011, and 2022 were processed to investigate the erosion and deposition areas, patterns, and sedimentation conditions of the Ayeyarwady River. In the study, NDWI and MNDWI were used to create the delineation of the water area. Among these two indices, MNDWI results are a more differentiated open water area that has greater positive values than NDWI, as it absorbs more shortwave-infrared (SWIR) wavelengths than near-infrared (NIR) wavelengths. Built-up features have negative values and soil and vegetation also have negative values, as soil reflects more SWIR wavelengths than NIR wavelengths. Along the left bank, there is mainly deposition than on the right bank because of the elevation and geological structure. The derived results of channel pattern changes were validated by comparing them with the Sediment Transport Index (STI), and Stream Power Index (SPI). Integration of remote sensing data with GIS is an efficient and economical technique to assess land losses and channel changes in large rivers.

Keywords*: River channel; migration; NDWI; MNDWI; erosion and accretion*

Introduction

Rivers and streams are natural watercourses on the surface of the earth and are of great importance in geomorphology. Naturally, rivers are dynamic and their shapes and sizes vary in space and time because of erosion and deposition. A firm understanding of channel migration and associated processes of erosion and deposition will allow for the management of river behavior and decision-making processes (Alam et al. 2007). River channel forms and their dynamics over time have long been a major subject of study in geomorphology (Petts 1995). Channel forms are classified into three basic types: straight, meandering, and braided (Leopold & Wolma 1957; Lewin & Brewer 2001; Schumm & Khan 1972). Meandering rivers shift their courses across the valley bottom by depositing sediment on the inside of bends while simultaneously eroding on the concave side of the meandering banks. Meandering is a natural geomorphic feature in rivers that results in the gradual migration of the river's course and erosion of its banks. Most rivers in the world are subject to meandering due to natural and human activities (Ayman & Ahmed Fawzi 2011). Monsoon runoff is known to affect river bank erosion rates (Darby et al. 2013). By using RS and GIS technology, river profiles at certain periods are developed and the rate of erosion and deposition is quantified. The temporal satellite images

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show how the river and its floodplain dynamics move. Also, these images help to predict how mobility continues or which kind of measures need to be considered to restore stability. The advantage of remote sensing techniques is the use of synoptic data covering both spatial and temporal aspects. These advantages could be maximized by using ground information and other geographical data, all of them integrated into a Geographical Information System (Rogan & Miller 2007).

Study Area

Two-thirds of Myanmar's surface rivers drain into the Ayeyarwady which ranks as the most important Myanmar river system. The Ayeyarwady River is a life artery and a major waterway. It passes through the heart of the dry zone which receives rainfall between 508mm (20 inches) and 1016mm (40 inches). The study area is located between north latitudes 19° 40' and 21° 00' and between east longitudes 94° 35' and 95° 15'. According to F. Bender (1983), the Ayeyarwady has a length of 2010 kilometers (1246.2 miles) and a catchment importance area covering 415700 sq. km (162123 sq-ml). The study area defines the Ayeyarwady River from Chauk to Magway and is about 203 km long.There are folds of rock formation older than sand. These folds are of importance because of their association with oil. The Ayeyarwady River wanders irregularly in this zone where it is bordered by alluvium, and the banks are low and fringed with sandbanks.

Figure 1. Location of the Study Area

Source: Landsat 8 (30 m)

Aim and Objectives

Aim

- To assess spatial variation in the channel migration in the Ayeyarwady River with the periods of 1990,2011, and 2022.

Objectives

- To investigate the erosion and deposition areas, patterns, and sedimentation condition of the Ayeyarwady River.
- To address the impact of the channel pattern changes of the study area.

Materials & Methods

Remote Sensing has been used by scientists for more than thirty years for investigating the surface of the earth (Bato et al. 2011). In order to quantify the changes in channel morphology of the Ayeyarwady River, satellite images of the study area were acquired and processed. There are a variety of satellite data source such as Landsat, Spot, Ikonos, Orbview and Quickbird. A selection of data mainly relates to its spatial, temporal, and spectral characteristic, time availability and most importantly its price (Hussain et al. 2011). For assessment of river channel temporal changes Landsat 5 TM, Landsat 8 OLI images with 30 m resolution were acquired for the months of November 1990, 2011 and December 2022. Images of November and December were chosen because of minimum discharge in the study area. The acquired images were already geo-rectified with the assigned parameters of projections and coordinate system. Parameters were WGS 84, zone 46N and Transverse Mercator's projection.

Landsat TM and OLI images actually consists of 7 bands and 11 bands but only three were required for information to be extracted. After atmospheric and radiometric correction of the images, a final binary image was obtained by applying the two techniques. The comparison of the channel pattern at different dates shows that the channel migration during 1990, 2011 and 2022 due to the erosion and deposition processes. Moreover, NDWI and MNDWI create for the delineation of the water area. Of these indices, MNDWI results is more differentiate open water has greater positive values than NDWI because it absorbs more shortwave-infrared (SWIR) wavelengths than near-infrared (NIR) wavelengths. And also, built-up features as well as soil and vegetation have negative values, as soil reflects more SWIR wavelengths than NIR wavelengths. The binary images were processed in ArcGIS10.8 software to extract the channel pattern. Firstly, each image was converted from raster to vector (feature class) with two main polygon features; water and land. Secondly, the two polygon layers were overlaid to estimate erosion and deposition pattern of sand areas in each period 1990, 2011 and 2022 along the Ayeyarwady River. As classified images were in raster format, they were converted into vector format by using Arc Map technique namely Raster to Polygon conversion. As a result of Vectorization all channel area of images were converted into polygon shape files. Flood plain boundary from the images was digitized by using Arc Map 10.8 meanwhile the vector layers of flood plain boundaries were produced for year 1990, 2011 and 2022. In order to integrate with topographic data, topo values were extracted from USGS SRTM DEM create a relief map. And also geological formation is used for erosion and deposition condition. NDWI and MNDWI band ratio method using Landsat images of LT5 and LC8 for 1990, 2011 and 2022 are as follows:

$$NDWI = \frac{\text{P Green} - \text{P NIR}}{\text{P Green} + \text{P NIR}}$$

$$MNDWI = \frac{\text{P Green} - \text{P SWIR}}{\text{P Green} + \text{P SWIR}}$$

Where, P Green, PNIR and PSWIR are the reflectance values of Landsat 5 TM Band 1, Band 2, Band 4 and Band 5 respectively. Moverover, Sediment Transport Index and Stream Power Index methods are used for data validation. Sediment Transport Index and Stream Power Index are as follows:

$$STI = (m + 1) \times (A_s / 22.13)^m \times \sin(B / 0.0896)^n$$ (Moore and Burch (1986))

Where A_s is the specific catchment area (i.e. the upslope contributing area per unit contour length) estimated using one of the available flow accumulation algorithms in the Hydrology toolbox; *B* is the local slope gradient in degrees; the contributing area exponent, *m*, is usually set to 0.4 and the slope exponent, *n*, is usually set to 1.4. Notice that *As* must not be log-transformed prior to being used; *As* is commonly log-transformed to enhance visualization of the data. The slope image can be created from the base digital elevation model (DEM) using the slope tool.

The Stream Power Index (SPI) is a measure of the erosive power of flowing water. SPI is calculated based upon slope and contributing area.

SPI=Ln (("flw_acc" +.001)*(("Slope_%"/100)+.001))

It shows negative values for areas with topographic potential for deposition and positive values for potential erosive areas. Highest values related to a strong slope gradient. This terrain morphology contributes significantly to the erosion's aggressiveness and land dergradation risk process. The lowest values represent relatively flat areas influencing the susceptibily to flooding and sediment deposition and accumulation.

Data Analysis

According to index map, vector profile and reference points were prepared, next important step was calculation of river channel pattern, changes in river channel width due to erosion and deposition and identification of erosion and deposition areas. In order to calculate river channel migration, the distance from the reference point to the river banks on both sides was digitized as line features. Then, the lengths of these lines were calculated in attribute table by using the calculate geometry options. As a result, distance of right and left bank of river channel are about 196 km 206 km. Extracted River channel and channel migration in the selected years is shown in Figure 2 and 3. The river channel location in 2022 was entirely at opposite location as compared with the channel location in 1990 along the entire river reach. This typically indicates the meandering river pattern in this reach. Whereas, in the middle reach length, the river shows the braided pattern due to the presence of islands and sand bars. In order to identify areas of erosion and accretion, overlay analysis techniques were used in Arc Map for flood plains extracted from images. As a result of using erase and merge tools in Arc map, from flood plain shape files polygons of areas showing deposition and erosion between given time period were retrieved as shown in Figure 2.

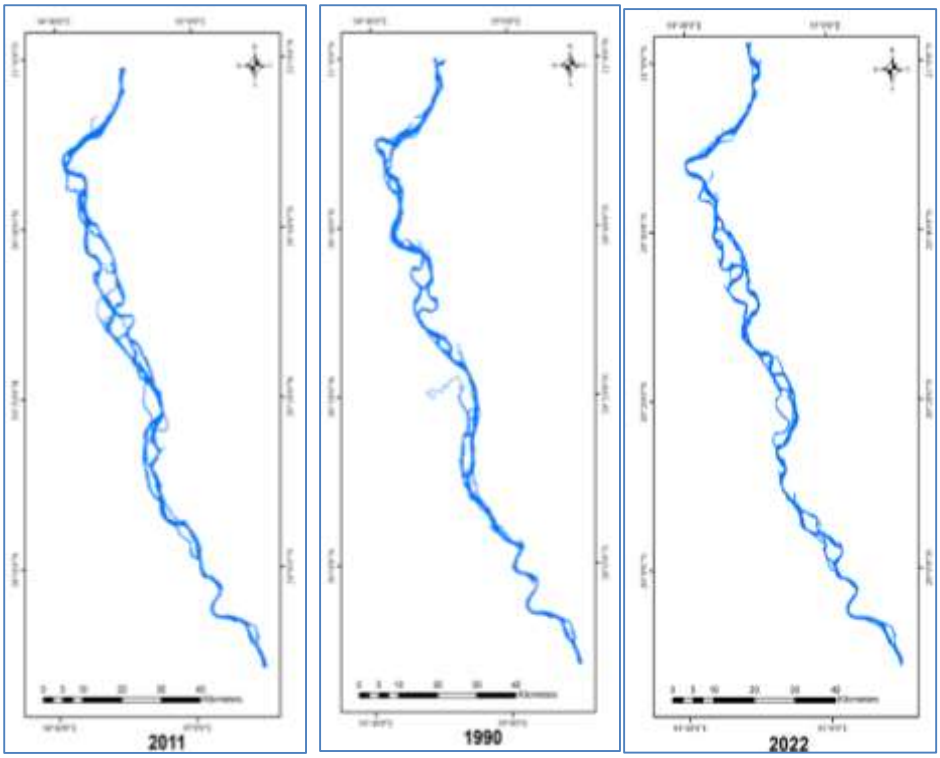

Figure 2. Channel Pattern of the Study Area (1990,2011 and 2022)

Sources: Extract from Landsat Images

Results and Discussion

Bank Line and River Channel Migration

Erosion and deposition variation at different reaches along the Ayeyarwady River are shown by analyzing data set in a form of overlay maps as shown in Figure 3. In 1990 and 2011, the erosion occurred right bank of the upstream and deposition occurred the middle stream parts of the reach along the left and right banks, respectively. In the middle reach, the upper braided portion experienced erosion along both banks. The lower braided portion of the Similarly, the middle portion also experienced at some of the cross sections along the both banks. During 1990-2022, almost the same pattern of erosion and deposition was found along both the river banks downstream part of the reach. Mostly, accretion is found at the left bank line and the lower portion of the reach showed the contrasting pattern where the erosion was observed along the both banks regardless of accretion. The shift of river channel is shown in the selected time periods (Figure 3).

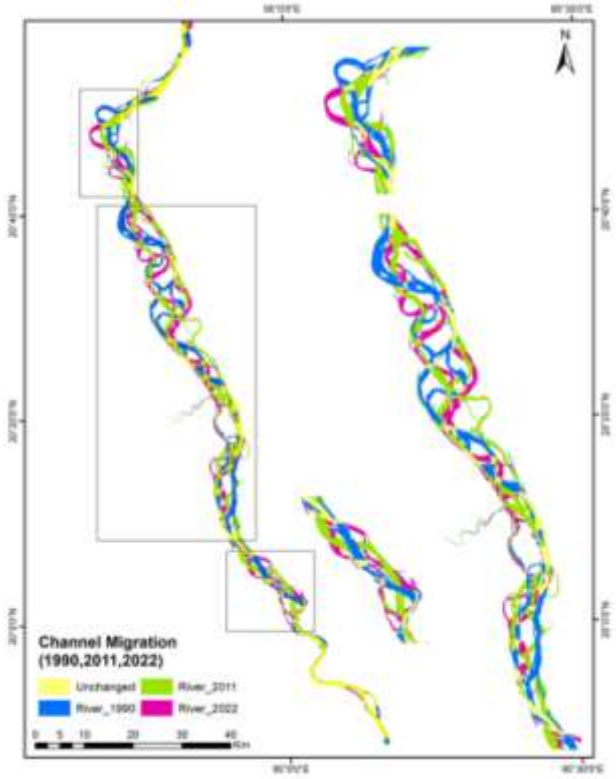

Figure 3 Channel Migration of the Study Area

Source: Extracted from Landsat 5 and 8 (30 m)

Table 1 Erosion and Deposition in the Study Area

Years	Previous 11 Years	Next 11 Years	Unchanged	Erosion	Deposition
1990-2011	20027.13	20240.77	8996.77	11030.37	11244.00
2011-2022	20240.77	19318.14	9701.91	10538.86	9616.23
1990-2022	20027.13	19318.14	8553.33	11473.80	10764.81

Source: Calculated by overlay Analysis

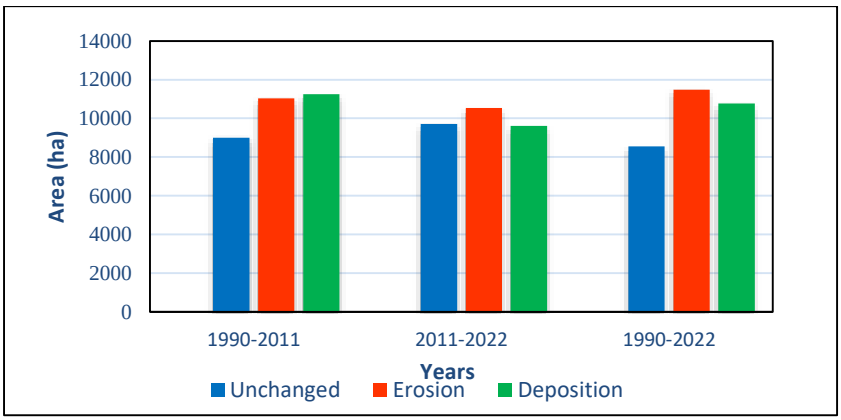

Figure 4 Changes in Erosion and Deposition in the Study area

Source: Table 1

River Banks Erosion and Deposition

The contrasting trends were observed along the right and left banks regarding deposition and erosion as shown in Figure 4 and Table 1. According to the Table 1, the deposition area is more than erosion in 1990-2011 because the left bank is primarily a trend of deposition in both 1990-2011 and 1990-2022 time periods, but the rate of deposition is very high as compared to rate of erosion along right bank. In 1990 and 2011, the channel migrates to east at the upstream near the Chauk area. Moreover, the geological formation is mainly composed of young alluvium. Mainly, deposition is caused immediately upperstream of the Ayeyarwady River due to the presence of stable islands and sand bars. The middle portion of reach river banks was also eroded on both sides due to the meandering pattern. Similarly, erosion along a bank results in deposition along the opposite bank that is attributed to the meandering of river channel. Areas for each polygon of erosion and deposition derived in Figure 4 were calculated and is given in Table 1 for the entire study periods. During 1990-2022, the channel migrate to the west near the Yenanchaung area and deposition occurred. Channel migration is not prominent at downstream area near Magway area. Analyses showed that the right bank was under erosion in both time spans, however, high rate of deposition is exhibited in middle reaches because of the underlying young alluvium and The eastern part of the study area is higher than the western part.

Data Validation

Accuracy assessment plays an important role in remote sensing image classification. It is important to know the quality of the classified maps (Jiang & Liu 2011). The accuracy of spatial data has been defined by the United States Geological Survey USGS, ‘Accuracy assessment or validation is an important step in the processing of remote sensing data. It determines the information value of the resulting data to a user’ (AbubakerHaroun et al. 2013). Most common techniques used for accuracy assessment of classified satellite images are error matrix generation by using ground sample data or any reliable published source data. However, in present study, sample data collection from field was not possible due to time of study area and location of cross sections. Ground truthing was not also an appropriate option for data validation. River channel delineated through Landsat image classification for 1990, 2011 and 2022 was validated through cross section generated according to similar vector profile of SRTM. And also, Sediment Transport Index and Stream Power Index methods are used for data validation. Because of the these are very useful for erosion and deposition. The Stream Power Index (SPI) is a measure of the erosive power of flowing water and Sediment Transport Index is also measure how much of sediment are transport by river.

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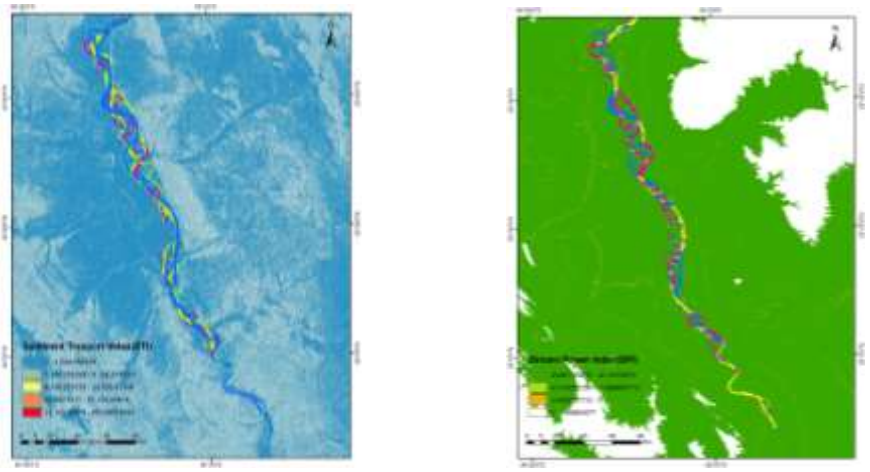

Figure 5 Sediment Transport Index and Stream Power Index

Source: calculated by formula

Conclusion

Alluvial flood plains are most important areas for agriculture, industry and human settlements. Nowadays supervising and forecasting changes in riverbanks are important and necessary for managing and detecting environment in marine infrastructure (Nguyen et al. 2010).

In the present study remote sensing and GIS techniques are used to identify changes in bank line of the Ayeyarwaddy River is about 206 km reach from Chauk to Magway. Cloud free Landsat satellite images of 1990, 2011 and 2022 are processed to identify changes in river morphology and location of eroded and deposited parts along river channel has been identified. The following conclusions are inferred after analyzing images. The middle reach exhibits a braided channel value because of its time and cost as no such investigations through field surveying techniques are regularly being carried in study area. The findings about river bank and flood plain dynamics will be valuable for erosion management plans and bank protection measures in study area whereas the rest of the channel exhibits meandering pattern. As left bank of the Ayeyarwady River is more subjected to deposition as compared to right bank which is more subjected to erosion. The present study is mainly based on image interpretation without incorporating other data like flow rate and volume, contributing to river channel migration erosion and deposition. Moreover, the processes of erosion and deposition are mainly affected on the socio-economic condition of local people.

Acknowledgements

I would like to express my gratitude to Dr Cho Cho Myint, Rector, Yenanchaung University, for providing us with the encourage and opportunity to present this paper.

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PERCEPTIONS OF PUBLIC RENTAL HOUSING RESIDENTS IN YANGON CITY, MYANMAR: OPPORTUNITIES AND CHALLENGES

Sabe Pyu Lwin[1], Khin Khin Soe[2]

Abstract

This research paper aims to explore the spatial distribution of public rental housing in Yangon City, Myanmar. With the rapid urbanization of Yangon as a commercial capital, affordable rental housing has become a crucial need. The demand for public rental housing has grown significantly, making it an essential component of urban development strategies. This study uses a mixed-methods approach that includes quantitative spatial data and qualitative residents' perspectives to comprehend the perception of residents regarding public rental housing's opportunities and challenges. The study uses Geographic Information System (GIS) mapping to visualize and analyze the spatial patterns of public housing distribution in the city. Resident surveys provide a deeper understanding of how this distribution influences their overall well-being, including their lives, employment, transportation, community engagement, and access to education, healthcare, and urban development. The findings of this study have significant implications for urban planning and policy-making, guiding the enhancement of public housing strategies in line with the needs and preferences of residents. Ultimately, this research aims to contribute to more inclusive and holistic urban development in Yangon City and help identify the factors that need to be considered in the next supply of public rental housing that is in high demand.

Keywords: public rental housing, perceptions, rapid urbanization, challenges, well-being, urban development

Introduction

Housing problems are prevalent worldwide, especially in developing countries. In recent years, the issue of housing accessibility and affordability has become more severe due to rapid urbanization and population growth in cities across the globe. Although various governments have made efforts to address this issue, it remains unsolved. Myanmar is also facing similar housing problems, and the government is trying to solve them as much as possible. The government has provided several housing options, including staff housing, public rental housing, low-cost housing, affordable housing, and luxury housing. The government has also allocated plots of land for the construction of private housing. Among these, public rental housing is the most attractive option for low-income people.

Myanmar’s population is 55,236,387 and Yangon City's population is 5,514,000, Yangon City's population is 10% of Myanmar’s population. Yangon City, Myanmar's economic and cultural hub, has witnessed a surge in urban migration, leading to a growing demand for housing options especially affordable for low-income people. As Yangon is a business capital, there are many employment opportunities and the costs of food and living are very high. Middle-income and lower-income people do not own their homes, but live in rented accommodations.

Many individuals residing in Yangon City are occupying public rental housing due to the difference in rent and quality of housing compared to private rental housing. The distribution of public rental housing in the city is a crucial factor in determining the living conditions and opportunities available to its inhabitants. This research delves into the public rental housing situation in Yangon, analyzing the effects on the residents residing in these housing projects. By

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exploring the perceptions and experiences of these occupants, this paper identifies the current challenges and opportunities for spatial planning. The study focuses on three housing camps in Yangon, namely: housing within the city center, housing on the outskirts, and housing located between the once-new urban areas that are now industrial zones. This research aims to highlight the opportunities and challenges faced by public rental housing occupants so that housing developers can use them as a reference for future rental housing development.

Research Background

The government has been exploring various solutions to address the housing demand in the country. In Yangon, the Yangon City Development Committee (YCDC) and the Department of Urban and Housing Development (DUHD) are responsible for resolving the housing issues faced by the public. This research focuses on the public rental housing sector in Yangon, which primarily caters to lower-income families and grassroots-level individuals. The Yangon Region has fifteen government-subsidized public rental housing projects that have been implemented by the Ministry of Construction, Department of Urban and Housing Development. Fourteen of these properties are already occupied, and the new "Thukha Dagon" project will be ready for occupancy in 2023. Public rental housing is available in all special areas of Yangon. However, the number of public rental housing units in Yangon is currently insufficient.

According to Table (1) and Figure (1), housing projects were located outside the city center. However, with the process of urbanization, some housing projects come to be established in the city center. As the population in Yangon has increased, some housing areas that were previously sparsely populated have become overcrowded.

Research Questions

To investigate the impact of public rental housing on the residents' living conditions and development in the Yangon Region, as well as their perceptions and experiences. The guiding research questions are:

1. What are the primary factors that influence the decision of residents to choose public rental housing, and how do these preferences affect the spatial distribution of public housing demand?
2. How do residents perceive the overall living conditions, comfort, and sense of community in different housing developments across Yangon City?
3. What are the main challenges, barriers, and benefits that residents associate with public rental housing?
4. How much do rental fees differ between public rental housing and market prices?
5. Based on residents' feedback, what policies and recommendations can be proposed to improve the situation of housing in Yangon City.

Table 1. Public Rental Housings Situation in Yangon City (1952-2023)

No	Name of Housing	Township	Buildings (Number)	Units	Year of Construction
1	Kyauktada(Middle Part)33St-38St	Kyauktada	13	404	1952
2	Yankin	Yankin	244	3604	1952
3	Kantawkalay (Pha Sa Pa La)	Mingala Taungnyunt	32	848	1952
4	Gyo Gone	Insein	30	145	1953
5	U Wisarra (Minn Ma Naing)	Dagon	34	684	1954
6	51Road	Botahtaung	2	224	1956/2013
7	PyiTawThit	Pazundaung	6	142	1956/2020
8	Lan Thit	Lanmadaw	11	264	1957/2017
9	Shwegon(Link Road)	Bahan	1	16	1964/2013
10	Thuwana	Thingankyun	411	2812	1965
11	Thanlyin	Thanlyin	6	112	1965
12	Wailuwon	Sanchaung	24	400	1968
13	Pyin Ma Pin	Mingaladon	6	96	1986
14	Mahar Bandula	South Dagon	50	1200	2015
15	Thukha Dagon	South Dagon	73	1168	2023

Source: Department of Urban and Housing Development, Myanmar, 2023

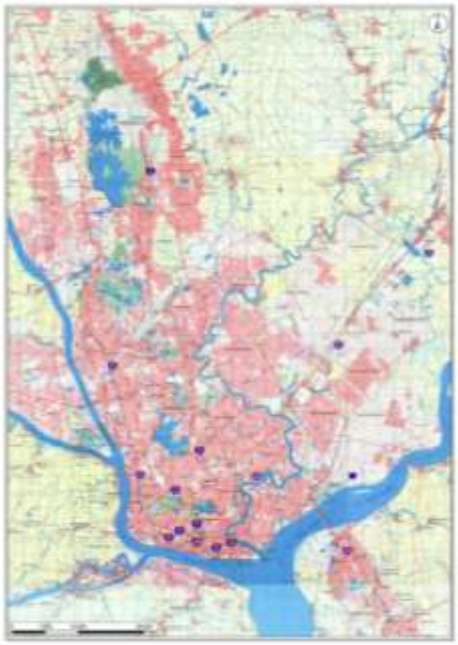

Figure1. Spatial Distribution of Public Rental Housing in Yangon City, Myanmar

Source: Department of Urban and Housing Development, Myanmar, (2023)

Materials and Methods

By using a ***mixed-methods approach***, the research hopes to provide a comprehensive understanding of the issue. This study uses both quantitative and qualitative research methods to gain a complete understanding of the spatial distribution of public housing in Yangon, Myanmar. It aims to investigate how this distribution affects the perception of opportunities and challenges among the residents.

Data Collection

The data collection methods include:

Geographic Information System (GIS) Data: Obtain GIS data from the Department of Urban and Housing Development, Ministry of Construction. This data provides valuable information about the spatial distribution of public rental housing.

Surveys: Surveys with residents living in Yangon city area public rental housing developments. The survey questionnaires are Likert-scale questions and open-ended questions.

Key Informant Interviews: Conduct interviews with key informants, such as government officials, urban planners, and representatives from housing authorities to gain insights into the policies and decision-making processes related to public rental housing distribution.

Focus Individual Discussions: Organize focus individual discussions with residents in different types of public rental housing areas to facilitate discussions and interactions on the topic. This method uncovered collective perceptions and fostered a better understanding of shared experiences.

Data Analysis

The research utilizes various data analysis techniques, such as descriptive statistics, spatial analysis, content analysis, comparative analysis, and triangulation. This combination of quantitative and qualitative data provides a comprehensive understanding of the issue and can help in making informed decisions for future public housing planning and policy-making in Myanmar. The findings of this study can be instrumental in improving the accessibility and equitable distribution of public housing, leading to more inclusive housing solutions for the residents of Myanmar.

Study Area

Public rental housing is located throughout Yangon City. They are located in different areas such as undeveloped and developed areas but occupiers and rental rates are usually the same. The government has been implementing the housing project since 1952. There are fifteen public rental housing in Yangon City by the Department of Urban and Housing Development. Among them, three housing projects in different areas of development were studied on a pilot basis. (Figure.2) U Wisarra Housing located in the center of the city, Pyin Ma Pin Housing which is on the outskirts of the city and Mahar Bandula Housing located between the once new town and now industrial zones area, were surveyed and studied. In the past, the development of public

housing was concentrated in the non-central areas of the city, but now these areas are located in the central areas or near the hub area due to urbanization.

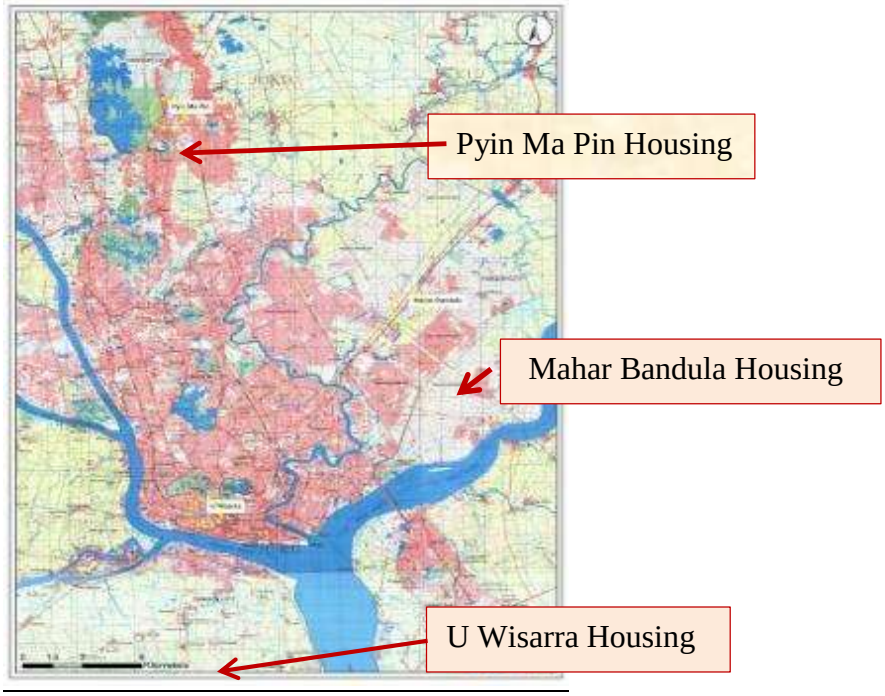

Figure 2. Location of Pilot Three Housing Projects

Source: Department of Urban and Housing Development, Myanmar, 2023

The housing complex is situated in the central hub of the city and is easily accessible through two nearby stations - Lan Ma Taw and Phayar Lan. Additionally, there are bus stations located beside it. The complex is situated close to the Yangon Public General Hospital, Yangon General New Hospital, as well as the General Aung San Market and four large shopping malls. There are also two high schools, one primary school, and one secondary school located near the complex. The ancient Christian Temple, which is over a hundred years old, is located in the courtyard. The area also boasts a football pitch and a small park. Furthermore, the famous Shwedagon Pagoda, a well-known trademark of Myanmar, is located nearby.

Source: Department of Urban and Housing Development, Myanmar, (2023)

U Wisarra Housing, a popular housing project among public rental housing, is located in Dagon Township, Yangon. People have been living there since 1954, and there are five types of buildings built with bricks; 4units x 4 stories;21buildings, 6units x 4stories; 9buildings, 7units x 4stories; 1building, 8units x 4 stories; 2buildings and 10units x 4 stories; 1building. A total of 684 units in 34 buildings. It was found that a minimum of two to a maximum of six people live in a family per unit. (Figure 3)

Figure 3. Location of U Wisarra Housing (Minn Ma Naing)

Source: Department of Urban and Housing Development, Myanmar, (2023)

The housing complex is situated in the central hub of the city and is easily accessible through two nearby railway stations - Lan Ma Taw and Phayar Lan. Additionally, there are bus stations located beside it. The complex is situated close to the Yangon Public General Hospital, Yangon General New Hospital, as well as the General Aung San Market and four large shopping malls. There are also two high schools, one primary school, and one secondary school located near the complex. The ancient Christian Temple, which is over a hundred years old, is located in the courtyard. The area also boasts a football pitch and a small park. Furthermore, the famous Shwedagon Pagoda, a well-known trademark of Myanmar, is located nearby.

It has the advantage of being walkable to the markets, schools, hospitals and work places. This housing complex is a livable place as it is easily accessible by social services such as public transportation, perfect infrastructures and have a lot of job opportunities. Source: Department of Urban and Housing Development, Myanmar, (2023)

The offices of the General Administration Department and the Department of Urban and Housing Development, which are responsible for housing maintenance, are both located in the township area. Additionally, the police station, communication unit, and medical unit of the Ministry of Defense are situated near the housing camp. Water supply is provided by a tube well, owned by the Department of Urban and Housing Development, and electricity is obtained from the National Energy Grid.

The monthly rental fees for housing units range from 4500/-Kyats to 14500/-Kyats. The rental fees vary based on the salary of the apartment owner and the floor level of the apartment. Therefore, the rental fees for each apartment differ from one another. The majority of the residents are individuals with middle-level income such as government officers, company employees, retired employees, teachers, sailors, merchants, and shop owners.

Pyin Ma Pin Housing is situated in Mingalardon Township, Yangon, adjacent to the Yangon-Pyay Road and in the Yangon outer ring. The housing has been around since 1965 and has been home to many people. It is a 4-unit x 4-story building and each room is 576 square feet. Among them, six buildings are public rental housing and four are sale housing. Family members range from a minimum of four to a maximum of eight per unit. Housing rental fees are (4500/- Kyats to 10,200/-Kyats) per unit per month and rental fees are not the same depending on the floor layer and apartment owner income (Figure 4).

Hlawga National Park and Hlawga Water Supply Station are situated near a housing compound. This housing compound receives water from the Water Supply Station. The electricity for the compound is obtained from the National Energy Grid. The compound is located on the outskirts of Yangon and is close to the bus station, Pearl New Town, Pearl Hospital, and Htauk Kyant Wholesale Market. Every Saturday, the Yangon Municipal Development Committee guides a mobile car that sells meat and fish at discounted prices. The area is considered safe and secure as there is an artillery unit of the Ministry of Defense located nearby. The majority of the residents are middle and low-income earners, such as government employees, company employees, retired employees, school teachers, taxi drivers, cycle drivers, and vendors. The residents mainly use cycle carriers for transportation.

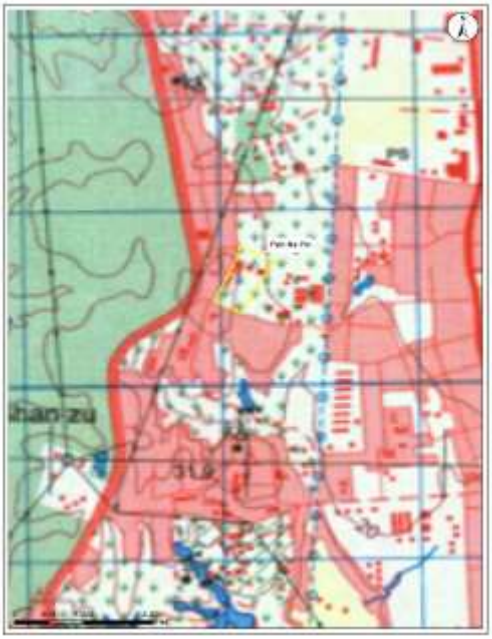

Figure 4. Location of Pyin Ma Pin Housing

Source: Department of Urban and Housing Development, Myanmar, (2023)

Mahar Bandula Rental Housing is in South Dagon Township, Yangon. Since 2015, it has received a residence permit. There are fifty buildings and all total 1200 units which are 6 units x 4 stories type and 640 square feet per area. Among them two buildings for the slum upgrading system and others are public which are at Yangon by the Yangon Regional Government allocated rooms through a lottery system. It was found that a minimum of four to a maximum of twelve people live in a family per unit. Housing rental fees are 30000/- Kyats per unit per month. Water is supplied by a tube well which is owned by the Department of Urban and Housing Development and electricity gets from the National Energy Grid. (Figure 5).

The housing compound is situated near Number 2 Main Road, and it's opposite the U Hla Tun Cancer Foundation Hospital. Additionally, there are two markets next to the housing courtyard - one open market and a cover market by the Yangon Municipal Development Committee. Bus stations are also located beside it. The Department of Road Transport District Office (Ywarthargyi), Ywarthargyi Dagon South Industrial Zone, Dagon East Industrial Zone, and Ywarthargyi Slaughterhouse are all around the housing camp. Adjacent to the housing camp, there is one Basic Education high school and one Secondary School.

Figure 5. Location of Mahar Bandula Housing

Source: Department of Urban and Housing Development, Myanmar, (2023)

Most of the residents belong to the middle-level and lower-level income earners category, which includes government employees, company employees, retired employees, school teachers, taxi drivers, cycle drivers, vendors, industrial workers, daily workers, and plastics or waste product pickers who don't have a regular income. Since workplaces and schools are located near the housing camp, residents usually go by foot or bicycle.

Results and Findings

Spatial Distribution of the Three Pilot Public Rental Housings

These pilot public rental housings are located in different areas of development in Yangon. This paper found that although these three housings provided by the government are equal, the opportunities and challenges of residents are different this depends on their location and spatial distribution of housing. This paper was analyzed by residents' perceptions and experiences based on the following criteria.

1) Spatial Disparities

The study found that there are significant spatial disparities in public rental housing in Yangon City. Unlike being clustered in one place, rental housing is spread throughout the city. Some neighborhoods have a higher concentration of public housing, while others have limited

availability, leading to unequal opportunities for residents. As a result, residents' development is also affected differently. In the past, public housing was implemented in the outskirts of the city, but now there are various developments all over the place. Due to urbanization, Yangon has a dense population everywhere, but the development varies depending on the area. It turns out that regardless of the development and location, many people are interested in living in public rental housing.

2) Accessibility

Residents' perceptions indicate that the location of public housing has an impact on their access to various opportunities. Housing that is situated closer to the city center, business hubs, industrial zones, schools, healthcare facilities, and public transportation facilities has received more positive responses from residents as it provides them with more opportunities. Those housing developments that are conveniently located near workplaces, schools, and healthcare facilities have higher satisfaction scores. According to some residents, they prefer to live in a place with public transportation near their workplace. Even if education and health services are not situated within the housing area, residents would still be satisfied if they were in an easily accessible place.

These experimental research areas are places where employment opportunities are abundant depending on their location, but living standards and opportunities vary based on the environment. Among these pilot research housings, U Wisarra Housing, located in the city center, has the best service accessibility. Mahar Bandula Housing, which is situated close to the industrial zones, offers the best employment opportunities. On the other hand, Pyin Ma Pin Housing, located outside the city, has slightly poorer service accessibility and job opportunities than the other two areas.

What is noteworthy is that the residents of Mahar Bandula Housing, who used to run shops in front of their houses before moving into this housing estate, have now relocated their businesses to the covered market next to their housing estate. During our research, we learned about their daily income and the success of the slum upgrading program. Mahar Bandula Housing also benefits from the presence of industrial zones around the housing camp, leading to better job opportunities compared to another public rental housing.

3) Infrastructure and Services

The perceptions of residents living in public housing are influenced by the availability and quality of infrastructure and essential basic services in their areas. The size and structure of the rooms, as well as the housing camp, also differ from place to place. Sometimes, even if the housing camp is the same, the housing styles may vary due to the year of construction. Adequate roads, electricity, water supply, sanitation facilities, and recreational spaces have a positive impact on the satisfaction levels of the residents.

This paper notes that public rental housings offer affordable rental prices with complete infrastructure. Some respondents mentioned that the housing is old, but the department provides periodic paint services and major maintenance services such as sewer repairs, plumbing repairs, and electrical aspects. The department also repairs damages to the interior of the houses. There is a housing maintenance committee to which complaints can be made for maintenance, and minor amendments are prepared by them self without reporting to the authorities.

It has been observed that some of the houses have been damaged for a long time, so the residents have repaired certain things themselves without complaining to the government. They do so honestly and without any frustration. When asked, residents of these housing areas responded that they find it difficult to live near the city center or industrial areas due to their income levels. They are very satisfied that the government has allowed them to live in a safe and secure residential camp with complete infrastructure. This is a strong opinion of the residents.

4) Rental Fees

Rent market prices are currently very high, especially in areas with complete infrastructure and proximity to city centers or abundant employment opportunities. Public rental housing, on the other hand, offers affordable rental fees. In U Wisarra Housing and Pyin Ma Pin Housing, monthly rental fees range from a minimum of Kyats 1250/- to a maximum of Kyats 12500/- per unit, depending on the floor layer and the apartment owner's income. Mahar Bandula Housing has a rental fee of Kyats 30000/- per unit per month. Public housing rents are found to be 5 to 15 times cheaper than market prices, depending on the development area. Residents who were interviewed stated that they find the rent in the market very expensive, with some areas lacking basic infrastructure such as water and electricity for tenants. Public rental housing, however, has fully functional basic infrastructure, including roads, water, and electricity, and the rent is very low. The residents are very satisfied with the living standards in the housing complex.

5) Social Impacts

The study found that there are differences in attitudes among various population groups such as education, occupation, income level, age, household size, and duration of stay in Yangon. Rental housing in U Wisarra has been occupied by the same tenants for many years, resulting in the original tenants being long gone. U Wisarra Housing is mainly occupied by upper and middle-class residents who are mostly educated, and there are hardly any social issues. Respondents' opinions on the Maha Bandula Housing project indicate that retired government and school teachers prefer to live in a quiet and peaceful environment. However, people from slums have low living standards and tend to quarrel more often. Residents of the Maha Bandula Housing project are a mix of retired government employees and people who live in the slums, making it difficult to maintain social harmony. Pyin Ma Pin Housing estate is exclusively for retired employees and their families, so there is equality among the residents.

6) Living Conditions

The study found that there are differences in the quality of living conditions based on the location of the housing. Housing in well-developed and accessible areas received higher satisfaction scores, while housing in more isolated or poorly serviced areas faced challenges related to amenities such as maintenance, safety, community engagement, and infrastructure.

The study focused on three specific areas and found that U Wisarra Housing had the highest standards of living among the three. The housing is located in the city center and has been given priority to government employees since 1954. As a result, everything is conveniently located and the standard of living is high.

Pyin Ma Pin Housing residents are mostly retired government employees, and while they do not have a high income, they have a moderate standard of living.

On the other hand, Maha Bandula Housing has two buildings that are from slums, resulting in a lower standard of living for those residents. The study found that rent was not regularly paid in Maha Bandula Housing, making it difficult to collect rent. Respondents who lived in Maha Bandula Housing previously noted that they had to worry about fire and theft, and had difficulty accessing clean water and electricity when they were in slum areas. Living in a squatter's tent also made them feel insecure about when they would have to move out. However, after moving to public rental housing, they were satisfied with the basic infrastructure provided, including access to clean water, electricity, and safety. They felt that their standard of living had improved. Overall, public rental housing has improved the standard of living for residents.

7) Environmental Impacts

Residents' satisfaction is determined by the quality of their environment, including both the good and bad conditions. Most rental housing camps have a public recreation area, a soccer field, or a small park. Housing developments located in areas with green vegetation, a clean environment, reduced air pollution, low noise levels, and tranquility are associated with higher levels of resident satisfaction. Safety and security concerns are also critical factors that affect residents' perceptions. Developments located in well-lit and secure areas receive more positive feedback, while those in less safe environments face challenges related to safety perceptions. According to U Wisarra Housing, being in the center of the city, near the police station, and close to service points makes for a safe and secure environment.

Pyin Ma Pin Housing, located on the outskirts of the city, away from other residential areas, with green lands, and next to the military area, has a peaceful, safe, and green environment. Respondents have stated, “There is safety in the housing compound. It is not safe outside the courtyard of the house when it is dark because of a lot of vacant land, not enough well-lit areas, and a lack of neighborhoods”.

Maha Bandula Housing has a livable, safe, and green environment with vacant land and green areas with security gates. Residents have responded that “there is complete security. Having a 24/7 security guard provides security to the compound, and we have access to fresh air and can easily go to work". So they have a livable environment.

Perceptions of Residents: Challenges and Opportunities

Based on the research results, living in the center of the city is relatively easy with no major challenges. However, people living in the outskirts of the city, especially in Pyin Ma Pin Housing camp, face several challenges including spatial disparities, environmental factors, infrastructure, and limited opportunities. (Table 2) and (Figure 6). Maha Bandula Housing poses social challenges as some residents fail to follow the rules, with some breaking them altogether. Rent collection is also a major issue, with some tenants not paying regularly. Some ground-floor tenants have turned their homes into shops by removing doors and windows, while others engage in illegal subletting. Housing administrators, therefore, called for stricter rules and enforcement. The study suggests that the Housing Estate Management Committees be formed systematically, and the department should strictly enforce the rules.

Table 2: Challenges of Residents in Pilot Public Rental Housing

No.	Criteria	U Wisarra Housing	PyinMaPin Housing	Mahabandula Housing
1.	Spatial Disparities	0	50%	0
2.	Accessibility	0	60%	0
3.	Infrastructure and Services	0	20%	0
4.	Rental Fees	0	0	0
5.	Social Impacts	0	20%	40%
6.	Living Conditions	0	0	0
7.	Environmental Impacts	0	20%	0

Source: Field Survey (2023)

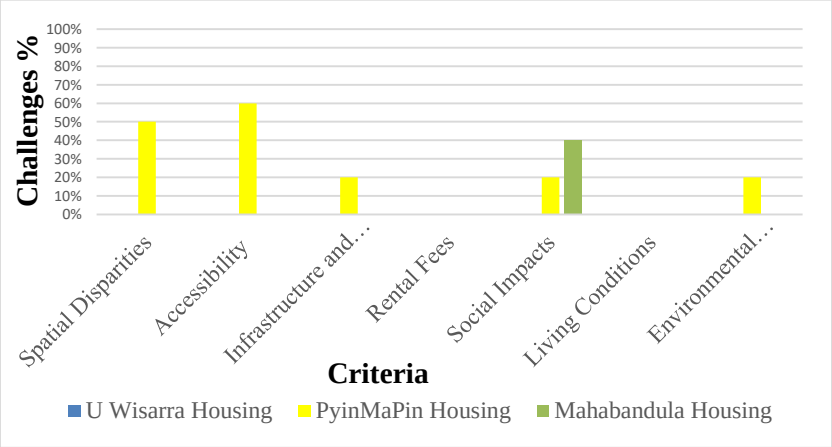

Figure 6. Challenges of residents in Pilot Public Rental housings

Source: Based on table 2 (2023)

These studies, show that people living in public rental housing have better opportunities and satisfaction than people living in other private rental housing. (Table3) and (Figure.7), U Wisarra Housing has the best opportunities. Maharbandula Housing has more opportunities than Pyin Ma Pin Housing.

Table 3: Opportunities for residents in pilot public rental housing areas

No	Criteria	U Wisarra Housing	PyinMaPin Housing	Mahabandula Housing
1.	Spatial Disparities	100%	50%	70%
2.	Accessibility	100%	40%	80%
3.	Infrastructure and Services	100%	90%	90%
4.	Rental Fees	100%	100%	100%
5.	Social Impacts	100%	80%	50%
6.	Living Conditions	100%	60%	80%
7.	Environmental Impacts	100%	70%	80%

Source: Field Survey, (2023)

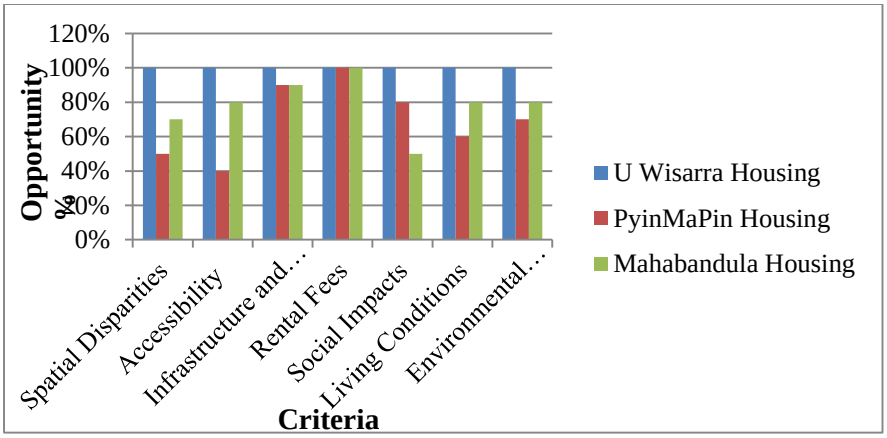

Figure 7. Opportunities for residents in pilot public rental housing areas

Source: Based on Table 3.

Recommendations and Suggestions

Quality of life and affordability are key indicators of a country's development and stability. Public rental housing is an important need, especially for low- and moderate-income people. Due to high demand, many people are looking for public rental housing. There should be a systematic survey of illegal residents by the township to provide them with rental housing. Establish short-term, mid-year, and long-term plans and make public rental housing mandatory. The **"5A Principles of Availability, Accessibility, Affordability, Acceptability, and Adaptability"** must be followed in the development of international public rental housing areas. In particular, as this research finds, it is important to carefully consider the location of public rental housing to provide easy access to the public, access to employment opportunities, and inclusion in the security system in the future that Burmese people desire. The main requirement is to enforce the rules. It is seen that the action taken against those who do not follow the rules set by the department is weak.

Figure 8. 5A Principles for Public Rental Housing Areas

Source: Lecture from Institute of Urban and Housing Studies, Netherlands

Conclusion

The study highlights the importance of how the availability of public rental housing areas is distributed in shaping the perceptions and experiences of its residents. Many people prefer living in public rental housing areas due to its benefits such as complete infrastructure, low rent, and residential area with a courtyard. Residents have provided feedback that there is a high demand for public rental housing, and the government needs to provide more of it since the current distribution of rent and housing is imbalanced. When comparing the challenges and satisfaction of residents, satisfaction is found to be greater. Policymakers and urban planners need to address spatial disparities, improve housing quality and amenities, and promote access to opportunities for more equitable and sustainable public housing solutions in Yangon City.

Public rental housing in Yangon, as in many urban areas around the world, can have a significant socio-economic impact on the City and its residents. Public rental housing initiatives aim to address these challenges by reducing housing rental costs for low-income people, improving accessibility for low-income families, reducing homelessness and upgrading slums, reducing the informal economy, promoting economic stability and social cohesion, integrating urban development and planning, and promoting education and improving living conditions. Regular monitoring and evaluation are essential to assess and improve the effectiveness of such initiatives in addressing housing challenges and promoting socio-economic well-being.

The results of this study can serve as a crucial base for enhancing the quality of life and opportunities for individuals residing in public rental housing areas in Yangon. The distribution of public rental housing has been influenced by urban planning policies and decisions related to housing development. The study has underscored the significance of considering social equity and inclusion in urban planning to create more balanced and sustainable communities. Based on the research findings, those in authority will have access to crucial information that can help identify public rental housing in the future. It is hoped that the conclusions and findings of this study will help advance knowledge and lead to positive changes in the spatial distribution of public rental housing residents in Yangon, ultimately resulting in an improvement in their quality of life.

Acknowledgment

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MONSOON PADDY CULTIVATION IN KYAING TONG TOWNSHIP

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Abstract

Kyaing Tong is one of the five townships of Kyaing Tong District, and is located in Eastern Shan State, Myanmar. Physical condition of the township is composed of many hilly areas and a few flatlands. The region experiences Humid Subtropical Climate. This study focuses mainly on the spatial variation of monsoon paddy cultivation in Kyaing Tong Township. In this research paper, Weaver's crop combination method and relative yield and relative spread indices are calculated based on cropped area and yields. According to Weaver's method there are 5 crop combination areas in Kyaing Tong. Based on 2022-23 data, 18 village tracts were monsoon paddy high yield-high spread areas, 9 village tracts- high yield- low spread areas, 2 village tracts- low yield- high spread areas and 3 village tracts- low yield- high spread areas. Besides, geospatial techniques used to identify the most productive and suitable areas for crop production and spread.

Keywords*:* Kyaing Tong, monsoon paddy, relative yield indices, relative spread indices, Weaver's crop combination method

Introduction

Kyaing Tong Township is situated in Eastern Shan State and belongs to the easternmost part of Myanmar. It is located between latitudes 20º 58′ N and 21º 35′ N and also between Longitude 99º 16′ E and 99º 58′ E. The area is covered by 3,783.31 square kilometres or 1,460.74 square miles. The elevation is 531 meters above sea level.

Based on the relief, the drainage pattern is typically distributed in the centre of the study area. The stream flows to the north direction accordingly. Thus, the cropping pattern is more tremendous and concentrated on the levelling plain area than any other the peripheral rugged region because of the marginal areas of the township are higher lands.

The equal proportions of silt and clay are also contained and richer in plant nutrients. The Meadow Alluvial Soils are also suitable for groundnut, sesamum, sunflower, jute, sugarcane and vegetables other than paddy. The relief and climatic conditions of Kyaing Tong are composed of lofty mountains these are favourable to shifting cultivation especially monsoon paddy and other crops and rubber plantation.

The total area of Kyaing Tong Township is 934,977 acres (378,371.8 hectares) or 1,460.9 square miles. In 2022-2023 data, 8.57 percent or 80089 acres is used for cultivated Land, 13.43 percent or 125595 acres for cultivable virgin land, 17.25 percent or 161283 acres for forest land, 28.5 percent or 266448 acres with unclassified forest and non- cultivated land amounted to 32.25 percent or 301,562 acres of Kyaing Tong Township area. According to the data, average land-man ratio for the whole township is about 0.3 acre per person in 2022-2023.

Monsoon paddy is the dominating constituents in the first ranking crop combinations or monoculture, which covers all of the village tracts in township. In Kyaing Tong Township, of the

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total cultivated area of 80089 acres, 47988 acres represent the monsoon paddy net sown area, i.e., about 60 per cent. In order of area covered, the most important crops are monsoon paddy, rubber, maize, corn, groundnut and soyabeans. Crops occupying less than one per cent of the gross cultivated area have not been included as they occupy an insignificant area.

Study Area

Kyaing Tong Township is situated in Eastern Shan State and belongs to the easternmost part of Myanmar. It is located between latitudes 20º 58′ N and 21º 35′ N and also between longitudes 99º 16′ E and 99º 58′ E. The area is covered by 3,783.31 square kilometres (1,460.74 square miles). It is bounded on the north by Mong Khat Township, on the north-east by Mong Lar Township, on the southeast by Mong Phyat Township, on the northwest by Mong Hsat Township and on the west by Mong Pyin Township.

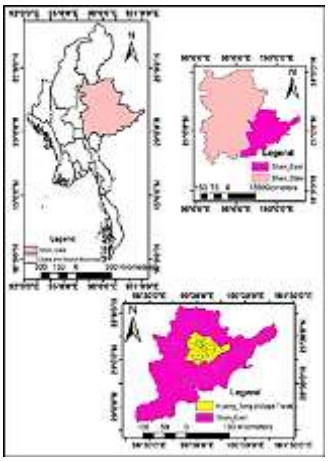

Figure 1. Location of Kyaing Tong Township

Source: Myanmar Information Management Unit (MIMU_2021)

Aim

The aim of this research is to present the spatial distribution of monsoon paddy cultivated areas in Kyaing Tong, the first ranking crop.

Objectives

The objectives are to present the crop combinations of Kyaing Tong by Weber's method, and to calculate and explore the relative yield and relative spread indices (Jasbir Singh & S.S. Dhillon) and their distributional areas.

Materials and Methods

The primary data are acquired through field observation and secondary data from the relative offices of Township General Administrative Office, District Immigration Office and Agricultural Land Management and Statistics Department of Kyaing Tong Township. The acquired data are organized and analyzed by figures, and questionnaire method, simple statistical methods in descriptive and explanatory forms are presented. In this research, Weaver's crop

combination method and relative yield and relative spread indices are calculated based on cropped area and yields by Jasbir Singh & S.S. Dhillon (2004).

Results and Discussion

Depending on the terrain, topography, slope, temperature, amount and reliability of rainfall, soils and availability of water for irrigation, the cropping patterns vary from place to place in Kyaing Tong. The perception and assessment of environment also guide to grow certain crops in this area. Those areas of the study area where physical diversities are less, the cropping patterns are less diversified. For example, in the steep slope areas of the village tracts in Kyaing Tong, the farmers grow coffee or tea leaf or millet, while in the valley or near from creeks areas, monsoon paddy is the dominant crop.

The cropping patterns of the study area or areal unit may be determined on the basis of areal strength of individual crops. (Jasbir Singh & S.S. Dhillon (2004): "Agriculture Geography" and Grigg, D. (1995): *"*An Introduction to Agricultural Geography**"**) The first and second ranking crops of an areal unit may be called as the dominant crops of that unit or the study area. These crops, if occupying more or less the same percentage of the total cropped area, shall be competing for area with each other and the farmer will decide which crop may fetch him more profit in a given year under the prevailing rainfall and demand, supply and commodity price condition. In general, for the determination of cropping patterns of a region, the minor crops (crops occupying insignificant proportion of the total cropped area) are eliminated.

In this research, computed the percentage of total cultivated lands occupied by each crop that held as much as 1 per cent of the total cultivated land in each of the 32 village tracts covered in the study area. Excluding a few village tracts like Yang Kying, Kat Taung, Wut Sawng, Kat Htaik, Yang Law, Loi Long, Kat Hpa, Mong Lat and Urban area in which the crop combination was easy to ascertain of monoculture, other village tracts showed a complex and confused picture of the percentage, occupied by different crops.

In this work, calculated deviation of the real percentages of crops (occupying over 1 per cent of the cropped area) for all the possible combinations in the component areal units against a theoretical standard by Weaver.

The deviation of the actual percentages from the theoretical curve is seen to be the lowest for a 5-crop combination. This result established the identity and the number of crops in the basic combination for the Kyaing Tong Township as monsoon paddy, rubber, maize, soyabean and groundnut.

The resultant cropping patterns plotted in Figure 2 are crop combination areas by village tract. The application of Weaver's method gave 5 crop combination areas in Kyaing Tong. The village tracts falling into different crop associations are given in Table 1.

Table 1. Kyaing Tong: Crop Combination Areas, 2022- 2023

No. of Crop	No. of Village Tracts	Names of the Village Tracts
Monoculture	9	Yang Kying, Kat Taung, Wut Sawng, Kat Htaik, Yang Law, Loi Long, Kat Hpa, Mong Lat and Urban
2	3	Mong Lan, Nawng Kon, Mong Zin
3	2	Mong Naw/ Hpar Ta, Nam Khat
4	1	Nam Inn
5	17	Tar Lu / Tar Lay, Mong Kaing, Wut Swng, Loi Mway, Pin Tauk, Pang Mat, Mong Pang (Middle), Pang Kyu, Mong Ngun, Mong Inn, Yang Hka, Nam Ni / Nam Long, Nar Paw, Naung Taung, Hway Kwei, Mong Hkun, Mong Pat (Upper), Mong Pat (Lower)

Source: Agricultural Land Management and Statistics Department, Kyaing Tong

Weaver's method has admirably been accepted and applied for the demarcation of crop combination and agricultural regionalization as its application results into suitable and accurate grouping of crops. The technique, however, gives most unwieldy combinations for the units of high crop diversification.

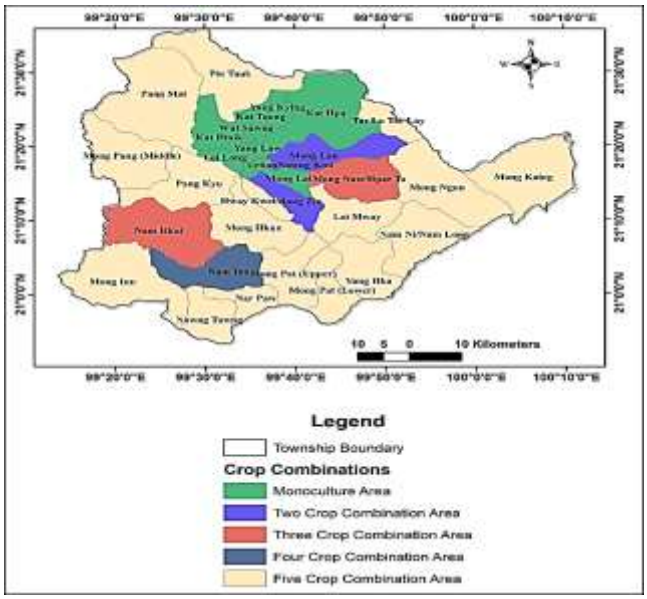

Figure 2. Kyaing Tong: Crop Combination Areas, 2022- 2023

(Weaver's Standard Deviation Method)

Source: Table 1

Such a problem of generalized crop combination was met in 9 village tracts of Kyaing Tong. In two, out of them, Wut Sawng Village Tract and Urban, the decrease in the variance was identical i. e., the value of 4 (Table 2) where every crop occupying as much as 1 per cent of the gross cultivated area was included in the combination to produce the lowest variance.

Table 2. Weaver's Method: Variance Values

Village Tract	Variance Values				
	Monoculture	**2-crop combination**	**3-crop combination**	**4-crop combination**	**5-crop combination**
Hway Kwei	1296	782.5	588.89	494.5	443.8
Kat Hpa	484	1004.5	1044.623	937.5	
Kat Htaik	324	1480	1287.423	1092.75	943.4
Kat Taung	49	2076.5			
Loi Long	81	1853	1741.157		
Loi Mway	2601	613	317.9567	263.25	241.592
Mong Hkun	2025	1025	750.49	589.5	484.4
Mong Inn	7569	1789			
Mong Kaing	3364	914	469.1567	335.75	
Mong Lan	1936	180	402.89	423.75	
Mong Lat	625	1034.5	1036.89		
Mong Naw/Hpar Ta	3969	246.5	116.7567	154.25	170.4
Mong Ngun	7225	1494.5	538.3567	259.75	159.6
Mong Pang (Middle)	1849	785	566.3567		
Mong Pat (Lower)	2209	1017	682.49		
Mong Pat (Upper)	2704	802	519.9567	398.75	324.2
Mong Zin	961	212.5	756.09		
Nam Hkat	7396	1752.5	736.2233		
Nam Inn	7225	1625	684.6233	367	
Nam Ni/Nam Long	1849	992.5	684.09	536.5	455
Nar Paw	6561	1538.5	660.3567	361.25	224.8
Nawng Kon	1444	144	530.3567		
Nawng Tawng	5776	1442.5	640.89		
Pang Kyu	961	902.5	804.8733		
Pang Mat	2500	882			
Pin Tauk	1764	716.5	506.49	421.25	378.2
Tar Lu Tar Lay	3969	966.5	466.3567	298.5	228.6
Urban	4	1730	1619.29		
Wut Sawng	4				
Yang Hka	1849	1037	721.1567	566.25	466.2
Yang Kying	225	1670.5	1483.157	1252.25	1069.6
Yang Law	16	2070.5			
Township Level	**1600**	**1018**	**753.0233**	**614.2225**	**517.778**

Source: Agricultural Land Management and Statistics Department, Kyaing Tong

In the remaining seven village tracts (Yang Kying, Kat Taung, Kat Htaik, Yang Law, Loi Long, Kat Hpa, Mong Lat), the value of variance does not show gradual decline. In these village tracts the variance decreases up to a few places from where it increases and then decreases again so as to surpass even the former decrease.

Weaver's technique when applied at the village tract level for the period of 2022- 2023 gives five crop combinations to Kyaing Tong which have been plotted in Figure 2.

Apart from the proportion of area under a particular crop, their relative yields also guide the suitability of that crop in a given geoclimatic and cultural setting. (Dayal Edison, (1984): "Agricultural Productivity of India") The relative yield index and the relative spread index for the determination of suitability of crop may be calculated by applying the following formulas:

Relative Yield Index = $\frac{Mean\ yield\ of\ the\ crop\ in\ a\ component\ areal\ unit}{Mean\ yield\ of\ the\ total\ area}$ x 100

Relative Spread Index = $\frac{Area\ of\ the\ crop\ expressed\ as\ percentage\ of\ the\ total\ cultivated\ area\ in\ the\ areal\ unit}{Area\ of\ the\ crop\ expressed\ as\ percentage\ of\ the\ total\ cultivated\ land\ in\ the\ entire\ region}$ x 100 (Jasbir Singh & S.S. Dhillon (2004): "Agriculture Geography")

On the basis of these indices the suitability of the crop grown in Kyaing Tong area is ascertained. If the relative yield index is below 90 per cent, then it may be an inefficient crop and therefore should not be devoted more area to its cultivation.

In greater parts of Kyaing Tong, agriculture is still largely subsistent in character. Consequently, the food grain crops occupy over 80 per cent of the gross cropped area. Among the cereals monsoon paddy ranks firstly. Maize, groundnut, soyabean and rubber are also important. The subsistent cropping patterns of Kyaing Tong are based on utilization of the inherent fertility of the soil without the much use of modern inputs and technology because of mostly shifting cultivation types.

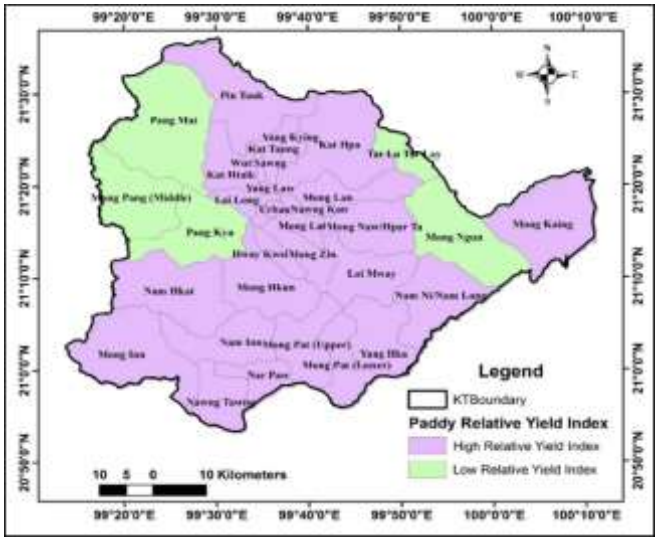

Figure 3. Monsoon Paddy Relative Yield Conditions for 2022-2023

Source: Agricultural Land Management and Statistics Department, Kyaing Tong

In this research, the relative yield index and relative spread index are calculated for monsoon paddy crops only for example. According to the 2022-23 data, paddy low relative yield village tracts or areas (relative yield index is below 90 per cent) are Pang Mat, Mong Pang (middle), Pang Kyu, Tar Lu/ Tar Lay and Mong Ngun village tracts. The remaining village tracts have high relative yield indices for monsoon paddy.

The horizontal expansion of agriculture is not possible without heavy capital investment and the study area situated on mountainous area. The change in the cropping pattern and introduction of crops which enhance the soil fertility are imperative to make agriculture more remunerative and sustainable.

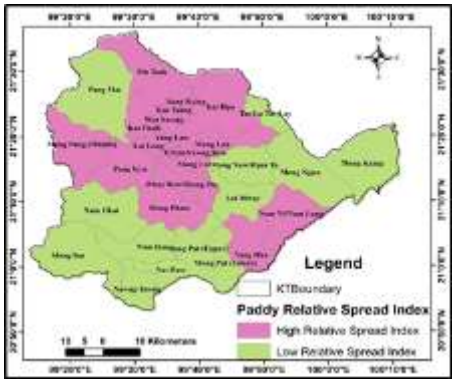

Figure 4. Monsoon Paddy Relative Spread Conditions for 2022-2023

Source: Agricultural Land Management and Statistics Department, Kyaing Tong

Crop concentration or relative spread of crop means the variations in the density or more cultivated area (hectare or acres) of any crop in an area/region at a given point of time. The concentration of a crop in an area largely depends on its terrain, temperature, moisture and pedological conditions. (Priyadharshini, S. Dr. and S.Aruchamy,S.(2014): "Agricultural Regionalization Based on Cropping Pattern in Sweta Nadhi Basin, Tamil Nadu") It has a tendency to have high concentration in the areas of ideal agroclimatic that monsoon paddy has high concentration elevation under 1198 meter in relief of the study area, and dominates near creeks and is the leading crop in Kyaing Tong. Besides, monsoon paddy grows well even with the help of minimum inputs, and thus has great significance for agricultural development and planning.

Table 3. Monsoon Paddy Relative Yield and Spread Indices

Village Tract	Paddy Acre	Total Cultivated acres	Relative Spread Index	Yield per Acre (bucket)	Relative Yield Index
Hway Kwei	373	587	111	81.41	94
Kat Hpa	4570	5896	136	86.69	100
Kat Htaik	4655	5702	143	88.93	103
Kat Taung	3156	3382	164	84.92	98
Loi Long	2979	3282	159	89.94	104
Loi Mway	1281	2627	86	81.37	94
Mong Hkun	2459	4464	97	88.41	102
Mong Inn	447	3365	23	82.01	95
Mong Kaing	406	978	73	84.68	98
Mong Lan	2161	3873	98	81.88	94
Mong Lat	1881	2497	132	90.16	104
Mong Naw/Hpar Ta	426	1162	64	77.84	90
Mong Ngun	104	688	27	77.22	89
Mong Pang (Middle)	1147	2005	100	67.35	78

Village Tract	Paddy Acre	Total Cultivated acres	Relative Spread Index	Yield per Acre (bucket)	Relative Yield Index
Mong Pat (Lower)	1287	2437	93	84.47	97
Mong Pat (Upper)	855	1792	84	80.54	93
Mong Zin	2103	3057	121	84.92	98
Nam Hkat	419	2940	25	89.7	103
Nam Inn	376	2567	26	89.78	104
Nam Ni/Nam Long	609	1071	100	79.96	92
Nar Paw	504	2619	34	84.2	97
Nawng Kon	233	378	108	89.21	103
Nawng Tawng	678	2808	42	90.27	104
Pang Kyu	1858	2686	121	76.08	88
Pang Mat	1080	2157	88	71.09	82
Pin Tauk	1675	2902	101	78.27	90
Tar Lu Tar Lay	270	730	65	73.3	85
Urban	385	392	172	88.72	98
Wut Sawng	3701	3784	172	89.83	104
Yang Hka	1126	1985	100	83.1	96
Yang Kying	2098	2469	149	85.52	99
Yang Law	2686	2807	168	86.7	100

Sources: Agricultural Land Management and Statistics in Kyaing Tong.

Within the study area, monsoon paddy low relative spread indices for 2022-2023 are Pang Mat, Nam Hkat, Mong Inn, Nawng Tawng, Nar Paw, Nam Inn, Mong Pat (upper), Loi Mway, Nong Nar/Hpar Ta, Mong Ngun, Mong Kaing and Tar Lu/ Tar Lay village tracts. Other village tracts have high relative spread areas for monsoon paddy in 2022-2023.

Findings and Suggestion

The area under each crop in a given region may be classified under four categories:

(i) High yield, high spread areas,

(ii) High yield, low spread areas,

(iii) Low yield, high spread areas and

(iv) Low yield, low spread areas.

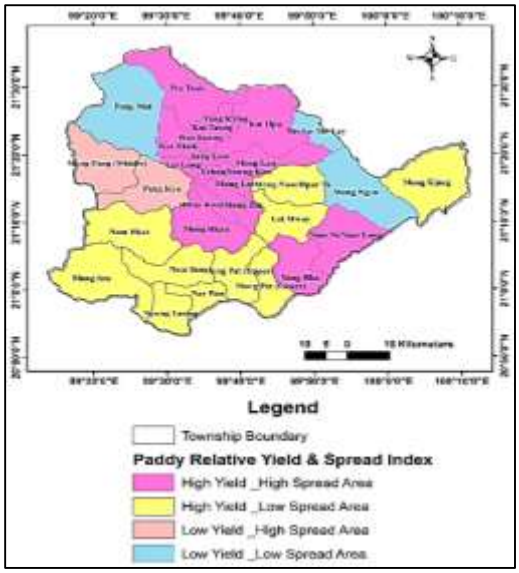

Figure 5. Monsoon Paddy Relative Yield and Relative Spread Areas in Kyaing Tong for 2022-2023
Source: Agricultural Land Management and Statistics Department, Kyaing Tong

Within the study area, monsoon paddy high yield- high spread areas are Pin Tauk, Yang Kyaing, Kat Taung, Wut Sawng, Kat Htaik, Yaung Law, Loi Long, Nawng Kon, Mong Lan, Kat Hpa, Mong Lat, Hway Kwei, Mong Zin, Mong Hkun, Yang Hka, Nam Ni/ Nam Long, Mong Pat (lower) village tracts and urban area.

High yield- low spread areas are Mong Naw/ Hpar Ta, Loi Mway, Nam Hkat, Mong Inn, Nam Inn, Nar Paw, Nawng Tawng, Mong Pat (upper) and Mong Kaing village tracts.

In Kyaing Tong Township, monsoon paddy Low yield- high spread village tracts in 2022-2023 are Mong Pang (middle) and Pang Kyu.

Low yield- low spread areas are Pang Mat, Tar Lu/ Tar Lay and Mong Ngun village tracts respectively.

On the availability of an alternative more efficient crop than the existing ones, new cropping patterns may emerge in an area. The cropping patterns may be intensified with the help of high yielding short duration varieties. Any cropping sequence to be adopted by the cultivators should be flexible.

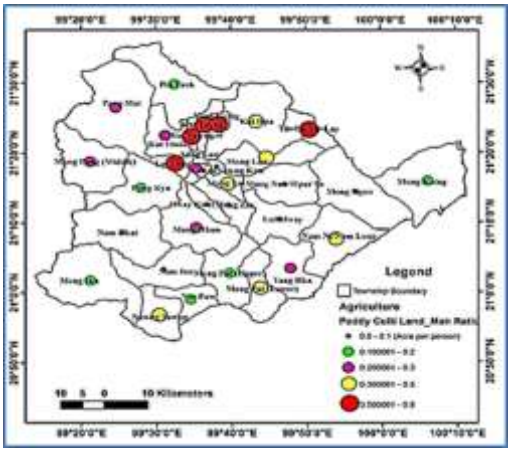

Figure 6. Paddy Cultivated Land- Man Ratio of Kyaing Tong
Source: Table 2

According to the data, average land- man ratio for the whole township is about 0.1 hectare per person (0.2 acre per person) in 2022-2023. Kyaing Tong urban area has total cultivated area of 155.8 hectare (385 acres) with total population over 58000 persons, therefore the ratio of cultivable land- man ratio 0.003 or zero acre per person. Paddy 0.2 hectare per person (0.1acre per person) areas found at Hway Kwei, Mong Naw/Hpar Ta, Loi Mway, Mong Ngun, Nam Hkat, Nam Inn, Mong Zin and Nawng Kon village tracts.

Table 4. Monsoon Paddy Cultivated Land- Man Ratio of Kyaing Tong

Village Tract	Total Population	Paddy Cultivated acres	Paddy Cultivated Land (acre per Person)	Paddy Cultivated Hectare	Paddy Cultivated Land (Hectare per Person)
Hway Kwei	3773	373	0.10	150.9	0.04
Kat Hpa	10328	4570	0.44	1849.4	0.18
Kat Htaik	13326	4655	0.35	1883.8	0.14
Kat Taung	5721	3156	0.55	1277.2	0.22
Loi Long	5310	2979	0.56	1205.6	0.23
Loi Mway	9072	1281	0.14	518.4	0.06
Mong Hkun	8812	2459	0.28	995.1	0.11
Mong Inn	2714	447	0.16	180.9	0.07
Mong Kaing	1837	406	0.22	164.3	0.09
Mong Lan	5934	2161	0.36	874.5	0.15
Mong Lat	4052	1881	0.46	761.2	0.19
Mong Naw/Hpar Ta	6255	426	0.07	172.4	0.03
Mong Ngun	2607	104	0.04	42.1	0.02
Mong Pang (Middle)	4181	1147	0.27	464.2	0.11
Mong Pat (Lower)	2901	1287	0.44	520.8	0.18
Mong Pat (Upper)	3618	855	0.24	346.0	0.10
Mong Zin	18326	2103	0.11	851.1	0.05
Nam Hkat	5584	419	0.08	169.6	0.03
Nam Inn	4881	376	0.08	152.2	0.03
Nam Ni/Nam Long	1621	609	0.38	246.5	0.15
Nar Paw	2989	504	0.17	204.0	0.07
Nawng Kon	2006	233	0.12	94.3	0.05
Nawng Tawng	1698	678	0.40	274.4	0.16
Pang Kyu	9782	1858	0.19	751.9	0.08
Pang Mat	3840	1080	0.28	437.1	0.11

Village Tract	Total Population	Paddy Cultivated acres	Paddy Cultivated Land (acre per Person)	Paddy Cultivated Hectare	Paddy Cultivated Land (Hectare per Person)
Pin Tauk	10506	1675	0.16	677.8	0.06
Tar Lu Tar Lay	336	270	0.80	109.3	0.33
Urban	58945	385	0.01	155.8	0.00
Wut Sawng	4556	3701	0.81	1497.7	0.33
Yang Hka	4369	1126	0.26	455.7	0.10
Yang Kying	3713	2098	0.57	849.0	0.23
Yang Law	9293	2686	0.29	1087.0	0.12
Township		47988	0.21	19420.1	0.08

Sources: Immigration and National Registration Department of Kyaing Tong District
Agricultural Land Management and Statistics in Kyaing Tong.

The ratio between 0.1 hectare per person and (0.2 acre per person) village tracts are Mong Inn, Mong Kaing, Mong Pat (Upper), Nar Paw, Pang Kyu and Pin Tauk. The village tracts over ratio of 0.1 hectare per person i.e., between 0.2and 0.3 paddy cultivated acre per person include Kat Htaik, Mong Hkun, Mong Pang (Middle), Pang Mat, Yang Hka and Yang Law village tracts. The ratio between 0.2 hectare per person and 0.3 hectare per person i.e., (0.5 acre per person) areas found Kat Hpa, Mong Lan, Mong Lat, Mong Pat (Lower), Nam Ni/Nam Long, and Nawng Tawng village tracts. Paddy cultivated land- man ratio over 0.3 hectare per person (over 0.6 acre per person) village tracts are Kat Taung, Loi Long, Tar Lu/ Tar Lay, Wut Sawng and Yang Kying respectively. (Table 2 and Figure 5)

The cultivation of monsoon paddy in Kyaing Tong Township especially paddy as the first ranking crop village tract testifies this fact. Nevertheless, in different parts of the study area, the physical environment reduces the choice of crops, either by prohibiting the growth of certain plants or by reducing their yield per unit area.

Analysis for the relationship between monsoon paddy cultivated lands and elevation of relief, high paddy cultivation lands are located on an elevation under 1449 meter above sea level. Elevation over 1449 meter above sea level areas had paddy cultivated areas under 678 acres. (Figure 7)

Analysis for the relationship between monsoon paddy cultivated lands and slope condition within the study area, most of the paddy cultivation lands are located on the slope under 10 degrees. Degree of slope over 10 degree areas had paddy cultivated areas under 678 acres. (Figure 8)

Thus, the cropping pattern is more tremendous and concentrated on the levelling plain area than any other the peripheral rugged region because of the marginal areas of the township are higher lands. The relief and climatic conditions of Kyaing Tong are composed of lofty mountains these are favourable to shifting cultivation especially monsoon paddy and other crops and rubber plantation.

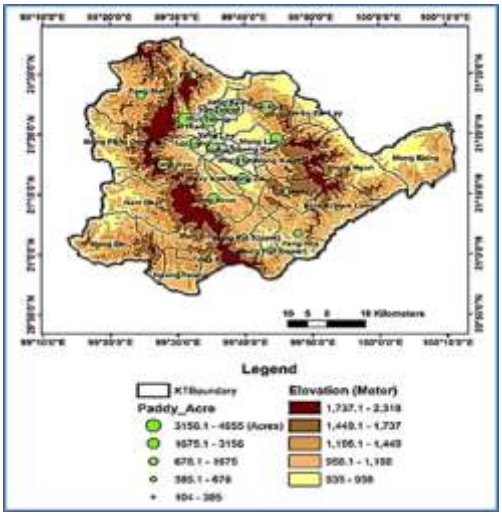

Figure 7. Relationship between Monsoon Paddy Cultivated Land and Elevation

Source: Table 4 and DEM

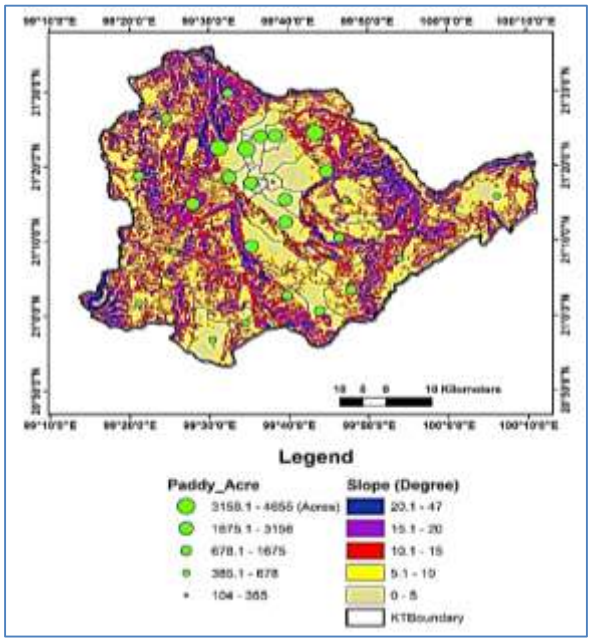

Figure 8. Relationship between Monsoon Paddy Cultivated Land and Slope Degree

Source: Table 4 and DEM

For the slope gradient i.e., slope percent rise per one kilometer, most of the monsoon paddy cultivations are found slope gradient under 9 percent rise per one kilometer distance. The remaining areas i.e., gradient over 9.1 percent rise per kilometer are little or no paddy cultivated lands. (Figure 9)

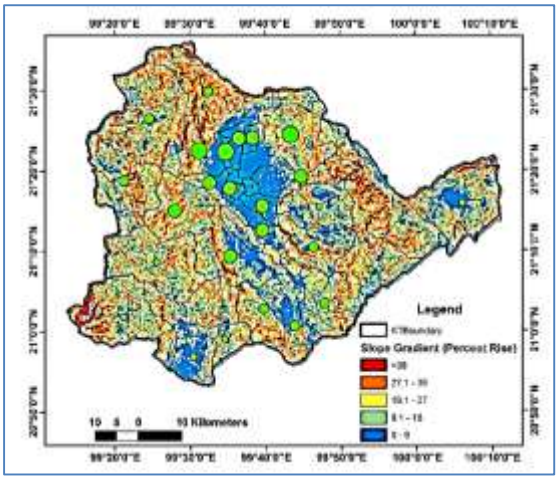

Figure 9. Relationship between Paddy Cultivated Land and Slope Gradient
Source: Table 4 and DEM

It is clearly seen that the monsoon paddy cultivations are related with water body or creeks of the study area. Most of the cultivated areas located near creeks or streams. (Figure 10)

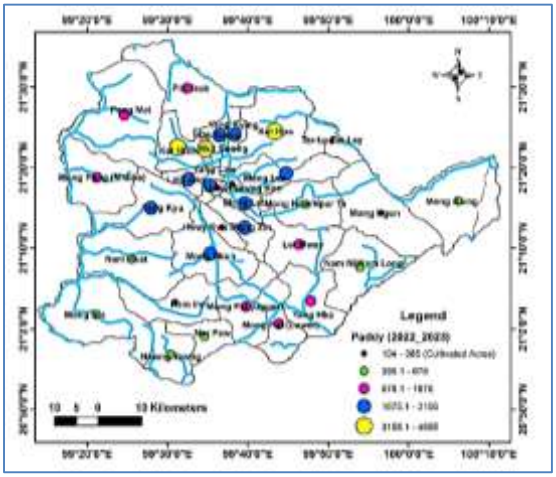

Figure 10. Relationship between Paddy Cultivated Land and Creeks
Source: Table 4 and DEM

Besides, most of the paddy cultivated lands located near the transportation roads. The remoteness areas has little paddy cultivation lands. (Figure 11)

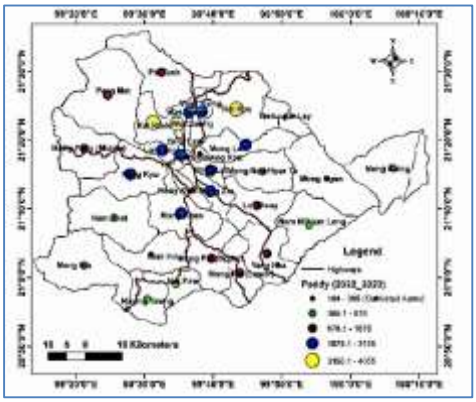

Figure 11. Relationship between Paddy Cultivated Land and Roads

Source: Table 4 and road map of Kyaing Tong

The soil types within Kyaing Tong Township is strongly relationship between topography, types of climate and vegetation cover as well as the soil units, properties and land use capability in those of the area.

The most prominent soil types in Kyaing Tong Township are Mountainous Red Brown Forest Soil (Cambisol-Chromic), Mountainous Brown Forest Soil (Cambisol-Histric) and Meadow and Meadow Alluvial Soil (Gleysol and Fluvison) and Red Earth and Yellow Earth (Acrisols). Mountainous Red Brown Soil can be found on the Shan Highlands at an elevation between 4,000 and 6,000 feet. Due to the practice of shifting cultivation, the area where the surface soils on the steep slopes have been eroded away. As such exposed soils are remained as the mountainous Red Brown Forest Soils.

Conclusion

The total area of Kyaing Tong Township is 378,371.8 hectares (934,977 acres). In 2022-2023 data, 8.57 percent or 32410.86 hectare (80089 acres) is used for cultivated Land, 13.43 percent or 50826.49 hectare (125595 acres) for cultivable virgin land, 17.25 percent or 65268.91 hectare (161283 acres) for forest land, 28.5 percent or107827.68 hectare (266448 acres) with unclassified forest and non- cultivated land amounted to 32.25 percent or 12237.81 heactare (301,562 acres) of Kyaing Tong Township area. According to the data, average land- man ratio for the whole township is about 0.08 hectare per person or 0.21 acre per person in 2022-2023.

Monsoon paddy is the dominating constituents in the first ranking crop combinations or monoculture, which covers all of the village tracts in township. In Kyaing Tong Township, of the total cultivated area of 32410.86 hectare (80089 acres), 19420.05 hectare (47988 acres) represent the monsoon paddy net sown area, i.e., about 60 per cent. In order of area covered, the most important crops are monsoon paddy, rubber, maize, corn, groundnut and soyabeans. (Phyu Thi Htet,Ma.(2019)) Crops occupying less than one per cent of the gross cultivated area have not been included as they occupy an insignificant area.

The suitability of a crop and cropping pattern may be judged on the basis of the following:

1. The crop should not accentuate certain diseases as a result of a fixed continuous rotation.
2. The crop should not exhaust on some specific plant nutrients from a particular depth of the soil.
3. The crop should be fertility building and soil improving.
4. The crop should fetch handsome return to the cultivator and should provide the farmer employment and income all the year round.

Moreover, the crop should ensure the optimum utilization of his resources, particularly inputs like irrigation water, chemical fertilizers, insecticides, pesticides, equipment, power and family labour. This research is useful for the local needs and regional development planning in Kyaing Tong Township.

Acknowledgements

In attempt to this research “Monsoon Paddy Cultivation in Kyaing Tong Township ", we are very grateful to Rector Dr. San San Mar, Kyaing Tong University, and Pro-rector, Dr. Mya Mya Khin for their permission for this research. The authors are highly grateful to the editors of Myanmar Academy of Arts and Science who give as permission to summit this research paper. The authors’ deepest gratitude goes to our colleagues and the participants who provide us grammar checked as well as thoughtful suggestions, careful assessments and valuable comments, concerning research paper.

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မြန်မာကျမ်းကိုးစာရင်း

ကျိုင်းတုံခရိုင် လူဝင်မှုကြီးကြပ်ရေးနှင့် အမျိုးသားမှတ်ပုံတင်ထုတ်ပေးရေးဦးစီးဌာန၊ လူဦးရေစာရင်းများ (၂၀၂၀)၊ ကျိုင်းတုံမြို့။

ကျိုင်းတုံမြို့နယ် အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ (၂၀၂၁)၊ ဒေသဆိုင်ရာ အချက်အလက်များ၊ ကျိုင်းတုံမြို့။

A GEOGRAPHY ANALYSIS ON HEALTH CARE CENTRES IN MEIKTILA TOWNSHIP

Soe Soe Yee[1], Nang San[2]

Abstract

In this paper, the researcher tried to seek the Medically Underserved Area (MUAs) with the different variables in Meiktila Township. With the help of geographical representation method and the weighted score introduced by the criteria for designation as MUA, the MUAs of the Meiktila Township is defined. Finally, the necessary actions which should be provided for the remote rural areas are proposed. With regard to the health care centres, the numbers of governmental health care centres and the numbers of visited patients to the concerned health care centres are considered. It can be admitted that, the data relating to the private clinics or private hospital in the study area could not be taken into account as the necessary and reliable data are not available from those private sources. The rural areas do have fewer physicians, fewer medical specialists and fewer dentists than the urban areas. It is found that an adequate health care work force is important to the rural area in two ways. Physicians, dentists and other health care practitioners working in rural communities of the study area may earn less in the full-service hospitals and the medical staffs have less access to advance technologies.

Introduction

"Health is a state of complete physical, mental and social well-being subjective or objective, from a state of physiological well-being, whether due to disease, injury or impairment is represented as sickness, illness, ill-health, disease, or morbid conditions." Recent advances in the field of medical geography have greatly improved to understand the role played by geographic distribution of health services in population health maintenance. Access to primary healthcare is recognized as an important facilitator of overall population health. Access to health services not only varies among countries and regions, but also within countries so that data should also be collected on sub-rational variation in access. Many rural areas may have considerable shortages of physicians, physician assistants, nurse practitioners, dentists, mental health providers, registered nurses, and other health care professionals. Primary care is recognized as the most important form of health care for maintaining population health because it is relatively inexpensive and can be more easily delivered than specialty and in patient care, and if properly distributed it is most effective in preventing disease progression on a large scale.

Aim and Objectives

The main aim of the study is to understand about the role of the Health Care Centres for rural people in the study area.

The specific objectives are:

- to study the ratio between total population and respective health care centre,
- to work out the ratio of health care staffs and population,
- to determine primary health care and basic services practised in the study area.

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Sources of Data and Methods

For spatial analysis from the available primary and secondary sources, the simple graphical methods are applied throughout the research work. For primary data, structured interview and questionnaire method are used to acquire information about health care centres. Certain secondary data will be collected from the various government offices.

Next to data acquisition, the appropriate method to demarcate the medically underserved areas is applied.

Study Area

The Study area of this paper is Meiktila Township. It is located in Meiktila district with in Mandalay Region. It lies between 20°39′ 15" North latitude and 21°00′ North latitude while the longitudinal extent of the township is between 95° 30′ 40" East longitude and 96° 00′ 55" East longitude. [Map (1)] The township is composed of Meiktila Town proper and 58 village tracts.

The topography of Meiktila Township can be divided into two regions:

1. the western undulating highland and
2. the eastern lowland.

Among the considered physical bases, relief feature is significantly determined on the location of health care centres. There are few centres in the western portion of the Township, due to its rugged terrain. (Map.2)

According to Koppen's climatic classification, Meiktila Township generally receives Tropical Steppe Climate (BSh).

The study area, Meiktila Township, is located in the Central Dry Zone of Myanmar. So, it is experienced by the dry climate with scanty rainfall and high temperature. Hence, it can be assumed that the people in the study area will be suffered from the tropical and zoonotic diseases. To understand the coverage area of medically protected in the township. Therefore, the study area will designate as Medically Underserved Areas (MUAs). Actually, medically underserved area may be a whole township or a group of contiguous village tracts or a group of urban centres in which residents have a shortage of personal health services.

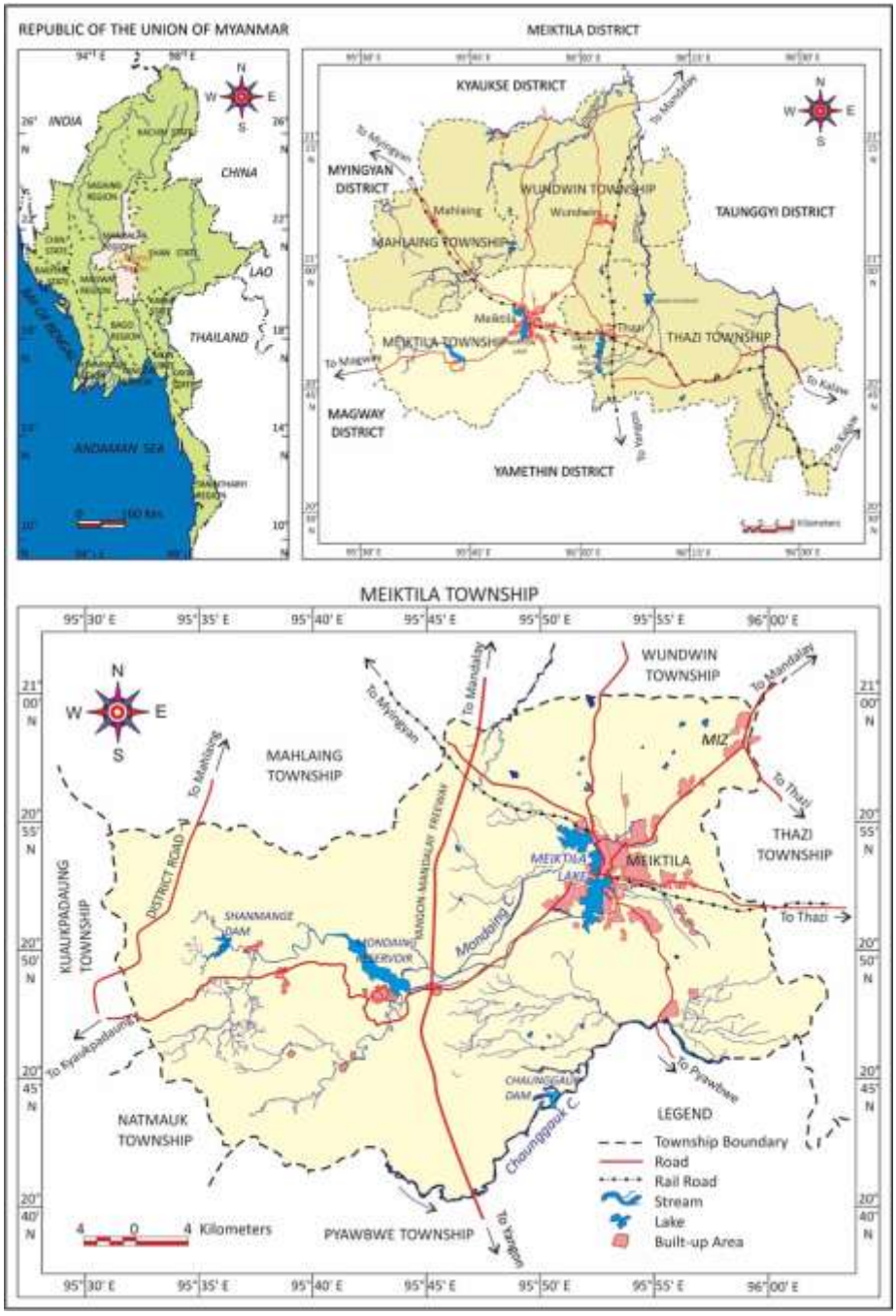

Figure 1. Location of Meiktila Township

Source: *Myanmar UTM Map* No.2095-9,2095-10,2095-13,2095-14 and 2096-1.

Most of the village tracts in the study area had a very low density of population. Very high populated areas were especially concentrated in the urban centres or around urban areas. Almost every village tract had at least sub-centre (i.e., primary health care centre) for health care in the township. But, by comparing to the respective population, there may not have sufficient facility of health care centres. Likewise, other facilities of health care workforce were still in shortage.

The study area is being located in the Central Plain of Myanmar and is more accessible than the other townships. There are sufficient water supply systems hand-dug wells or tube wells.

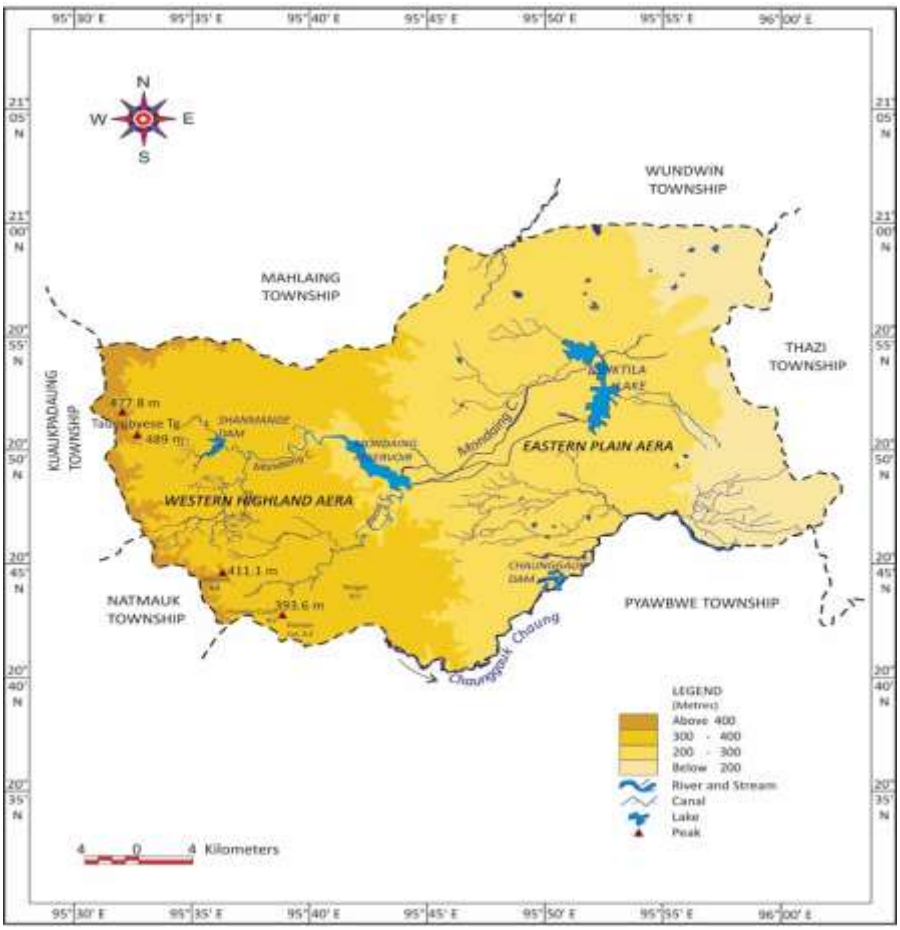

Figure 2. Relief and Drainage of Meiktila Township

Source: *Myanmar UTM Map* No.2095-9,2095-10,2095-13,2095-14, 2095-16 and 2096-1

Analysis on the Medically Underserved Area

Medically Underserved Areas (MUAs) is a particular place or a group of places in which residents have a shortage of personal or basic health services. This term is applied by the Indiana Primary Health Care Association, U.S.A. Moreover, the guidelines and criteria for MUAs can also be used in the study area because there generally have shortages of primary health care. To designate the MUAs, it is involved application of the Index of Medical Underservice (IMU) to date on a service area to obtain a score for that area. The IMU scale is from 0 to 100, where 0 represents completely underserved and 100 represents best served or least underserved. Under the established criteria, each service area found to have an IMU of 62.0 or less qualifies for designation as an MUA. The IMU involves four variables.

1. ratio of primary medical care staffs per 1,000 populations, infant mortality rate,
2. percentage of the population with incomes below the poverty level,
3. percentage of the population (age 65 and over).

The value of each variable for the service area is converted to a weighted value, according to the established criteria. The four values are summed up to obtain the area's IMU score.

Not only for the study area but also for the entire country, very few or none of physician or dentists or psychiatric is appointed up to the RHC or sub-centre. More than 65% of the

population resided in the rural area in Meiktila Township. Such amount of people could not get sufficient health care by proper methods or staffs. But midwife or health assistant is appointed to the RHC or sub-centre at village level. Therefore, for the ratio of primary medical care staffs to 1,000 population, not only physician but also dentists, nurses, midwives and health assistants are accounted for the first criterion (i.e., ratio of primary medical care staffs per 1,000 population).

Another problem is that the percentage of population with incomes below the poverty level. Since 2010, the poverty level for States and Regions of the whole country was worked out jointly by the National Planning and Economic Department, Swedish International Development Cooperation Agency (Sida), United Nations International Children's Emergency Fund (UNICEF), United Nations Development Programme (UNDP). For the year of 2012, the poverty profile and poverty level were also announced for each State and Region. But it was unfortunate that such poverty level could not be released district or township level. Therefore, to define the MUAs in Meiktila Township, the percentage of population below the poverty level was taken into consideration from Mandalay Region for rural and urban areas separately.

For the study area, the major criteria which significantly specify the MUAs are the IMR and the ratio of health care staffs per 1,000 population. The MUAs which have the IMU score of less than or equal to 50 are located at remote and inaccessible area. The weighted value for the percentage population of 65 and over is almost same to all considered health care centres. Hence, the criteria of percentage of 65 years and over and the percentage of people below the poverty level are almost constant throughout the study area. For all MUAs, the main problem is that there had no medical doctor or physician. And, the IMR rates of these MUAs were also another great problem.

Here, it is considered that the IMU score of 62 is the boundary for the MUAs and non-MUAs. That is the definition from the developed country (i.e, USA). But for Myanmar that less value of score can be assumed due to its developing character. If doing so, what score should be identified? It is more difficult for the study area in Myanmar country. Therefore, the score of 62 is accepted to demarcate the MUAs in this township. To measure social health protection coverage in the study area, criteria for designation as a HPSA or MAU's score is used and studied without changing the score.

Demarcation on the MUAs

A geographic area will be designated as having a shortage of primary medical care professionals if the following three criteria are met:

1. The area is a rational area for the delivery of primary medical care services.
2. The area has a population to full-time-equivalent primary care physician ratio of at least 3,500:1.
3. Primary medical care professionals in contiguous areas are over utilized, excessively distant, or inaccessible to the population of the area under consideration. (http://bphic.hrsa.gov/databases/newmua/).

The study area coincides with the above three criteria, so that it can be generally recognized as the area of shortage of primary medical care. For the grass root level analysis, the IMU scores for each health care centre was worked out and shown in the table (1). The

summations of respective weighted values are the bases to define the MUAs in the study area. According to table (1), Map (3) are prepared according to IMU scores of health care centres in township.

According to table (1), there has one township hospital, two station hospitals and six R.H.Cs. All R.H.Cs can be designated as MUAs. Among them, Shande, Mondaing and Nyaunggine R.H.Cs had been visited more than 14% of total population from their respective village tracts within a year. It is noted that more than 3500 number of patients had been relied to those R.H.Cs. But these are still MUAs in the study area. There three (Mondaing, Shande, Nyaunggine) R.H.Cs are located on the transportation route to Kyaukpadaung, Mandalay, Taunggyi, respectively and thus, they are assumed as accessible areas. Therefore, more number of patients than that of Kwetnge, Magyisu and Nyaungbin-sho R.H.Cs were consulted in Mondaing, Shande and Nyaunggine RHCs. Consequently, these accessible R.H.Cs can be appointed by a medical doctor and a dentist for the relied patients.

For Magyisu, Kwetnge and Nyaungbin-sho, the transportation facility is very poor. So that, if such infrastructural provision can be fulfilled, those areas can be free from the MUAs by appointments of health care physicians.

Table (1) The IMU Scores for each Heath Care Centres

Health Care Centres	Ratio of Physicians per 1,000 population		IMR		Below the poverty level		Age 65 and over		Total
	%	Weighted value	%	Weighted value	%	Weighted value	%	Weighted value	
Meiktila Township Hospital	0.33	7.3	10.5	24.0	14.1	17.4	7.19	20.1	68.8
Aleywa Station Hospital	0.52	14.8	12	23.2	31.6	6.6	6.71	20.2	64.8
Shanmange Station Hospital	0.65	19.1	9.5	24.8	31.6	6.6	8.31	19.9	70.4
Shande RHC	0.27	5.7	9.0	25.6	31.6	6.6	5.37	20.2	58.1
Magyisu RHC	0.36	9.0	13.9	21.5	31.6	6.6	5.12	20.2	57.3
Kywetnge RHC	0.39	9.0	18.79	16.4	31.6	6.6	9.89	19.8	51.8
Nyaungbinsho RHC	0.32	7.3	17.2	17.5	31.6	6.6	6.22	20.2	51.6
Mondaing RHC	0.30	5.7	4.44	26.0	31.6	6.6	7.49	20.1	58.4
Nyaunggine RHC	0.30	5.7	12.5	22.4	31.6	6.6	9.72	19.8	54.5

Source: Calculated by the researcher based on the field survey data

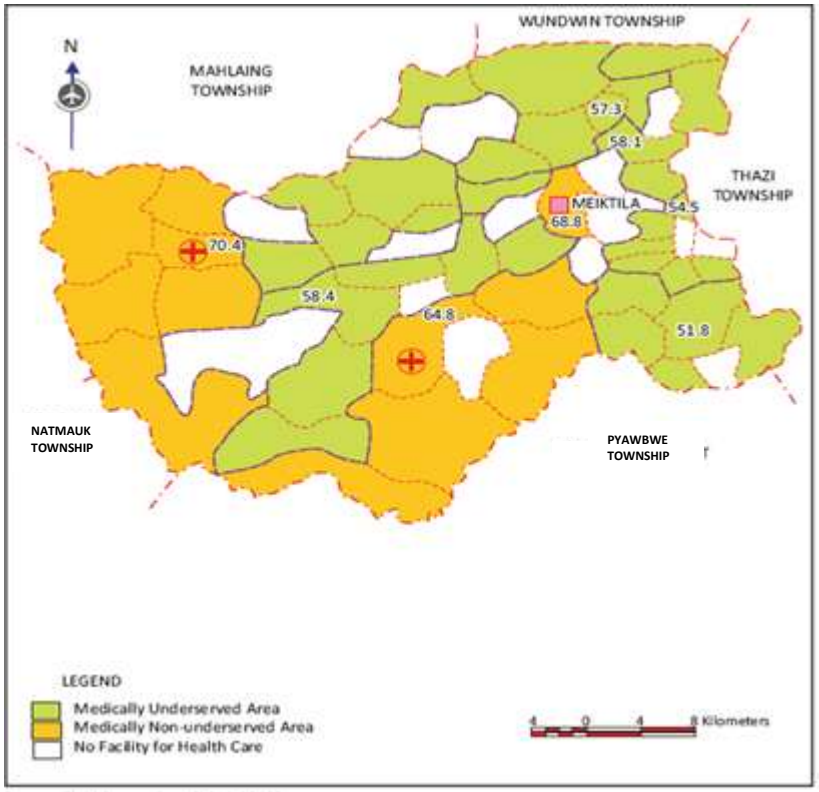

Figure. 3 IMU Scores for Health Care Centres in Meiktila Township
Source: Field Survey Data

Conclusion

Findings and Discussion.

After studying spatial distribution pattern of all considered health care centres, it can be observed that there are a greater number of sub-centres than the others in the district. But those centres are not evenly spread throughout the study area. Only township hospital and station hospital are well facilitated not only by health care staffs but also by medicines. Even though there is at least one RHC or one sub-centre which serves for a people of one or two village tracts, but it is not much reliable for the local people. Actually, the health care centres were set up by the government based on the total number of resided population for a particular area. Therefore, the areas which are in accessible and remote from the urban centres are unfavorable for health care.

All RHCs can be designated as MUAs in Meiktila Township. Among them, three centres have good accessibility because they lied on the highway to other cities. But, lack of physician or medical doctor is the major hindrance to be MUAs the remaining centres have to be provided both transportation facility and medi-care staffs to be non-MUAs. Where is the township hospital and station hospitals in the study area were non-MUAs. It was mainly due to the presence of physicians or doctors or dentists

For the study area, the major criteria which significantly specify the MUAs are IMR and ratio of health care staffs per 1,000 population. Even for the township hospitals, the IMR is quite high rather than that of some station hospital or RHC, which should be noticed by the authority

and health care staffs. Apart from that, transportation facility plays as a major determinant for MUAs in the study area.

Suggestion

Health centres should be patient-oriented and focused on improving the quality of care. Although health centres' effectiveness as providers of care to vulnerable population is well documented, the patients they serve have diverse needs and there remain disparities in health status between health centre patients and the general population. In a continued effort to reduce and eliminate these disparities, the RHC or sub-centre should be implemented a series of health disparity collaborative.

The government or the concerned authorities should develop several programme to help health centres and other providers in underserved communities to meet their workforce needs.

To achieve this goal, primary care physicians should need to be distributed fairly evenly across the study area. Several programme should provide funds to increase the number of practitioners where shortage of high-need areas.

Attracting young people to healthcare careers and encouraging health care professionals to work and stay in rural areas should be carried out. A basic premise in these efforts is that young adults from rural areas, or students, who have had positive rural experiences as part of their training, should contribute some services be most likely jobs in rural areas.

Departments of Health should promote health career education in secondary schools. Together with higher education and private agencies, they should sponsor annual conference for secondary school health careers and teachers.

Acknowledgements

We wish to express our deepest gratitude to Rector Dr. Khin Thant Sin, Pro-Rector Dr. Win Mar, and Pro-Rector Dr. Sandar Khar, at the Mandalay University of Distance Education, for their encouragement to publish this research.

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STUDY ON TOURIST SATISFACTION IN NATMATAUNG NATIONAL PARK, CHIN STATE IN MYANMAR

Win Pa Pa Myo[1] and Khin Khin Soe[2]

Abstract

Myanmar is a land rich in nature and diversity of species. Tourism industry is being developed by numerous kinds of tourism. Among them, ecotourism is getting popular. The richness of biodiversity makes Natmataung National Park ideal for ecotourism. Geographically, the study area has a great opportunity to promote potential ecotourism sites and mountain resorts. This research emphasizes on tourist satisfaction. The objectives of the research work are to present the basic factors (accommodation, transportation, local people's behaviour and safety and security) of Natmataung Area and to examine the tourist satisfaction on the study area. The data are collected from 160 tourists according to interviews and questionnaires. They are analyzed statistical analysis. Quantitative and qualitative methods are used and the questionnaire includes demographic factors of tourists and their satisfaction on the national park. The analyzed results highlight tourist satisfaction. Extensive survey research methods are used to collect primary and secondary data. In this research, descriptive analysis, frequency, percentage and graphical analysis are used to identify and analyze the data. The findings of this research will be useful for tourism promoting in destination. Primary data are mainly applied to the research. SWOT analysis is a frame- work used to evaluate tourist satisfaction.

Keywords: satisfaction, perception, demographic factors

Introduction

Tourism in Myanmar has been based on natural, traditional culture, historical sites, religious attraction and ecotourism. Tourism is not only the world's leading service sector but also considered to be an important foreign exchange earner around the world and all the countries in the world strive for economic benefits by developing tourist resorts for attracting the "global tourists" (Ranade, P.S., 1998). Tourism industry of developing countries also supports their economic potential and these countries majorly rely on tourism for their foreign exchange reserves. World's forty poorest countries, tourism is the second most important source of foreign exchange (Mastny, 2001). Tourism has also been a driving force in protecting natural and cultural heritage, preserving them for future generations to enjoy" (Pololikashvili, Z., 2019). Natmataung area is mainly dependent on the supporting factors especially, physical factors (natural tourist attraction sites) and cultural factors (life styles of local people).

Myanmar has emerged as a popular tourist destination and experienced rapid growth in tourism sector (Tun Win Than, 2019). Nowadays, tourism is trend to ecotourism. Myanmar has numerous untapped natural resources below our land**.** In Chin state, Natmataung is also known as Mt. Victoria and Khaw Nu Sone or khonuamthung is the highest mountain of western Myanmar. Natmataung is the most attraction site in Kanpatlet Township. The most common types of tourism are ecotourism, adventure tourism, cultural tourism and bird watching tourism. It is located close to the border of India and which at 3035 metre above sea level. It occupies an area of 720 km and is one of ASEAN Heritage Park. The study area is surrounded at lower elevations by tropical and subtropical moist forest. Natmataung park has been protected as an ecotourism site since 1994 (Wikramanayake, Eric Diner Stein; Colby J. Loucks; et al. (2002).

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Aim

The main aim is to explore the basic needs for tourism development.

Objectives

The objectives are

- to present the basic factors (accommodation, transportation, local people behaviors and safety and security) for tourism development, and
- to examine tourist satisfaction on the study area

Study Area

The study area is located in the southern part of the northwestern Myanmar, Chin State (Figure 1). Chin State is a mountainous region and, has the primary attraction of the ecosystem such as forest, flora, fauna, cultural heritage and natural environment. Study area is located in Southern Chin Hill at 21° 19' North Latitude and 93° 55' East Longitude in Chin State, north-western part of Myanmar. It is located within 3 townships - Kanpatlet, Mindat and Matupi. Natmataung is the highest mountain in Chin State and the third highest mountain in Myanmar. Natmataung National Park was established in 1994. This Park was also appointed as an ASEAN Heritage Park. This Park is administered by the Department of Forest and Environment.

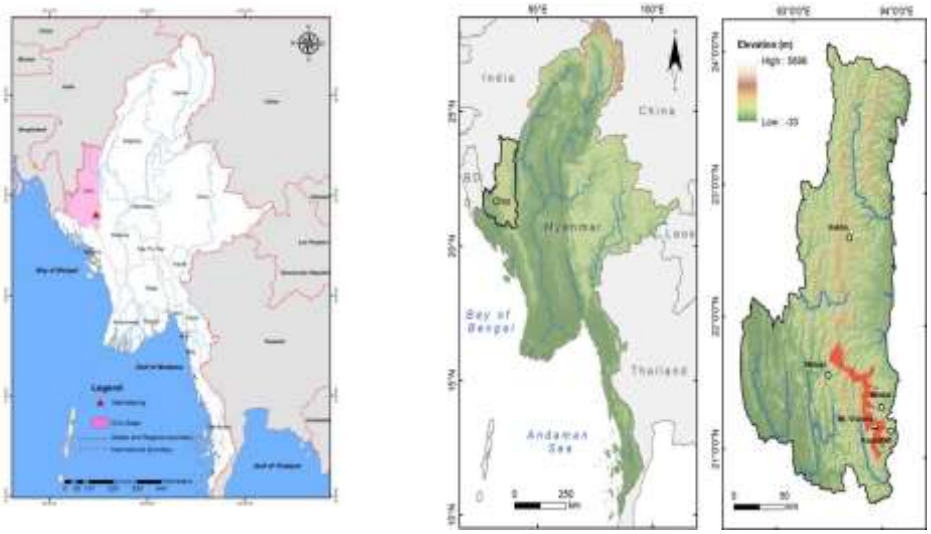

Figure 1. Location of Natmataung

Source: Myanmar Information Management Unit

Methodology

To present tourist satisfaction of Natmataung, primary data were collected 160 respondents from tourists. To collect primary data, interviews, structure interviews and questionnaires were applied. Four main factors: accommodation, transportation, local behaviors and local security and safety were stressed to present tourist satisfaction. In this paper, physical and human factors especially climate data are used. This research is based on open interviews, structures interviews and questionnaires. The questionnaire's sampling size is 160. Furthermore, eleven interviews were conducted with representatives from administrative institutions who were

engage in tourism. Additionally, information from field observation conducted in March 2019 and 2020 is used as well as some specific literature on internet and text. The questionnaire is structured with satisfaction factors based on a five-point Likert scale ranging from (1) very satisfied, (2) satisfied, (3) neutral, (4) dissatisfied, (5) very dissatisfied. The methods of descriptive analysis, frequency, percentage are used to identify and analyze the data. In this research, SWOT analysis is used for tourist satisfaction.

Geographical Background of Natmataung Area

Natmataung is one of the highest peaks of Southeast Asia. The mountain is now protected within Natmataung National Park established in 1994. The area is 279 square miles and also an Association of ASEAN Heritage Park and an important bird watching area. Natmataung (Mt. Victoria) is the highest mountain in the Chin state, western part of Myanmar; it is located in Kanpatlet Township of southern Chin State. It is a part of the Chin Mountain range with a height of 3053 metres above sea level. It is established in 2010 and is listed as one of the ASEAN Heritage Park. In elevation, it ranges from 740 to 3,070 metres. It was designated an important birth watching area in 2004. It is easy to access by land from Pakokku and Seikpyu. It is 193 km away from Pakokku and 150 km from Seikpyu and is an 8hour drive to Pakokku via Ayeyarwaddy Bridge. There is a forest area, including hill evergreen forests, moist upper mixed deciduous forests, pine forest (above 9,000 feet) and hill savanna. Natmataung area conserves rare species of Myanmar's orchids. In the top area, pine trees and many oaks are grown. The mountain is covered by large rhododendron trees that bloom three colours such as red, yellow and white flower. There are many varieties of wild orchids flower and roses. There are 1024 plant species, 91 orchids species and 71 medical plants species. This area falls within the Eastern Himalayas Endemic Bird Area. According to forest department, 345 birds, 35 mammals ,105 amphibians and reptiles, 99 butterflies and 35 beetle's species has been recorded here. The mountain top has a borderline and the climate is alpine climate (ET) along with subtropical Highland climate (Cwc and Cwb) in the nearby surrounding terrain. November to February is Myanmar's cool season. Night temperature falls to 0°up the mountain and in Kanpatlet and Mindat the temperature is around 5°C. The hottest months are April and May. Chin ethnic group are Tibet-Burma group and comprise about only one percent of Myanmar's population. Chin is comprised of multi sub- groups with distinct identities. Chin people that lived around Natmataung National Park consist of nearly 6000 people and about 100 people inside the park. (Figure 2). They depend on the shifting cultivation and hunting. People in Chin state can be to six main groups: the Asho, Laimi, Mizo, Cho, Khumi, and Zomi. The Chin groups share similar history but speak different languages and dialects and have different cultural identities. Facial tattoo culture of Chin women became more popular cultural attraction in the study area. About 80% of Chin people are Christians but many tribes still follow animistic beliefs and traditions.

Figure 2 Le Pon village in Natmataung Area

Source: Field Observations (March, 2020)

Results and Findings

According to secondary data, international tourist arrival was 4,364,101persons in Myanmar. The tourist arrival of the study area was 18,809 persons in 2019. The arrival of international tourist was 2,878 persons (0.07% of international tourists' arrival in Myanmar) and domestic tourists with 15,931persons. Table1.

Table 1. Tourist Arrivals in Kanpetlet Township (2016-2019)

Sr. No.	Year	International Tourist	Domestic Tourist	Total
1	2016	1761	5151	6912
2	2017	2459	11047	13506
3	2018	2364	16904	19268
4	2019	2878	15931	18809

Source: Ministry of Hotel and Tourism, Kanpetlet

Tourists Satisfaction on Natmataung National Park

Satisfactions of visitors on study area are distributed to 160 visitors. Their responses are differentiated into 5 levels as very satisfied, satisfied, neutral, dissatisfied and very dissatisfied. Satisfaction is based on four factors such as accommodation, transportation, local people behaviour and safety and security. According to table 2 and figure 3, most tourists are satisfied on accommodation with 59 percent which is the highest percentage. For the ease and comfortable lodging of tourists, almost all the hotels are well built in a modern style and facilitated with attractive, traditional and valuable furniture. The lowest percentage is in safety and securities in tourist satisfaction. Without strict security arrangements, tourists who do not know the local situation of the place they visit may be exposed to some harm. This would create negative perception in the minds of potential visitors. There is no police station at the Natmataung National Park, but several police are assigned to keep watch at the foot of the hill. Some tourists suggest that police should be everywhere.

Table 2 Tourist satisfaction on Natmataung National Park

Sr.No	Factors	Percentage
1	Accommodation	59%
2	Local Behaviours	28%
3	Transportation	11%
4	Safety and securities	2%

Source: Based on questionnaires

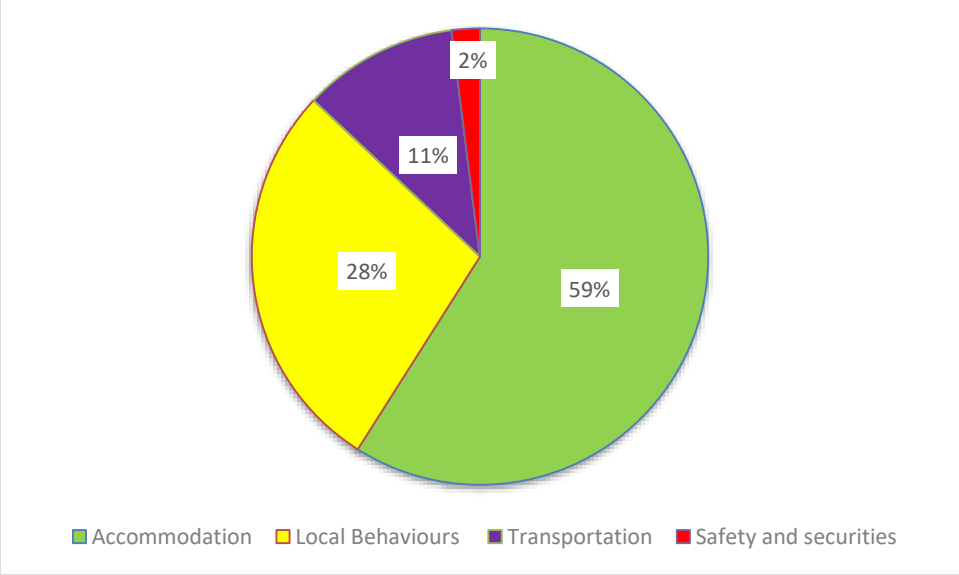

Figure 3 Tourist satisfaction on Natmataung National Park

Source: Field Observations (March,2020)

Tourist Satisfaction on Accommodation

Accommodation means all accommodation facilities such as hotels, guest houses facilities and services, water and electricity systems, atmosphere cleanliness and food. Table 3.

Table 3 Percentage of Tourist Satisfaction on Accommodation

Accommodation	Hotel services	Water/ electricity system	Atmosphere cleanliness	Food
Very satisfied	35	24	65	12
Satisfied	42	28	24	15
Neutral	12	20	3	25
Dissatisfied	8	18	4	28
Very dissatisfied	3	10	4	20
Total	**100**	**100**	**100**	**100**

Source: Field Observations (March,2020)

Concerning with accommodation, 65% of the visitors responded as very satisfied is which highest percentage among other factors. This indicates that the most visitor like the atmosphere cleanliness. Some tourists said that they like the clean air and clean atmosphere. Some were very dissatisfied about food which consists of 20 percentages. Most of the visitors, especially foreign tourists dislike chin traditional food. The majority of tourists are satisfied on hotel services.

For accommodation, lodging facilities are viewed as very satisfied by 35%, satisfied by 42 %, neutral by 12% and dissatisfied by 8% and very dissatisfied by 3%. According to their answers, most visitors prefer the hotels to be furnished with local products like bamboo, rattan

and teak. International tourists liked facilities and services. Most hotels are well decorated, furnished and facilitated with high quality teak furniture and doors, which is why all the respondents gave satisfied. Figure 4.

Figure 4. Mountain View Hill Resort Hotel Conditions in Myoma (1) Kanpetlet

Source: Field Observations (March,2020)

Tourist Satisfaction on Behaviour of Local People

Local behaviors include Tattoo culture and lifestyle of ethnic groups. According to the responses to questionnaires, tattoo culture is very satisfied as perceived by 77 percent, satisfied by 13%, neutral by 2 %, dissatisfied by 8% and very dissatisfied no responded. Lifestyle of ethnic group is very satisfied as perceived by 54 percent, satisfied by 22%, neutral by14 %, dissatisfied by 7% and very dissatisfied by 3%. Most of the tourists are interested in Chin women. According to interview, *"Chin women wear tattoo because they were afraid of being picked up by king and become his lesser wife. Chin people said that they started wearing tattoo on their face in order to prevent this*." Chin people can tell which type of Chin they are by seeing this tattoo. The pattern of tattoo culture was distinct tattoo pattern according to those living tribes of Kanpatlet Township. Thus, this part of chin culture will soon be gone and can find that culture at over 50 years old Chin women. Actually, face tattoo culture of chin women will disappear in over 30 years. But the young women of the study area have made fake tattoo on their face when the Chin National Day and other traditional festival was held. It is attractive to the tourists. Moreover, a trip to Chin State is not complete without tourists listening to the sound of flute played by nose. The old women age is nearly 80 years who can entertain that kind of unique tradition (see figure 5).

Table 4 Percentage of Tourist Satisfaction on Behaviour of Local People

Local People	Tattoo Culture	Lifestyle of ethnic groups
Very satisfied	77	54
Satisfied	13	22
Neutral	2	14
Dissatisfied	8	7
Very dissatisfied	0	3
Total	**100**	**100**

Source: Field Observations (March, 2020)

Figure 5. Chin women's face with tattoo

Source: Field Observations (March, 2020)

Tourist Satisfaction on Transportation

Transportation also plays an important role for study area development. Transportation is easy to access from Yangon to Kenpatlet but Mindat Township is not easy to access as the road is incomplete. However, the road condition between Kenpetlet and Natmataung is not good and is the main reason why some respondents gave negative answers concerning with transportation. Visitors can trek from Kanpetlet to Natmataung National Park as it is located only 15 miles away. According to table 5, the accessibility from Yangon is very satisfied as perceived by 65 %, satisfied by 13 %, neutral by 5 %, dissatisfied by 7% and very satisfied by 10%. Table 4. Most visitors visited study area by car. Only 22 percent visitors arrive by flight. The nearest airport to Natmataung is Bagan Nyaung U, which is an eight-hour drive away. See figure 5. Most of the tourists are not satisfied on the road condition.

Table 5 Percentage of Tourist Satisfaction on Transportation

Transportation	Road Condition	Yangon to Kanpetlet	Kanpetlet to Natmataung	NyaungU to Kanpetlet
Very satisfied	19	65	32	45
Satisfied	20	13	18	21
Neutral	21	5	25	13
Dissatisfied	25	7	20	12
Very dissatisfied	5	10	5	9
Total	**100**	**100**	**100**	**100**

Source: Field Observations (March, 2020)

Figure 6 Transportation route from Yangon and Bagan- Nyaung U to Kanpetlet

Source: Myanmar Information Management Unit

Tourist Satisfaction on Safety and Securities

In the tourism industry, securities and safety of tourists is a very important necessity. Without strict security arrangements, tourists who do not know the local situation of the place they visit may be exposed to some harm. Local securities include political stability, tourist police enforcement, and strictness of local immigration and the activation of local Voluntary Originations. This would create negative perception in the minds of the potential visitors. Till now, serious crimes have not been reported in Natmataung area. There is no police station at study area, but several police are assigned to keep watch at different sections of the park. An army camp located near Chin Village for the security of Kenpetlet Township is also helpful, in some ways, for the security of the park.

For security and safety of the study area, the most respondents were not satisfied with the existing facilities. There was 14% of total responds condition was very satisfaction, which while 20% perceived as being satisfied and 20 % as neutral. 22% was dissatisfied. However, 22% respondents said the condition was dissatisfied and 24 % regarded it as very dissatisfied. Table 6. According to the data, the respondents are not satisfied with all the aspects of local securities.

Table 6 Percentage of Tourist Satisfaction on Safety and Securities

Level	**Safety and Securities**
Very satisfied	14
Satisfied	20
Neutral	20
Dissatisfied	22
Very dissatisfied	24
Total	**100**

Source: Field Observations (March, 2020)

SWOT analysis on the tourist satisfaction in Natmataung National Park

SWOT (strengths, weaknesses, opportunities, and threats) analysis is a framework used to assess internal and external factors, as well as current and future potential. The strengths, weaknesses, opportunities and threats affecting tourism in Natmataung are as follows:

Table 7 SWOT analysis on the tourist satisfaction in Natmataung National Park

Item	Strength	Weakness	Opportunities	Threats
Attraction	-attractive climate - attractive plant species - natural landscapes and cultural tourism sites -natural tourism sites - local cuisine	-less efficient in superstructure and infrastructure -weak infrastructure -lack of cleanliness and -poor food sanitation	-resort Tourism - ecotourism - CBT Area (community-based tourism) - special events and festivals (e.g., Chin New Year festival)	-change of ecosystem, -loss of animals and degradation of environment - threat to the natural environment
Accessibility	-easy access to trip by road	-no air trip to study area -no railway line and - poor condition of earth roads	-can fly airline, extension and upgraded road lines	-loss of forest, -change in Land Use - loss of biodiversity
Accommodation	new hotels, motels, inn, guest house, home stay	-some services poor, -need high quality accommodation	- can get more services, - good quality accommodation and -job opportunities	-increase in hotel price competition within the hotel,
Infrastructure	-water supply, -accommodation amenities	- low internet access and telecommunication -less efficient in healthcare and toilet - Banking	-can improve more infrastructure e,g toilet and health care centres	-cost for machine and maintain
Market demand	-ecotourism and nature tourism	-cultural tourism - low number of international tourists	-resort tourism -ecotourism site - new CBT area	-change of ecosystems, -loss of natural habitat - influence upon culture and tradition

Source: field observations and interview, 2020

Discussion and Conclusion

Chin State has many potentials for ecotourism. Around the study area is rich in natural resources and specific culture and life styles. To develop Natmataung National Park's ecotourism, the involvement of host community is one of the fundamental facts and their positive views are very important. The weakness of this research is that field observations was conducted only in March,2019 and 2020, therefore it was not possible to ask the tourists of the rest of the months. The advantage is that when sharing the questionnaires for the research, I was able to recollect all the questionnaires and interviews with authorize persons, hotel owners, hotel managers and tour guides.

According to survey data, in accommodation factors, the atmosphere cleanliness is the only one aspect in which most of the tourists are satisfied. According to research, respondents are satisfied only to culture such as local people behaviour, it is tattoo culture and life styles of ethnic groups. For transportation, responds into are very satisfied with the route from Yangon to Kanpetlet. Overall road condition doesn't meet the satisfaction level for the respondents. For the last factors, safety is an important aspect for tourism development. Travelers are not satisfied with the aspects in safety factors. Most of the tourists suggest that hygiene and sanitation should be improved, and community-based tourism are also important for tourism development. The findings suggest that tourists have different levels of satisfaction with five elements of study area tourism. Tourists are more satisfied with attributes concerning attractions, accommodation, amenities, and activities while less satisfied with safety and security. Generally, the findings have shown that tourists are more satisfied with atmosphere cleanliness, tattoo culture and traditional ways of living of the local residents.

This research used survey technique with structured interviews to collect the satisfaction from tourists. According to the results, most of the respondents travel to Natmataung for recreational purposes. Their main consideration of criteria to choose the area is cleanliness of atmosphere and freshness, accessibility of transport and variety of accommodation choices. Generally, visitors to the study area are satisfied because of the hospitality of local people, cool climatic conditions and the attractiveness of the existing natural sources of beauty scenes. Seen from positive points of view, local people can gain economic opportunities as a result of the development of tourism industry. To sum it up, the results state that it is to plan, organize, direct and control the infrastructure development, political stability, safety and local security, local attractiveness and sustainable activities with the collaboration of local people, private and partnership in promoting Natmataung ecotourism site to become a quality destination.

Acknowledgement

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COVID-19 OUTBREAK IN SITTWAY CITY: PEOPLE'S PERCEPTIONS AND EXPERIENCES OF QUARANTINE

Khin Khin Soe[1], Naw Paw Pale Wah[2], Win Pa Pa Myo[3], Tin Tin Mya[4]

Abstract

The second wave of coronavirus diseases started in Sittway on August 2020. There were three quarantine centres for contact cases and five Isolation Units for confirmed (positive) cases. Six Isolation Units for Internally displacement person (IDP) from camps. The purpose of this research is to identify people's perceptions and experiences of quarantine during the COVID-19 outbreak. First a literature review took place and secondary data was collected from General Administrative Office (GAD) and Sittway General Hospital. Semi-structured interviews with 30 participants were conducted. In-depth group discussions and interview data were collected from August to November 2020. Most of the interviews were conducted over the phone, viber and audio-recorded and statistical data were used. The interviewed were divided by three stages, and participants were formed: doctors/nurses, confirmed and contact cases. The finding of their perceptions and experiences: community-based facilities quarantine was effective; lack of knowledge and fear of quarantine were the main factors that affected quarantine compliance.

Keywords: Quarantine, Sittway, Perceptions, Covid-19, Experience, Stages

Introduction

The World Health Organization (WHO) has alerted the world and declared Coronavirus disease 2019 (COVID-19) as a public health emergency that require drastic interventions. Notably, the disease emerged in Wuhan city of Hubei province, Central China in December 2019 and spread throughout the world. Since then, the virus has caused serious illness, death, and social disruption around the world. At the time of this writing (September 2020), there were 26 145 350 confirmed cases of COVID-19 and almost 866 499 deaths worldwide (Thamra Al Ghafri https://orcid.org/0000-0002-4818-9565).Introduction

COVID-19 Global health emergency has forced the governments around the world to take strict actions and quarantine are one of them. It is the oldest and effective method of controlling communicable disease outbreaks. In December 2019 there was a cluster of pneumonia cases in China where investigations found that people were affected by unknown viruses, now named as novel coronavirus disease 2019 (COVID-19). COVID 19 is defined as an illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SARS-COV-2; formerly called 2019-nCOV), which was first identified as an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. It was initially reported to the WHO on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic, its first such designation since declaring H1N1 influenza a pandemic in 2009. Since then, it has spread in many countries around the world, with the World Health Organization declaring it a pandemic.

The coronavirus disease 2019 (namely COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) broke out in Wuhan, China, in December 2019, and

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spread rapidly to other provinces. To effectively control the development of the epidemic, according to the decision of the Chinese government, the First Shelter Hospital for children in Wuhan, China-Wuchang Shelter Hospital operated to treat the patients with confirmed mild disease. Currently, data on epidemiological and clinical characteristics of COVID-19 in children are limited. (Mukherjee. S et al, 2020)

The second wave of coronavirus started in Sittway on 16.8.2020. The cases were rapidly spread in Sittway City. There are 58 contact cases in August, 495 in September, 379 in October and 63 contact cases in November 2020. The total number of confirmed cases in the whole country was 53403 in Nov 2020(MoHS). Local government prepared the quarantine centre such as three quarantines and six isolation units in Sittway University for the cases outbreak spread from camps. The meaning of quarantine is to prevent people or animals from entering or leaving a particular area or building where some or all of those in it have been affected by a harmful substance or disease, until the danger of harming others has passed (Cambridge Dictionary) or Quarantine means the oldest and effective method of controlling communicable disease outbreaks.

The Ministry of Health in Myanmar activated the surveillance and control measures in all the international and national ports of entry to Sittway, the capital of Rakhine. Guidelines and data information flow charts were put in place and disseminated across all sectors. Additionally, health education and mass media campaigns were developed to prevent cross-infection. Moreover, capacity building and training activities continued for public and health workers in private and governmental institutes. These included infection control measures, taking swabs, the clinical presentation of the disease and follow up plans. Authorities' members preparing the quarantine centre everywhere particularly, Yangon and Sittway for prevention, management, monitoring, and follow up of the COVID-19 cases.

Research Background

The second wave of Covid-19 started in Sittway City on August 2020. Although there was no oversea travel history, no close contacts with the confirmed patients, the confirmed cases were increased day by day. Because of this, although there was not overseas travel history, some places of Sittway city are **overcrowded** places for example Sittway Myoma market area. Where is impossible **social distancing, no** medical knowledge, do not wear masks. That is why, the number of cases were immediately increased Plate (1).

The first case as a local transmitter started in (16.8.2020). After infecting, the five days later the people were increased to 16, nine days later the people were increased to 30. Accordantly, the State government prepared the quarantine centres everywhere. Sittway has many different ethnic groups and different perceptions. The city was selected based on the two criteria: 1) the number of confirmed positive cases, 2) the presence of ethnic minority groups. The paper tried to analysis perceptions and experiences of quarantine people.

Plate 1. **(Main Infection Point)** Impossible social distancing, no medical knowledge and do not want to wear masks, Myoma market, Sittway City

Source: Photo taken by Researchers, 2020

Study Area

Sittway is located in the Rakhine State. It is between 20º 17" and 20º 19" north latitude and 92º 45" and 92º 55" east longitude. Sittway City is bounded on the northern side by Ponnakyun Township, on the eastern side by Kaladan River, on the southern side by the Bay of Bengal and on the western side by Kwe Del River (Figure 1 and Figure 2).

The area of Sittway city is 6.25 sq-miles, approximately 4000 acres. And it is composed of 33 wards. Sittway City is located 15 feet above sea level and there is absence of mountainous areas. Sittway City is a flat plain coastal area.

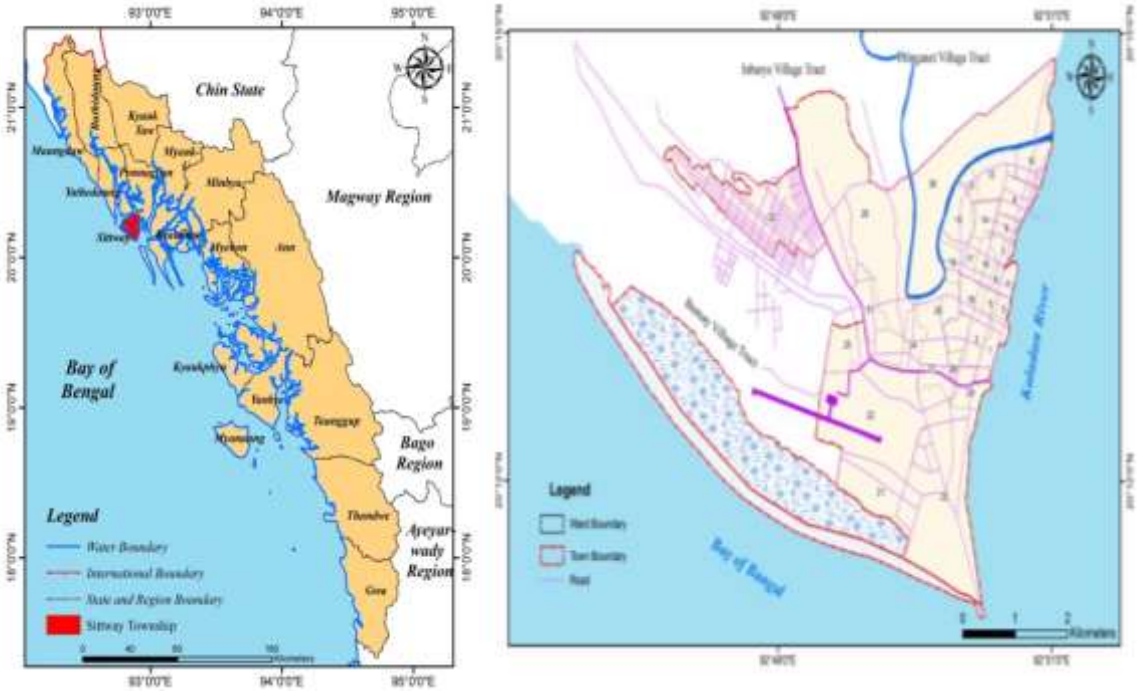

Figure 1 and 2. Location of Rakhine State, 2020 and Location of Sittway City

Source: Myanmar Survey Department

Research Questions

Against this background, which illustrates the situations of quarantine people, the aim of the study is to look deeper into the people's perceptions and experiences. The guiding research questions are:

1). *How is the state of* ***Treatment and Preparedness controlling*** the spreading of virus? Which ***preventions method*** was used in hot spot area?

2). What is your ***opinion*** of quarantine?

3). *How did your emotion change and* ***what strategies*** *do you adopt to* ***cope your*** *emotional changes during quarantine?*

Aim of the Research

The main aim of this research is to identify people's perceptions and experiences of quarantine during the COVID-19 outbreak

Materials and Methods

The research design is based on a mixed-methods approach. Particularly most of the interviews were collected by phone and viber (video) audio-recorded to reduce the risk of infection (lasted approximately 50 to 90 min). During the empirical fieldwork 30 unsystematic talks, 26 in-depth qualitative talks with interviews to Chairman of the Covid-19 Control and Emergency Response Committee, doctors, nurses, patients (confirmed case), quarantined people, drivers, local stakeholders, NGOs staff, INGOs staff and volunteers were conducted. The interviewee was based on the different levels such as from the low educated person to higher level to get difference perceptions. Systematic literature search, secondary data collections were conducted in 2020. Literature search included reviewed articles, published documents and unpublished studies, as far as it could be retrieved from international libraries. Statistical data were collected from General Administrative Department (GAD), Ministry of Health and Sports (MoHS), Sittway General Hospital (SGH) and Traditional hospital, Sittway. Based on the findings, a comprehensive, ***integrated analysis and triangulation method*** is drawn.

Results and Findings

In Sittway City the number of confirmed cases increased day by day. But most people were resuming their work as a "new normal". A major virus spread area is Sittway Myoma market which is overcrowded area and impossible social distancing places, most of the buyers and sellers are do not want to wear the masks, mostly are do not know well about covid-19 and they have no medical knowledge, uneducated people are mostly found. Confirmed cases are Non-Governmental Organizations (NGOs) staff, monks, International Non-Governmental Organizations (INGOs'), specialist doctors and nurses, healthcare workers were infected (MoHS, 2020).

After transmitting one case as a local transmitter was confirmed in Sittway on 16 August, the town quickly became a hotspot area and the number of confirmed cases increased rapidly, reaching over 200 within a week. The spreading of virus was slightly calm situation in November in Sittway town.

The confirmed cases of Rakhine State were 119 in August 58 in the Sittway City, In September 896 in Rakhine State and 495 in Sittway City and the highest number of confirmed cases among the dominant four months (August –November). In which the half of the confirmed cases included in Sittway town compare with Rakhine State. Sittway has the highest number of positive cases in Rakhine State, which increased rapidly in September. In October, although increased number of confirmed cases were 1326 in Rakhine State, in Sittway City were decreased to 379, The decreased in November in Rakine State about 459 and Sittway City were dramatically decreased to 63 Table 1.

Table 1. Number of Confirmed Cases (Positive), 2020

Sr No.	Month	Union	Rakhine State	Sittway City
1	August	173	119	58
2	September	11160	896	495
3	October	39333	1326	379
4	November	22176	459	63
Total		**72842**	**2800**	**995**

Source: Ministry of Health and Sports Myanmar, 2020

Demographic Characteristics of the Participants

For qualitative analysis, a total of 40 participants were included in this study, and the majority were in the age group of 26–30 years, and over 50 years with most of the participants were male. The participants that represented diverse backgrounds in terms of gender, profession, education, geography and social status were selected using a maximum variation sampling method. For the in-depth interview (IDI), individuals who were at the forefront in the community such as the healthcare workers (doctors and nurses) of the local hospital, security personnel, volunteers, media personnel, school teachers, local leaders, local public health experts, students, shopkeepers, drivers and daily wage labourers were selected for the participation. People who were less than 18 years or more than 60 years, those suffering from infectious disease. Of them, 40.5% were graduated and post-graduated and above. The 25.5% were undergraduate.

Among the participants, 43.2% were employed, and 27.9% were students. Details of the demographic characteristics of the participants were illustrated in Table 2. The quantitative analysis was also conducted.

Table 2. Characteristics of Participants (Interviewee), 2020

No	Age (Year)	Profession	Education Level	Remarks
1	43	Confirmed Case	Bachelor	
2	58	Confirmed Case	Doctoral	
3	48	Confirmed Case	Bachelor	
4	27	Driver/ Confirmed Case	Bachelor	

No	Age (Year)	Profession	Education Level	Remarks
5	28	Cleaner/ Confirmed Case	Primary	
6	40	Confirmed Case	4PhD	
7	37	Medical Doctor/ Contact Case	MBBS	
8	45	Medical Doctor/ Contact Case	MBBS	
9	35	Medical Doctor/ Contact Case	MBBS	
10	45	Physician/Contact Case	MBBS	
11	28	Nurse/Contact Case	B.N.Sc	
12	25	Nurse/Contact Case	B.N.Sc	
13	27	Driver/ Contact Case	Undergraduate	

Source: Interviewed, 2020
Noticed: The table just to show as an example of the structure of interviewed, actual interviewee was (30) people

Treatment Capacity and Preparedness Controlling the Spreading of Virus

The government organizations, national and international organizations NGOs, INGOs supported to treatment processes in Sittway City in 2020. At the beginning the Sittway General Hospital (SGH) has 50 beds later the regional government expanded its capacity to 200 beds. Besides, the Sittway Nursing Training Schools was supported by government about 40 inpatient beds available, Traditional Hospital and two universities are serving as treatment facilities such as testing equipment and the testing capacity of up to 100- 150 tests per day in Sittway.

The regional government given special treatment to NGOs staff because of the staff are running as round trip from Sittway to the camps to internally displaced persons (IDP). That is why the virus will be outbreak and spread to the Buthidaung /Maungdaw (IDP) camps. Also volunteers from difference places of Myanmar help for treatment processes and they take the temperature of a visitor at the entrance of Sittway General Hospital (SGH) Plate 2.

Plate 2. Difference kinds of treatments: the testing equipment can use 100 tests per day

Source: Photo taken by researchers and OCHA, 2020

Preparedness and Preventions

The state government announced a "stay at home" policy in Sittway with immediate effect, which included a lockdown of the streets where the positive cases were found and a nighttime curfew from 9pm to 4am, in a bid to contain the spread of the virus. Among the 33 wards in Sittway City the 17 wards are placed under semi-lockdown (Plate 3). The state government strictly enforced the regulation of wearing masks in public, and recommended people wash hands regularly and not visit public places. Meanwhile, Ministry of Healths (MoHS) announced do not permission from and to in other parts of the country arrivals Sittway.

There were prepared three quarantine centres for contact cases as a Community- Based Facility Quarantine such as old and new Sittway universities, No.4 State High School. The state government prepared five isolation units for positive or confirmed cases as a Hospital- Based Isolation Unit, which was three wards in Sittway General Hospital (SGH), four wards in Nursing Training School, one ward in Traditional Hospital, six buildings in New Sittway University (Plate 4). Which was prepared particularly for Internally displaced persons (IDP). These buildings prepared for in case outbreak spread to (IDP) camps because of Sittway has many diffident ethnicities and IDP camps found in Buthidaung and Maungtaw townships. The regional government systematically arranges for families when the families have to give necessary things to quarantine people (Plate 5).

Plate 3. Semi- Lockdown at the checkpoints and street of the first case no.375 (as a local transmitter)

Plate 4. Preparation for quarantine centres, Sittway University and Traditional hospital

Plate 5. Systematic Arrangement for families to give necessary things to quarantine people, Sittway University

Source: Photo taken by researchers, 2020

Analysis on People's Perceptions and their Emotional Change

There were varied perceptions and experiences regarding COVID-19 during the quarantine centres about its origin and its survival. The people **perception of biological hazard** plays a key role in the response to health emergencies, affecting risk management and risk communication strategies (Cava MA, Fay KE et al,2005).

Therefore, the people perceptions of health risks can influence **individual behaviors** (Slovic,1987). This paper explored the result related question (2) on the perceptions and experiences of quarantine's people, analysis by **integrated analysis and triangulation method**. There are divided by **three stages** of quarantine people and **two participants groups.** They are:

1) the early stage of quarantine

2) the middle stage and

3) the late stage of quarantine people

Two participants group are

1) Confirmed cases (Positive cases): interviewed to the different levels of participants such as drivers, students, healthcare workers, shopkeepers, street venders,

2) Contact cases were including doctors, nurses, volunteers and so on.

The Result of the Early Stage of Quarantine people, the interviewee said:

I did not hope that would be positive. After knowing the result, I was deeply shocked, especially I worried for my work, I had to do many things at my work. Besides some people might think I was a carrier of COVID-19 (interviewed, ST_001).

Particularly, in this stage 25% of the quarantine people were afraid of phone calls. Because before they were sent to the quarantine, they experienced phone calls frequently from local/ ward authorities, volunteers and healthcare workers.

At that time, they were not prepared and had emotions for their families. Besides, they are not sure whether they were COVID- 19 positive or not. That was why they did not want to accept phone calls and helps of health workers. This is a strong opinion of **early stage of quarantine** people.

Half of the participants were worried for their work, they do not seriously worried for their family and for themselves.

The perception of some participants, quarantine is necessary:

Interviewee said:

- *Fortunately, I was quarantined. If I was infected, it would affect my family (interviewed*_ST_006*).*
- some participants actively cooperated with the relevant departments. They answered the questions of this department honestly. Among the quarantine people 80% of people said that quarantine is necessary.

Experience at the quarantine

- *I had too much psychological pressure. I couldn't sleep, and my blood pressure went up in (early) quarantine (interviewed*_ST_002*).*

Ethnicity issue: interviewed to doctors/ nurses: they are facing problem "how to put together these difference ethnic groups at the quarantine"

The Result of the Middle Stage of Quarantine

Interviewee said *I have done swab tests again at middle stage. At that time, we were nervous. Later, the test results were negative. I suddenly became relaxed.*

Strategy to cope their emotions

Most of the participants took a variety of ways to support their immune systems during quarantine such as drinking water, eating food, and doing exercise, making meditation, which changed their emotions. This variety of ways are affected to reduce their emotion (Plate 6). Regional government prepared the enough space for doing exercises for quarantine peoples. This is a very strength for them and immediately recover to quarantine people.

Plate 6. Doing exercises to cope their emotion at the Traditional hospital (Isolation Unit)

Source: Photo taken by researchers, 2020

External support

Some participants received social support from family and friends. ***Interviewee said:***

I like to make friends, and I have many friends. I like to chat with others. My friend called me to care about me and comfort me, which relieved my fear.

-some participants said their strategies such as watching TV, listening to music, charting with friends and families. Then, reduced their stress regarding quarantine

by these strategies.

Professional Psychological support

Some participants are primary education level had limited knowledge about COVID-19 and they were psychologically vulnerable.

One interviewee said: I didn't know much about the disease. I was very afraid, fortunately, there were professional psychologists to comfort me

The Result of the Late Stage of Quarantine

Most of the participants were calm and peaceful in the late stage of the quarantine. At that time, they knew more about COVID-19

- *In the late stage of quarantine, I wanted to be immediately released from quarantine and back to my work. I couldn't wait anymore. I have a lot of work to do*. (interviewed)

Discussion and suggestions

- The authorities need to clearly announce the rules and regulations of the Ministry of Healths (MoHS) at every wards.
- The government, military and ethnic groups should work together in preparedness and preventions actions for reduce pandemic.
- Healthcare professionals should conduct psychological assessments for individuals if necessary.
- Need to prevent seriously on spreading of virus to camp. If not, the camp residents are more vulnerable than the others people because they have limited access to basic healthcare. Beside they are not easy for them to come to the hospital (interviewed).
- One doctor said that: although they suggested to people to wear masks but they do not wear. At that time if police said that they wear the masks immediately.
- To care psychological support especially for older people and the low educated people.

Conclusion and Recommendations

The second wave of coronavirus started in Sittway on 16.8.2020. The cases were rapidly spread in Sittway City. There are 58 contact cases in August, 495 cases in September, 379 in October and 63 contact cases in November 2020. The total number of confirmed cases in the whole country was 53403 in November 2020 (MoHS). In 2020, 12 people died in Sittway Township. The spreading of virus was slightly calm situation in November in Sittway City.

Local government prepared the quarantine centre. There are three quarantine centres for contact cases and five Isolation Units for confirmed (positive) cases. Six Isolation Units were established in Sittway University for Internally displacement person (IDP) from camps (if outbreak from Buthidaung, Maungdaw camps). The government organizations, national and international organizations NGOs, INGOs supported to treatment processes and treatment capacity in Sittway City in 2020. At the beginning the Sittway General Hospital (SGH) has 50 beds later the regional government expanded its capacity to 200 beds.

For the preparedness and prevention, the state government announced a “stay at home” policy which included a lockdown of the streets where the positive cases were found and a nighttime curfew from 9pm to 4am. Among the 33 wards in Sittway town the 17 wards are placed under semi-lockdown.

Sittway has many different ethnic groups and different perceptions. The city was selected based on the two criteria: 1) the number of confirmed positive cases, 2) the presence of ethnic minority groups. In qualitative analysis, a total of 40 participants were included in this study, and the majority were in the age group of 26–30 years, and over 50 years with most of the participants were male. People who were less than 18 years or more than 60 years, were those suffering from infectious disease. Of them, 40.5% were graduated and post-graduated and above. The 25.5% were undergraduate. Among the participants, 43.2% were employed, and 27.9% were

students. The interviewed were divided by **three stages**, such as **early stage** of quarantine, **middle stage** of quarantine and **late stage** of quarantine and participants were formed: doctors/nurses, confirmed and contact cases. According to interviewees, the finding of their perceptions and experiences are community-based facilities quarantine are effective, lack of knowledge and fear of quarantine are the main factors that affected quarantine compliance.

At the **early stage** of quarantine, particularly 25% of the quarantine people were afraid of phone calls. Because before they were sent to the quarantine, they experienced phone call frequently from local/ ward authorities, volunteers and healthcare workers. At that time, they were not prepared to go to quarantine and they had emotions.

At the **middle stage** of quarantine, the people were relaxed. At this stage, most of the participants took a variety of ways to support their immune systems such as drinking water, eating food, and doing exercise, making meditation, which changed their emotions. At the **late stage** of quarantine, most of the participants were calm and peaceful. At that time, they knew more about COVID-19.

The people perceptions of biological hazard play a key role in the response to health emergencies, affecting risk management and risk communication strategies. Most of the quarantined people had experienced heavy emotional in the quarantine period. Quarantine people adopted emotional regulation strategies and received external support to cope with their negative emotions.

Finally, this paper explored the perceptions of people. Their perceptions were based on knowledge and awareness about the COVID- 19. Most of the quarantine people and confirmed cases were low educated people. That was why the people were strongly emotion during the quarantine and they faced a lot of challenges.

Acknowledgement

This research project was possible because of the strong support by many institutions, experts and citizens. We also deeply thank all stakeholders, interviewees from the Sittway General hospital, Sittway traditional hospital and the Township General Administrative Department (GAD).

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DELINEATION OF THE RELEVANT MARKET UNDER COMPETITION LAW IN MYANMAR*

Nu Nu Maw[1]

Abstract

The economic system around the world is now interconnected and developed between nations. A sustainable economy is the key to ensuring human existence in the face of climate change, and it also offers economic opportunity. The business of Myanmar is more developed, and on the other hand, the risks of the enterprises are increased through unfair competition. All countries agree that competition should not only be free but also fair. Protection against unfair competition is an ever-evolving notion that has to adapt to the evolution of trade, and the development of new principles and obligations for participants in the business environment. To prevent abuses of market power arising from monopolization or anti-competitive actions in a market economy, the Competition regulator shall be first to define the relevant market. The assessment of market/ dominance power is vital to determining the illegal influence of a firm or product in a particular market. Assessing market power is a fundamental tool for analysis of the anti-competitive agreements. In competition law, defining the market is a complicated procedure. The determination of the market definition needs to be clarified more in the Competition Law in Myanmar. The product scope and geographical scope will figure out the market condition. However, markets are sometimes narrowly defined by integrated controls, such as services or customers.

Keywords: business environment, product market, geographical market

Introduction

The emphasis on effective resource allocation, safeguarding product quality, and encouraging innovation and technical advancements is where competition law and sustainable development connect. As a result, authorities overseeing competition will have a significant impact on how business practices linked to sustainability develop. Enforcement actions by competition authorities can be directed towards anticompetitive and consumer protection violations that endanger these aspects. Examples of such violations include market manipulation that hinders the entry of more sustainable competitors into the market or their ability to compete on an equal basis, mergers that may result in less innovation, and cartels thatimpede the advancement of technology for reducing greenhouse gas emissions[2].

Competition becomes unfair or one competitor when its effects on consumers and society are more harmful than beneficial. In Myanmar, factors relating to the competition are described in the 2008 Constitution: “Section- 36(b) of the Myanmar Constitution, 2008 also enacts that “protect and prevent acts that injure public interests through monopolization or manipulation of prices by an individual or group with the intent to endanger fair competition in economic activities”.[3]

Moreover, there is another general provision about the competition in the market which safeguards the public interest. Although Myanmar’s Competition Law (MCL) was enacted in 2015 and came into force in 2017 and the Myanmar Competition Commission (MmCC) issued the Competition Rules by Notification 50/2017 to provide for the implementation of the

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[2] Competition Policy and Sustainable Development, *Asia-Pacific Economic Cooperation*, APEC Competition Policy and Law Group, 2022, p-8.

[3] The Constitution of the Union of Myanmar (2008), section 36(b).

Competition Law, many challenges remain in Myanmar. The competition law is the promotion of consumer interests and the protection of smaller firms from large aggregation of economic power[1]. If firms possess high market shares or a dominant market position, that situation harms competition. However, this situation does not always fall into being the anti-competitive behaviors that examine the exclude and control in competition regions. The assessment of the relevant market is the fundamental step for calculating the dominance and market share/power in the anticompetitive region. Market definition in dominance investigations can ensure that the first defines the relevant product market and then the relevant geographic market.[2] A business may place significant barriers to expanding and entering into a dominated market and such barriers often make it difficult for other market players to challenge their dominance. Myanmar's recent economic momentum will require overcoming challenges in upcoming competition cases, along with addressing consumers' rights and preventing unfair competition that could hinder progress.

Aim and Objectives

The aim of this paper is to clarify the notion of the relevant market in competition law to promote healthy business environment. It assesses what are the relevant markets and the barriers it establishes to inhibit new competitors. Moreover, it describes the framework of the economic approach and the legal approach of the relevant market and barriers to entry for new competition regions. The research paper will give all of the relevant data and observations to achieve the aim and objectives of the research through books, publications, journals, and library-based sources and e-sources.

Brief Overview of the Competition Law in Myanmar

According to the MCL, "competition" means "business-related competition carried out by businesses among the businessmen in the market through competitive business activities to get a greater number of customers who consume by purchasing their goods and services, market share and market dominance."[3] The MCL is a key provision for the legal terms and definitions. The purposes and the basic principles of the Competition Law are in line with the framework of the AEC Blueprint and the ASEAN Regional Guidelines on Competition Policy.[4]

Myanmar Competition Law, 2015 primarily prohibits four kinds of acts as follows, namely:

(a) act of restraint on competition,
(b) monopolization of the market,
(c) unfair competition, and
(d) business combinations that may lessen competition in the market.

The anti-competitive practices are harmful and unlawful behaviors for fair and free competition in the relevant market. The assessment of the market condition is vital for calculating the market power and market share in a particular market. This will help reduce market barriers and facilitate regional market integration. MCL describes that Section 2 (g)

[1] Paul Craig *et al*., "EU Law, Text, Cases and Material", 2nd ed, *Oxford University Press, New York*, p. 26.
[2] CCCS Guidelines on Market Definition (2007), para. 2.11.
[3] Section 2(e), Myanmar Competition Law.
[4] ASEAN Regional Guidelines on Competition Policy, *available at*: <https://www.icao.int/sustainability/Documents/Compendium_FairCompetition/ASEAN/ASEANRegionalGudelinesonCompetitionPolicy.pdf/>(last assessed: 2023/02/01)

defines harm to competition among businesses in the market. Moreover, in section 2(m) of the MCL, "Market means an area where commercial dealings are conducted between persons desirous of selling and purchasing goods and services." According to the provisions of the MCL, the Myanmar Competition Commission still needs to clarify the determining of the market definition in MCL. The current situation has deterred competitors from entering the markets, which harms the competitive process and the consumer. Myanmar Competition Commission (MmCC) should delineate the market and thresholds in the relevant markets. Although the Myanmar Competition Commission promulgated the Competition Rules in 2017, it did not directly relate to the market share or effects-based thresholds in investigating potential infringements in the relevant market. Although the Commission has the power, it is not yet clear how that power might be used.

The Relevant Market Rationalizing the Adoption of a Competition Law

The Competition Law is an essential law for businesses and firms in the economy. When harmful and unlawful actions arise in businesses, the competition law will protect innocent businesses. Prices are raised by the dominant firm above the level of competition, which hurts consumers and the interests of the public as a whole. To conclude whether a firm or not it has a dominant position in harmful or unlawful cases, the commission needs to define the market first. Market determination is essential to identifying the boundaries of competition between firms. A market may be defined regarding its product and geographic dimensions, including economic substitutes in supply and demand. The product dimension defines the competing products, and the geographic dimension establishes the extent of the geographic areas that should be considered to be in the same market.[1]

The Relevant Product Market

Product dimensions define different competitive products that should be considered in the same market. "A relevant product market comprises all those products and services which are regarded as interchangeable or substitutable by the consumer, because of the products' characteristics, their prices, and their intended use."[2]

There are three elements used to define markets: "(1) demand-side substitutability, (2) supply-side substitutability, and (3) potential competition. Demand-side substitutability is related to consumers' preparedness to switch between products in response to relative changes in price. The commission considers demand-side substitution to be the most immediate and effective regulatory force on the suppliers of a product that provides on-demand substitution, particularly in their pricing decisions. Supply-side substitution involves in the manufacturer's preparation to shift production capacity from one product to another in response to changes in price." [3]

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[1] M.Malathi, "Abuse of Dominant Position in light of the Competition Law in India", *Studies in India Place Names UGC Care Listed Journal*, Vol. 40, Issue 29 (2020), p. 292.

[2] Commission Notice on the definition of the relevant market for Community Competition Law, *Official Journal of the European Communities*, C 372, 09/12/1997, para. 8.

[3] *Ibid.*, paras. 15-24.

Product Characteristics: A Non-Scientific Method for Delineating the Market

Kauper noted that the "characteristics, prices and intended use 'formula' appear regularly to commission regulations and decisions almost systematically."[1]Those three ways may provide valid and comprehensive information about substitutes for any product with appropriate methodology and analysis.

The term "relevant market" suggests that products that are part of a market can compete effectively. All products that are part of the same market for such products have an adequate measure of interchangeability.[2] To determine the product market and whether the product is interchangeable or substitutable in the product market, the Commission focuses on case study analyses.

The product market may reveal the product characteristics and end uses that govern the interchangeability or substitutability of the product. The Commission has concluded that the separate markets for industrial equipment (further sub-divided into earthmoving and construction equipment), on-highway trucks, Genets, and marine applications are due to their precise capabilities.[3] The Commission designated soft drinks and bottled water as separate products because of their price differences.[4]

In the case of Kimberly-Clark/Scott, the Commission recognized that AFH products may be less complicated than consumer tissue products in supply-side substitutability for the product. The Commission considered that "AFH toilet paper, AFH paper hand-towels, and AFH paper wipes constitute separate relevant product markets. If demand is elastic, a price increase will reduce demand."[5]

Moreover, there are some facts to consider regarding product range when assessing the degree of similarity of a product's utility for users.

(1) Actions of users. "The JFTC will consider the following to determine the product market based on external characteristics such as dimensions and structure; specific material features such as solidity, plasticity, heat resistance, and insulation; quality such as purity; and technological characteristics such as standards and systems."[6]
(2) Changes in price, quality, etc. "They were considering the firm's product range: differences in the price level or changes in price and quality. Although product A and product B can be used for the same purpose, their price level differs, and B cannot easily substitute for product A. In this circumstance, their utility cannot be considered to provide similar utility, Etc. The product in the place will consider the quality or other aspects of the product, such as its external characteristics, size and shape, physical properties, and technological characteristics."[7]
(3) Recognition and behavior of users, etc. "The JFTC will be considered the recognition and behavior of users. The product is based on the user's recognition of the utility.

[1] Patrick Massey, "Market Definition and Market Power in Competition Analysis: Some Practical Issues", *The Economic and Social Review*, Vol. 31, No. 4 (2000), pp. 309-328.
[2] Hoffmann-LA Roche & Co. AG v. Commission of the European Communities, 9 June 1976 (Case 85/76).
[3] Caterpillar/Perkins Engines, Case IV/M.1094 (1998), paras. 9-14.
[4] Nestle/Perrier, Case IV/M.190(1992), paras. 11-12.
[5] Kimberly-Clark/Scott, IV/M.623 (1996), paras. 53-60.
[6] Guidelines for Exclusionary Private Monopolization under the Antimonopoly Act (2020).
[7] *Ibid*.

> Even if product A and product B are not similar, if the users can easily substitute product B for product A as raw materials to produce product B of the same quality".[1]

Buyer preferences based on such qualities and attributes as goodwill, habit, and brand promotion are also markets of product differentiation. The concept of a market is flexible and changes depending on the facts of the case. Product differentiation appears to lessen the elasticity of the demand curve faced by the individual seller by reducing the homogeneity of competing products in the market. This relieves the seller of the need to compete on price, making it more difficult for new competitors to establish themselves.[2]

In the United Brands Company and United Brand Continental B.V v. Commission of the European Communities case, the applicants submitted that the relevant market was essential to deciding the determined market. This was based on delineating the character of the related product and its boundary of the case realistically. The Commission decided the banana market is separate, and it has different features from the other fruit markets. However, "although bananas are reasonably interchangeable with other fruit, it has unique characteristics (a) ability (appearance, chemical composition, taste, softness, vitamins, and minerals) (b) features (easy and hygienic in handling, convenience for eating, particular nutritional value) and (c) economic".[3] In this case, the court decision was based on the product's characteristics and consumer welfare. The exercise of market definition is based on prices and practical considerations.

SSNIP: A Scientific Method for Delineating the Market

The market may be defined with the SSNIP test introduced in the 1982 Merger Guidelines in the US Department of Justice. "The SSNIP test can be understood as a way to identify short-term demand substitutability by positing a small but significant price rise".[4]The acronym SSNIP stands for "small but significant non-transitory increase in price," and it is sometimes called the hypothetical monopolist test (HMT).[5]

The SSNIP test seeks to determine from the customer's point of view whether another product or service can be substituted. The test recognizes that such a price increase will be profitable if it leads an insignificant number of consumers to substitute other products.

A simple example might determine if "A" and "B" are in the same product market. If the monopolist attempted to impose an approximately 5-10 percent price increase, the SSNIP test essentially asks what consumers would do. Suppose this "B" price increase leads to changes in the consumption patterns of both fruits. If the consumers switch a sufficient volume of "B"

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[1] *Ibid.*

[2] G. de Q. Walker, "Product Market Definition in Competition Law" (1980), *Federal Law Review*, Vol. 11, Issue. 4, pp. 386-421, *available at* <https://journals.sagepub.com/doi/10.1177/0067205X8001100402?fbclid=IwAR0lQU4-uYzl-13zPNtwmgAF2O2fpSjQSRULK7K7u5RDXL8YuAoApL0TzEM&> (Last access: May 23, 2022).

[3] United Bands Company and United Brand Continental B.V v. Commission of the European Communities, Case. 27/76, 1978, pp. 224-226.

[4] Alison Jones and Bren Sufrin, *EC Competition Law: Text, Cases and Materials* (2008), p. 77.

[5] Observations by RBB Economics, "The EC's consultation on the market definition", *available at* https://www.rbbecon.com/downloads/2021/01/RBB_EC-Consultation-on-Market-Definition_v4.pdf (Last access: March 3, 2022).

purchases to "A," making it unprofitable for the monopolist in response to the price increase, then "A" would be considered to be within the same product market as "B."[1]

The Commission uses SSNIP tests to assess demand substitutability to analyze the relevant product market. While SSNIP may be conceptually valuable, the facts of a particular case can determine what will be significant with the percentage and what time duration of time will satisfy the test.[2]

"The Market Definition Notice defines clear guidance to practice on how to assess the HMT in the different sources of evidence that it includes, such as past price and volume sales data, customer surveys, market shocks, customer switching, production data, competitors' and customers' testimony, existing market research studies, margin data, and internal documents."[3]

If the consumers do not respond when the price rises, the Commission will comply with the following criteria, i.e., the supply-side substitutability will be used. Thus, supply-side substitutability is relevant to the producer's readiness to switch production capacity from manufacturing one product to another product in response to price changes.[4] Potential competition is not an essential factor in determining the market, but it is crucial when assessing market strength.[5]

One concept is called the interchangeable ability test (Cellophane Fallacy). In this case, the market definition is not essential, but the substitution presents an economic problem. Du Pont produced 75% of cellophane in the US as a monopoly or in attempting to monopolize the trade. Du Pont argued that all flexible packaging materials should be included in the product dimensions, which would make Du Pont's share constitute less than 20%, while the government determined that cellophane was the appropriate market. The court found there is reasonable interchangeability between Cellophane and other wrapping materials even though the prices of cellophane are as high as two or three times in the flexible wrapping market and even though cellophane's cost could change independently from other materials.[6] This decision was later criticized because the firm set the price of Cellophane so high that consumers would consider replacing it with inferior substitutes. [7]"The US Supreme Court failed to identify that high own-price elasticity may mean that a firm is already exercising monopoly power and may already have increased prices to the level at which other products become substitutes."[8]

Therefore, many case law and economic tests depend on the specific competition law market. The market definition is the center of any analysis of the abuse of dominant position, merger control, and identifying areas of competition between firms. Defining the market is very complicated in competitive regions. In Myanmar, the Competition Law states "Market means an area where commercial dealings are conducted between persons desirous of selling and purchasing goods and services."[9]What criteria will indicate the product market and how to access the relevant market area?

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[1] David Fruitman, *Abuse of Dominance in Developing Economics: A Focus on the issues in Cambodia, Laos and Vietnam* (2006), p. 8.
[2] The Director of Investigation and Research v. Laidlaw Waste System Ltd., CT-1991/002-Doc # 72, p. 52.
[3] Observations by RBB Economics, *supra* note. 12, p. 3.
[4] Hoffmann-LA Roche & Co.AG v. Commission of the European Communities, Case 85/76 (1976), para. 20.
[5] *Ibid.*, para. 34.
[6] United States v. E.I. du Pont de Nemours & Co. 351 U.S. 377 (1956).
[7] Massimo Motta, *Competition Policy: Theory and Practice* (2004), p. 105.
[8] ATMD Bird and Bird LLP, *Business Guide to Competition Law* (2011), p. 28.
[9] Myanmar Competition Law (2015), section 2(m).

The SSNIP test is a conceptual test in which demand-side and supply-side substitution patterns are considered, and it requires economic data and information. However, the SSNIP test is used to determine the relevant market regarding price. Moreover, it is observed based on product characteristics, consumer surveys, price information, economic evidence, and the switching of demand to potential substitutes. The regulators must define and analyze the determined market with the economic, consumer interests, and legal concepts.

The Relevant Geographic Market

The definition of the geographic market depends on the location of the business and the nature of the business's activities.[1]

"The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from the neighboring area because the conditions of competition are appreciably different in that area."[2]

The geographical boundaries of the relevant market involve identification within the area where competition takes place. Consumption patterns and delivery trends, expenses, quality, obstacles to product shipment in bordering geographical regions,[3] substantial differences in market shares between surrounding areas, and essential price distinctions are all relevant to geographical aspects.[4]

In the case of ***the Director of Investigation and Research v. Laidlaw Waste System Ltd***, the plaintiff and defendant were not in dispute regarding the product provision. However, there was considerable dispute about the product's relevant market's geographic dimensions of the product's relevant market for life-on-board services for waste disposal.

The tribunal decided that the Courtenay-Comox-Cumberland area was not the same market as Campbell River in this case. This conclusion was based on the past and present market participants in the relevant areas. The particular points of fact were the sparsely populated area between Courtenay-Comox-Cumberland and Campbell River along with the locations of the dumpsites that serve those areas are significant to the conclusion that the two population centers are not in the same geographic market concerning the provision of the lift-on-board services.[5]

Economists have focused on the issue of determining the relevant market. Areeda and Turner (1978, p.355) stated that separate (geographic) markets are indicated for a given product where it has a different price in each different area and where price changes between areas are relatively uncorrelated.[6] In the case of ***Volvo/Scania***, Volvo submitted a new argument relating to the scope of the relevant geographic market. Furthermore, Volvo argued that price comparisons were not meant to define the geographical markets and that they were different because of customer structure and the purchasing power in different countries. The Commission

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[1] Doris Hildebrand, *The Role of Economic Analysis in the EC Competition Rules* (2009), p. 299.

[2] Commission Notice on the definition of relevant market for the purposes of Community Competition law, *Official Journal of the European Communities*, C 372, 09/12/1997.

[3] M.Malathi, "Abuse of Dominance Position in light of the Competition Law in India", *Studies in India Place Names UGC Care Listed Journal*, Vol. 40, Issue 29 (2020), p. 292.

[4] Commission Notice on the definition of the relevant market for the purposes of Community competition law, *Official Journal of the European Communities*, C 372, 09/12/1997.

[5] The Director of Investigation and Research v. Laidlaw Waste System Ltd., CT-1991/002-Doc # 72, pp. 46-60.

[6] Patrick Massey, *supra* note 5, pp. 309-328.

states that "the definition of the geographical market is a critical component for the ability of the producer to distinguish prices between different geographical areas".[1] Determining the relevant geographic market was vital in the Volvo/Scania case.

The geographic range is determined in the same manner as "the product range and from the perspective of substitutability for users between products supplied in a region. In this case, the geographic range is determined after determining the product market. In many cases, the degree of substitution between different products supplied in a region can be determined from the perspective of the geographical distance of the suppliers who can purchase the relevant product under normal conditions."[2]

Entry Barriers

Entry barriers are essential because they are relevant in almost every competition case that does not involve a per se offense. Barriers to entry are considered when assessing dominance because they can prevent new companies from entering the market. Most notably, entry barriers slow down the normal functioning of the market to strengthen market power; they may be dampening or annulling. It is often necessary to establish the presence of significant entry barriers to prove that a large market share has translated into market power in the abuse of monopoly or dominance.[3]

Some economists are identifying barriers to entry using an economic approach. "Bain (1956) characterized an entry barrier as the set of innovation or product conditions that permit incumbent firms to gain economic profits in the long run. Bain recognized three sets of conditions: economies of scale, product separation, and outright cost advantages of established firms. Stigler (1968) criticized this approach, particularly the thought of scale economies as barriers to entry. He offered an alternative definition: a cost of production which must be delivered by an entrant applicant but not by an incumbent."[4]

This includes regulatory barriers as well as patents or other intellectual property rights, licenses, financial risk, and the high capital cost of entry. Further barriers are marketing entry barriers, technical competitive dynamics, productivity improvements, and the high cost of substitutable goods or services for consumers. In the case of Marine Bancorporation, the court professed to limit its per se rule to "an industry in which the State and Federal Government extensively regulates new entry."[5]

"In particular, when an IPR does not prevent others from competing with the IPR holder in the relevant market, it would not normally be a barrier to entry. In those cases, where IPRs do constitute a barrier to entry, it does not always imply that competition is reduced. Although an IPR may constitute entry barriers in the short term, in the long term a rival undertaking may be able to overcome it by its innovation. The short-term profit an IPR can provide acts as an incentive to innovate and can thus stimulate competition in innovation."[6]

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[1] Volvo/Scania, Case. No COMP/M.1672 (2002), pp. 13-31 & 233.
[2] Guidelines to Application of the Antimonopoly Act Concerning Review of Business Combination (2019).
[3] OECD, Barriers to Entry (2005), p. 9.
[4] Luis M.B. Cabral, "Barriers to entry: The new palgrave dictionary of economics", *available at* <https://studylib.net/doc/10298592/barriers-to-entry---the-new-palgrave-dictionary-of-economics> (Last access: Feb 27, 2022).
[5] United States v. Marine Bancorporation, 418. U.S. 602 (1074).
[6] CCCS Guidelines on the Section 47 Prohibition (2016), p. 50.

Firms can benefit from efficiency, allocation of resources, and product innovation. Consumers will benefit from lower prices, higher quality, and a more comprehensive range of options.

Society can achieve economic democracy and good governance through fair competition. Tariff and non-tariff regulatory barriers are those created by state statutes, regulations, and administrative practices. Sometimes, new competitors face barriers to entering the new market because of the government. (e.g., licenses).

"Barriers that would be ineffective if prices were raised higher than prevailing levels may still be relevant in assessing exclusionary practices that prevent prices from falling below current levels. The ability of firms to deter entry through behavioral as opposed to structural barriers is increasingly recognized."[1]

Research Finding

The market must be set up with an effective legal framework to promote fair and free competition and prevent anticompetitive actions in a market economy. To safeguard the interests of the business environment, it is crucial to continuously take into consideration the Competition Law. The determining of the market condition should be based on the product market and geographic market in MCL. For assessing the relevant market, one should look at the substitutability. Within the relevant market, the market share and entry barriers need to be determined.

Conclusion

The primary purpose of competition laws and regulations is to create a competitive environment for the efficient distribution of resources within the country's economic structure and to promote competition. A competitive market is cheaper and more convenient, more goods will be available for consumers, the economy will grow faster, and income distribution will be more equitable.

The objectives of the MCL are to; increase economic activity across markets, promote the development of the national economy, control unfair market competition inside and outside Myanmar, provide an economic environment that protects consumers, prevent abuses of power, and restrict control of the unfair practices among enterprises.

The dominant firm in an industry often raises prices above what would be the natural price in a competitive environment, harming consumers, and public interests, and in the competitive process. The current situation has deterred competitors from entering the markets, which harms the competitive process and the consumer. Myanmar Competition Commission (MmCC) should delineate the market and thresholds in the relevant markets. If the MmCC addresses the issue of dominance, it will be equipped with a clear economic view of market power and the ability to prevent potential competitors from entering the relevant market. In this case, the market power or shares are based on calculating the relevant market.

According to the provisions of the Myanmar Competition Law, the Myanmar Competition Commission still needs to clarify section 2 (m) of the Myanmar Competition Law

[1] R. Shyam Khemani *et al*., *A Framework for the Design and Implementation of Competition Law and Policy* (1998), *available at* <https://doi.org/10.1596/0-8213-4288-6> (Last access: Feb 27, 2022).

which is the term "market" which describes a place where people who want to buy and sell goods and services interact commercially. The Myanmar Competition Commission should clarify that they will consider the SSNIP test or other assessment factors. Although SSNIP is a conceptual test, it is applied in many countries. Moreover, Myanmar must consider other factors such as product characteristics, users' utility, consumer surveys, price information, economic evidence, switching of demand to potential substitutes, content, quality, etc., changes in Price, quality, etc., recognition, and the actions of users.

Competition analysis typically refers to a relevant market that includes a relevant product and geographic market. Market definition is usually the idea of determining market share, market power, and the scope and effect of relevant conduct. The Competition Law needs to assess market share levels in its provision. There are two types of assessment of the relevant market. The SSNIP test is used to determine the relevant market regarding price. SSNIP test is a conceptual test in which demands and supply-side substitution patterns are considered, and it will need economic data and information.

Moreover, it will observe based on the product characteristics, consumer surveys, price information, economic evidence, and switching of demand to potential substitutes. The regulators must define and analyze the determined market with the economic, consumer interests, and legal concepts. The geographic market is likely to be based on product and consumer behavior. Determination of the geographic market is significantly fixed by the product's availability to assess other factors such as industry policies, consumer preferences, shipment patterns, transportation costs, perishability, and barriers to shipment of products.

The Commission requires the enterprise's economic data to identify the relevant market in competition, nevertheless in actuality; such kind of economic data is still inadequate. Therefore, the Myanmar Competition Commission should determine the relevant market clearly to prohibit unfair competition that encourages harmful and unlawful behaviors in the relevant market. This will help reduce market barriers and facilitate regional market integration.

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LEGAL PROTECTION ON FOOD SAFETY FOR PUBLIC HEALTH IN MYANMAR*

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Abstract

Food safety refers to the conditions and practices that preserve the quality of food to prevent contamination and foodborne illnesses. Foodborne illness is a major public health issue in worldwide because it affects human health and causes significant economic loss. Myanmar is still weak in its functional capacity to address growing international concerns about the safety of food products being imported from countries like China. Therefore, legislation is needed to ensure that the food supply to consumers meets safety standards. This study aims to explore the legislative requirements for food safety, and to protect and promote public health relating to food safety from a legal aspect. According to the findings, inadequate food safety knowledge and attitudes among consumers leads to not only a negative impact on food safety practices but also health problems and a shorter life expectancy among them. Therefore, this study will inform the public to the importance of food safety and how food safety is protected and public health is promoted by national laws. Moreover, it will help the State government effectively implements the Sustainable Development Goals (SDGs) especially in Goal 2 for achieving food security and improved nutrition and Goal 3 for good health and well-being among the 17 Goals of SDGs; promotes economic development of the State; and reduces poverty among the public by protecting public health in Myanmar.

Keywords: Food safety, public health, legal protection, knowledge, attitudes, practices

Introduction

Food is one of the most essential human needs. However, the consumption of contaminated foods can cause diseases and even death. Getting safe food is the right for all consumers, as recognized by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO). Consequently, ensuring food safety and preventing foodborne disease outbreaks among the public continue to be of high priority in both developed and developing countries. Therefore, Myanmar formulated the National Comprehensive Development Plan (NCDP) (Health Sector) (2010-11 to 2030-31) in order to effectively conduct food safety as a public health programme across the country. Moreover, as Myanmar is an active participant in the ASEAN Codex Committee, food control activities in Myanmar are conducted in line with the Codex guidelines and standards. Actually, to protect and promote food safety, the enactment and proper enforcement of food legislation are essential. The objectives of this research are to check whether the consumers get or not the rights given by law and whether the entrepreneurs are responsible or not for their duties prescribed by law; to review the relevant existing laws and regulations and food safety cases together; and to find out the weaknesses and necessities of the legal system that are needed to amend the old laws and add new legal provisions for ensuring that all food produced in Myanmar are in line with quality standards and effectively protecting food safety. In this study, the legal provisions and case analysis relating to food safety are presented by observing through the Myanmar existing laws and regulations, and food complaints settled by the Department of Consumer Affairs; and the knowledge, attitudes, and practices of the teachers

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and students at Naypyitaw State Academy through the descriptive analysis and multiple linear regression from their answers to questionnaires about food safety.

Research Questions

1. How do Myanmar existing laws protect food safety?
2. What are the weaknesses and necessities of a legal framework to effectively protect food safety?
3. How can food safety knowledge and attitudes impact on food safety practices of consumers?

Research Methodology

In this study, a mixed method research design was used. The qualitative research design was used for studying the legal provisions relating to food safety. The case studies and analysis were conducted on the food complaints settled by the Department of Consumer Affairs. Data was collected from the answers to questionnaires of the respondents, about 100 persons who are the teachers and students of Naypyitaw State Academy because they are one of six target groups for consumer education under the National Consumer Protection Programme (NCPP) of Myanmar (2021-2025). The questionnaires consist of four parts: socio-demographic characteristics; 13 questions for the assessment of knowledge about food safety; 10 questions to identify the attitude level of respondents; and 10 questions to access the practices of respondents. Five points Likert scale method was used, and the answers were coded into Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly Disagree = 1 for attitude statements, and Always = 5, Often = 4, Sometimes = 3, Rarely = 2, Never = 1 for questions of food safety practices. The results in the questionnaire forms were checked and entered into the computer by Microsoft Excel software, 2010. Then, the recorded data was transferred to the IBM SPSS Statistics 27 software program. The quantitative research designs such as descriptive analysis and multiple linear regression methods were also conducted in this study.

Definitions relating to Food Safety

Food

Food means thing that human may eat and ingredients included therein or food additives except drug, tobacco and cosmetic. This expression also includes thing determined as food by the Ministry of Health by notification from time to time with the approval of the Union Government.[1]

Food Safety

Food safety refers to the conditions and practices that preserve the quality of food to prevent contamination and foodborne illness.[2]

Foodborne Illness

Foodborne illness is an infection or irritation of the gastrointestinal (GI) tract caused by food or beverages that contain harmful bacteria, parasites, viruses, or chemicals. Common foodborne illness symptoms include vomiting, diarrhea, abdominal pain, fever, and chills.[3]

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[1] Section 2(a), The National Food Law, 1997. (The Law Amending the National Food Law, 2013)

[2] Omar A, Oyarzabal & Barbara B. VanRenterghem, (2020) "The Meaning of Food Safety", Food Safety Magazine, https://www.food-safety.com/articles/6545-the-meaning-of-food-safety.

[3] National Institutes of Health (2012), Foodborne Illnesses, Department of Health and Human Services, the United States, P- 1.

Legal Framework for Food Safety

Food safety is one of the most essential things in public health. Therefore, to protect and promote food safety for consumers, Myanmar has enacted the Public Health Law, 1972, the National Food Law, 1997 and the Consumer Protection Law, 2019. The Public Health Law, 1972 protects the public health by controlling the quality and cleanliness of food; the National Food Law, 1997 seeks to ensure the availability of genuine quality, safe, and hygienic food and check them to meet the prescribed and required standards; and the Consumer Protection Law, 2019 ensures the fulfillment of consumers' rights, raises comprehensive awareness on consumer protection, and guarantees the high quality of goods or services on safety and health. The legal provisions relating to food safety are presented in detail as follows.

Quality Assurance of Food Safety

Food safety control in Myanmar is regulated by the Department of Food and Drug Administration (FDA). The FDA controls the quality and safety of all imported food and local food production. Moreover, the FDA analyzes imported food to check whether it complies with its specifications or international standards. Therefore, food safety activities are conducted in line with the National Food Law, the Consumer Protection Law, and the Public Health Law and also aim to comply with Codex guidelines and standards. These laws provide the following provisions for quality assurance.

The entrepreneur shall inform the facts about the potential changes in the nature of the selling goods that are normally invisible to the consumer by stating explicitly them.[1] The entrepreneur shall cause to include the following facts in the guarantees of goods:

(a) having the quality that can be accepted and used by the consumer;

(b) correcting the quality, measure and weight of goods;

(c) safety;

(d) suitability for the need of consumers;

(e) the same goods as the sample represented;

(f) availability of spares part, repair or replacement during the guaranteed period or the period that can be used; and

(g) conforming with the information on labelling and the description in advertisement, offering or promotion.[2]

Additionally, a person who produces, imports, exports, stores, distributes or sells food shall strictly abide by the order, directive and conditions issued by the relevant Government department or organization or Board of Authority in respect of quality assurance of food, labeling and advertisement.[3]

Furthermore, the affairs concerned with food manufacturing of local people are provided for (a) registering food manufacturing industry, repeating registration and cancelling from registration; (b) selling the hygienic food to local people; (c) protecting the adulteration of foods intended to be sold, contamination with other disqualified substances, extraction from existing ingredients; (d) making the factory, workshop and working environment which produce food to

[1] Section 22, The Consumer Protection Law, 2019.
[2] Section 23, Ibid.
[3] Section 18, The National Food Law, 1997.

be hygienic; (e) cleaning the buildings or sites where the food are manufactured and sold; (f) protecting from appointing the employee who suffered from infected diseases in the sites of manufacturing and selling foods; (g) seizing and destructing the harmful foods; (h) sending the materials concerned with food to government laboratory in order to test if it is necessary; and (i) performing the food quality up to government standardization.[1]

According to Myanmar Standards (or) Codex Standards, it must include the following elements in the brand of ready-to-eat food, apart from food that needs to be separately indicated by namely: (a) The name of the food; (b) List of ingredients; (c) Net Content, Quantity and Drained weight; (d) Name and address; (e) Country of origin; (f) Lot identification; (g) Date marking; and (h) Instructions for use.[2]

Food manufacturing enterprises must indicate the date marks, such as the manufacturing date or packaging date in the food produced in accordance with the specifications described in Notification on the Labelling of Ready-To-Eat Packaged Foods, 2022.[3] Moreover, changing the name of the general category of food manufacturing ingredients to the specified group name and the descriptions of food additives must also be stated in accordance with the specifications described in Notification on the Labelling of Ready-To-Eat Packaged Foods, 2022.[4]

In the exercise of power conferred under Section 83 (b) of the Consumer Protection Law, 2019, the Department of Consumer Affairs, Ministry of Commerce issued the Directive on Recalling the Hazardous Goods or Temporary or Permanent Prohibition on the Distribution of Hazardous Goods and Services, 2022; and the Directive on Handling and Taking Action related to Consumer's Complaints, 2022 in order to implement the process of handling and taking action related to consumer complaints and follow the business entrepreneurs in mentioning Myanmar language (or) Myanmar language and one or more other languages together on goods.[5]

In studying quality assurance of food safety in Myanmar, the issues of food safety and food control systems typically face challenges in strengthening around the five key components and priorities of (i) food legislation; (ii) food control management; (iii) inspection services; (iv) laboratory services; and (v) information, education, communication, and training. Moreover, it can also be found that there is still weak point in infrastructure such as food testing laboratories; shortage of qualified manpower; and functional food testing equipment in food laboratories; and referral laboratories resulted in deficient testing of food samples. Therefore, the relevant departments need to regularly inspect the place of food production; review the list of food products; more expand laboratory services throughout country; give timely information to consumers and education since school-aged children; and revise and add the necessary legal provisions for food safety.

Rights and Duties of the Consumers for Food Safety

Any consumer in Myanmar can enjoy the fundamental rights such as: (a) the right to satisfaction of basic needs; (b) the right to safety; (c) the right to know information correctly and completely; (d) the right to choose; (e) the right to explain and complain the consumer damage

[1] Section 3(2), The Public Health Law, 1972.
[2] Paragraph 5, The Notification on the Labelling of Ready-To-Eat Packaged Foods, 2022.
[3] Paragraph 12(f), Ibid.
[4] Paragraph 7 (p), Ibid.
[5] The Directive on Recalling the Hazardous Goods or Temporary or Permanent Prohibition on the Distribution of Hazardous Goods and Services, 2022.

matters; (f) the right to remedy for damages; (g) the right to study the knowledge, and required information; and (h) the right to live in a healthy environment. [1]

Furthermore, the consumers have the following duties:

(a) complying with the information and guidelines regarding goods or services;

(b) paying the agreed price in purchasing the goods or services;

(c) avoiding the false accusation and act intended to the detriment of entrepreneurs; and

(d) avoiding the false statement in the form of saying, writing and acting in order to cause the detriment of relevant entrepreneurs by means of the social media or by other means while settling the consumer dispute.[2]

The consumers should also have due diligence not to consume the food unfit for health. Furthermore, the instructions for food safety should be strictly followed as the prescriptions mentioned on the food.

Duties of the Entrepreneur for Food Safety

The entrepreneurs in Myanmar are responsible for the liability of goods or services they provided when consumers suffer from damages. These responsibilities are as follows:

(a) providing the simple and correct information regarding the guarantee and requirements of goods or services;

(b) treating consumers honestly and properly without discrimination;

(c) acting the business honestly and properly in accordance with the business ethics and regulations;

(d) guaranteeing goods or services for trading or manufacturing based on the quality and standardization stipulated by the relevant government departments and government organizations;

(e) providing the opportunity to test on goods for consumers which is required to test quality before purchase;

(f) expressing the additional costs of goods or services to be known by the consumer before purchase;

(g) avoiding the direct or indirect selling goods or services that are likely to cause damage or loss to consumers;

(h) taking responsibility for goods or services that are inconsistent with the guarantee;

(i) avoiding threatening, false statements in the form of saying, writing and acting in order to the detriment of consumers by means of the social media or by other means while settling the consumer dispute;

(j) notifying timely to the Department and consumers by means of the social media or by other means if he knows the hazard of the produced goods or services by himself or by any other way; and

[1] Section 19, The Consumer Protection Law, 2019.
[2] Section 20, Ibid.

(k) complying with the settlement and decision made by the relevant Committee if the disputes related to goods or services arise.[1]

Apart from the above duties, the entrepreneur should keep the place of food business in a clean and sanitary condition. Moreover, the employees shall be supervised to maintain personal cleanliness for food safety. The vehicles for transportation of food should also be kept in a state of cleanliness and good condition to prevent any risk of contamination of the food.

Prohibitions and Restrictions for Food Safety

The existing laws relating to food in Myanmar provide the following prohibitions and restrictions for food safety.

No one shall produce, import, export, store, distribute or sell the food that may be poisonous, dangerous or injurious to the health of the consumer; food wholly or partly substituted or adultered so as to affect or endanger the quality of food; and food containing food additive is used in excess of the prescribed limit and agricultural chemicals in excess of the maximum permissible level under Section 22. No one who produces, imports, exports, stores, distributes or sells food shall fail to abide by the order, directive and conditions issued by the relevant Government department or organization or the Board of Authority under Section 25.[2]

No one shall act dishonestly to injure any consumer or entrepreneur under Section 62. No entrepreneur shall advise the fraudulent advertisements; and the advertisement including the false information related to the quality, quantity, ingredients, mode of use, price, rate of service and time needed to deliver the goods or services under Section 63. No entrepreneur shall mislead the goods or services traded by selling the goods after modifying or altering, selling the expired goods, mixing the goods that are of the same type but lower quality under Section 65.[3]

In addition to the above legal provisions, Myanmar should enact legal provisions for persons with infectious diseases not to carry on food business, like Singapore. The authoritative body may require any entrepreneur or any assistant or employee to submit certificate of immunization against infectious diseases.

Remedies for Damages of Food Safety

Any consumer who is dissatisfied with unsafe goods or services that do not meet the prescribed quality or condition can make a complaint to the Head Quarter Office in Nay Pyi Taw or through the Departments of Consumer Affairs in Regions or States to settle the consumers' damages. The law authorizes the Department of Consumer Affairs to settle consumer disputes and impose administrative measures. These administrative measures are prescribed in below.

The Township Food and Drug Supervisory Committee may pass a temporary or permanent prohibitory punishment on the person who commits any of the following acts: (a) production, storage, or sale of food under unhygienic conditions; (b) causing a person who has contracted a food-borne infection or who is a carrier of the germs of the said infection to enter or work on the premises for production, storage, or sale of food under Section 13. If a person who has obtained a licence violates or is considered to have violated any order, directive, condition, or any condition of the licence issued by the relevant government department or organization, the

[1] Section 21, The Consumer Protection Law, 2019.
[2] The National Food Law, 1997.
[3] The Consumer Protection Law, 2019.

government department or organization which is authorized to issue the licence may revoke the licence temporarily, subject to a time limit, or cancel it under Section 14. The Board of Authority may direct the relevant State/Divisional, District, and Township Food and Drug Supervisory Committees to seize the food produced and distributed by a person whose licence has been cancelled due to infringement of any condition relating to quality assurance under Section 15.[1]

The relevant office may pass one or more of the following administrative orders to any entrepreneur who fails to comply with the duties of the entrepreneur under Section 21 or fails to provide the rights claimed by the consumer: (a) warning; (b) ordering to remedy; (c) ordering to provide substitute; (d) ordering to refund the value of damage under Section 52. The Committee may pass one or more of the following administrative orders to any entrepreneur who violates any provision of this law and the prohibitions in Chapter XXIII: (a) ordering to provide the prescribed compensation for damage; (b) imposing a fine; (c) prohibiting the sale of the disputing goods or services for a limited period; (d) coordinating with the relevant government department to revoke the business licence temporarily or permanently under Section 53. The Committee shall deposit the fines imposed under sub-Section 53(b) to the Union budget and State or Region budget as prescribed by the Commission under Section 54.[2]

Case Studies and Analysis

After analyzing the food complaints settled by the Department of Consumer Affairs, comparison on the number of food complaints from January, 2017 to October, 2023 was shown in the following table in detail.

Table 1. Comparison on the number of food complaints in Myanmar (January 2017 - October 2023)

Years	Jan - Dec 2017	Jan – Dec 2018	Jan – Dec 2019	Jan – Dec 2020	Jan – Dec 2021	Jan – Dec 2022	Jan - Oct 2023
Number of Food Complaints	32	42	52	68	15	15	11

Source: Data of the Department of Consumer Affairs, 2023

According to the above Table 1, the rates of food complaints increased year by year until 2020. After the new Consumer Protection Law, 2019 had been enacted to provide more protection and take action on the violations of consumer rights, the Consumer Affairs Committees were also formed to settle the disputes between the consumers and entrepreneurs and make the decisions on them. As these committees and the Department of Consumer Affairs are settling the disputes and taking action effectively, it is found that the rates of food complaints are gradually decreasing after 2020.

The cases of consumer complaints relating to food safety are studied as follows:

When the bakery (A) in Nay Pyi Taw was inspected by an inspection team on 24-1-2018, it was found that making bread on the ground floor inside; the presence of rat holes next to the bread machines; kneading and making bread without wearing shirts by the bakers, dirty and bad

[1] The National Food Law, 1997.
[2] The Consumer Protection Law, 2019.

smelling around the place where the bread is made. When these grounds were presented at the (1/2018) meeting of the Consumer Dispute Settlement Bodies in Nay Pyi Taw, an investigation team was formed, and this team inspected again on March 19, 2018. It was found that applying for registration as a small enterprise had been certified as suitable for consumption and the baking workshop had been systematically revised and modified. It was decided that the entrepreneur would be given a severe warning and signed a pledge under Section 19(b) of the Consumer Protection Law to strictly follow the consumer protection procedures and to conduct responsible behavior in the operation of the business in the (2/2018) business coordination meeting of the Consumer Dispute Settlement Bodies held on May 17, 2018.[1]

A complainant who resided in Mawlamyine Township, Mon State, complained that Brand (A) - dried lemon flats were being sold without the approval of the relevant departments. Thus, on December 14, 2020, when the manufacturer of dried lemon flats of the brand (A) was called and negotiated regarding the complaint, he agreed that dried lemon flats of the brand (A), which are being distributed and sold in the market without a recommendation, would be voluntarily retaken, and the retaking process would be completed during from December 14, 2020 to December 31, 2020.[2]

As a complainant who resided in Pyay Township, Bago Region, complained that Brand (A) - the dry cake had a bad smell and bad taste when he bought and consumed it from a dry cake bakery in Pyay Township. The officials of the Chief Officer's Office of Pyay District conducted a field visit to the bakery (A) on the North Slope Road on July 21, 2022. That afternoon, the complainant and the respondent were called for discussion and negotiation. After negotiating, the owner of the bakery said that he would apologize to the complainant's family and that the purchased dry cake pack would be exchanged for a new one. On that day, July 21, 2022, the owner of the bakery and three members of his family apologized to the complainant's family in front of the officials of the Chief Officer's Office of Pyay District, and the complaint was withdrawn as both sides were satisfied.[3]

A complainant who resided in Katha Township, Sagaing Region, purchased Brand (A) - evaporated milk can from a grocery store and complained that the evaporated milk can was not fresh and foamy to the Chief Officer's Department of Sagaing Region on 23-6-2023. Regarding the complaint, the inspectors from the Chief Office of Katha District analyzed and found that the complainant requested to exchange the evaporated milk can to the store where he bought it, but the store owner said that the company is currently out of stock of the evaporated milk cans and will exchange it when the company sends them. Then, the complainant wanted to get back the value of his damages. There is no need to return the item for replacement. Moreover, it was also found that the complainant filed the complaint not to suffer similar losses for others in the future. The responsible persons from the Chief Officer's Department of Katha District explained to the complainant that he needs to carefully read the labels on the product before purchasing the product, and issued a warning letter to the store owner who was complained about not to sell the product that would cause consumer damage under Section 52(a) of the Consumer Protection Law, and withdrew the complaint.[4]

[1] Data from the Department of Consumer Affairs, www.doca.gov.mm.
[2] Ibid.
[3] Ibid.
[4] Ibid.

According the case studies and analysis, it was found that most of the food complaints indicated food is unclean and not fresh to consume. Other food cases are found that the manufactures do not register their food production, distribution and sale to the relevant departments in accordance with the existing laws.

Data Analysis of Respondents' Socio-demographic Characteristics, Knowledge, Attitudes, and Practices for Food Safety

This study was conducted by 100 respondents from Naypyitaw State Academy. The respondents' knowledge, attitudes and practices towards food safety were collected by answering the prepared questionnaires. The records taken for this study were as follows.

Socio-demographic Characteristics of the Respondents

This section covers the characteristics of the respondents, such as gender, age, education level, and kinds of respondents.

Table 2. Socio-demographic characteristics of the respondents

No.	Variables	Characteristics	Frequency (n= 100)	Percentage (100%)
1.	Gender	Male	18	18%
		Female	82	82%
2.	Age	18 – 25 years	54	54%
		26 – 35 years	33	33%
		36 – 45 years	7	7%
		46 – 65 years	6	6%
3.	Education Level	University Education	50	50%
		Graduate	7	7%
		Post Graduate	43	43%
4.	Kinds of Respondents	Teachers	50	50%
		Students	50	50%

In Table 2, respondents included the teachers with 50 numbers and the students with 50 numbers from Naypyitaw State Academy. In this study, most of the respondents are females with 82%. By the age analysis on the respondents, Table 2 showed that there are 54 respondents with age level 18 – 25 years, 33 respondents with age level 26 – 35 years, 7 respondents with age level 36 – 45 years and 6 respondents are above 46 years old, respectively. Further, when education levels of respondents are analyzed, 50 respondents have university education level, seven are graduate level and fourty-three are post-graduate level, respectively.

Reliability Test of the Variables

In this study, Cronbach's Alpha values were utilized to check the reliability of the variables. Cronbach's Alpha values of this study were shown in Table 3.

Table 3. Reliability test of the variables

Variables	Numbers of Items	Cronbach's Alpha
Food Safety Knowledge	13	0.683
Food Safety Attitudes	10	0.609
Food Safety Practices	10	0.836

In this study, regarding the reliability test, the Cronbach's Alpha values were 0.683, 0.609 and 0.836. Pallant (2001) stated that Cronbach's Alpha value above 0.6 is considered reliable and acceptable. Thus, the alpha values of all variables for this study are the acceptable level.

Background Knowledge Test about Food Safety

This section explained the level of respondents' knowledge based on their answers to yes/ no questions in Table 4. A total of 13 questions were included in this knowledge test.

Table 4. Respondents' knowledge about food safety

No.	Questions	Right Answers		Wrong Answers		Don't Know	
		Frequency (n= 100)	Percent (100%)	Frequency (n= 100)	Percent (100%)	Frequency (n= 100)	Percent (100%)
1.	Does unsafe food not only cause danger to people's health but even lead to death?	98	98%	2	2%	0	0%
2.	Can you tell whether food is safe or not just by looking at its external appearance?	70	70%	23	23%	7	7%
3.	Can we do laboratory tests to know whether food is safe or not in our country?	61	61%	21	21%	18	18%
4.	Is imported food safer than domestically produced food?	70	70%	13	13%	17	17%
5.	Are expensive foods safer than cheaper foods?	59	59%	30	30%	11	11%
6.	Can you protect yourself from foodborne illnesses if you buy and eat food that is properly packaged?	62	62%	29	29%	9	9%
7.	Can you confidently eat foods that are advertised on television and in the media?	66	66%	18	18%	16	16%
8.	Is there remedy for damages arising out of the purchasing and consuming of food?	35	35%	38	38%	27	27%
9.	Is there law for protecting consumers in Myanmar?	42	42%	25	25%	33	33%
10.	Do consumers have the right to choose and buy food in the market?	93	93%	6	6%	1	1%

No.	Questions	Right Answers		Wrong Answers		Don't Know	
11.	Can you complain foodborne illness symptoms to the relevant authorities if you suffer from them?	59	59%	22	22%	19	19%
12.	Are they perfect for eating at any time if you store leftovers in the refrigerator?	84	84%	13	13%	3	3%
13.	Have separate investigators been appointed to investigate consumers' complaints about food safety in Myanmar?	32	32%	36	36%	32	32%

From the information in Table 4, it was found that 65% of the respondents cannot correctly answer about the question "Is there remedy for damages arising out of the purchasing and consuming of food?". Moreover, about 60% don't know "Is there law for protecting consumers in Myanmar?". Only 32% of respondents answered correctly "Have separate investigators been appointed to investigate consumers' complaints about food safety in Myanmar?". Again, as a result of the analysis, respondents were not clear on the statement "Can you complain foodborne illness symptoms to the relevant authorities if you suffer from them?".

Table 5. Distribution of respondents according to total knowledge score percent on food safety

Percentage of Knowledge Scores	Frequency (n= 100)	Percentage (100%)
0% - 25%	27	27.0%
26% - 50%	50	50.0%
51% - 75%	21	21.0%
76% - 100%	2	2.0%

The following Figure 1 showed the overview of the correct answers of respondents who answered the knowledge questions concerning food safety.

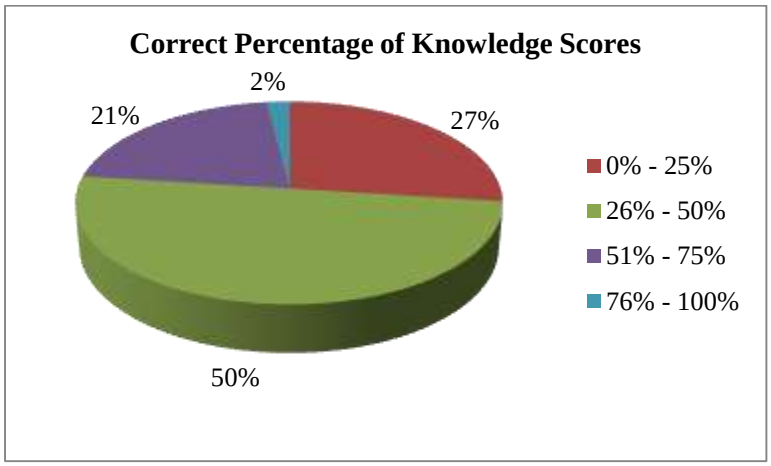

Figure 1. Knowledge level of respondents to food safety

This pie chart shows the group of people being indicated by the percentage of answering right among 13 knowledge questions about food safety. 50% of respondents had a median level

of knowledge. The minimum scores (0% - 25%) of the respondents were 27%. As shown in Figure 1, 2 respondents (2%) achieved 76% - 100%, 21 respondents (21%) gained between 51% - 75% and 50 respondents (50%) got 26% - 50%. Only 23% of the respondents graded above 50% of the total knowledge scores. However, none of the respondents obtained the full of the total knowledge scores.

Attitude Statements Among Respondents

Table 6. Descriptive analysis of respondents' attitudes to food safety

No.	Statements	Mean	Standard Deviation	Number
1.	In all domestic and foreign foods, the ingredients, allergens, and how to store them are mentioned in Burmese.	3.7600	1.01623	100
2.	All domestic and foreign food products are attached to the date of manufacture and expiration date.	4.1300	0.97084	100
3.	Now, you can safely eat locally produced food.	3.0600	0.82658	100
4.	All ingredients in food are exactly the same as described on the label.	2.9300	0.97706	100
5.	Consumers have full rights regarding food.	3.0300	1.02942	100
6.	The entrepreneurs in Myanmar are selling food with full quality assurance.	3.0100	0.94810	100
7.	The entrepreneurs take responsibility and accountability for the promise if it is not compatible with the guarantee they made for the food.	2.9200	0.89533	100
8.	Eating in restaurants and buying locally produced food are full of satisfaction.	3.2100	0.70058	100
9.	You can easily get the necessary information about food in Myanmar.	3.0300	0.95827	100
10.	In order to ensure food safety, the public is often informed by the relevant departments through the media.	3.3600	0.96943	100
Overall Mean		3.2418	0.59809	

Table 6 illustrated the analysis of respondents' attitudes to food safety that is computed with five points Likert scales methods from the agreement of the respondents. From the respondents' attitude scores, the minimum attitude score was 2.9200 for the statement "The entrepreneurs take responsibility and accountability for the promise if it is not compatible with the guarantee they made for the food" and the maximum score was 4.1300 for the statement "All domestic and foreign food products are attached to the date of manufacture and expiration date". Among the ten questions, the mean values for the higher mean score of 3.7600 agreed with "In all domestic and foreign foods, the ingredients, allergens, and how to store them are mentioned in Burmese". The overall mean score of the respondents' total attitude scores was 3.2418.

According to the results of attitude questions, it was found that the answers of the respondents to the attitude questions are neutral.

Food Safety Practices Among Respondents

Table 7. Descriptive analysis of respondents' practices for food safety

No.	Questions	Mean	Standard Deviation	Number
1.	Do you store food at the recommended temperature or cool time for various foods?	3.4848	0.81270	100
2.	Do you read the allergens and ingredients carefully before consumption?	3.9293	1.03266	100
3.	Do you check the expiration date mentioned on the food before consuming it?	4.8384	0.44509	100
4.	Do you read the reference labels for various foods carefully?	4.1313	0.93292	100
5.	Are oil cans reheated to the recommended temperature before consumption?	3.7172	1.26201	100
6.	Have you heard of foodborne illnesses in your environment?	3.7576	0.78365	100
7.	Do you know and follow food safety regulations?	3.7273	1.00831	100
8.	Do you often visit Internet websites for lists of foods that the relevant Ministry has announced should not be consumed?	3.1818	1.23192	100
9.	Do you consider the safety and cleanliness of food before buying and consuming it?	4.2323	0.99825	100
10.	Have you ever eaten food with no reference labels or expiratory dates?	2.4343	1.07059	100
Overall Mean		3.7459	0.46444	

Table 7 illustrated the analysis of respondents' practices to food safety that is computed with Likert scales from the habits of the respondents. The mean values for the higher mean score of 4.84 showed respondents always check the expiration date mentioned on the food before consuming it. Moreover, respondents often read the reference labels for various foods carefully and consider the safety and cleanliness of food before buying and consuming it. The overall mean value for food safety practices of respondents was 3.7459. This suggested that the major respondents often follow and apply the food safety practices.

Correlation Analysis of Food Safety Knowledge and Food Safety Attitudes with Food Safety Practices

This section revealed whether there was a relationship between dependent variable as food safety practices and independent variables as food safety knowledge and food safety attitudes. The results were mentioned in Table 8.

Table 8. Results of correlation matrix

Variables	Food Safety Practices	Food Safety Attitudes	Food Safety Knowledge
Food Safety Practices (P-value)	1	0.381 (0.000)	0.300 (0.003)
Food Safety Attitudes (P-value)	0.381 (0.000)	1	0.112 (0.268)
Food Safety Knowledge (P-value)	0.300 (0.003)	0.112 (0.268)	1

***. Indicate the significant level at 0.01.

Based on the results presented in Table 8, there was a positively weak correlation between the food safety attitudes and knowledge and the food safety practices for all variables.

Multiple Linear Regression Analysis of Food Safety Practices

Multiple linear regression model was applied independent variables as food safety knowledge and food safety attitudes and dependent variable as food safety practices. This analysis determined the effect of food safety knowledge and attitudes on food safety practices. These results were shown in Table 9.

Table 9. Results of multiple linear regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	Test Statistic (t)	Significance (Sig.)	Variance Inflation Factor (VIF)
	Beta (β)	Std. Error	Beta (β)			
(Constant)	1.874	0.393		4.767	0.000	
Knowledge	0.435	0.153	0.260	2.845	0.005	1.013
Attitude	0.277	0.071	0.356	3.897	0.000	1.013
F	13.034 (P-value=0.000)					
R	0.464					
R^2	0.215					
Adjusted R^2	0.199					

***Indicate the significant level at 1%.

According to Table 9, the values of VIF for all independent variables were 1.013, indicating that there was no multicollinearity. The coefficient of determination (R^2) is 0.215. The overall model was significant at the 1% level.

Research Findings

This study conducted a comprehensive analysis using both descriptive and multiple linear regression methods to investigate the factors influencing food safety practices. The descriptive analysis was observed on fifty teachers and fifty students at Naypyitaw State Academy. Among 100 of the respondents, all of the respondents have heard about the food safety. Most of the respondents answered that they received the knowledge of food safety from media and newspapers. Moreover, this study found that about 50% of the respondents had a low level of knowledge. Because about half of the respondents cannot correctly answer about the questions "Is there remedy for damages arising out of the purchasing and consuming of food?", "Is there law for protecting consumers in Myanmar?", "Have separate investigators been appointed to investigate consumers' complaints about food safety in Myanmar?", and "Can you complain foodborne illness symptoms to the relevant authorities if you suffer from them?". These results may be explained by the fact that although most of the respondents have heard about food safety, they do not clearly know the role of law in food safety. Therefore, these findings suggest that the legislature needs to effectively notice to the public about the legal protection and rights relating to food safety.

According to the attitude statements, most of the respondents agreed that the statement "In all domestic and foreign foods, the ingredients, allergens, and how to store them are mentioned in Burmese". This result may explain that the respondents have relatively good attitudes towards the information given by the entrepreneurs. Other attitude statements were answered as neutral. The results of this study seem possible because they were not satisfied with the responsibility, accountability and quality assurance of the entrepreneurs. The multiple regression analysis revealed that the food safety knowledge and attitudes had a significant positive impact on food safety practices. Therefore, it can be concluded that all independent variables have a significant positive effect on food safety practices. This means that improving the food safety knowledge and attitudes can lead to higher levels of food safety practices among the public. According to the standardized coefficient (β), food safety attitudes are more influent on food safety practices than food safety knowledge.

Conclusion and Recommendations

As Myanmar is a signatory to the ASEAN Trade Protocol, Sanitary and Phytosanitary Measures (SPS), and Technical Barrier to Trade (TBT) agreements, the Food and Drug Administration (FDA) operates as the contact point for Center band Only Detection of Exchange (Codex). At present, although illegal cross-border trading is excessive, FDA is weak in the resources required to adequately inspect food products in the local market. The secondary sources of information show that approximately 70% to 80% of food sold on the market is not safe to eat. Most of the foods contain fake colourings and chemicals which are very harmful to consumers' health. This problem of substandard food products being available on the market is exacerbated by the imports brought into Myanmar illegally. This is due to weak awareness of food safety issues and international standards; weak enforcement of existing laws; illegal imports; weak coordination and information sharing between Ministries. Therefore, although

Myanmar has the laws relating to food safety, the enforcement has been weak. Moreover, food safety compliance is now weak and great efforts are required to strengthen the system. Under the National Food Law and the Consumer Protection Law, it is mandatory for procedures and manufacturers to attach labels to food products, indicating their constituents and expiration dates. However, it has been found that these procedures are not abided by in practice. Therefore, food safety inspection should be regularly conducted by the inspectors in the food production, distribution and sale.

Based on the results and findings of the study, some recommendations can be given to enhance food safety practices for public health. Firstly, legal knowledge should be enhanced by giving information from media in order to protect public health and the rights of consumers. Secondly, food safety attitudes can be promoted by providing guarantee for the quality and security of food. Lastly, legal enforcement of food safety must be improved, and action must be effectively taken against the producers, suppliers, and the distributors of food products who fail to abide by the laws, rules, and standards related to food safety. Additionally, the Food Safety Law should be enacted like India in order to fully protect the food safety, to promote public health and to effectively implement the Sustainable Development Goals (SDGs) especially in Goal 2 for achieving food security and Goal 3 for good health among 17 Goals of SDGs in Myanmar.

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LEGAL PROTECTION OF GEOGRAPHICAL INDICATION IN MYANMAR: A CASE STUDY ON EDIBLE BIRDS' NEST IN MYEIK ARCHIPELAGO

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Abstract

Geographical indication (GI) is a collective intellectual property right used to identify a particular products or goods of a specific place and possess a given quality, reputation or other characteristics attributable to its geographical source of origin. GI system can bolster sustainable economic growth with the restoration, preservation and promotion of cultural identity, specific knowledge and natural resources linked to a particular territory (FAO, 2023). Myanmar has many renowned local products or goods possessing distinct quality or reputation accrued from their place of origin as Puto-O grapefruit, Ywar-Ngan Coffee, etc. These local products can now be enjoyed protection as GI- certified product or goods under Trademark Law, 2019. This study aims to disseminate legal knowledge on GI protection and to provide better understanding in the use of GI among stakeholders and potential GI beneficiaries including SMEs with emphasizing the implementation of GI protection to edible Bird's Nest in Myeik Archipelago. The research highlights that with the adoption of a comprehensive GI protection scheme, policy and legislation framework should be in place so as to ensure that the protection system is adequately prepared and effectively provided to guarantee the sustainability of GI system as well as to secure the environmental sustainability of the local community.

Keywords: geographical indication, edible birds' nest, protection.

Introduction

Mergui (Myeik) Archipelago is a group of over 800 islands located in Tanintharyi Region, Myanmar. These islands are renowned for their rich in natural resources in diversity and also famous for their rich in marine life with an extensive coral reef system. This is also the area where the first and only marine national park _ Lampi Marine National Park was established in 1996 and declared as an ASEAN Heritage Park in 2003.[1] The islands of Myeik Archipelago are also a habitat for the largest population of white-nest swiftlet (*Ziwasoe* bird in Burmese name) in Myanmar. Bird nests created by these small species using their solidified saliva are typically prized as commercial product due to their containment of high nutrition and protein level and edible bird's nest becomes one of the well-known local products of the area.

Bird's nests have been harvested naturally on these islands of the Myeik Archipelago under government 'competitive bidding (tender) system'. Later, with the increase in market demand and price, the production of bird's nests at in-house (man-made) breeding has developed where the authorization to operate is granted with 'permit (contract-based) system'. Eventually, bird's nest production has become one of the main industries in the region and the numbers of producers are tremendously increase during these years. Currently, in Myeik Archipelago including Tanintharyi Region, there are 2 companies operated for birds' nest harvesting under the tender system and over 225 private contracts are being permitted for in-house breeding for bird's nest harvesting as of data 2023, August.

This research highlights the significance of geographical indication to locally-originated goods or products and its contribution to bird's nest production sector in Myeik Archipelago. In addition, it explores the means for legal protection to edible bird's nest as Geographical

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[1] https://tourism.gov.mm/myeik/, https://whc.unesco.org/en/tentativelists/5874/

Indication under current intellectual property (IP) system. This study aims to provide legal knowledge about geographical indications to the community as well as to disseminate about the potential benefits that can be contributed to the local community through the legal protection of edible birds' nest along with the conservation of natural resources.

Method of the Study

The research paper has been principally applied the qualitative research methodology covering the descriptive and contextual analysis methods and also conducting in-depth interviews with the principal governing body and local business persons. This paper relies its primary data on the national legislation and international instruments dealing with the protection and governance of GI protection. Secondary data of this research comes from literary books, interviews with key informants, publications, articles and also online resources.

Problem Statement

The current monitoring and management system on the bird's nest production sector is governed by the Forest Law[1] and the Conservation of Biodiversity and Protected Areas Law[2] because edible nest swiftlets are being identified as 'wildlife'. The principal monitoring body concerning the harvesting and production of birds' nests is the 'Department of Forest' under the Ministry of Natural Resources and Environmental Conservation. It can be said that these are the administrative practices solely established on the production of edible bird's nest in the region.

With the market production rate is vividly increased lately, the protection upon the quality and distinctiveness/characteristics of edible bird's nest is demanding in order to maintain the originality and quality of the birds' nest that are due to geographical factors in Myeik Archipelago. The argument in this paper is that the maintenance of reputation and quality of the edible bird's nest can be accomplished through geographical indication protection under the new Trademark Law of Myanmar. With strong GI protection scheme, the Small and Medium Enterprises (SMEs) can build consumers trust with GI-certified products and secure, in return, a value chain and good return on their investment. At the same time, production industry will be performed in a way to balancing the conservation of biodiversity and preservation of natural resources in a particular region.

Geographical Indication and Its Importance in Commercial Sector

Geographical indication is an indication which identifies the particular goods and/or products originating in a specific place where a given quality, reputation or other characteristics of the goods/products is essentially attributable to its geographical origin.[3] Generally, geographical indication is a sign used on goods or products that have a specific geographical origin and possess distinct qualities or reputation due to that origin.[4] In Myanmar, a geographical indication (GI) can be defined as an indication which identifies any goods as originating from a particular country, territory or a region, where a given quality, reputation or other distinguishing characteristics of the goods is indicative of its geographical origin.[5]

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[1] Pyidaungsu Hluttaw Law No. 29/ 2018, Myanmar.
[2] Pyidaungsu Hluttaw Law No. 12/ 2018, Myanmar.
[3] Article 22 (1) of the TRIPS Agreement, 1995.
[4] WIPO, 'Geographical Indications: An Introduction', 2021, p-6.
[5] Section 2 (o) of the Trademark Law 2019, Myanmar

Generally, a geographical indication consists of the name of the place of origin of the goods, such as "Darjeeling" for tea from an Indian Town named Darjeeling or "Blue Mountain Coffee" for coffee bean from a mountain range- Blue Mountains in Jamaica. Such examples show that geographical indications can attach a high reputation and thus may be valuable commercial assets.[1] In Myanmar, there are many well-known goods/products particularly originated in a given geographical region as for instance, "Shwe-bo Thanakkha" is well-known for its origin linked to in Shwebo region. Likewise, "Puta-O Grapefruit", "Myeik Bird's Nest", "Ywar-Ngan Coffee", "Pakokku Blanket" are some examples of the well-known products in Myanmar named after its geographical origin. Therefore, GI can be a tool serving to identify a product or good that originates from a geographical location.

It is obvious that geographical indication is not simply just a name or a symbol but it reflects a reputation closely linked to a designated geographical location. This reputation is in collective nature, intangible asset owned by the local community (producers) as a whole. If it is not protected, it could be used without restriction and its value diminished and eventually lost. Therefore, protection of GI can enhance the reputation and value of particular local product and support local business. Moreover, such protection is a way to forestall registration of the indication as a trademark by a third party (outsiders) and to limit the risk of the indication becoming a generic term.[2]

It seems that geographical indications can only be used by the producers, whose goods conform to the applicable requirements concerning the area of origin, processing method and typicity of the product. The protection of geographical indication is considered as an effective mean to add value to goods/products, local identity and traditional knowledge in the ASEAN region.[3] As such, it can be seen that geographical indications could be a tool for promoting local community's branding and for generating local production capacity that can upgrade the socio-economic development. With a GI, the small and medium enterprises (SMEs) that produce GI-registered products can built a trust with consumers with strong reputation and quality and thereby secure a good return on their investment.[4]

Difference between Trademark and Geographical Indication

Though Trademark and Geographical indication are the signs with commercial value that is principally used to distinguish the particular products or goods from others, their usage have many different purposes.

Firstly, in terms of ownership, a trademark is owned by an enterprise which offers certain products or services on the market. Geographical indication identifies a geographical area in which several enterprises are located which produce the kind of product for which the geographical indication is used. It means that GI is a collective asset and there is no 'particular owner' of it. Any local organization and/or in some jurisdiction, the local administrative body may become the authorized one dealing with the use of GI. Secondly, in terms of visuality, a trademark may be names, letters, numbers, illustrated parts, or combinations of colors, or combination of any of them. On the other hand, a GI is an indication which identifies any goods

[1] WIPO, Ibid, p-20.
[2] WIPO, 'Geographical Indications: An Introduction', 2021, p-21.
[3] ASEAN, 'Guidelines on Protection of Geographical Indication in ASEAN Member States', 2020.
[4] https://www.wipo.int/ip-outreach/en/ipday/2022/toptips/geo_indications.html (Access on 10 Sep 2023)

as originating form a particular area where a given quality, reputation or characteristics is attached to its geographical origin.

Thirdly, in terms of negotiability, a trademark can be transferred or assigned to anyone by its owner. In contrast, a GI cannot be transferred or assigned to an outsider that is not belonging to a given geographical area. It implies that a GI may be used by any person/company that produces the goods in a particular area in line with certain quality requirements. Lastly, the objective to protect a trademark is to provide intellectual property rights to an individual manufacturer to protect from counterfeiting and infringement. Meanwhile, the primary aim to protect a GI is for public interests and designs to protect a particular product against misuse or imitation and to guarantee the true origin of the product to the consumers.

Protection of Geographical Indication under Intellectual Property System

Geographical indications are protected in different countries and regional systems through a wide variety of approaches. In the world, there are three main ways to protect GIs among countries which are (a) so-called *sui generis* systems (under the law specifically designed to protect geographical indications); (b) collective and certification marks (under Trademark Law); and (c) modalities focusing on business practices including administrative product approval schemes (under unfair competition law, consumer protection law, etc.).[1] In Myanmar, the protection system on geographical indication is applied under the Trademark law as collective and/or certification marks.

The above-mentioned approaches are the systems typically applied by each country in their local protection systems. The way of obtaining a GI protection abroad is through two international registration systems administered by World Intellectual Property Organization (WIPO): the "Lisbon System" and the "Madrid System". The Lisbon System was established in 1958 to facilitate the international protection of appellations of origin through a single registration procedure. The Madrid System is an international registration system legally governed by the Madrid Agreement (1891) and the Madrid Protocol (1989) whereby GIs can also be protected in other countries as collective and certification marks. States can enjoy international protection of their GIs through the ratification of these two instruments. Though not yet ratification, Myanmar is on its way to take part in these international protection systems.

Myeik Edible Bird's Nest and Registration for GI Protection

Edible bird's nest is one of the distinguished natural products in Myanmar_ originated from the Myeik Archipelago. The protection of GI for edible bird's nest can be achieved through registration as collective marks and/or certification marks in line with legal provisions under Trademark Law.[2] Any organization legally formed by the manufacturers, producers of natural and/or industrial products and/or on behalf of them, or government authority can apply the registration of geographical indication.[3] In this case, for instance, the formation of Bird's Nest Manufacturers' Organization (BMO) comprising with local manufacturers is demanding to perform as authorized local (representative) body to apply for GI registration. According to

[1] WIPO, 'Geographical Indications: An Introduction', 2021, p-26.
[2] Chapter XVI of Trademark Law 2019, Myanmar.
[3] Section 53 of the Trademark Law 2019, Myanmar.

interview data, though the local manufactures are planning to form a body, there is no yet formal region representative body dealing with the matter. Otherwise, like in some jurisdictions, the local administrative body may take a representative role to apply for registration.

Currently, Department of Forest is taking primary responsible upon the administration of birds' nest production industry both with bidding (tender) system (for natural harvesting in islands) and with permit system (for in-house breeding harvesting). There are two enterprises doing business for bird's nest harvesting under the tender system whereas over 225 private/individual enterprises are currently operated under the permit system.[1]

Registration form can be submitted to the Intellectual Property Department (IPD) under the Ministry of Commerce with prescribed fees outlined in its Notification.[2] The application is provided with the following requirements;

a. Name, nationality and address of the application entity or representative;
b. The geographical indication for which registration in sought;
c. The applied area to which the geographical indication applies;
d. The good designated by the geographical indication;
e. The specific characteristic of the good or quality or its reputation;
f. The link between the prescribed specific quality, its reputation or characteristic and original area and technology of production;
g. A copy of payment receipt of fees;
h. Related documents required by the Department of Intellectual Property (If needed);
i. Other prescribed particulars.[3]

After receiving the application by the Registrar, he/she must examine whether an application is in conformity with the prescribed regulations. If all the criteria are met, he/she can publish the contents of the application and specification. If there is no objection within a particular time or the objection is rejected, the Registrar has to accept the registration of a GI.[4] However, the registration of a geographical indication can be limited if a GI does not conform with its definition mentioned in Section 2 (o), or if the goods for which the geographical indication is used has become common usage or customary in the Republic of the Union of Myanmar, or if a GI which is contrary to public order, morale or public policy of the country.[5]

The term of protection enjoyed by such registration of a GI is provided in Section 59 that the protection is up to the period as long as the registered GI has the distinguished characteristics, quality or reputation for which protection was initially granted exists. In order to maintain its protection, a GI-certified good or product must fulfil certain requirements which local manufactures or producers have agreed upon or adhered to. It can be said that a monitoring system has to be established collaboratively with the relevant departments and organizations (probably, like Department of Forest, BMO, Custom Department and/or Department of Trade, etc.) to supervise not only the consistency of particular product or goods with prescribed

[1] Interview Data with key informants. (26. 06. 2023)
[2] Notification No 1/2023 of Intellectual Property Agency, Myanmar.
[3] Section 54 of the Trademark Law 2019, Myanmar & www.ipd.gov.mm [latest access on 4 May 2023]
[4] Section 58 of the Trademark Law 2019.
[5] Section 55 of the Trademark Law 2019, Myanmar.

qualifications but also between the descriptions of the products registered as GI and the relevant products as well as the use of the names of registered GIs in the market.[1]

The term of protection provided is unlimited as long as the given quality, reputation or other characteristic of the product remain essentially attributable to that particular geographical origin. Therefore, in respect of bird's nest, specific GI logo should be in place by registration so as to guaranteed or certify the authenticity of such products. Meanwhile, the quality control and/or quality assurance system on the products should be implemented so as to sustain the given quality or reputation of GI-certified products.

Legal Rights enjoyed under the Protection

Upon receiving the protection, the right holder can enjoy "the right to prohibit" the following activities-

(a) use of a geographical indication in any manner by falsely describing that a product is from the region stated in said geographical indication even though it is from another place of origin in order to deceive the public;
(b) any use of a registered geographical indication which creates unfair competition;
(c) the use of a disputed geographical indication for goods that are not from the region indicated in said geographical indication for indicating the origins of goods, for use after translating said geographical indication, or for the use of a geographical indication together with the description of the type, group, form, imitation or similar descriptions.[2]

Any dispute arising out from the infringement of IP rights can be submitted to the Intellectual Property Rights (IPR) Court as criminal case or civil action or miscellaneous suit.[3] Such IPR Court may adjudicate and confer judgment and/or order compensation upon investigation. Recently, the Supreme Court grants jurisdiction and mandate to Yangon High Court as IPR Court to adjudicate cases related to IP rights.[4]

Advantages upon the Protection of Geographical Indication

GI can be a tool for local producers to assist in developing value chain and in promoting market access with origin-linked products. Brand recognition is a crucial part of marketing and nowadays, consumers pay increasing attention to the geographical origin of products, and care about specific characteristics attached to the purchased products. GI conveys information about the origin-bound characteristics of a product.[5] This trend creates a major opportunity for producers (particularly for SMEs), as it removes the pressure of competing with generic and standardized products.[6] Improved demand and market access for GI-certified products significantly contribute income generation for all actors in local value chains and improving their livelihoods which have positive impact on reducing poverty (SDG 1).

According to Food and Agriculture Organization (FAO), GIs can boost sustainability which covers combination of three pillars: economic, environmental and social sustainability. GI

[1] Ibid, Section 61.
[2] Section 57 (c) of Trademark Law 2019, Myanmar.
[3] Ibid, Section 77.
[4] Notification No. 235/2023 of the Supreme Court of the Union of Myanmar.
[5] WIPO, 'Geographical Indications: An Introduction', 2021, p-13.
[6] https://blog.private-sector-and-development.com/2020/11/19/geographical-indications-and-quality-brands-an-effective-tool-to-promote-industrial-smes-market-access/ (latest access on 23 Sep 2023)

is designed to ensure the quality and reputation of a particular product by ascertaining the continuous use of traditional production, processing, marketing practices as well as given geographical contributions such as weather, soil, etc. GI systems act as catalysts for sustainability in the long run, as they ensure the continuous use of traditional production, processing and marketing practices and know-how. Therefore, GI system can be an instrument which local community can exploit to create an endogenous sustainability pathway towards the objectives of the 2030 Agenda.[1] The strong link between the products and their geographical origin focus attention on the need to preserve the local natural resources and products are particularly motivated to adopt environmentally sustainable production methods.

A number of studies has shown that under appropriate conditions, geographical indications can contribute to development in rural area. The entitlement to use a GI generally lies with local producers, and the added value generated by the GI accrues to all such producers.[2] Meanwhile, GI can enhance local governance through collaborative decision-making and governance structures whereby SEMs enjoy greater opportunities to market their local products abroad. This raises the region's international profile and boosts tourism.[3] The development of Agro-based tourism can be seen, as an example, in "Buon Ma Thuot Coffee Festival" have been organized in *Buon Ma Thout* (Viet Nam) with the aim to introduce the potential and strength of the Dak Lak Province, promote investment in coffee processing and agricultural products in the area, and attract domestic and foreign tourists to Dak Lak Province.[4] It can be said that GI can foster social fairness and gender equality with the participation of male and female entrepreneurship and the preservation of local and natural heritage and traditions.

The protection of GI shows a positive impact in terms of volumes, prices and local development. The most important benefit for a registered GI is the enjoyment of legal protection to take legal measures against misleading and deceptive trading practices. Such legal protection extends as a way to encounter forestall registration of the indication as a trademark by a third party and to limit the risk of indication becoming generic term.[5]

Findings

Edible birds' nests are one of the well-known local products in Myeik Archipelago due to its rich nutrients. With the expansion of traditional cave-breeding method to in-house breeding, bird's nest production industry becomes the growing business sector in the area. At the moment, the Department of Forest is focal governing body concerning the harvesting of birds' nest. Under new Trademark Law, it recognizes the geographical indication as an indicative sign to protect any goods originating from a particular place where a given quality, reputation or other distinguishing characteristics of the goods is attached to its geographical origin. Any origin-linked goods including Myeik birds' nest can now be registered as collective marks and/or certification marks under the trademark system. Therefore, the stakeholders can enjoy legal rights as well as many benefits accrued from such GI protection system though there may be challenging in preparing processes.

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[1] FAO, 2023, 'Using geographical indications to improve sustainability – Lessons learned from 15 years of FAO work on geographical indications', Rome. https://doi.org/10.4060/cc3891en

[2] WIPO, 'Geographical Indications: An Introduction', 2021, p- 15.

[3] https://www.wipo.int/sme/en/geographical-indications.html (latest access on 23 Sep 2023)

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[5] WIPO, Ibid, p- 21.

Recommendation

Geographical indication is crucial in identifying products from a particular place known for its unique characteristics and quality. It cannot be denied that the influence of GI upon market expansion of a particular product lies with quality and authenticity attached to its geographical origin. Legislation, policy and regulatory framework should be in place to ensure that the protection system is adequately prepared and effectively provided to maintain the sustainability of GI system. At the national level, it is necessary to develop a comprehensive geographical indication scheme covering the rules and mechanisms underlying the functioning of a GI including strong administrative and enforcement mechanism. In Myanmar, the application for GI registration can be submitted by any local representative body in respective sector or by any responsible local government authority. It is important to disseminate knowledge about GI including benefits to the local community and then encouraging them to strengthen the cohesion of group of producers and other stakeholders for the accomplishment of GI registration processes for instance, identification of product's characteristics, traceability.

Conclusion

In conclusion, the protection of geographical indication can be applied to industrial, agricultural, natural and handicraft products. Upon registration, it can be a tool to protect the local producers/ manufacturers against unfair competition and prevent third party from using the registered GI to identify goods that are not originated from the designated region or goods that are not manufactured/produced in compliance with the prescribed standards. Due to its well-known quality and reputation of GI products, it can increase the commercial value of the products and foster national, regional and international trade. Creating higher income for producers and stakeholders of the value change, a registered GI can support the local and rural development with jobs creation and attract investment as well as tourism in somehow. To summarize, with the establishment of effective legal protection and enforcement, a strong institutional support and cohesion between the group of producers and other stakeholders are so demanding and crucial upon the development of a comprehensive GI protection scheme in Myanmar.

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CONTROLS ON ESTABLISHING PRIVATE SCHOOLS IN MYANMAR

Thida Tun[1]

Abstract

Myanmar endeavors to enable quality education, whether in the public and private sectors. SDG4 recognizes the need to provide quality education for all. The establishment of private schools can contribute to the achievement of this Goal by providing quality education to students. Great attention was paid to the emergence of private schools at all educational levels in the education sector. Accordingly, this paper mainly focuses on the examination of the legal provisions how to regulate the establishment of private schools considering the compelling legal, social, economic, educational and political issues. The legal context of such issues plays a crucial role in the establishment and management of private schools in a democratic society. It is also essential to operate the quality assurance system. The sectoral laws should be enacted to control the private universities and colleges including TVET schools based on the relevant sectors although private schools can be established under the private education law.

Keywords: private schools; quality education; legal provisions

Material and Methods

This project is conducted in terms of these areas: educational laws and related legal provisions in the scope of private schools. These are reviewed by using the research descriptive and analytical methods. The relevant provisions, policies and practices are criticized thematically to ensure the main focused areas. The analysis of the specific legal provisions is aimed to examine what extent of the existing provisions to control the private schools and to identify the legal requirements for the establishment of the schools.

Findings

The research work indicates that the registration is a key point for the establishment of private schools to follow a set of procedures prescribed by the Ministry of Education (MOE). In addition, the private schools have to meet certain quality standards regarding teaching facilities used in the teaching environment, qualifications of teaching staff, curriculum and quality assurance.

Introduction

Education is not only a powerful tool of the countries in building their future but also an essential pillar to elevate their status. They realized that their generations are the most valuable resources on earth. Accordingly, access to quality education is important because it is a key to unlock a better life by seeking knowledge, building confidence, and breaking down barriers to opportunity. So it forms a part of development plans to face the future. Non-public type education has been developed by commercialization and privatization in education. Many private schools have spread all categories and specializations in education. As a supporter of education, private schools are classified by Myanmar National Education Law. Private participation in education is also a promoted sector under the law.

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The research topic is chosen to conduct the project due to the lack of previous studies on the field. Mainly, private education sector is even now important to regulate the conducts through the legislation because it has amplified in the various fields. For this reason, the study is aimed to begin with legal analysis through in-depth review. In order to achieve the project's aim, there are three main sections in this study. In the respective sections, it tries to study the legal provisions covering education sector and clarify the meaning of the terms such as private education and private schools. It elaborates the rules and regulations governing the establishment of private schools. It highlights the quality assurance system that is crucial for quality control.

Three main sections are:

(i) Legal Framework of the Education System in Myanmar;

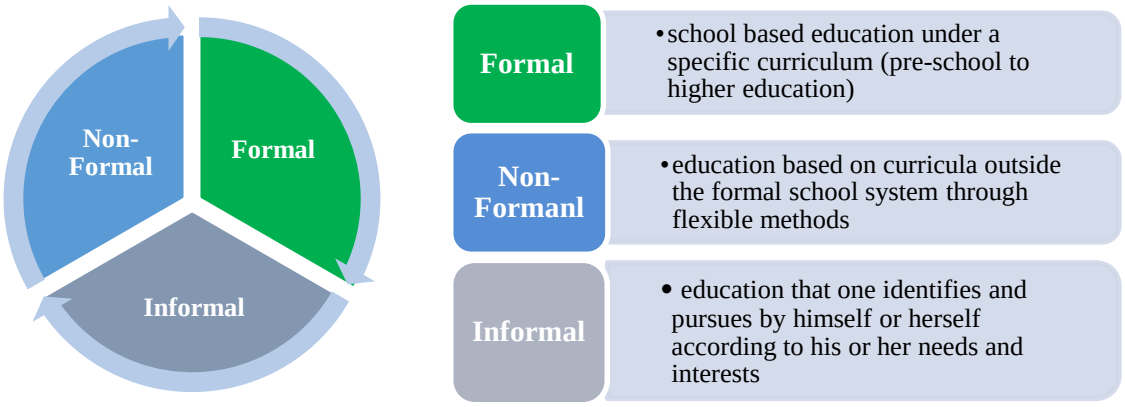
(ii) Legal Requirements for the Establishment of Private Schools; and

(iii) Ensuring Quality Education.

Legal Framework of the Education System in Myanmar

Education is recognized globally as the most empowering force. Education reform is an attempt of Myanmar for upgrading its education. One of the steps for education reform includes an enactment of the National Education Law (NEL) in 2014 which is amended in 2015 and in 2022. It emerged as an umbrella law for education. According to Section 11 of the Law, formal education, non-formal education and informal education are comprised of in the implementation of the national education system.

Education System



To implement the formal education, the State designates the education as follows:

(a) Basic Education;

(b) Technical and Vocational Education; and

(c) Higher Education.[1]

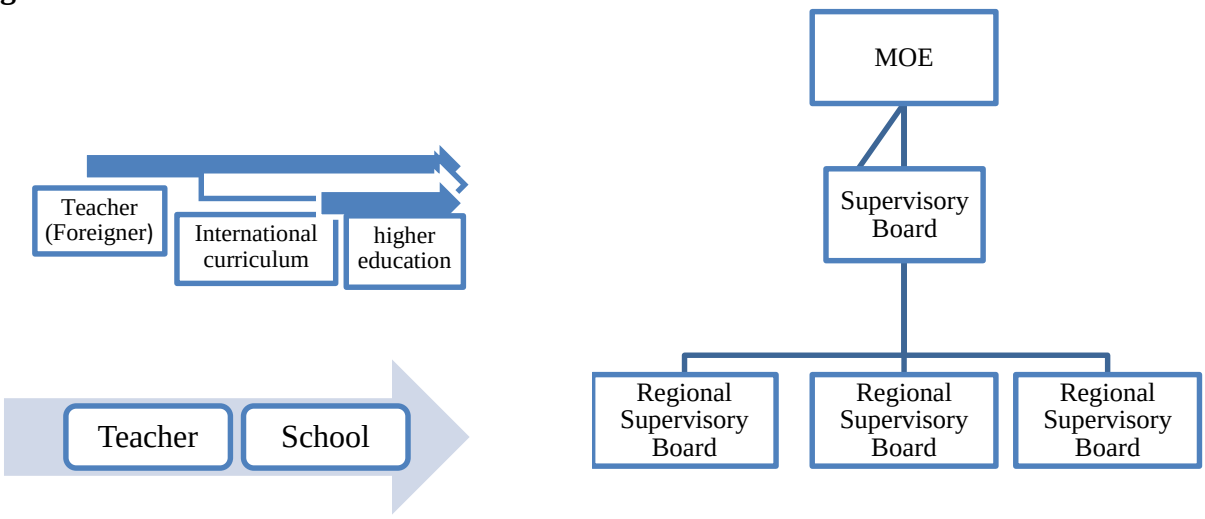
[1] Section 14 of the National Education Law of Myanmar, 2014.

There are nine types of schools classified by Section 34 of the Law including public and private schools. Under the Law schools covers the places where teaching and learning for pre-school, basic education, technical and vocational education, and higher education take place. The State accommodates the children who wish to pursue knowledge in private schools depending on their facilities. Thus, private or independent schools are recognized as one of the categories to provide education. This Law drives to develop the relevant law for private education sector according to sections 4(e), 56(a), 57(a), 58(d) and 60.

Legal Requirements for the Establishment of Private Schools

The basic framework of private education sector has developed in Myanmar through the promulgation of the Private Education Law (PEL) in 2023. The Private School Registration Law, 2011 has been replaced by this Law. Under section 2(f) of the Law, private education means education provided by private or independent schools in accordance with the educational policies of the Ministry. This type of education can be presumed to implement national education system under formal education despite not mentioning in the National Education Law. Thus, the educational services can be provided by the private schools concerning basic education, technical and vocational education and higher education. Those are categorized as private schools to be registered under section 5(a) of the Law. Section 2(e) defines the term "private or independent school" as school established and registered in accordance with this Law. In this expression, branches of private or independent school registered under this Law are included. Accordingly, registration is a legal requirement for the establishment of private schools. In addition, section 6 says that the private schools should be established by registration if they are in accord with the Myanmar Investment Law and the relevant laws. It indicates that the sectoral law is necessary to regulate their activities in the respective fields of education. Therefore, a founder must apply to register for the establishment of the private school through the relevant Regional Supervisory Board in accordance with the stipulations.

Registration Process



The following are the statutory requirements to be submitted to apply for the registration according to section 27 of the Law:

(a) permission for the establishment of a private or independent school granted in accordance with the Myanmar Investment Law and relevant laws;

(b) documents regarding ownership or lease of the land and building, or building to be used for a private or independent school;

(c) lesson plans in accordance with the prescribed curriculum and syllabus;

(d) documents stating that students' hostels are in line with the stipulations of the Supervisory Board, if the private or independent school has any;

(e) arrangements for the campus, environment and classrooms to be suitable premises and to be adequate sanitary facilities;

(f) emergency health care programmes;

(g) security and fire safety programmes;

Moreover, it is important that the application should be in accord with the basic requirements prescribed by the Ministry or relevant Ministry, and the stipulations of the Supervisory Board under section 26. Some sections of the Law say that private schools need to follow the relevant rules and regulations based on their types concerning basic education, technical and vocational education (TVET) and tertiary education. They need to fulfil certain conditions imposed by the relevant laws in their respective fields.

Private Basic Education Schools

Basic education is a foundation of the education to pursue further studies for TVET or higher education according to the definition provided in National Educational Law. According to ISCED standard, basic education comprises primary education and lower secondary education covering a wide variety of non-formal and informal public and private activities intended to meet the basic learning needs of people at all ages.[1] Due to its importance as the heart of education, the management and superintendence of the basic education schools are undertaken by the Ministry of Education and the relevant Ministries under section 57(a) of the Law. The 1973 Law of Basic Education was replaced by the Basic Education Law (BEL) in 2019. Section 4(e) of the new Law affirm non-discrimination policy that is vital to education for all. It has become a boost for basic education to create the international-standard learning environment and to ensure the quality education.

With respect to the private education sector, sections 4(o), 36 and 52 of the Law provides that private education should be implemented in accordance with the relevant law. Therefore, the promulgation of private education law has played a crucial role in the control of private schools because the 2011 Law just regulated the establishment of private basic education schools following the national curriculum. Accordingly, this law did not cover international schools, private TVET and higher education schools.

[1] https://uis.unesco.org/en/glossary-term/basic-education#slideoutmenu

The Private Education Law applies to all types of private schools in the respective fields. It regulates the conduct of the schools based on the different levels of education. In order to uplift the union spirit and to maintain national culture, section 32 provides that the private education schools other than the schools following international curriculum have to teach the subjects including Myanmar, history and geography of Myanmar. The students of the private basic education schools following international curriculum need to study these subjects if they are Myanmar. In addition, the above type of schools shall ensure to teach Myanmar subject to the students who are foreigners and wish to study this subject suitable to the respective grade. The curricula for these subjects are prescribed by the National Curriculum Committee. Similarly, in Malaysia, a private educational institution providing primary education or secondary education or both shall comply with the requirements of the National Curriculum. [1] The curriculum has to be used by the schools. Core subjects of the National Curriculum are set out in the Schedule including national language. Thailand Private School Act also states that apart from teaching foreign language subject, Thai language shall be used, unless otherwise it is an international school or a school which is granted a permission to educate in foreign language, such school may teach in a language specified in a license. However, it must teach students to be capable of reading, writing and speaking Thai language.[2] Obviously, countries are seeking to maintain their culture by regulating in private education sector.

Further requirements have to be met under the conditions imposed by the Law and specific directives. For private basic education school following national curriculum and the schools following international curriculum two Directives are issued by the Supervisory Board under the Law. It includes the specification for their infrastructure, facilities, class size ratio, registration fees, and etc.

Private Higher Education Schools

Higher education is defined in section 2(s) of NEL as the education that provides the learners who have successfully completed the highest level of basic education or its equivalent at a school recognized by the Ministry or the Relevant Ministry. Sections 4(j) and 26 recognizes that universities, colleges and institutes are leading to autonomous system. According to sub-sections 4(k), 28 (b), 28(c) and 57(d), every university has to draw up a charter comprising of its organizational structure and internal regulations. The charter is also necessary for private universities under sub-sections 34(a), (b) and (c). The university charter should informs all of its activities, laying out its goals and explaining the methods.

Directive on the registration of private higher education school has been issued under PEL In the directive, private higher education schools are categorized as university, foreign university branch, college and center based on the academic programs. It includes the conditions of using the name of the school. In Singapore, there is also restriction on use of school, no person or organization shall, except with the written consent of the Director-General use the words “academy”, “college”, “school”, “university” or any other terms specified in the Gazette by section 4A(1)(a) of the Education Act, 1957. Under sub-sections 10(1)(h)(i) and (ii) of the Singapore’s Private Education Act, 2009, grounds for refusal to grant or renew registration

[1] Section 74 of the Malaysian Education Act, 1996.
[2] Section 43 of the Thailand Private School Act, 2007.

include the use of the name that is likely to mislead the public or that is identical to or so nearly resembles the name of some other's. In Thailand, there are three types of private institution of higher education as follows: university; institution; and college. The characteristic of the university, institution, and college shall be in accordance with the Ministerial Regulation.1 There are also certain prohibitions under section 76(1) of the Malaysian Private Higher Educational Institutions Act, 1996 which states that no one shall establish a private higher educational institution by the use of the word "University", "University College" or "branch campus" except in accordance with the provisions of this Act. These provisions illustrate private higher education institutions that cannot use the words such as "university" regardless of their status. Establishment of private higher education schools are prohibited unless they are created in accordance with the Law.

With regard to higher education sector the University Education Law 1973 is an existing law in Myanmar despite its silent feature. Particularly, many provisions contained in this law do not accord the current operational system of university education. Moreover, section 14 of the Law is in conflict with the provision of PEL. According to the section, only universities established by the said Law can confer certificate of completion of course, diploma or degree. The 1973 law should be considered as an issue in the control of higher education institutions including private universities because it can be ambiguous in interpretation and implementation of the laws due to the contradictory statements. It is strongly recommended to launch unified provisions as a contemporary law covering higher education system in Myanmar.

Private TVET Schools

Technical and Vocational Education is defined in section 2(r) of the NEL as the education that systematically produces technocrats, technology technicians and experts, and vocational education scholars, technicians, and experts. Technical and vocational education and training (TVET) is understood as comprising education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods.[2] As an integral components of TVET, it can be taken place at secondary, post-secondary and tertiary levels and includes work-based learning and continuing training and professional development which may lead to qualifications.[3] As part of lifelong learning, TVET contributes to skills development opportunities in national and local contexts.

In TVET sector, the 2018 Science, Technology and Innovation law is a related legislation. In section 2(f) of the Law, training means know-how training conducted by organizations, businesses, departments, universities, degree colleges, colleges and institutes which are based on science, technology and innovation. However, this law focuses on research, innovation and technology transfer by regulating the functions.

According to the NEL, formal education contains technical and vocational education as one of the main stream to implement the national education system. To promote the involvement of the private sector in skills development is one of the key aspects of the draft TVET law.[4]

[1] Section 9 of Thailand 's Private Institution of Higher Education Act, 2003.
[2] https://unevoc.unesco.org/home/UNEVOC+Publications/akt=detail/lang=en/qs=5968
[3] Ibid
[4] https://unesdoc.unesco.org/ark:/48223/pf0000373105

Current reforms emphasize better involvement of the private sector in the development of the TVET system. According to National Education Strategic Plan 2016-21, access to TVET in Myanmar is provided by relevant ministries and the private sector through 372 technical and vocational education and training centres.

Private TVET schools need to register for their establishment under the Private Education Law. They need to meet the requirements imposed by the Law. Section 33 of the Law provides that private or independent technical and vocational education and training schools have to -

(a) comply with the relevant law;

(b) comply with the stipulations of the relevant ministry;

(c) systematically design and adopt transfer learning programmes for learners who want to pursue their education while they are attending the prescribed courses, or after the completion of the prescribed courses;

(d) confer the certificate of completion of the course, certificate, diploma, degree or honorary degree in accordance with the stipulations of the National Accreditation and Quality Assurance Committee;

(e) classify the level of technical and vocational education in accordance with the National Education Law.

These provisions reveal the importance of the relevant law such as the TVET Law how to control the activities of all private or independent technical and vocational education schools in implementation of the TVET education.

Ensuring Quality Education

Goal 4 of the Sustainable Development Goals sets out to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. It is recognized that the provisions of section 54 aim to develop a scheme of quality assurance by specifying the standards and methods of evaluation in order to ensure quality. According to section 58 (b) of the law, the National Accreditation and Quality Assurance Committee (NAQAC) need to be formed by the MOE to assure the quality education in the implementation of educational policies and projects for all kinds of education at all levels. Moe is responsible to specify means and methods for assessment and evaluation under the Law. Two components are thus outlined in Strategy 6 of the National Education Strategic Plan (2021-2030) for the strengthening and institutionalizing of quality assurance systems in relation to quality education.

Fundamental principles of national education include fostering inclusive education and creating opportunities for lifelong learning. In every sector of education, it is essential to implement the national education principles when providing education for their respective fields. In section 4(d) of the Private Education Law, the basic principle of private education is to ensure the emergence of private or independent schools that are internationally recognized for quality assurance. Private schools are required under section 42 of the law to take steps to improve the quality of education in line with the National Accreditation and Quality Assurance Committee's criteria, which are based on the National Education Framework.

In order to provide quality education, both internal and external quality assessment system is essential to operate in the respective education. Under the chapter of quality assessment and quality assurance contained in the Law, the functions of the NAQAC has played a crucial role in evaluating and accrediting the level of quality of a school and its academic programs in accordance with the educational standards.

One of the Agency's functions is to establish or support accreditation or certification schemes and other measures to enhance the standards of the private education industry or the education industry in Singapore generally under section 4(1)(d) of the Private Education Act 2009. This Act aims to provide for the regulation and accreditation of private education institutions so as to ensure the provision of quality education. Agency has been established by section 3 of the Skills Future Singapore Agency Act 2016. Accreditation is recognized as a quality control system because private higher education institutions need to be accredited concerning degrees and academic programs.

It is also handled by the regulations in Thailand. This says that an application for accreditation and accreditation of academic standing of the private institution of higher education shall be in accordance with the criteria, procedure, and condition as prescribed in the Ministerial Regulation.[1] Moreover, one of the duties of the Private Education Commission is to promote and support in academics, quality assurance, research and development, in order to assure the quality of private education under section 14(3) of Thailand's Private School Act, 2007.

This can also be noticed that quality assurance is a mean to ensure quality education by recognizing that the authority to determine adequacy of educational facilities and quality assurance of the course of the study, provided in section 39 of the Malaysian Private Higher Educational Institutions Act 1996.

Notably, these legal provisions indicate that a responsible body for quality assurance is important to accredit the educational programs provided by the various types of schools based on the different levels of education. In order to evaluate the educational standards of the institutions and their programs, the accreditation of schools is one of the requirement for the establishment of the private schools, especially in higher education. Therefore, the vital role of the NAQAC should be considered to upgrade the quality assurance system.

Conclusion

The global goal aims to provide quality education and life-long learning opportunities for all because education is a device to create better world in the future. Significantly, in order to achieve the SDG4 the main key is to uplift the educational quality.

In Myanmar National Education Law 2014 is the main legislation for all education sectors. Under the Law, the main stream includes basic education, technical and vocational education and higher education in the implementation of the national education system. Specific

[1] Section 54 of Thailand's Private Institution of Higher Education Act, 2003.

legislation is necessary to regulate the activities in their respective sectors because management system can be different from one to another. For this reason, the Basic Education Law is enacted in 2019. The promulgation of Private Education Law is constituted as a framework for the establishment of private schools. However, some provisions of the Law signal the needs for sectoral laws as the establishment and operation of the private schools should be in line with the relevant laws.

The comparative study on the selected countries shows that the registration with the submission of relevant documents for the school's facilities is a basic requirement for the establishment of private schools. It is interesting to note that the countries maintain their culture by identifying the compulsory subject for their citizens. Besides this the accreditation by the appropriate body is cardinal in the quality assurance system. Accordingly, NAQAC need to perform the statutory duties under the educational laws. In order to achieve SDG4, it is important to ensure that all students have access to quality education without discrimination in private schools. They have to comply with non-discrimination policy. This should be a regulation for private schools despite providing to follow the policy in BEL. Many provisions of the University Education Law do not accord with the current university education governance structure. For this reason, a new sectoral law is necessary to replace the law in line with tertiary education system. The right to confer degree, diploma and certificate by the higher education institutions including private universities and colleges should be in accord with the system. It is also essential to enact TVET law as private providers in TVET sector are increasing in Myanmar. Significantly, the establishment of quality assurance system under the law is a central point in ensuring quality education.

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RIGHTS OF MARRIED WOMAN UNDER MYANMAR CUSTOMARY LAW

Khin Myo Thant[1]

Abstract

Every citizen has the freedom to abide by his customs, cultures, and traditions and to choose religion which they wish to respect. The Constitution clearly allows these fundamental rights and men and women have the same rights and not discriminating the status of sex under Constitutional right. The purpose of this paper is to analyze the rights of married woman in Myanmar, based on a review of current practice, and to guarantee the observance of rights of married woman. Myanmar customary law applies to all Buddhists as the personal law which mainly concerns family matters such as marriage, divorce and conjugal rights, adoption, succession and inheritance especially in married woman. Myanmar Buddhists woman can marry her own desire without restriction. Mutual consent between them is very important of the marriage of their life. The modern right of married woman is the practice of monogamy that defend women from becoming co-wives and to prevent domestic violent that arise from the actions of polygamist men. Therefore, the rights of Myanmar Buddhist married women have the higher rights than the other religions concerning with matrimonial and conjugal rights. It can also find that the rights of married woman are aligned with some of sustainable development goals in United Nations. Finally, this research will give awareness how important on the rights of married woman in the matrimonial affairs.

Keywords: Constitutional right, Matrimonial rights, Equality, Well-being**,** Restriction

Introduction

The population of women is higher than that of men in every state. Nowadays, every nation accepts that the rights of men and women must be the same and equal. In Myanmar, women's rights are expressly mentioned in the State Constitution and protected under the Myanmar Customary Law, the Myanmar Buddhist Women's Special Marriage Law and the Monogamy Law. Moreover, Myanmar signed "Convention on the Elimination of All Forms of Discrimination against Women" (CEDAW) to promote women's rights of equality and protect them from domestic violence. Myanmar also has been followed and implemented the sustainable development goals of United Nations. Therefore, it can be seen that Myanmar Buddhist married women have the higher rights than other religious woman under fundamental and matrimonial and conjugal rights from birth to death without any discrimination.

Research Method and Materials

With the intention of bring out this paper, research methodology is qualitative that deals with the basis of Myanmar Customary Law. The main sources of research base on the collection of literature, principles and legal norms of Myanmar Customary Law and other relevant provisions relating to matrimonial rights under various statues, namely, Monogamy Law 2015, Myanmar Buddhist Women's Special Marriage Law 2015, are studied together with leading cases and not leading but prominent cases. The other sources are studied in practices on rights under sustainable development goals of United Nations compare with rights of married woman in Myanmar. Additional source is collecting from journals, articles, materials and websites.

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Finding of Research

In this research paper can find the rights of Buddhist married woman who have the higher rights than the other religious married woman. Men and women have the same rights and not discriminating the status of sex under constitutional right. The rights of men and women must be the same and equal in matrimonial and conjugal rights. These rights of Myanmar married woman are aligned with some of sustainable development goals in international practices.

Discussion

Fundamental Rights

Myanmar Customary Law regulates the personal affairs of Myanmar Buddhist faith. In Myanmar, others residents in different religions are Christianity, Hinduism, and Muslim. Buddhist woman is a citizen of the Union of Myanmar who believes in Buddhism, or a citizen both of whose parents are Buddhist.[1] The rights of Marriage, divorce, adoption, succession and inheritance, matrimonial rights and religious usage and institution are primarily concerned with family matters.[2] After enacting the Monogamy Law, 2015 and the Myanmar Buddhist Women's Special Marriage Law, 2015, the rights of married women are getting more improved, equality and safety in matrimonial rights.

According to the Constitutions of Myanmar, the rights of married women are the

same as all citizens of Myanmar without discrimination.[3] Women shall be entitled to the same rights and wages as men for similar work.[4] It also stipulates those mothers, children and pregnant woman shall enjoy equal rights as defined by Law.[5]

Thus, Myanmar Buddhist Women will obtain and protect from constitutional rights and matrimonial or conjugal rights. And also, the Myanmar married women's rights are found to be consistent with the Sustainable Development Goals (SDG) implemented by the United Nations.

Right to marriage

Marriage is purely a temporal affair. The Myanmar word for "Ein-Daund-Pu" means "Set-Up-Home."[6] According to Myanmar Customary Law, marriage is clearly a civil without any religious, traditions or ceremonies matter. Certain requirements for a valid marriage are prescribed by custom. Parties must be of age and mental capacity.[7]

Dr Maung Maung states that the marriage in three periods as follows; -

1. Period when a daughter had to comply with parent's wish.
2. Period when a daughter could refuse her parent's arrangement.

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[1] Section 2 of the Buddhist Women's Special Marriage and Succession Act, 1954.
[2] Section 13 (1) of Myanmar Laws Act, 1898.
[3] Section 348 of the Constitution, 2008
[4] Section 350, Ibid
[5] Section 351, Ibid
[6] Maung Maung, Dr, "Law and Custom in Burma and the Burmese family", 1st edition, 1963, p.54,55
[7] Ibid, p.56

3. Period when parents have to approve their daughter's own choice.[1]

The following requirements are in legal marriage between Myanmar Buddhists; -

1. The man should have his adolescence.
2. The woman should be above her 20, a widow, a divorcee or a spinster under the age of 20 years who has obtained the consent of her parents or custodian.
3. The man and woman must give must freely consent to be husband and wife presently.
4. Both shall not be unsound mind.
5. The woman shall not have legal husband.
6. In the absence of direct proof of marriage, then they shall live together as husband and wife publicly.

In marriage among Myanmar Buddhist, mutual consent is very important to become a legal marriage. Hence, the bride and bridegroom cannot have a legal marriage without free will.[2]

With regard to make marriage without the consent of woman, the daughter whether minor or majors, her parents may not be married against such daughter's will.[3]

Moreover, parents and guardians have the right to prosecute under the Child Marriage Restrain Act of 1930, when they agree to a marriage between a boy under 18 and a girl under 14.[4]

In Myanmar Customary Law, consummation was prescribed as one of the essential elements of legal marriage in the earliest reported cases.[5] In the case of Ma Hla Me v. Maung Hla Baw,[6] with the approval of the parents of both parties wedding reception was held. Before consummation the bride and the bridegroom were separated. After then Maung Hla Baw filed a suit for restitution of conjugal rights in the Lower Court. The Lower Court decided in favour of Maung Hla Baw. The Supreme Court decided that consummation is required for a marriage to become legal.

But in the case of Daw khin Mya Mar (a) Mar Mar v. U Nyunt Hlaing,[7] the issues of the case is necessary of consummation to valid marriage. The Lower Court decided that a marriage is legal when there is mutual free consent and that consummation is not necessary to constitute a valid marriage. The Supreme Court decided that Myanmar Customary Law was always changing. And some of the provisions in Dhammathat is not suitable for the current situation in Myanmar. Thus, the consummation is not necessary to constitute a valid marriage between a Myanmar Buddhist Couple.

According to Article 16 (a) and (b) of CEDAW, the same right to enter into marriage and freedom to choose a mate and marriage is allowed only with free and full consent.

In the matter of marriage, women have the freedom to choose her spouse and to be able to mutually consent that aligned with the goal number (5), which is gender equality. It was also found to be consistent with non-discrimination conformity with goal number (10) that is emphasized to reduce inequality and increase women's rights.

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[1] Ba Maw, U, "The Marriage Law of Myanmar", Win Sapay, 1st edition ,1992, p.13
[2] Mya Sein, U, "Myanmar Customary Law", 12th edition, 2014, p.40
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[4] Mya Sein, U, "Myanmar Customary Law", 12th edition, 2014, p.43
[5] Ba Maw, U, "The Marriage Law of Myanmar", Win Sapay, 1st edition, 1992, p.43
[6] Ma Hla Me v. Maung Hla Baw, 1930, 8 Ran, p.425
[7] Daw Khin Mya Mar (a) Mar Mar v. U Nyunt Hlaing, 1972, Civil First Appeal, No.38

Among today's youth, marriages signed by free consent in the presence of two witnesses before a judge, sworn oaths, have become popular and fashionable and expressing their ability and intention to marry. The two parties are getting their marriage by proof of marriage certificate or contract. This process saves on costs for large events and receptions; it's faster to store and legal because it has stamps, labels and signatures. In this way, marriage has changed and not lost the rights of married woman.

Right to divorce

For Myanmar Buddhists, a marriage as a husband and wife is just a secular social issue, and it is just a matter of making a contract with each other according to Myanmar Customary Law. Therefore, if both husband and wife agree, it is very easy to get a divorce. In Myanmar Customary Law, the married couple can divorce in mutual agreement, the husband enters into the priesthood and matrimonial faults. Married husband and wife could not divorce the other in the absence of any fault on the part of that other. Nowadays, the women have the right to divorce in the case of matrimonial faults; cruelty, taking another wife by the husband and adultery on the part of the husband according to the Monogamous Law, 2015.

Mutual Consent

If a divorce by mutual consent, it is no need to execute a divorce deed. However, if it is executed, the deed is the strongest or concrete evidence to suit the purpose, If there arise problems later.[1]

In the case of Ma Hnin Ngon v. Maung Aung,[2] it was held that a divorce by mutual consent is valid without a decree of a Court of Law or a deed of divorce or guardianship.

When the divorce is over, it must be done with a stamped-paper. The value of the stamped paper of today is 250 kyats according to Law Amending the Myanmar Stamp Act.[3]

Divorce by the Buddhism under the Myanmar customary Law, the husband and wife can divorce by the mutual consent because marriage is the social matter between them. So, consent is very important in divorce between Myanmar spouses.[4]

Therefore, the salient feature of Myanmar Customary Law is that the husband and wife have equal right and a mutual consent divorce without a decree of the Court is valid.

Entry into Priesthood or Rahan of the Husband

Entry into a Buddhist Priesthood as a rahan is the permanent renunciation the secular life. But it has become customary for an adult Buddhist man to enter the dullabarahan for a short period of time. It is not always a renunciation of secular life, with the intention of entering social life after a period as a dullabarahan and to regain his original position in secular life, whereas Maung Nyunt Tin v. Ma Pu, if a man intends to leave the secular life and become a monk, if his wife allows him, the relationship between the husband and the wife is terminated.[5]

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[1] Mya Sein, U, Myanmar Customary Law, 12th edition, 2014, p.145
[2] Ma Hnin Ngon *v.* Maung Aung, Select Judgments (S.J). 1970, p.73
[3] Schedule 1, paragraph-29 of the Stamp Act, 2011
[4] Mya Sein, U, "Myanmar Customary Law", 12th edition, 2014, p.144
[5] Maung Nyunt Tin v. Ma Pu, 1954, B.L.R, p.76

Dhammathat says that if the husband were to enter a high priesthood or rahan, the marriage bond had been dissolved. So, the Manugya Dhammathat said, if the husband enters into priesthood or rahan, the wife waits for 7 days but if the husband returns to the lay life over from 7 days, cannot said the wife is his wife. The wives can remarriage.[1]

Matrimonial Faults

A divorce cannot be granted, if one of the spouses does not love the other or for reasons that do not comply with the wishes of the other. However, due to some defects in the marriage, either party can divorce.[2] There are two types of matrimonial faults.

These are;

1. Ordinary matrimonial faults
2. Grievous matrimonial faults[3]

(1) Ordinary matrimonial faults

Myanmar Customary Law states that there are five types of ordinary matrimonial faults. These are; (a) Misrepresentation, (b) Adultery on the part of the husband, (c) Taking another wife by the husband, (d) Desertion, (e) Cruelty.

(a) ***Misrepresentation:*** When a man induces a girl or a girl to marry a boy by misrepresenting them into marriage, the deceived person can ask for annulment of the marriage.[4]

The court was held in the case of Maung Po Nyunt v. Ma Saw,[5] the wife proceeds the suit for divorce by misrepresentation but the Court grant the divorce by the cause of desertion.

(b) ***Adultery on the part of the husband*****:** A wife cannot sue it for divorce on the grounds that her husband has committed adultery.[6]

In the case of Mrs. Jubert Bwa v. Mr. Jubert Bwa,[7]the court was held that it is obvious that the husband has the intention to make his wife disease. Infecting the wife in that way is another form of cruelty, and she has the right to claim for a divorce.

Where a man beats his wife once and takes a child from living with another woman, the battered wife has the right to divorce the husband.[8]

Nowadays, a husband's adultery is a reason for divorce according to the Monogamous Law, 2015.

(c) ***Taking another wife by the husband*****:** If a husband takes another wife, the wife sues to divorce her husband for cruelty. The wife has the right to divorce her husband.[9]

Any man or woman who is now married, even if the original union is recognized as a valid marriage, a man and a woman may not to marry or shall not be cohabitated illegally as

[1] Mya Sein, U, "Myanmar Customary Law", 12th edition, 2014, p.147
[2] Sisir Chandar Lahiri, "Principles of Modern Burmese Buddhist Law", Eastern Law House, 6th edition, 1957, p.105
[3] https://docplayer.net/amp/68550806-Modes-of-divorce-under-myanmar-customary-law.html
[4] Sisir Chandar Lahiri, "Principles of Modern Burmese Buddhist Law", Eastern Law House, 6th edition, 1957, p.105
[5] Maung Po Nyunt v. Ma Saw, 3 Ran, p.160
[6] Ma Thein Nwe v. Mg Kha,1929, 7 Ran, p. 451
[7] Mrs. Jubert Bwa v. Mr. Jubert Bwa, 1948, B.L.R, Ran, p.64
[8] Maung Ngwe San v. Ma Gyi, A.I.R, 1929 Ran, p.64
[9] Maung Set Maung v. Ma Kyin Thwe, 1963, B.L.R (C.C), p. 295

husband and wife.[1] If a husband or a wife marries again another person, he or she commits matrimonial faults and his or her spouse has the right to divorce.[2]

(d) ***Desertion:*** If a wife who does not love her husband deserts him for a year, and he does not pay maintenance during that period, her husband can dissolve the marriage if he likes to do so. If the husband who does not affection his wife abandons her for three years, and he does not pay maintenance during that period, the wife can dissolve the marriage if she so desires.[3]

Later in the case of U Sein Aye v. U Sein Lun,[4] the court's decision was that, U Sein Aye was prohibited in the Kyemon newspaper date (30.7.87) that did not to transfer the property owned by both husband and wife. Daw Hla Yi declared in the newspaper date (22.7.87) that she possessed the property alone as she had already divorced with U Sein Aye since last 14 years. It can be said that this declaration indicates that Daw Hla Yi has no intention to reunite with her husband. Daw Hla Yi sold precinct of action by registered deed on (14.4.88). At the time of sale, the deserted person, Daw Hla Yi had already declared that it is proved that Daw Hla Yi and U Sein Aye had already divorced according to the law at the time of sale and the appeal of U Sein Aye was dismissed.

Therefore, in respect of desertion that either husband or wife merely deserts his or her spouse in any prescribed period the marriage tie is not automatically dissolved. Merely the deserted party has given the right to dissolve the marriage if he or she desires. So, the deserting party has no right to divorce by only own will.

(e)***Cruelty*****:** The cruelty of husband or wife is a marital error that the other party can demand a divorce: cruelty can happen either way. Some mental disorders are worse than physical cruelty. Hence, one spouse has the right to divorce if he or she

suffers from mental illness because of cruelty.[5]

In the case of Daw Yi Lae Mon v. U Sein Than Wai,[6] plaintiff and defendant are married in 2004 according to Myanmar Customary Law. They got a son in 2008. Daw Yi Lae Mon took 200,000,000 kyats owned by family and took her son without giving notice of her family, she deserted her husband for one year. He accuses his wife of committing adultery with evidence. Any husband, who suffers from mental pain from his wife, may divorce her. So, U Sein Than Wai sued divorce for his wife cruelty. Therefore, the Court decided that the husband has a right to divorce his wife.

Therefore, according to the above decision of Central Court, if the husband commits cruelty, the wife has the right to divorce. Similarly, if the wife commits cruelty, the husband has the right to divorce. But it depends on the fact of the case whether it has a right to divorce or not and whether amount to cruelty or not.

(2) Grievous Matrimonial Faults

Grievous matrimonial faults included adultery on the part of the wife and grievous cruelty.

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[1] Section 12 of the Monogamous Law, 2015
[2] Section 14 of the Monogamous Law, 2015,
[3] Ma Hnin Ngon v. Maung Aung, S.J, p.19
[4] U Sein Aye v. U Sein Lun, 1990, Civil First Appeal No.15 (Mandalay)
[5] Mrs. Protima Ghosh v. Bimalandu Ghosh, 1963, BLR, p. 526
[6] Daw Yi Lae Mon v. U Sein Than Wai, 2015, M.L.R, p.157

The wife's adultery is a ground for divorce. Adultery on the part of the wife means the wife committed adultery with another man. [1] Adultery by the wife will entitles the husband to divorce.[2] If the wife commits adultery, the husband may divorce her or condone the offence.[3]

According to Myanmar Customary Law, a husband may condone his wife is offence of adultery or may obtain her admission of guilt and the dissolution of marriage may then take place by mutual consent on the footing that the husband retains the hnapazon property.[4]

In the case of Daw Oh Yin v. Ko Mya Aung,[5] it was held that Daw Daung Shein, wife of U Paw Thwe by following with U Oh Maung, committed matrimonial fault. In respect of this U Paw Thwe, the husband of Daw DaungShein, did not take any action for divorce or adultery. So, U Paw Thwe and DawDaungShein are not automatically divorce from their tie even.

Husband commits the grievous cruelty the wife has the right to divorce and the offender forfeits his or her joint property in the couple, concerning this case can be seen-

In the case of Daw Pu v. Maung Tun Kha,[6] It was held that where cruelty is aggravated by the fact that it is committed with intent to make the other party to seek a divorce. Other case is Daw Mi Mi Tun v. U Mg Mg Lwin,[7] the defendant is committed the adultery and taking another wife. Moreover, the defendant is frequently committed cruelty to the plaintiff because the defendant is desirous divorce instead of regretting. So, he forfeits his share as a regarding of grievous matrimonial fault offender.

Hence it should be noted that according to Myanmar Customary Law cruelty takes an aggravated from and the guilty party, seeks the divorce, or repeated acts of cruelty, then the guilty party is liable to forfeit his or her share of the joint property and divorce.

According to Myanmar Customary Law, if married woman wants to end their marriage, women are protected from husband who he cannot commit serious injury by domestic violence. On the other hand, SDG number (3) expresses the health and well-being of women and social welfare of married woman has been provided.

Therefore, the women have the right to divorce in the case of matrimonial faults; cruelty. But cruelty depends on the fact of the case whether has a right to divorce or not and whether amount to cruelty or not.

Rights to partition of property

After divorce, married couple has the rights in partition of property and custody of children. During the subsistence of the marriage, the wife has a beneficial interest in all the property owned by either one or both of them. Except inherited property, all property acquired by the spouses is owned equally by the husband and wife. But according to the Customs, the wife has serious trouble in the acquisition of property. So, the position of the ownership of a Myanmar Buddhist woman is very peculiar.

[1] Mya Sein, U, Myanmar Customary Law, 12th edition, 2014, p.162
[2] O.H Mootham, Burmese Buddhist Law, Oxford University Press, 1st edition, 1939, p.41
[3] Maung Maung, Dr, Law and Custom in Burma and the Burmese Family, 1963, p.77
[4] 1941, Ran, p.14
[5] 1990, M.L.R, p.160
[6] 1946 Ran, p.125
[7] 2012, M.L.R, p.48

Myanmar Buddhist married couples are not business partners but are usually tenants.[1] Property acquired jointly by the husband and wife during cohabitation is normally deemed to be in the possession of the husband.[2] Husband and wife are co-owners, and the husband is usually assumed the manager of the family.[3] Under Myanmar Customary Law, partition of property could be made only after divorce.[4]

In deciding the method of partition, three points must be taken into consideration, namely:

(1) whether the parties are *eindaunggyis* or *ngelin-ngemaya*;
(2) whether the parties stand in the position of *nissaya* and *nissita*;
(3) whether the divorce is by mutual consent or for some matrimonial fault.[5]

Owing to the fact that marriage in Myanmar Buddhist law not only confers a status but invests both parties with rights in the property of the marriage, a divorce is almost invariably followed by a partition.[6]

Several of categories of property has owned by each spouse before and after their marriage.[7] Payin property is also known as atetpa property. Atetpa is the material brought by eindaunggyi couple to their new union. When two eindaunggyi marry, neither of them thereby acquires, any interests in the atetpa property of the other.

Kanwin is the property given by the parents, relatives to the bride at the time of marriage for the joint purposes of the husband and wife. Hnapazon is the property earned by the spouses during the marriage through their efforts or from the property they already own. So, kanwin is also included to hnapazon because the husband and wife can equally entitle in kanwin. Lettetpwa is the property that is inherited after he or she gets married, or is owned by each spouse through special efforts. Thinthi is property which a husband or a wife is supposed to hold separated. Minbe is the property at the time of marriage that gift made to either spouse by the King. Nowadays, there have no these kinds of thinthi and minbe property.

In the case of Daw San Yi v. Daw Kyaut Khaing,[8] it was held that, according to Myanmar Customary Law the causes of partition must be appeared after dissolution of marriage. The wife has the right as an owner in common upon the husband's properties, so until the partition was made before the dissolution of marriage. Such partition may not be affected only.

Nowadays according to Myanmar Customary Law, if a married couple wants to divorce, they may sue divorce and partition of property at the same time or the first, they may sue only a suit for mere divorce and then they continue to sue a suit for partition of property.

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[1] U Pe *v.* U Maung Maung Kha,10 Ran. 261 (279) P.C; Ma Htwe *v.* Ma Tin U, 1953, BLR 29; Ma Ohn Kyi v. Daw Hnin Nwe, 1953, BLR 332
[2] Maung On Sin *v.* Ma O Nat, 11 U.B.R. (92-96), P. 303
[3] Ma Thaing *v.* Maung Tha Gywe, 11 U.B.R (02-03), Ex. P. 1
[4] Daw Pu (a) Daw Pu Gyi *v.* Maung Tun Kha, 1946 R.L.R, 125
[5] S.C. Lahiri, Principles of Burmese Buddhist Law, VI Edition, 1957, 107-108
[6] O.H Mootham, Burmese Buddhist Law, Oxford University Press, 1st edition, 1939, p.42
[7] U Pe v. U Maung Maung Kha, 10 Ran.261 (268) P.C
[8] 1984, B.L.R, p.76

Right to obtain maintenance

Every husband has a responsible for the maintenance of his wife and child. It's the most important duty of a husband. If this duty is neglected or refused, the wife may claim maintenance from the civil or criminal court. The first type is prosecution under Section 488 of the Criminal Procedure Code and the second types is civil prosecution under Myanmar Customary Law. Every Myanmar Buddhist wife has the right to claim maintenance from her husband.

In the case of Ma Saw Nwe v. U Aung Soe,[1] the wife maintenance lawsuit is a civil case as it is stipulated in Section 9 of the Civil Procedure Code that "all civil suits that are not barred must be tried by the courts". The Court made a decision that "Myanmar Buddhist Law imposes a positive duty on the husband to maintain wife".

In order to obtain maintenance to be a legal wife, the Court pointed out in the case of Ma Kyin Mya v. Maung Sit Han,[2] a man does not take a woman into a social environment with his relatives, friends, and acquaintances. It is the case of a concubine who does not have the right to claim maintenance for that woman.

The case of Dr. Thar Mya v. Ma Khin Pu,[3] the wife is permitted with maintenance and amounts which is one-third of the income generated by the efforts of her monogamous husband. But, when the husband takes a second wife, the first wife has the right to receive only one-sixth of the amount of maintenance from the husband's income. However, if the wife is self-employed and able to maintain herself, she cannot sue for maintenance from her husband. In addition, the wife is not entitled to claim arrears of maintenance for the period before the suit was filed.

Therefore, only a legally married wife can claim for her maintenance either through criminal proceedings or civil proceedings. If a woman is living illegally with a man, she cannot claim her maintenance.

Right to Succession

Succession is the right of the transfer of the property of a person upon his or her death of another person. Myanmar Buddhist married women have equal inheritance rights compared to men.

In Myanmar Customary Law, Myanmar Buddhist recognizes only intestate succession and for that reason a Myanmar Buddhist has no power to disinherit their heirs. Accordingly, the wife inherits from the husband and *vice versa*.[4]

Therefore, when husband died, first wife and second wife should inherit equal right. Wives of the husband, whether living together or not, inherit the property of the deceased, the co-widows may claim equal share in the husband's estate. The wives take back their own payin, kanwin and inherited lettetpwa.

According to the Monogamous Law, 2015, the succession of widow and widower is clear and not complicated problems. It cannot have co-widows. The sole widow entitles the inheritance

[1] Ma Saw Nwe v. U Aung Soe, 1939, Ran, 527
[2] Ma Kyin Mya v. Maung Sit Han, 1937, R.L.R, p.103
[3] Dr. Thar Mya v. Ma Khin Pu and another, 1940, Ran, p.807 (816)
[4] Aung Than Tun, U, "Myanmar Laws Digest", Innwa Book Store, 1st edition, 2001, p.127

of all his property rights. A marriage between Myanmar's Buddhists can be canceled at any time when both parties agree to consent, and divorce can make without decree of a court.

Matrimonial rights after divorce, such as the right to ask for partition of property, maintenance and succession that have been found that goals (1), (2) and (16) such as poverty reduction and food security can be achieved as they have the right to property and inheritance rights. The end of poverty can only be achieved with the end of gender-based discrimination. All over the world, gender inequality makes and keeps women poor, depriving them of basic rights and opportunities for well-being.

Conclusion

According to Myanmar Customary Law, in Myanmar has freedom of choice for her spouse by legal marriage and has the right to get divorce, maintenance and property. They are also entitled to definitely equal right of inheritance, compare to men. Traditionally, Myanmar Customary Law recognized having more than our wife. According to the Monogamous Law 2015, a married man or a woman shall not marry again another man or woman. If he or she married another, the marriage is not legal. So, the illegal marriage shall forfeit the property right and the successive right. The practice of monogamy was to protect women from co-wives and to prevent domestic crimes arising from polygamy by men. In Myanmar, the rights of married women are getting more improved, protect and safety. Besides, Myanmar women are not only able to fulfill their responsibilities, either for their families or for others, but also to work equally with men in overcoming obstacles. To this day, they are actively involved in the country's economic, social, and cultural sectors as well as the development and improvement of Myanmar's society. Ending all discrimination against women is not only a basic human right, it's crucial for sustainable future that empowering women helps economic growth and development. They can raise the new generation of young people with the high standards of morals and patriotism. So, the roles of Myanmar women are of great importance to our country.

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ANALYSIS OF HUMAN TRAFFICKING CASES IN MYANMAR

Win Win Soe[1]

Abstract

Human trafficking is a form of modern-day slavery and a human right violation that is a crime committed against individuals and the state. The big challenge is that Human Trafficking is increasing day by day due to changes in patterns and flows of human trafficking by using developed internet techniques. From 2017 to 2022, the most common forms of human trafficking are forced marriage and forced labour. Therefore, this paper intends to express how to punish the main traffickers and abettors effectively. It is pointed out that the enforcement actions against human trafficking cases are very few in practice under the decided cases analysis within 2021 and 2022 from the legal perspective. It is also found that the identification and the punishment against human trafficking still have defects in that the main traffickers and abettors were absconding and some traffickers are living in foreign countries under the collected data. It can be asserted that it is very necessary to some extent reciprocal assistance among the countries through bilateral negotiations to eliminate effectively cross-border human trafficking. As a result, without public participation, human trafficking cannot be controlled and awareness-raising is also needed to get valid information in trafficking cases. In addition, training and workshops are needed for the participants involved in the Criminal Justice System to quickly identify human trafficking cases. Thus, Public participation and cooperation are mainly needed in trafficking cases.

Keywords: Human Trafficking, Forced Marriage, Forced Labour.

Introduction

Human Trafficking means the violation of human rights in which humans exploit other human beings. The problem of human trafficking is still threatening mankind in the twenty-first century and nations around the world are combating this issue collectively. Myanmar first became arouse of the human trafficking problem around the years of 1995. Human Trafficking is an unacceptable issue that spoils Myanmar's national prestige and dignity. Therefore, Myanmar has adopted combating human trafficking as a national cause by emphasizing anti-human trafficking. On 30th March 2004, Myanmar acceded to the United Nations Convention against Transnational Organized Crime and its Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children. Moreover, Myanmar has entered and is cooperating Internationally with the ASEAN Convention against Trafficking in Persons Especially Women and Children regarding human trafficking.

Kofi A. Annan, former-Secretary-General of the United Nations remarked "Trafficking in Persons" as the worst human rights infringement in the world.[2]

Myanmar Law's definition of human trafficking derives from Article 3 of the UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention Against Transnational Organized Crime commonly referred to as the Palermo Protocol and Article 2 of the ASEAN Convention Against Trafficking in Persons, Especially Women and Children, 2015.

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[2] Han Myint (War Khe Ma), The Knowledge of Anti-Trafficking in Persons Law, 1st edition, 2010, Yan Aung Literature, p.48.

Section 3(b) of the Prevention and Suppression of Human Trafficking Law (2022) defines "Human Trafficking" as the recruitment, transportation, transfer, sale, purchase, lending, hiring, harbouring or receipt of persons after committing any of the following acts for the intend to exploit of a person with or without his consent:

1. threat, use of force or other form of coercion;
2. abduction;
3. fraud;
4. deception;
5. abuse of power or authority;
6. abuse of taking advantage of a difficult situation;
7. giving or receiving of money or property or benefit to obtain the consent of a person who can control or influence him in some way.

Exception- Any method in sub-section (b) is applicable or not, whether or not there is any exploitation of children, confiscation, collection, transportation, transfer, selling, purchase, renting, granting asylum or accepting shall be considered as human trafficking.[1]

The Republic of the Union of Myanmar recognized the fundamental rights of its citizens in Section 358 of the Constitution of the Republic of the Union of Myanmar 2008 that the Republic of the Union of Myanmar prohibits the enslaving and trafficking in persons. That section shows for State's aim to protect its citizens and that every citizen should cooperate in the Anti-Trafficking activities of respective bodies in Myanmar.

In Myanmar, in the past, due to poverty and lack of employment opportunities, only people with low education had problems of being trafficked, but now, educated people are also being trafficked. Myanmar citizens are being trafficked annually for forced marriage, forced labour and sexual exploitation to neighbouring countries and other foreign countries as well as locally. Patterns of human trafficking are changing, and it is being observed that recruitment is taking place using evolving technologies.

To combat the new forms of human trafficking, the State Administration Council repealed the Anti-Trafficking Law. Then it promulgated the Prevention and Suppression of Human Trafficking Law in 2022 as Law No. 41/2022 on 16th June 2022. This paper is divided into two parts: the prosecution of the Prevention and Suppression of Human Trafficking Law, and an analysis of human trafficking cases in Myanmar from 2017 to 2022.

Materials and Methods

This paper analyses human trafficking cases in Myanmar from 2017 to 2022 from the legal perspective and uses the collected data from the Central Body for Suppression of Human Trafficking. In this section, related laws and reports are cited.

Findings and Discussion

This paper finds that a significant number of absconders are involved in the decision-making process of human trafficking cases. During 2017 and 2022, most of the cases relating to human trafficking were forced marriages and forced labour cases were caused internally and

[1] The Prevention and Suppression of Human Trafficking Law 2022 s 3(b).

externally. It has been reported that Yangon Region not only has the highest number of human trafficking cases but also the highest number of traffickers, while there have been no reported cases in Kayah State, and Chin State has the lowest number of traffickers. In addition, Yangon Region has the highest place of victims' residences while Chin State has the lowest. It has been discovered that human trafficking is increasing rapidly due to the use of advanced internet techniques, while enforcement actions against human trafficking cases are rarely practised. To effectively eliminate cross-border human trafficking very need to some extent reciprocal assistance among the countries through bilateral negotiations. Therefore, most of the responsible persons need multi-sectoral cooperation to effectively prevent the elimination of internal and transnational human trafficking cases and protect against new forms of human trafficking, which are constantly changing.

Prosecution of the Prevention and Suppression of Human Trafficking Law in Myanmar

Myanmar is implementing to combat human trafficking as a national responsibility. In particular, human trafficking is firmly established and prosecuted to identify the perpetrators and impose effective punishments. The courts are imposing effective punishments on the perpetrators of human trafficking by the law. In the Anti-Trafficking in Persons Law of 2005, the Central Body forms a Working Group on Legal Framework and Prosecuting Measures headed by the Deputy Attorney General to prevent and suppress human trafficking. Then, the Central Body assigns functions and duties to implement human trafficking prosecution measures.

And then, to combat the new forms of human trafficking effectively, the Central Body for Suppression of Trafficking in Persons was amended and formed by the State Administration Council on 7th July 2022 comprising 43 members, headed by the Union Minister of Home Affairs as the Chairperson and the suitable persons as members.[1] Its functions and duties are delegated by the State Administration Council.

Furthermore, a Working Committee on Legal Affairs and Prosecuting comprising 15 members was amended and formed by the Central Body for Suppression of Trafficking in Persons on 26th October 2022.[2] Its functions and duties are delegated by the Central Body for the Suppression of Trafficking in Persons. Then, a Suppression of Trafficking in Persons Group, Nay Pyi Taw Council comprising 15 members and a Suppression of Trafficking in Persons Group, Region or State comprising 16 members were amended and formed by the Central Body for Suppression of Trafficking in Persons on 26th July 2022.[3] Its functions and duties are delegated by the Central Body. According to Section 9 of the Prevention and Suppression of Human Trafficking Law of 2022, Self-Administered Division in a Region or a State Suppression of Trafficking in Persons Group, District Suppression of Trafficking in Persons Group, Township Suppression of Trafficking in Persons Group and Ward or Villages Suppression of Trafficking in Persons Group formed in the relevant Regions, States and Union Territories. Moreover, a Community-Based Trafficking in Persons Screening Group comprising 7 members was formed

[1] Order No.119/2022 issued by the State Administration Council, dated on 2022 July 7.
[2] Order No.7/2022 issued by the Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, dated on 26th October 2022.
[3] Order No.10/2022 issued by the Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, dated on 26th July 2022.

in the relevant Regions, States and Union Territories on 26th July 2022 under Section 10 of this Law.[1]

Analysis of Human Trafficking Cases in Myanmar

Regarding offences and penalties, it is stated that any person who committed human trafficking, especially women and children, shall be punishable with imprisonment a minimum of 10 years to a maximum of imprisonment for life and may also be liable to a fine.[2]

In studying the case of **"Police Lieutenant Aung Kyaw Myint Vs. Han Oo and one other",** Ma+++ was convinced her aunt, Ma Zin Mar Htwe and her husband, Han Oo to work in a clothing shop in Karaburi, Thailand during school holidays. They took her to a rubber farm and forced to work as a rubber scraper, and her wages were exploited. Han Oo threatened her with a knife and raped her and sexually exploited her. The Court held that Han Oo was sentenced to imprisonment for life under Section No.24/29 of ATIP Law and 10 years imprisonment under Section No.376(1) of the Penal Code and Ma Zin Mar Htwe was sentenced to 10 years imprisonment under Section No.24 of ATIP Law.[3]

Similarly, in the case of **"Ywar Kauk Police Station Vs. Ma Pann Lay Pyay Hlaing @ Ma Baby and one other",** Ma Pann Lay Pyay Hlaing convinced 3 women including Ma+++ were working at KTV that there was a good job at a music bar in Nay Pyi Taw and they would earn 1,000,000 MMK per month. She talked to her again on the phone to go with her if they wanted to work in a modelling show, and they agreed. She gave them 500,000 MMK in Pyinmana. Ma+++ is forced to do as a prostitute for a man. The Court held that the arrested perpetrators, Ma Khaing Thazin and Ma Pann Lay Pyay Hlaing were sentenced to 10 years imprisonment for each.[4]

It is prescribed that any person who committed human trafficking other than women and children, shall be punished with imprisonment a minimum of 5 years to a maximum of 10 years and may also be liable to a fine.[5]

Concerning human trafficking for men, in the case of **"Police Lieutenant Nay La Oo Vs. Xiao Hein @ Rang Hong and one other",** Mr.Reshou Al Cox convinced 4 people including Yan Bin using QQ application that they would receive between 8,000 Yuan to 15,000 Yuan if they worked online shopping in Yuana Province, China and they agreed. They worked about two weeks in an online financial fraud job at a company on a hill at Minelar. Through there, they arrived at Shwe Kokko Township and they worked again about three weeks in an online financial fraud job. When they arrived at Laukkaing Township, Arr Wai planned to sell 4 people including Yan Bin to Xiao Hein with 450,000 Yuan to work in an online financial fraud job. The Court

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[1] Order No.10/2022 issued by the Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, dated on 26th July 2022.

[2] The Anti-Trafficking in Persons Law 2005 s 24 and the Prevention and Suppression of Human Trafficking Law 2022 s 35.

[3] *Police Lieutenant Aung Kyaw Myint Vs. Han Oo and one other* Dawei [2021] District Court, Criminal Case, No. 2/2021.

[4] *Ywar Kauk Police Station Vs. Ma Pann Lay Pyay Hlaing @ Ma Baby and one other* [2022] Dakhina District Court, Criminal Case No.132/2022.

[5] The Anti-Trafficking in Persons Law 2005 s 25 and the Prevention and Suppression of Human Trafficking Law 2022 s 36.

held that the arrested perpetrator, Xiao Hein was sentenced to 7 years imprisonment under Section No.36/44 of the Prevention and Suppression of Human Trafficking Law and the absconder, Arr Wai was issued a confirmation order under Section No.87/88 of the Code of Criminal Procedure.[1]

Similarly, in the case of **"Police Lieutenant Aung Kyaw Kyaw Vs. U Yu Ko Aung",** U Yu Ko Aung convinced two people including Ko+++ that they must work on a foreign fishing boat and they would earn 350 USD per month. They said that they agreed to pay 550,000 MMk for the document fee and for making the SeaMan Book. He took 550,000 MMK from them and sent them to U Aung Theik from Myanmar Kaung San Company. U Aung Theik convinced them that they must go to work on a fishing boat abroad, they would get 350 USD per month for free food cost and they must sign a two-year contract; if they wanted to go to work, he would send them by credit system and they must pay 1,000 USD as a service fee. Therefore, the arrested perpetrator, U Yu Ko Aung was prosecuted at Yangon Southern District Court, which is still pending in trial.[2]

It is provided that any person is guilty of trafficking in persons with organized criminal group as provided in section 35 shall, on conviction be punished with imprisonment for a term which may extend from a minimum of 20 years to a maximum of imprisonment for life and may also be a fine. In addition, any person who is guilty of trafficking in persons with organized criminal groups as provided in section 36 shall, on conviction be punished with imprisonment for a term which may extend from a minimum of 10 years to a maximum of 20 years and may also be liable to a fine.[3]

Although stipulated in the above sections, in the case of **"Muse Police Station Vs, Ma Zin Mar Lwin @ Ma Zin and four others",** Ma Zin Mar Lwin @ Ma Zin (Zin Lay Facebook Account) through a Facebook messenger, convinced Ma+++ 16 years old, Ma+++ 14 years old that there was a job in Laukkaing, 10,000 Yuan per month. She took them to Laukkaing and sent them to Ma Kay Zin Htoo Lwin and her husband, Wai Phyo. They showed them by video call to a female Chinese boss. They took 1,060,000 MMK from her. When they were planning to send them to the prostitution of the female Chinese woman, they ran away. The Court held that the arrested perpetrators, Ma Zin Mar Lwin and Ma Kay Zin Htoo Lwin were sentenced to 10 years imprisonment for each under Section No.24 of ATIP Law and the absconders, Wai Phyo, Thit Lwin Oo and Ma Shee Ze were issued a confirmation order under Section No.87/88 of the Code of Criminal Procedure.[4]

Studying the above cases, it is found that with the evolution of technology, cases of human trafficking have increased, including fraud committed through social networks. Due to poverty, economic decline, low social standards, lack of job opportunities, and political instability, human trafficking through people smuggling is increasing. Therefore, more job opportunities should be raised and the education system needs to be improved.

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[1] *Police Lieutenant Nay La Oo Vs. Xiao Hein @ Rang Hong and one other* [2022] Kokang Autonomous Region Court, Criminal Case No.5/2022.

[2] *Police Lieutenant Aung Kyaw Kyaw Vs. U Yu Ko Aung* [2022] Yangon Southern District Court, Criminal Case No.87/2022.

[3] The Prevention and Suppression of Human Trafficking Law 2022 s 38.

[4] *Muse Police Station Vs, Ma Zin Mar Lwin @ Ma Zin and four others* [2022] Muse District Court, Criminal Case No.29/2022.

Statistical Analysis of Combating Human Trafficking Cases from 2017 to 2022

This paper evaluates the human trafficking cases from 2017 to 2022 through the collected data from the Central Body for Suppression of Human Trafficking.

1. A total of 828 trafficking cases were exposed and 2,484 (male 829 and female 1655) traffickers were prosecuted. Altogether, 1264 (male 218 and female 1046) were rescued in these cases.

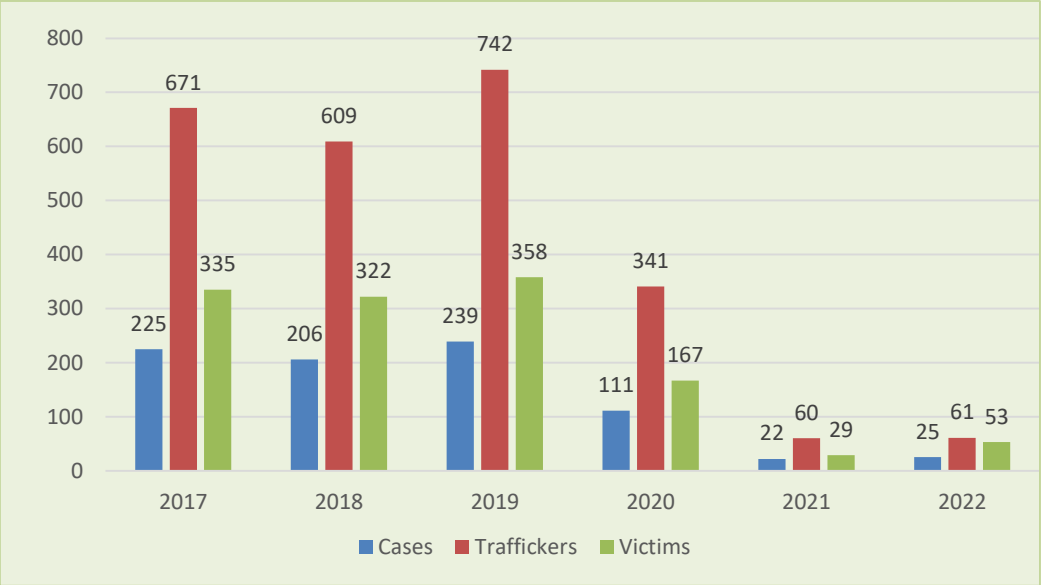

Figure 1: Comparison between cases of trafficking in persons from 2017 to 2022[1]

According to Figure 1, the year 2019 had the highest number of human trafficking cases in Myanmar and 2017 followed it. But 2021 had the lowest number of human trafficking cases in Myanmar.

2. From 1st January 2017 to 31st December 2022, it was found that types of trafficking in persons in the following are: -

Table 2: Types of Trafficking in Persons from 2017 to 2022.[2]

No.	Types of Human Trafficking	2017	2018	2019	2020	2021	2022	Percentage
1.	Forced marriage	153	155	189	87	12	4	72.46%
2.	Forced labour	36	18	30	10	4	13	13.41%
3.	Prostitution	36	28	17	13	4	8	12.80%
4.	Surrogacy	-	4	2	1	-	-	0.85%
5.	Adoption	-	1	1	-	1	-	0.36%
6.	Sexual exploitation	-	-	-	-	1	-	0.12%

[1] The Republic of the Union of Myanmar, Central Body for Suppression of Trafficking in Persons, Myanmar Annual Progress Report on Combating Trafficking in Persons 2022 p-77.

[2] The Republic of the Union of Myanmar, Central Body for Suppression of Trafficking in Persons, Myanmar Annual Progress Report on Combating Trafficking in Persons 2017,2018,2019,2020,2021,2022.

Table 2 mentions that from 2017 to 2022, the highest number of human trafficking cases is forced marriage. Most girls /women were persuaded for forced marriage. The second highest number of human trafficking cases is forced labour caused internally and externally. Such victims are used in forced labour in factories, plantations or fishing boats, domestic servitude, commercial sexual exploitation, and begging. The third highest number of reported cases is prostitution, both domestically and internationally. The lowest number of reported cases is the adoption case and sexual exploitation case.

3. From 1st January 2017 to 31st December 2022, it was found that trafficking in persons cases by destination countries in the following areas: -

Table 3: Trafficking in persons cases by destination countries from 2017 to 2022[1]

No.	Destination Countries	2017	2018	2019	2020	2021	2022	Percentage
1.	China	162	164	196	85	13	3	75.24%
2.	Domestic	49	39	40	22	8	15	20.90%
3.	Thailand	13	3	1	2	1	-	2.42%
4.	Malaysia	1	-	2	2	-	-	0.60%
5.	Singapore	-	-	-	-	-	4	0.48%
6.	Laos	-	-	-	-	-	2	0.24%
7.	UAE	-	-	-	-	-	1	0.12%

Table 3 states that from 2017 to 2022, the most trafficked country is China. Most of the victims of human trafficking to China are young girls or women who are forced to marry Chinese men. The second highest number is Domestic, and they are trafficked in various forms. In addition, trafficking in Thailand began with illegal employment and then turned into trafficking in many ways. Trafficking to Malaysia did not happen directly. Traffickers lure victims of human trafficking to Thailand and send them to Malaysia for forced begging and prostitution. Nowadays, traffickers are trafficked into Singapore, Laos and Dubai in various forms.

4. From 1st January 2017 to 31st December 2022, it was found that 828 Trafficking cases found in the following States or Regions:

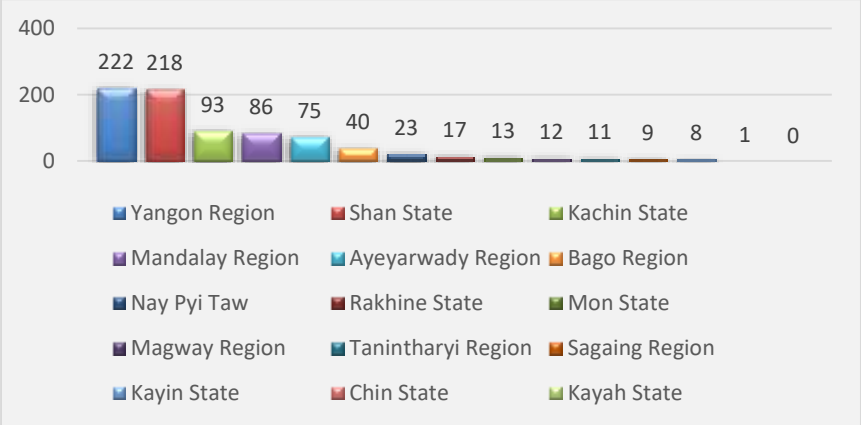

Figure 2: States and Regions where Human Trafficking Cases occur from 2017 to 2022[1]

[1] The Republic of the Union of Myanmar, Central Body for Suppression of Trafficking in Persons, Myanmar Annual Progress Report on Combating Trafficking in Persons 2017,2018,2019,2020,2021,2022.

According to Figure 2, from 2017 to 2022, Yangon Region had the highest number of human trafficking cases (222 cases), while Shan Region had the second highest number of cases (218 cases) mainly due to its close location with China and Thailand borders and also Yangon and Mandalay are the main transit route in entering other cities and other countries because of its good transportation and communication system. Kayin State is the place with the lowest number of Human trafficking cases (1 case) and Kayah State is the place where there is no Human trafficking.

5. From 1st January 2017 to 31st December 2022, there were a total of traffickers 2,484 (male 829 and female 1655) involved Chinese citizens 54 (male 48, female 6) and the rest traffickers were found inhabited in the following States or Regions:

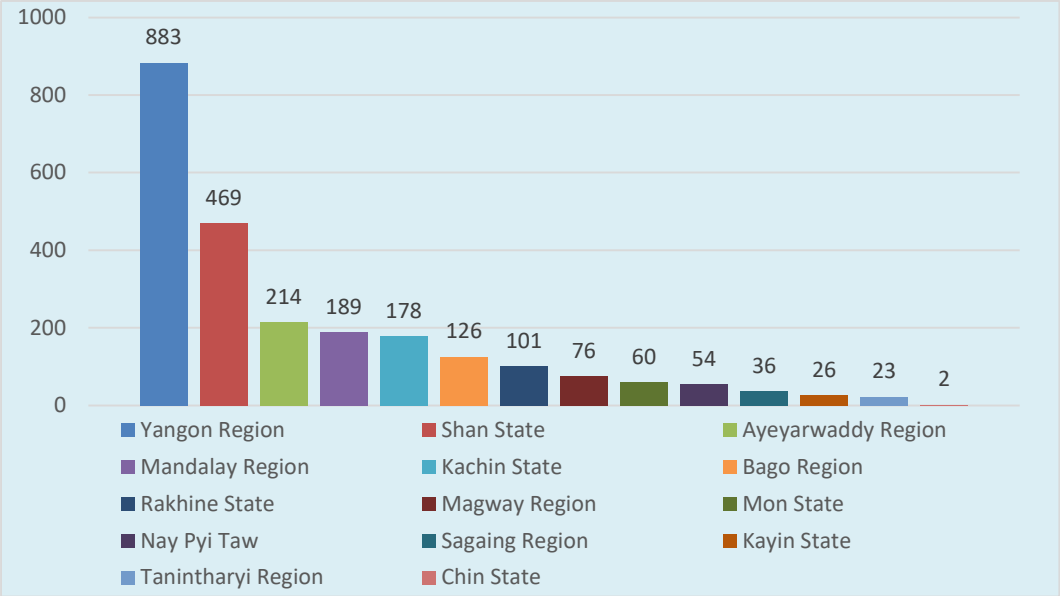

Figure 3: A place of residence of traffickers from 1-1-2017 to 31-12-2022[2]

Under Figure 3, from 2017 to 2022, Yangon Region had the highest place of residence of traffickers and Shan State had the second highest place of residence of traffickers. Moreover, Chin State had the lowest place of residence of traffickers.

[1] The Republic of the Union of Myanmar, Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, Myanmar Fourth Five-Year National Plan of Action to Combat Trafficking in Persons (2022-2026) and Myanmar Annual Progress Report on Combating Trafficking in Persons 2022.

[2] The Republic of the Union of Myanmar, Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, Myanmar Fourth Five-Year National Plan of Action to Combat Trafficking in Persons (2022-2026) and Myanmar Annual Progress Report on Combating Trafficking in Persons 2022

6. From 1st January 2017 to 31st December 2022, it was found that the 1284 trafficked victims (male 220 and female 1064) involved Chinese citizens 4 and the rest trafficked victims were found inhabited in the following States or Regions:

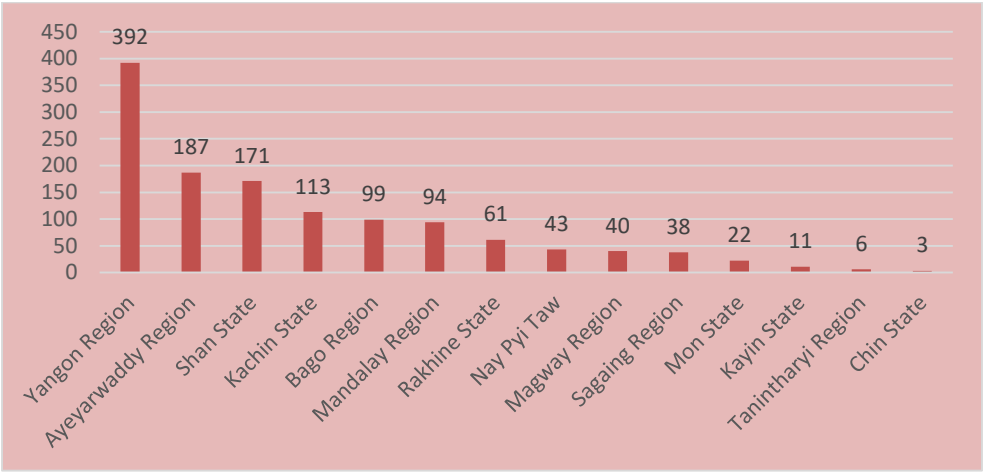

Figure 4: A place of residence of victims of human traffickers from 2017 to 2022[1]

According to Figure 6, from 2017 to 2022, Yangon Region had the highest place of residence of victims of human traffickers and Ayeyarwaddy Region had the second highest place of residence of victims of human traffickers. In addition, Chin State had the lowest place of residence of victims of human traffickers.

7. From 1st January 2017 to 31st December 2022, a total of 1849 (male 596 and female 1253) traffickers were convicted.

Table 7: Convicting of Traffickers from 2017 to 2022[2]

No.	Imprisonment	Male	Female	Total
1	life imprisonment	2	7	9
2	30 years imprisonment	1	-	1
3	25 years imprisonment	2	7	9
4	21 years imprisonment	3	5	8
5	20 years imprisonment	43	81	124
6	16 years imprisonment	1	-	1
7	15 years imprisonment	5	16	21
8	14 years imprisonment	2	5	7
9	13 years imprisonment	1	3	4

[1] Ibid.

[2] The Republic of the Union of Myanmar, Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, Myanmar Fourth Five-Year National Plan of Action to Combat Trafficking in Persons (2022-2026) and Myanmar Annual Progress Report on Combating Trafficking in Persons 2022.

No.	Imprisonment	Male	Female	Total
10	12 years imprisonment	26	44	70
11	11 years imprisonment	13	26	39
12	10 years imprisonment	187	448	635
13	7 years imprisonment	11	2	13
14	6 years imprisonment	2	-	2
15	5 years imprisonment	10	11	21
16	4 years imprisonment	1	4	5
17	3 years imprisonment	2	2	4
18	2 years imprisonment	-	2	2
19	1 year and 8 month imprisonment	-	1	1
20	1 year imprisonment	1	3	4
21	4 months imprisonment	1	1	2
22	Criminal Procedure Code (Sections 87 and 88)	199	476	675
23	Acquitted	59	90	149
24	Released	23	15	38
25	Youth Conservation School	1	4	5
Total		**596**	**1253**	**1849**

Under Table 7: analysis of trafficking cases in 6 years (2017-2022), sentencing 10 years imprisonment is seen more than other imprisonments. And general, female traffickers are found more than male traffickers. Moreover, by looking at these records, a total of 1174 traffickers (397 males, 777 females) are given punishments whereas a total of 675 absconders (199 males, 476 females) are being investigated within six years.

Conclusion

Human trafficking can occur within a country or transnationally. It can be confirmed that enforcement actions against human trafficking cases are very few in practice. In addition, there are still defects in the identification and punishment of human trafficking, many of the main traffickers and abettors are absconding or living in foreign countries. To effectively eliminate cross-border human trafficking very need to extent reciprocal assistance to countries through bilateral negotiations.

According to the human trafficking cases from 2017 to 2022, the forms of human trafficking are that are sold girls or women for forced marriage to Chinese as their wives, and they are subjected to sell to neighbouring countries after persuading them to get a good job. The most common form of human trafficking offence is to marry Chinese men. Some cases find that the trafficked victims agree to do so. The second highest number of human trafficking cases is forced labour caused by internal and external boundaries.

Therefore, preventative measures are more effective than investigating occurrences of human trafficking. It is important to raise awareness in the community. If the public gives information related to human trafficking cases to the respective bodies as soon as possible, the traffickers are also arrested in time and reduce the trafficking cases to some extent. Therefore, training and workshops are necessary to help Criminal Justice System participants quickly identify human trafficking cases. In addition, Human Trafficking awareness-raising within Language Training Centers, Employment Agency, Schools and University, Workshop and Wards and Village should act for promoting activities in cooperation with the Anti-Trafficking Task Forces and Non-government organizations. Finally, to decrease the happening of human trafficking and to suppress it, public participation and cooperation are needed.

Acknowledgements

I would like to thank Rector Dr Ba Han, Pro-Rector Dr Nay Aung, and Dr Khin Hnin Ei, Meiktila University, for their permission and guidance on this research work. I particularly want to thank Head of Professor Dr Thein Thein Win and Professor Dr Khin Lin Aung, Department of Law, Meiktila University, for their suggestion and advice to accomplish this paper.

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Ywar Kauk Police Station Vs. Ma Pann Lay Pyay Hlaing @ Ma Baby and one other (Judgement) [2022] Dakhina District Court, Criminal Case No.132/2022

Police Lieutenant Nay La Oo Vs. Xiao Hein @ Rang Hong and one other (Judgment) [2022] Kokang Autonomous Region Court, Criminal Case No.5/2022

Police Lieutenant Aung Kyaw Kyaw Vs. U Yu Ko Aung Yangon Southern District Court, Criminal Case No.87/2022

Muse Police Station Vs, Ma Zin Mar Lwin @ Ma Zin and four others (Judgement) [2022] Muse District Court, Criminal Case No.29/2022

C. Legislation

Order No.119/2022 issued by the State Administration Council, dated on 7th July 2022

Order 7/2022 issued by the Ministry of Home Affairs, Central Body for Suppression of Trafficking in Persons, dated on 26th October 2022

Order No.10/2022 issued by the Ministry of Home Affairs, Central Boby for Suppression of Trafficking in Persons, dated on 26th July 2022

LEGAL ASPECT OF MANGROVE CONSERVATION IN MYANMAR

Theint*

Abstract

This paper aims to conserve mangrove in coastal areas of Myanmar. And the objectives of this paper are to safeguard the preservation of mangroves for their environmental advantages, as well as to ensure a sustainable supply of various forests and other products to meet the daily needs of local residents, it is imperative to implement appropriate management strategies for mangrove ecosystems. Mangroves play a crucial role in safeguarding the food security of numerous coastal communities. The management and restoration of mangrove ecosystems present a viable and economically efficient approach to ensuring food security for these communities. The major challenges of mangrove conservation are excessive exploitation of fuelwood and charcoal production, the conversion of mangroves into other land uses such as rice fields, shrimp farming, and salt pans, the development of coastal areas and deltas for human settlement as well as the impacts of climate change and natural disasters. National legal frameworks that address wildlife conservation have been implemented in these countries. States' financial, sociocultural, economic, and environmental spheres play significant roles in the long-term sustainability of wildlife conservation. This paper focuses on the Ayeyarwady Delta as a model system, employing an integrated approach to conserve mangrove ecosystem. It is hoped that by carrying out a study of the environmentally related laws of the country, a better understanding will be achieved of the challenges faced by the country in their efforts to conserve the mangrove and will support the sustainable development of mangrove conservation in Myanmar.

Keywords: Mangrove, conservation, ecosystem, sustainable development, community forestry

Introduction

Mangrove, which can be either trees or shrubs, thrive in the intertidal zone of coastlines, serving as a transitional habitat between the coastal and terrestrial environments. These plants possess remarkable adaptability to survive in saline and brackish conditions, making them truly exceptional.

Myanmar has maritime boundaries in the Bay of Bengal that it shares with Bangladesh, India, and Thailand. Myanmar's coastal zones consist of the Rakhine Coast, Ayeyarwady Delta, and Tanintharyi Coast, extending from north to south. In terms of mangrove coverage, Myanmar ranks as the fourth largest in Asia, with an estimated area of 467,330 ha. The majority of primary mangroves in Myanmar are found in the Ayeyarwady flood plains, while the Tanintharyi and Rakhine areas have smaller portions. The distribution and composition of mangroves vary among these three coastal regions.[1]

The mangrove forests are of great significance to Myanmar's economy as they offer natural resources for personal and commercial purposes. The impoverished rural communities residing near the mangrove areas heavily rely on these ecosystems for sustenance and income. Mangroves serve as the basis for a highly productive and biologically diverse ecosystem, serving as a habitat and feeding ground for numerous species. Several species are listed as vulnerable or endangered on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species. Additionally, they contribute to stabilizing the coastline, mitigating erosion,

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[1] IUCN, Myanmar National Strategy and Action Plan (NSAP), October 2016.

and providing protection against storms. Mangroves store up to four times the amount of carbon compared to inland forests. These forests support local fishing industries and provide coastal communities with food, shelter, small-scale timber, fuelwood, and other forest products.

Aim and Objectives

This paper aims to raise awareness of the importance of mangrove ecosystems as a unique, special and vulnerable ecosystem and to promote solutions for their sustainable management, conservation and uses. And the objectives of this paper are to safeguard the preservation of mangroves for their environmental advantages, as well as to ensure a sustainable supply of various forests and other products to meet the daily needs of local residents, it is imperative to implement appropriate management strategies for mangrove ecosystems.

Method

The methods used for this research are the qualitative method and quantitative method. This research paper encompasses a comprehensive examination of literature and legal resources pertaining to international and national law and policy. Additionally, it entails an evaluation of legal instruments related to mangroves in Myanmar. The collection of events that aid in the management of mangroves was sourced from interviews with locals and articles scholarly journals.

Results and Discussion

1. Mangrove Conservation and Management

The rise in human population along coastal areas is leading to increased strain on mangrove ecosystems in Myanmar. This is primarily due to the escalating demand for timber, fuelwood, fodder and other non-wood forest products. In order to safeguard the preservation of mangroves for their environmental advantages, as well as to ensure a sustainable supply of various forests and other products to meet the daily needs of local residents, it is imperative to implement appropriate management strategies for mangrove ecosystems. Effective management can also create new opportunities for self-employment, such as ecotourism, fishing, beekeeping and cottage industries centered on mangrove forests products. This, in turn, can contribute to enhance the socio-economic conditions of the local communities.

2. Natural Hazards and Problem Caused by Humans

The mangrove ecosystems in Myanmar have faced significant threats due to various factors. These include the excessive exploitation of fuelwood and charcoal production, the conversion of mangroves into other land uses such as rice fields, shrimp farming, and salt pans, the development of coastal areas and deltas for human settlement, the improper collection of revenue on mangrove products in forest management, as well as the impacts of climate change and natural disasters. According to a spokesperson from the ministry, approximately 600,000 acres of coastal land in Myanmar are now at risk of natural disasters due to the depletion of mangroves. U Aung Than Zin, the chief executive of the Myanmar Environment Rehabilitation-conservation Network, highlighted that the destruction of mangroves in Ayeyarwady, Tanintharyi, and Rakhine is primarily caused by charcoal production and the clearing of land for shrimp and salt farms.[1]

[1] Hein Soe, Saving the mangroves, Frontier Myanmar, August 2, 2016.

In recent decades, more than 60% of the mangroves in the Ayeyarwaddy Delta have been eradicated. This destructive trend can be attributed to the conversion of land for rice cultivation and human settlements. As a result, the depletion and clearance of mangroves are expected to have a detrimental impact on the fisheries in the area, ultimately leading to a loss of livelihoods. U Kyaw Soe, the Chairman of the Community Forest User Group from Mya Yar Gone Village, lamented the decline in fish and crab catches due to the rapid disappearance of mangrove forests in their vicinity. Furthermore, the loss of environmental stability provided by the mangroves will heighten the vulnerability of local communities to climate change and natural disasters.

Rakhine State encounters various natural calamities annually, and the coastal communities bear the brunt of disasters like cyclones and floods. The coastal communities suffer greatly from recurrent natural hazards, and although mangroves act as a natural defense against heavy monsoon rains, the mangroves in Rakhine State are deteriorating at alarming rates. From 2000 to 2015, the overall mangrove coverage in the state decreased by 23%.[1]

Tanintharyi had a relatively low mangrove cover loss compared to other regions in Myanmar, with only 3.2 percent being deforested over a span of 25 years. However, this overall statistic masks the significant variations in losses and gains at specific sites within the study area. In Myeik district, for instance, 210 km^2 of mangrove were lost, but there was also a gain of 132 km^2. On the other hand, Dawei and Kawthung experienced minimal net loss of mangroves due to extensive regeneration. Understanding this historical mangrove baseline is crucial for promoting environmentally-conscious development in Myanmar's southernmost state.[2]

3. Principles of Mangrove Conservation

The Mangrove Principles are underpinned by sustainable development principles; namely securing economic development, social equity and justice, and environmental protection, and have been developed to reflect some of the globally recognized barriers to effective conservation of mangrove ecosystems. The principles presented are categorized in major fields of action towards Sustainable Mangrove Ecosystem Management: I. Promote good governance, II. Ensure a strong and just society, III. Use sound science and knowledge, IV. Achieve a socially sustainable economy within environmental limits and V. Ensure sustainable conservation financing.[3]

With regard to the types of conservation which may be employed, mangrove conservation is achieved through two types of approaches, in situ and ex situ. In situ conservation enables evolutionary and ecological processes to take place and promotes the genetic variability and adaptability of species to changing environmental conditions. In addition, ex situ conservation serves as a source of materials for research and ecosystem restoration. However, ex situ conservation disrupts evolutionary and ecological processes and limits the genetic variability and adaptability of species to changing environmental conditions. In addition, the costs, risks and research needs of ex situ conservation are significantly higher than in situ conservation.

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[1] ACTED, Myanmar: ACTED supports mangrove conservation in Rakhine State, June 2017.

[2] Leon Y.F Gaw, Matthew Linkie, Daniel A. Friess, Mangrove forest dynamics in Tanintharyi, Myanmar from 1989–2014, and the role of future economic and political developments, Singapore Journal of Tropical Geography, Volume 39, Inssue 2, February 2018, pp- 224-243.

[3] IUCN, WWF, Wetlands International, Mangrove Principles, guiding principles on sustainable mangrove ecosystem management, Save our Mangroves Now, September, 2021.

It has also been noticed that in an effort to conform to the principle of mangrove conservation, Myanmar have enacted laws for both in situ an ex situ conservation in accordance with international principles and guidelines. However the implementation of their international obligations on conservation varies depending on political commitment, the availability of institutions, technology, human capacity, effective planning and the financial resources of the States.

4. Legislative Frameworks of Mangrove Conservation

A variety of legal instruments are necessary to tackle the various threats to the preservation of mangroves across different sectors and locations. Diverse legal mechanisms can be employed to combat issues such as the diversion of freshwater sources, pollution, and the conversion of mangroves for aquaculture or farming, among other threats. To fully comprehend the scope of options and requirements for mangrove conservation, it is essential to analyze numerous sectors and areas of law, encompassing forest, marine, fisheries, land use, biodiversity, protected areas, climate change, industry, and freshwater, among others.[1]

National and global policies and legal structures are necessary to offer comprehensive direction for the preservation and responsible utilization of mangrove resources, as well as to guarantee the safeguarding of biodiversity associated with mangroves. In order to accomplish this, policies and laws must encourage the sustainable management of mangrove ecosystems while also tackling the factors that pose a threat to their loss and degradation.

The sovereign rights and jurisdiction of States regarding the natural resources is also addressed by Article 3 of the United Nations Convention on Biological Diversity, 1992 which provides that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

In Section 37 of the Constitution of the Republic of the Union of Myanmar, 2008 states that "the Union is the ultimate owner of all lands and all natural resources above and below the ground, above and beneath the water and in the atmosphere in the Union, and the Union shall protect and conserve the natural environment and the government shall enact necessary law to supervise extraction and utilization of State owned natural resources by economic forces."

The Article 3 (1) of the Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, 1971 states that "the contracting parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the list, and as far as possible the wise use of wetlands in their territory." The Convention also defines "the wise use wetlands as the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development. Wise use thus be seen as the conservation and sustainable use of wetlands and all the services they provide, for the benefit of people and nature."

[1] IUCN, Legal Frameworks for Mangrove Governance, Conservation and Use, Assessment Summary, 2018, Pg-13.

According to the National Wetland Policy and Strategic Actions, 2017, (Third Draft) classified six wetland regions in Myanmar. These wetland regions include a diverse array of coastal ecosystems - coral reefs, seagrass beds, mud and sand flats, mangroves, bays, estuaries and sandy and rocky shores.

Six wetland policy imperatives were adopted that focused on protection, wise use, mainstreaming wetlands values in development plans, public participation, raising awareness, collaborating international and regional wetlands programme.[1] According to the Fourth Ramsar Strategic Plan, 2016-2024, the wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone.[2]

In Article 3(4) of the United Nations Framework Convention on Climate Change, 1992 provides that the parties of this Convention have a right to, and should, promote sustainable development. Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change.

According to the Forest Law, 2018 provides that The Ministry of Natural Resources and Environmental Conservation of the Union Government may, with the comment of the Nay Pyi Taw Council, State or Regional Cabinet, and with the approval of the Union Cabinet, declare as protected public forest, specifying limits on land at the disposal of the Government, outside reserved forests for the purposes of conservation of mangrove forests.[3]

Following Cyclone Nargis which made global headlines when it struck Myanmar's coastal areas in the Ayeyarwady Delta in May 2008, killing 84,500 people according to official figures, though other estimates placed the death toll much higher,[4] the Natural Disaster Management Law was enacted in 2013. According to Section 16(c) of this Law "preventive measures to be carried out in the area likely to be struck be a natural disaster before the natural disaster occurs include preservation of mangroves along the coast and planting fast-growing trees."

Also, the Myanmar Action Plan on Disaster Risk Reduction, 2017 has four pillars and each pillar has six to nine priority actions. The four pillars are aligned with four priority actions of the Sendai Framework for Disaster Risk Reduction. These are Pillar 1: Assessing disaster risk including extreme weather events and creating public awareness on DRR in Myanmar, Pillar 2: Strengthening disaster risk governance to reduce and manage risk, Pillar 3: Mainstreaming disaster risk reduction for resilient development, Pillar 4: Enhancing disaster preparedness for effective response and resilient rehabilitation and reconstruction.[5] The implementation of the Natural Disaster Management Law and the Action Plan would enhance Myanmar's ability to protect and preserve her coastal areas.

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[1] National Wetland Policy and Strategic Actions (Third Draft), the Republic of the Union of Myanmar, May 2017.

[2] The Fourth Ramsar Strategic Plan, 2016-2024, Sub-series I; Handbooks 2, International Cooperation of Wetlands, 5th Edition, 2016.

[3] Section 5(c), Forest Law, 2018.

[4] 7CFE-DM, Center for Excellent in Disaster Management & Humanitarian Assistance, Myanmar Disaster Management Reference Handbook | March 2020, pg-27.

[5] Myanmar Action Plan on Disaster Risk Reduction, 2017, pp-27-29.

The Myanmar Climate Change Policy (MCCP), 2019 are guiding tools in terms of addressing climate change impacts on both natural and human. MCCP highlights six guiding principles: Sustainable development, Precaution, Prevention, Environment integrity, Shared responsibility and cooperation, and Inclusiveness while MCCP considers Sustainable management of natural resources for healthy eco-systems in six key sectors.[1]

The mangrove ecosystem has ability to reduce seawater intrusion because mangrove can eliminate the effect of salinity, pH, pyrites and anaerobe conditions. The mangrove ecosystem also has salt-excreting gland, salt accumulating gland and salt-excluder gland, specific root, root activity, salinity absorption, salinity accumulation, specific growth and another metabolism to reduce impact of seawater in mangrove metabolism. Therefore, the degradation and deforestation of mangrove ecosystem causing reduction of the mangrove function to reduce seawater intrusion.[2]

Experts Expressed concern about the current rate of pumping, especially in Yangon, because of its rapid growth, and in the delta area, where there is a danger of saltwater intrusion into freshwater sources. The 1930 Burma Underground Water Act is the current legal provision governing this issue, but it is not applied properly and requires many amendments to reflect the current situation. [3]

Coastal erosion and flooding are factors that can indirectly damage mangrove forests. Degradation of mangrove forests often leads to habitat fragmentation, having serious consequences for ecosystem functioning and the capacity of mangrove to provide ecosystem services, such as preventing freshwater diversion, shoreline erosion and facilitating shoreline protection.[4] In that case, in the Conservation of Water Resources and Rivers Law, 2006 provides that no person shall carry out sand suction, sand dredging, sand excavating, river shingle suction, panning for gold, gold mineral dredging or resource production for commercial purpose in the river-creek boundary, bank boundary and waterfront boundary without the recommendation of the Directorate.[5]

The government is underestimating the importance of the forestry sector, Myanmar may be underinvesting in sustainable forest management. To save the remaining mangroves, the Myanmar government issued a logging ban in 2014. Despite that, illegal logging persists. The strict enforcement of the Law is required to deter would be perpetrators from committing such illegal acts.

For the mangrove conservation, nature-based solutions play a crucial role in facilitating the recovery and adaptation of ecosystems to seasonal climate change and land-use changes. These solutions serve as a regulatory mechanism to effectively respond to the consequences caused by environmental degradation. In the context of mangroves, nature-based solutions can be employed to safeguard islands and coastal communities from wind storms and floods, as well as mitigate the impacts of sea level rise. One such solution involves the planting of windbreak trees,

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[1] San Win, Sirintornthep TOWPRAYOON, Amnat CHIDTHISONG, Mangrove status, its ecosystem, and climate change in Myanmar: A study in Ayeyarwaddy Delta Coastal Zone, IOP Conf. Series: Earth and Environmental Science 496, IFSFA, 2020.

[2] Endang Hilmi, Cecep Kusmana, Endang Suhendang and Iskandar, Correlation Analysis Between Seawater intrusion and Mangrove Greenbelt, Indonesian Journal of Forestry Research Vol. 4, No. 2, October 2017.

[3] www.myanmarwaterportal.com.

[4] Daniel M. Alogi, Habitat Destruction and Degradation, Tropical Marine Ecology, 2021.

[5] Section 13, Conservation of Water Resources and Rivers Law, 2006.

which act as natural walls, thereby reducing the risks of flooding. Additionally, these solutions contribute to ensuring food and energy security, while also combating climate change and preserving biodiversity through tree planting initiatives.[1]

Protected Areas are one of the most important parts for biodiversity safeguarding ecosystems services and preserving cultural landscapes. All CBD activities are accordingly, carried out within the fundamental paradigm of the ecosystem approach. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.[2]

With an ever-increasing pressure on the remaining mangroves, there is an urgent need to safeguard the remaining mangrove forests of Myanmar. However, only a small fraction of the mangroves in Myanmar are currently protected inside the Meinmahla Kyun Reserve and in the Lampi Marine National Park covering a total of 3% of Myanmar's overall mangrove stands. A priority task should be to expand the existing protected area network in Myanmar. Strengthening the legislative framework applicable to protected area management will enhance law enforcement as well as providing incentives for restoration of degraded mangrove areas.[3]

Ideally, land use management can achieve win–win solutions that satisfy human needs while maintaining ecological function. Although ideal, win–win opportunities are not possible in all situations. Nonlinear relationships between ecological responses and land area under protection make it possible to identify small loss–big gain opportunities, in which ecological functioning of the protected area might be maintained with minimum negative consequences for human land use.[4]

The Forestry Department's rehabilitation programs have made significant improvements to certain areas of the mangroves in the Ayeyarwady Delta. These programs include reforestation and the protection of natural mangroves in both the Ayeyarwady and Tanintharyi regions. In order to address the ongoing loss of mangrove habitats and involve local communities, it is crucial to coordinate these commendable efforts with the establishment of a combination of UNESCO Biosphere Reserves and Ramsar Wetlands these Golf Mottama, Meinmahla Kyun and Myeik Archipelogo. This will greatly contribute to the conservation and restoration of mangroves, ensuring the continuous provision of essential ecosystem services by intertidal ecosystems.[5]

Accordingly, to the Convention on Biological Diversity, states that "A contracting party shall subject to its national legislation, respect, preserve and maintain knowledge, innovations

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[1] Thit Taw Maung, The role of nature-based solutions in disaster prevention and mitigation, Myanmar Digital News, Oct 7, 2022.

[2] Michael Bowman, Peter Davies, Catherine Redgwell, Lyster's International Wildlife Law, Cambridge University Press, 2nd Edition, 2012, pp-603,604.

[3] Christoph Zockler and Cherry Aung, The Mangrove of Myanmar, B. Gul et at.(eds), Sabkha Ecosystems, Tasks for Vegetation Scinence VI, August 2019, Pg-265.

[4] Ruth Defries, Andrew Hansen, B.L. Turner, Robin Reid, Jianguo Liu, Land Use Change Around Protected Areas: Management to Balance Human Needs and Ecological Function, Ecological Application, Volume 17, No.4, 2007, pp-1031-1038.

[5] Christoph Zockler and Cherry Aung, The Mangrove of Myanmar, B. Gul et at.(eds), Sabkha Ecosystems, Tasks for Vegetation Scinence VI, August 2019, Pg-265.

and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity."[1]

Recognizing that local traditional practices with regard to mangrove can be a benefit to mangrove conservation, the Conservation of Biodiversity and Protected Areas Law, 2018 states that "The Minister of the Ministry of Natural Resources and Environmental Conservation of the Union Government may allow the community participatory protected area management which favours harmonization of sustainable socio-economic development of local communities and sustainability of biodiversity conservation."[2]

In Section 7(d) of the Forest Law, 2018 provides that the Ministry, with the comment of the Nay Pyi Taw Council, State or Regional Cabinet, and with the approval of the Union Cabinet may recognize the natural forest and mangrove conserved traditionally by the local people.

The community-based conservation that places decision-making power with lower-level authorities and involves local stakeholders in conservation management, is thought to increase support for conservation through greater sensitivity to local conditions and perceptions.

In fact, Community Forests (CF) are forests that belong to the local community, and residents have the right to apply for forest plantations. Once permission is granted, the residents are allowed to maintain the forest belts and cultivate the plantations, thereby enabling them to sustain their livelihoods through the utilization of forest products. By allowing the establishment of community-owned forests, external individuals will be restricted from accessing them, ensuring that the rights of the local people are protected. This, in turn, will create more employment opportunities for the residents.

According to Section 23(g) of the Community Forest Instructions, 2019 provides that the CFUG or the CFUG members shall have the rights to harvest and utilize wood and other forest products systematically from natural forest in accordance with the MP without negatively impacting the original objective to sustain the CF in accordance with the existing laws, rules and procedures. Forest Department is supporting and supervising in implementing the community forestry.[3]

The community forestry, as a practice, utilizes a participatory approach in forest management, engaging communities and stakeholders in the governance and sustainable management of forest resources. In this approach, communities may have ownership of the forests or receive authorization from the government to utilize forest products for economic purposes or personal consumption.

5. Management of Mangrove Conservation in Ayeyarwady Delta

Sustainable mangrove restoration on a national scale is possible with a comprehensive step-by-step approach. The first period with research has generated scientific knowledge on vital national and local issues. It has identified the need for permanent mangrove parks as a necessary follow up towards national restoration.

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[1] Article 8(j), the Convention on Biological Diversity, 1992.
[2] Section 13 (e), the Conservation of Biodiversity and Protected Areas Law, the Republic of the Union of Myanmar, 2018.
[3] Section 9(h), The Forest Law, 2018.

In fact, the establishment of the first mangrove gene bank by the Marine Research Centre of Pathein University in partnership with Worldview Myanmar, aims to safeguard and conduct research on these species. Currently, the gene bank is fully operational and under the management of Pathein University.

The classification of diversity in mangrove systems includes regional diversity, ecosystem diversity, species diversity, and genetic diversity. Mangrove species from various coastal regions in Myanmar have been cultivated in the nursery and then relocated to the gene bank area at Shwe Thaung Yan. This initiative was carried out as part of the Thor Heyerdahl Climate Park, situated in Shwe Thaung Yan, Ayeyarwady Region, Myanmar.

It is from the park, functioning as resource centers in cooperation with local, regional and national institutions, a full scale effort can be successfully completed. Pathein University is a leading academic institution in the coastal west, recently approved as a university of excellence. Academic's ongoing research project has provided capacity building and necessary skills to students and academic staff. This has led to the contribution of 1,800 acres from the regional governments for mangrove restoration and adaptation to climate change. A successful implementation of mangrove restoration in vulnerable coastal areas will save human lives and create new opportunities for the poorest of the poor. This will yield climate change protection as a catalyst for sustainable social and economic development.[1]

By the end of 2022, a total of 53 species have been recorded in the gene bank and its surrounding area. Notably, the Gene Bank has successfully propagated three species from The IUCN Red List. Over the past three years, more than 20,000 B. hainesii have been planted, while the researchers have diligently cared for thousands of naturally growing palms in the Shwe Thaung Yan region. The preservation of endangered species holds great significance for the Gene Bank, which also serves as a home to a majority of the world's authentic mangrove species and their associates for scientific research purposes. Additionally, the gene bank is actively studying the potential use of mangrove fruits and edible ferns to ensure food security.[2]

Mangrove forests and their ecosystems have made significant contributions to the environment, communities, and economies. For decades, these forests have become popular tourist attractions, and the demand for nature-based tourism in mangrove forests is increasing worldwide. However, it is important to be cautious of unsustainable tourism practices that can lead to negative consequences such as forest loss, depletion of natural resources, and increased pollution in and around mangrove forests. By maintaining a balance between economic activities and the preservation, conservation, and restoration of mangrove forests, can achieve sustainable tourism development.[3]

This being so, the Ministry of Natural Resources and Environmental Conservation of Myanmar and the Ministry of Hotels and Tourism which are lead focal ministries support the Ecotourism Policy and Management Strategy. The 2018 Myanmar Tourism Law includes as an objective the promotion of responsible tourism activities that will contribute to ecotourism and conservation of the natural environment. Under the Myanmar Tourism Law, 2018 provides that

[1] www.wif.foundation.
[2] Ibid.
[3] Yurina Ahmad & Mohd Nazip Suratman, The Roles of Mangroves in Sustainable Tourism, Mangrove Ecology, Biodiversity and Management, 2 October 2021.

"any person who operates a tourism business has the responsibility to respect Myanmar cultural heritage, customs and traditions, and conserve the natural environment."[1]

In Section 13 (e), (f) of the Conservation of Biodiversity and Protected Areas Law, the Republic of the Union of Myanmar, 2018 provides "the Director General of the Ministry of Natural Resources and Environmental Conservation of the Union Government may determine a plan to collect entrance fees or other fees related to tourism in protected areas and determine a payment system for ecosystem services derived from the ecosystems within protected areas with the approval of the Ministry."

The Meinmahla Kyun Wildlife Sanctuary, situated in the southern part of the Irrawaddy Delta, was established in 1994 and spans an area of 33,776 acres. This sanctuary holds great significance as a protected area in Myanmar and was recognized as an ASEAN World Heritage Park in 2003. Located in Bogalay Township, it is an island within the Ayewarwaddy Delta region. The sanctuary is predominantly covered by mangrove forests, which form a vital part of its forest type and ecosystem. In recognition of its ecological importance, it was designated as a Ramsar Site in 2017. Visitors to this sanctuary have the opportunity to immerse themselves in the natural habitat of various endangered species, including crocodiles, turtles, waterbirds, fishes, and migratory birds.[2]

Conclusion and Recommendations

This research has also brought the realization that the political, financial and socio-cultural sectors of country play a crucial role in the field of sustainable development of mangrove conservation. Myanmar's Wetland Policy (third draft) includes important elements for wetland preservation as these elements are defined as: wise use, protection, public participation and awareness raising. Although Myanmar authorities have the intention to formulate programmes and action plans for wetland management, they have not as yet done so. Thus, if such programmes and action plans are properly implemented, Myanmar should be able to effective preserve her wetlands. The implementation of the Natural Disaster Management Law and the Action Plan would enhance Myanmar's ability to protect and preserve her coastal areas. Myanmar has enacted the Conservation of Water Resources and Rivers Law but implementation and enforcement actions are weak which has led to pollution being a problem in most of Myanmar's rivers. A Law for the conservation of Myanmar's underground water resources has been drafted and is hoped to be enacted in the near future. The provision relating to the budget for the conservation of wildlife in the Conservation of Biodiversity and Protected Areas Law, 2018 is needed. In Myanmar, there are designated mangrove protected ecotourism sites. The collection of entrance fees and other fees from these sites may be contributed towards expenses for these sites, according to the Conservation of Biodiversity and Protected Areas Law, 2018. The positive influence of community forestry on mangrove conservation has been demonstrated through strong national backing. The sustainable management of forests under this model can lead to beneficial outcomes for community well-being. Measures to ensure cooperation between the government departments in order to be able to coordinate the performance of their duties is needed for the proper implementation of the law. It is important to work with local communities

[1] Section 14(b), the Myanmar Tourism Law, 2018.
[2] www.tourism.gov.mm.

to raise awareness of biodiversity issues. Local authorities and residents in coastal areas are urged to work together to protect the environment to prevent damage to mangrove forests.

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LEGAL ANALYSIS ON NATURALIZATION OF IMMIGRANTS IN MYANMAR

Phyu Thandar Win*

Abstract

Immigration is the act of entering a country other than one's native country with the intention of living there permanently. Integration of immigrants has become a permanent issue on the political agenda of the host countries. States exercise their sovereign powers not only to determine who will be admitted and for how long but also to regulate laws and regulations for noncitizens who are admitted as immigrants and who are entitled to their citizenship. Myanmar is situated in common borders with China, Laos, Thailand, Bangladesh and India. Due to the closeness of respective borders, Myanmar has been confronting issues such as boundary and immigration issues inevitably since independence in 1948. This paper aims to analyze how to confer naturalized citizenship to an immigrant in Myanmar and under what circumstances naturalized citizenship can be removed. This paper carries out a legal analysis based on International Conventions relating to immigrants and domestic laws dealing with immigrants. The results from this study indicate that the Myanmar Citizenship Law, 1982 provides three types of citizenship: citizens, associate citizens, and naturalized citizens. Naturalized citizenship can only be acquired by application via one of five criteria. Regarding immigrants in Myanmar, especially the third generation of Bengalis who arrived before 1948 can be granted Myanmar citizenship. The granting of citizenship depends on the existing laws of the States and such existing laws may be changed when the government or the policy of the government changes. States enact their immigration laws based on their national interests. Finally, the study recommends that the civic knowledge requirement and the citizenship test should be added to the Myanmar Citizenship Law 1982.

Keywords: immigrant, naturalization, citizenship, acquisition, removal, civic knowledge

Introduction

The phenomenon of immigration is not new and it has been part of the human experience since before recorded history. The process of global immigration is influenced by several factors, such as the economy, lack of employment opportunities, political instability, religious persecution, environmental crisis, etc. Besides these factors, technical progress and human rights and democracy progress in most countries are new emerging processes in the twenty-first century. People especially from developing countries move to developed countries to improve their lives. The host countries face the reality of controlling or managing immigrants. All countries around the world have the authority to determine who is allowed to enter the country and for how long.

Integration of immigrants has become a permanent issue on the political agenda of the host countries. The concept of integration is the inclusion of new populations into the existing society of the immigration country. The acquisition of naturalized citizenship is a basic factor for the political integration of immigrants and the quick acquisition of citizenship is considered a sign of successful political integration. This allows immigrants full participation in the legal and political institutions in the society and also immigrants can get a right to participate in sustainable development.

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Before 1824, there had been no foreign settlement in Myanmar. The first Anglo-Myanmar War started in 1824. After the war, the British annexed the western part of Myanmar and turned it into one of the states of India. Since then, foreigners from the neighboring country have settled in Myanmar for various reasons. Thus, colonialism is the main reason why foreigners settled in the country for the very first time. The country regained its independence on January 4, 1948, and therefore had to live under foreign rule for over 120 years between 1824 and 1948. Another reason for the settlement of foreigners is that the border between Myanmar and Bangladesh (at that time, East Pakistan) was only defined in 1966 when the Nave River became the border.

Myanmar is one of the strict *jus sanguinis* states as opposed to *jus soli* states. Citizenship can be acquired automatically by birth or non-automatically by application. The Myanmar Citizenship Law 1982 and the Procedures on the Myanmar Citizenship Law are primarily applicable to the acquisition and removal of naturalized citizenship in Myanmar.

Materials and Methods

Research Questions

1. How can naturalized citizenship be acquired in Myanmar and under what circumstances naturalized citizenship can be removed?
2. What are the requirements for naturalization?

Research Methods

This paper applies legal analysis based on International Conventions relating to Immigrants and national laws dealing with Immigrants in Myanmar and some countries. Secondary data is collected from related literature and some reliable internet sources.

Who is an Immigrant?

The word "Immigrant" has different connotations in different countries. For instance, in countries where citizenship is automatically granted to anyone born in the country, "immigrants" may generally be assumed to include only those who were born abroad. However, in countries where citizenship is linked to ethnic origin, "immigrants" may generally be inferred to include those of foreign ethnicity, regardless of their place of birth.[1] Generally, every immigrant has the same factors. They move across an international border away from their country of origin. They move voluntarily or involuntarily. Their intention of living is permanent and their movements relate to one of the push and pull factors of immigration. On the other hand, migrants move across an international border or within a State.

International Legal Framework Relating to Immigrants

States have broad authority to regulate the movement of foreign nationals across their borders. Non-nationals enjoy all of the universal, indivisible, and unalienable rights applicable in international law. The following conventions are the international conventions relating to immigration.

[1] David Card, Christian Dustmann and Ian Preston, Understanding attitudes to immigration: The migration and minority modulion of the first European Social Survey, CReAM discussion paper No.03/02, 2005, P. 3.

(i) Convention regarding the Status of Refugees (1951) and its protocol (1967)

(ii) Convention relating to the Status of Stateless Persons (1954)

(iii) International Convention on the Elimination of All Forms of Racial Discrimination (1965)

(iv) International Covenant on Civil and Political Rights (1966)

(v) International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (1990)

(vi) Protocol against the Smuggling of Migrants by Land, Air, and Sea which supplemented the United Nations Convention against Transnational Organized Crime (2000)

The United Nations Convention relating to the Status of Refugees was adopted in 1951 and entered into force on 22 April 1954. The 1951 Convention was originally limited in scope to persons fleeing events occurring before 1 January 1951 and within Europe. The 1967 Protocol removed these restrictions and thus gave the Convention universal coverage.[1] As of December 2023, 146 States ratified the 1951 Convention and the 1967 Protocol was ratified by 147 countries. Article 3 of the Convention provides that the contracting States shall apply the provisions of this Convention to refugees without considering their race, religion, or country of origin. To the same degree that nationals of other countries are granted rights, refugees are granted fundamental rights like freedom of movement according to Article 26 of the Convention. Article 31 of the Convention further stipulates that refugees should not be penalized for their illegal entry or stay, with certain exceptions. This recognizes that refugees may have to break immigration laws to seek asylum. Penalties that are prohibited might include being charged with immigration or criminal offenses dealing with the seeking of asylum, or being arbitrarily detained purely based on seeking asylum.[2]

The Convention relating to the Status of Stateless Persons was adopted by the United Nations Conference on the Status of Stateless Persons in 1954 and entered into force on 6 June 1960. As of December 2023, it has been ratified by 97 States. Article 3 of the Convention mentions that the contracting States shall apply the provisions of this Convention to stateless persons without regard to their race, religion, or country of origin. Article 26 of the Convention provides that subject to any regulations applicable to foreigners generally in the same situations, stateless persons who are lawfully residing in its territory are granted the right to choose their place of residence and to move freely within its territory. Except in cases involving national security or public order, the contracting States shall not expel a stateless person lawfully in their territories.[3] Article 32 of the Convention prescribes that States are also urged to assist stateless people in their assimilation and naturalization.

The International Convention on the Elimination of All Forms of Racial Discrimination is an instrument for protecting the rights of migrants. It was adopted by the United Nations General Assembly in 1965 and entered into force on 4 January 1969. As of December 2023, 182 States have ratified it. According to Article 5 of the Convention, state parties commit to outlawing and

[1] Introductory note by the Office of the United Nations High Commissioner for Refugees, 2010, P. 2.
[2] Ibid, P. 3.
[3] Article 31 of the Convention relating to the Status of Stateless Persons (1954).

eliminating racial discrimination in all its forms and to guarantee the right of everyone, regardless of race, color, national or ethnic origin, to equality before the law, particularly in the enjoyment of the civil rights, such as freedom of movement and residence within the border of the State, the right to leave any country, including one's own and to return to one's country and the right to nationality.[1]

The International Covenant on Civil and Political Rights (ICCPR) was adopted by the United Nations General Assembly in 1966 and entered into force on 23 March 1976. As of December 2023, 173 States have ratified it. The ICCPR describes the basic rights of all persons. Article 2 specifies that such rights are provided without discrimination as to race, color, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. The ICCPR provides that everyone residing legally within the territory of a State is entitled to the freedom of movement and to choose where they want to live. The ICCPR specifies that nationals have the right to leave and re-enter their countries. However, States may not arbitrarily deny nationals the right to re-enter.[2] Although freedom of movement is often recognized as a civil right in the International Covenant on Civil and Political Rights (1966), freedom only applies to movement within national borders and the ability to return to one's home state.

The International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families was adopted by the United Nations General Assembly in 1990 and entered into force on 1 July 2003. As of December 2023, 59 States have ratified it. It reaffirms fundamental human rights norms and embodies them in an instrument applicable to migrant workers and their families. The underlying objective of the Convention is to guarantee minimum rights for migrant workers and members of their families, regardless of their legal status or irregular immigration status. The rights of migrants who have been detained by State authorities for immigration and criminal offenses are covered in Articles 17 to 21. The rights of migrants in expulsion proceedings are outlined in Article 22, which also forbids collective expulsion. Article 23 grants the right of all migrants to seek the protection and assistance of the consular or diplomatic officials of their countries of origin.

The Protocol against the Smuggling of Migrants by Land, Sea, and Air, both of which supplement the United Nations Convention against Transnational Organized Crime was adopted by the United Nations General Assembly in 2000 and entered into force in January 2004. As of December 2023, 151 States have ratified it. Article 16 of the Smuggling Protocol sets forth States to preserve and protect the rights of migrants who have been smuggled, whereas Article 18 requires States to facilitate the return of migrants.

Most of the international Conventions and protocols have been widely ratified although others have entered into force with relatively few parties. As soon as the States have ratified the Conventions, they need to modify or amend their national legislation to be in line with the provisions of the Convention. It should be noted that only 59 States have ratified the UN (United Nations) Convention on the Protection of All Migrant Workers and Members of Their Families. Myanmar has not ratified all the above-mentioned Conventions except the Smuggling Protocol.

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[1] Article 5 of the International Convention on the Elimination of All Forms of Racial Discrimination (1965).
[2] Article 12 of the International Covenant on Civil and Political rights (1966).

Domestic Legal Framework Dealing with Immigrants

There are existing immigration laws that determine who is allowed to enter the country and for how long, and other matters such as citizenship. The following are domestic laws relating to immigration applied in Myanmar since the colonial period.

(1) The Foreigners Act 1864

(2) The Registration of Foreigners Act 1940 which was amended in1956, 1957, and 1958

(3) The Registration of Foreigners Rules 1948

(4) The Myanmar Immigration (Emergency Provisions) Act 1947 which was amended in 1955, 1956, 1957, 1958, and 1990

(5) The Myanmar Immigration (Detention) Rules 1951

(6) The 1949 Registration of Residents in the Union of Myanmar Act

(7) The 1951 Registration of Residents in the Union of Myanmar Rules

(8) The Myanmar Citizenship Law 1982 which was amended in 1997 and

(9) The Permanent Resident of a Foreigner Rules 2014

What is Citizenship?

Citizenship is the legal institution that denotes a person's full membership in a state with the associated rights and obligations. Citizenship is also defined as "the legal status of having the right to participate in and be represented in politics".[1] Citizenship distinguishes between members and outsiders in a migration context based on their various relationships with particular states. The right to free movement within state territories, as well as the right to readmission to this territory, has become a characteristic of modern citizenship. Citizenship, however, functions as a control device in the international arena, tightly limiting state obligations to foreigners and allowing governments to keep them out of, or remove them from, their jurisdiction.[2] On the other hand, a state grants certain political, social, and legal rights to its citizens, and in turn, citizens need to respect the laws established by the state.

Types of Citizenship

Every country has its laws, rules, procedures, and criteria as to who is entitled to its citizenship. According to the practices and laws regarding citizenship in countries around the world, citizenship can be acquired by the following types:

(1) Citizenship by birth

(2) Citizenship by descent

(3) Citizenship by marriage and

(4) Citizenship by naturalization.

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[1] www.unesco.org>themes>glossary>ci...

[2] Rainer Bauböck, Migration and Citizenship: Legal Status, Rights and Political Participation, IMISCOE Reports, Amsterdam University Press, 2006, P.16.

Citizenship by birth (birthright citizenship or *jus soli*) refers to the principle that everybody born in a country is automatically a citizen of that country.[1] A good example of a *jus soli* state is the United States. The United States is one of the few nations that assign citizenship by birth within the territorial boundaries of the nation, irrespective of the parents' citizenship.[2] Although China, Japan, and Thailand are *jus sanguinis* states, they follow the *jus soli* system with certain conditions. A person born in China is conferred Chinese nationality if their parents are stateless or uncertain nationality and have settled in China.[3] In a case where the child is born in Japan, a child may acquire nationality by birth when both parents are unknown or have no nationality.[4] A person born within the Thai Kingdom of alien parents may acquire Thai nationality by birth if their parents must have a legal status during their stay in the country.[5]

In theory, the *jus soli* is completely opposed to the *jus sanguinis* rule, which gives citizenship only if one or both parents are citizens. Citizenship by descent (*jus sanguinis*), the principle of blood, descent, and heritage, is crucial in determining who he or she is and who can become a citizen. It is unimportant where people were born.[6] The United States and Australia grant citizenship by descent to an adopted child.[7] On the other hand, Myanmar does not grant citizenship by descent to an adopted child because a child who is adopted by a citizen or by an associate citizen or by a naturalized citizen is not eligible for any of these three types of citizenship.[8]

Citizenship by marriage (*jus matrimonii*) means acquiring citizenship by marriage by a national.[9] Myanmar recognized citizenship by marriage if a person married to a citizen or to an associate citizen or to a naturalized citizen, who is holding a Foreigner's Registration Certificate anterior to the date the Myanmar Citizenship Law 1982 comes into force. The last way to acquire citizenship is through naturalization. Naturalization is the legal procedure by which a noncitizen or stateless person applies for citizenship of a nation.[10]

Myanmar is one of the strict *jus sanguinis* states as opposed to *jus soli* states. Myanmar Citizenship can be acquired automatically by birth or non-automatically by application. The Myanmar Citizenship Law 1982 and the Procedures on the Myanmar Citizenship Law are primarily applicable to the acquisition and removal of naturalized citizenship in Myanmar. The Myanmar Citizenship Law 1982 has recognized three different types of citizenship: "citizens", "associate citizens" and "naturalized citizens". Specific documentation is required for each type of citizenship according to the Myanmar Citizenship Law 1982 – the Citizenship Scrutiny Card

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[1] https://www.scu.edu>all-about-ethics

[2] Kevin R. Johnson, Raquel Aldana, Bill Ong Hing, Leticia M. Saucedo and Enid Trucios-Haynes, Understanding Immigration Law, Carolina Academic Press, 2nd Edition, 2015, P.605.

[3] Article 6 of the Nationality Law of the People's Republic of China 1980.

[4] Article 2 of the Japanese Nationality Law 1950.

[5] Section 7 bis as added by the Thai Nationality Act (No.2) B.E. 2535 (1992).

[6] www.unesco.org>themes>glossary>ci...

[7] Section 320 of the U.S. Immigration and Nationality Act of 1952 and Section 19 C(2) of the Australian Citizenship Act 2007.

[8] Section 73 of the Myanmar Citizenship Law 1982.

[9] Ngoh Tiong Tan, Transforming Soceity: Strategies for Social Development from Singapore, Asia and Around the World, Taylor & Francis Ltd, 2017, P.99.

[10] Ibid, P. 98-99.

(CSC), Associate Citizenship Scrutiny Card (ACSC), or Naturalized Citizenship Scrutiny Card (NCSC), respectively.[1]

Section 2 of the Myanmar Citizenship Law, 1982 provides that "Citizen" means a Myanmar citizen, "Associate Citizen" means an associate citizen prescribed by this Law, and "Naturalized Citizen" means a prescribed by this Law. In addition to these three different types of citizenship cards, residents in the Union of Myanmar were issued National Registration Cards (NRC) or "three-folded cards" according to the 1949 Registration of Residents in Union of Myanmar Act and the 1951 Registration of Residents in Union of Myanmar Rules. Foreigner registration cards are granted to persons who are not citizens of the Union of Myanmar according to the Registration of Foreigners Act 1940 and the Registration of Foreigners Rule 1948.

Temporary Identification Certificates (TICs) or Temporary Registration Certificates (TRCs), also known as "the White Cards" were granted under Rule 13(1)(c) of the 1951 Registration of Residents in the Union of Myanmar Rules. Rule 2(e) defines a Temporary Identification Certificate as a certificate issued instead of a registration card and it represents a proof of identity valid for a certain period that is specified on the certificate. Temporary Identification cards are issued mostly to those who had no registration cards; who have remained to scrutinize citizenship according to the Myanmar Citizenship Law; who have been disqualified to scrutinize citizenship owing to incomplete documents; and who have not included to hold foreigner registration cards under the Registration of Foreigners Rules 1948.

On February 11, 2015, the Office of the President of Myanmar released Notification Number 19/2015, which declared that the Temporary Identification Card, also known as the White Card, had to be surrendered by May 31, 2015, as its validity had expired on March 31, 2015. The temporary identification cards were issued in 1995.[2] Out of the 759,672 temporary certificates disbursed, only 469,183 have been surrendered. With effect from June 1, 2015, instead of those temporary certificates, the distribution of an Identity Card for National Verification (NVC) was carried out. The main purpose of distributing those cards was to scrutinize them as to whether they were entitled to become a citizen under the provisions of the Myanmar Citizenship Law 1982 and to acknowledge them as residents in Myanmar. According to the President's Office, as of December 23, 2016, 32,016 people out of 469,183 who turned in their temporary certificates were given Identity Cards for National Verification.[3]

Modes of Acquiring Naturalized Citizenship

A stateless or noncitizen can apply for citizenship in a country through the legal process known as naturalization. To apply for and be granted citizenship is one of the most fundamental ways that immigrants can participate in their new society. This makes it possible for immigrants to fully engage in the legal and political institutions in society.[4] In addition to serving as a means

[1] Norwegian Refugee Council, the Seagull and the Statelessness Network Asia Pacific, A Gender Analysis of the Right to a Nationality in Myanmar (March 2018), P.5.
[2] https://www.moi.gov.mm>moi:eng
[3] www.president–office.gov.mm>rakhine...
[4] James P. Lynch and Rita J. Simon, Immigration the World Over: Statutes, Policies, and Practices, Rowman & Littlefield Publishers, Inc., 2003, P.253.

of separating desirable from undesirable immigrants, citizenship creates a second gate that must be crossed by immigrants to become full members of the polity.[1]

Under one of five conditions, naturalized citizenship can only be acquired by application in Myanmar. Acquisition of naturalized citizenship is stated in Sections 42, 43, 45, and 47 of the Myanmar Citizenship Law, 1982. First, people who have entered and settled in Myanmar before 4th January 1948, and their children born within Myanmar may, if they have not already applied under the Union Citizenship Act 1948, apply for naturalized citizenship; Second, a person born in or outside of Myanmar to parents, one of whose parents is either a citizen, associate citizen or naturalized citizen and the other is a foreigner; Third, a person born in or outside of Myanmar to parents, one of whose parents is an associate citizen and the other is a naturalized citizen or both of whom are naturalized citizens; Fourth, a child whose name is included in one of their naturalized citizen parents' certificates is a naturalized citizen; Fifth, a person who is holding a Foreigner's Registration Certificate married to a citizen or to an associate citizen or to a naturalized citizen, anterior to the date the Myanmar Citizenship Law, 1982 enters into force may acquire a naturalized citizen.

It is important to mention that the President of the State or the Union Government has the power to grant any person citizenship. Section 8(a) of the Myanmar Citizenship Law 1982 provides that the President of the State or the Union Government may, in the interest of the State, confer on any person citizenship or associate citizenship or naturalized citizenship.

The Situation of Conferring Naturalized Citizenship to Immigrants in Myanmar

Myanmar shares borders with China, Laos, Thailand, Bangladesh and India. Since gaining independence in 1948, Myanmar has unavoidably faced issues such as boundary and immigration due to its close borders. It is evident that the Kingdom of Arakan was ruled by the Rakhine, one of the indigenous people of Myanmar from 1430 to 1785. It included the region near the border between Myanmar and Bangladesh. The Kingdom of Arakan became part of Myanmar, which subsequently came under British colonial rule. Myanmar became independent of British rule in 1948. However, it wasn't until 1966 that the Nave River was designated as the boundary between Bangladesh (at that time, East Pakistan) and Myanmar. The Bangladeshi, Rakhine, and Bengali (the original Rohingya) people were able to freely move between the two countries until the border was drawn in 1966.[2]

According to the statement issued by the President's Office on 11 July 2012, President U Thein Sein said that Bengalis came to work in the agricultural sector in Myanmar because British colonialists had invited them there before the country gained independence from Britain in 1948. Some Bengalis settled here because it was convenient for them to do so, and Myanmar law allows for the granting of citizenship to the third generation of those who arrived before 1948. While some people are the younger generation of Bengalis who came before 1948, others are illegal immigrants claiming to be Rohingyas who pose a threat to the security of the State. The Government has been seriously looking for a solution to this problem. The country will take

[1] Rainer Bauböck, Migration and Citizenship: Legal Status, Rights and Political Participation, IMISCOE Reports, Amsterdam University Press, 2006, P.18.

[2] Sari K. Ishii, Marriage Migration in Asia: Emerging Minorities at the Frontiers of Nation-States, Kyoto University Press, 2017, P.190.

responsibility for its native people, but it is unable to accept Rohingya immigrants who are in the country illegally.[1]

To address the issue of illegal immigrants, in July 2014 the Union Solidarity and Development Party (USDP) government introduced a pilot Citizenship Verification Process in Myebon Township. This process allowed Muslim TRC holders to apply for citizenship but stipulated that they had to list "Bengali" as their ethnicity. The process was halted as a result of protests and a planned process in Thet Kay Pyin IDP camp in Sittwe was never initiated due to rising tensions. But in January 2015, citizenship verification was restarted and was extended to the whole of Rakhine State. The government announced in February 2015 that all TRCs would be cancelled, and in June it started to issue NVCs in their place. The National League for Democracy (NLD) government restarted the process of issuing new documentation in June 2016. For the first time, recipients of the NVC were not required to identify as "Bengali" to receive them, and neither were ethnicity or religion criteria included in their issuance. Efforts to issue NVCs persisted intermittently after June 2016. About 2,000 people became citizens as a result of the first Myebon process; however, since the focus of the subsequent processes has been on issuing interim documents, relatively few people have become citizens.[2]

Qualifications for Naturalization

Every country usually determines eligibilities for naturalization depending on the applicant's age, language skills, residence requirements and the benefits of the state. In Myanmar, to be a naturalized citizen, an applicant shall have the following qualifications:

(a) be a person who conforms to the provisions of Section 42 or Section 43;

(b) have completed the age of eighteen years;

(c) be able to speak well one of the national languages;

(d) be of good character; and

(e) be of sound mind under Section 44 of the Myanmar Citizenship Law 1982. In addition to the above-mentioned facts, a person who is holding a Foreigner's Registration Certificate married to a citizen or to an associate citizen or to a naturalized citizen, anterior to the date this Law enters into force shall have the following qualifications:

(a) have completed the age of eighteen years;

(b) be of good character;

(c) be of sound mind;

(d) be the only husband or wife;

(e) have resided continuously in the State for at least three years as the lawful wife or husband.[3]

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[1] Ashley South and Marie Lall, Citizenship in Myanmar: Ways of Being in and from Burma (Myanmar), Chiang Mai University Press, 2018, P.241.

[2] Center for Diversity and National Harmony, Myanmar's Citizenship Law: An Analysis, August 2018, P. 218.

[3] Section 45 of the Myanmar Citizenship Law 1982.

In the United States, an applicant must meet a few requirements before he/she applies for naturalization. Over the course of the nineteenth Century, Congress amended the naturalization laws several times to attach certain requirements, including lawful entry, enumerated years of continuous residence, intention to reside in the U.S. permanently, ability to write his or her name, ability to speak English, good moral character, and attachment to the principles of the U.S. Constitution.[1] Additionally, an official naturalization test was first implemented in 1986, and remained unchanged until 2006. In September 2007, United States Citizenship and Immigration Services (CIS) unveiled the final 100 questions to the new citizenship test, created to be "more standardized, fair, and meaningful".[2] Persons who are unable because of physical or developmental disability or mental impairment can be exempted from civic knowledge and English language requirements.[3]

In Australia, the applicant must meet certain requirements, including lawful entry, permanent residency, having a basic knowledge of the English language, having an adequate knowledge of Australia and of the responsibilities and privileges of Australian citizenship, and having good character, before making application to the Minister.[4] The applicant requires to sit and pass the Citizenship test related to the eligibility criteria referred to in Section 21(2) (d), (e) and (f) of the Australian Citizenship Act, 2007 before making application to the Minister.[5] If the applicant is under 18 years, or 60 years or over, or has a permanent physical or mental incapacity, he or she is not required to sit the citizenship test.[6]

Myanmar, unlike the United States and Australia, does not require the applicant to be a permanent resident to apply for naturalization. Naturalization in the United States and Australia requires the applicant not only to have civic knowledge but also to sit and pass the citizenship test. However, the civic knowledge requirement for naturalization and citizenship test are not mentioned in the Myanmar Citizenship Law. It should be noted that a noncitizen cannot acquire Myanmar naturalized citizenship through marriage to a Myanmar citizen, if such marriage is entered into after 15 October 1982. In addition, the Myanmar Citizenship Law 1982 expressly provides that a foreigner shall not acquire citizenship merely by marriage to a citizen. Likewise, a foreigner who is adopted by a citizen, or by an associate citizen, or by a naturalized citizen is not eligible for any of these three types of citizenship.

Rights and Responsibilities of a Naturalized Citizen

The rights and responsibilities of a Myanmar naturalized citizen are prescribed in Sections 53 to 56 of the Myanmar Citizenship Law 1982. A naturalized citizen shall respect and abide by the laws of the State; discharge the duties prescribed by the laws of the State; and be entitled to enjoy the rights of a citizen under the laws of the State except the rights stipulated from time to time by the President of the State or the Union Government.[7] Furthermore, a naturalized citizen shall not acquire the citizenship of another country.[8] A naturalized citizen

[1] Kevin R. Johnson, Raquel Aldana, Bill Ong Hing, Leticia M. Saucedo and Enid Trucios-Haynes, Understanding Immigration Law, Carolina Academic Press, 2nd Edition, 2015, P.626.
[2] Ibid, P. 631.
[3] Section 312(b)(1) of the U.S. Immigration and Nationality Act of 1952.
[4] Section 21(2) of the Australian Citizenship Act 2007.
[5] Section 23A, Ibid.
[6] Section 21(3), (4) and (5), Ibid.
[7] Section 53 of the Myanmar Citizenship Law 1982.
[8] Section 54, Ibid.

shall have no right to divest himself of his naturalized citizenship during any war in which the State is engaged.[1] A naturalized citizen shall not automatically acquire citizenship or associate citizenship merely by marriage to a citizen or to an associate citizen.[2] A naturalized citizen is entitled to enjoy the rights of a citizen under the laws of the State, but there are some differences. Naturalized citizens are eligible to vote at the elections; however, they are not eligible to stand for election to the Pyithu Hluttaw[3] or the Amyotha Hluttaw[4] respectively.

Every citizen has the right to elect and right to be elected to the Pyithu Hluttaw, the Amyotha Hluttaw, and the Region or State Hluttaw subject to the Constitution and relevant laws in accord with Section 369(a) of the Constitution of the Republic of the Union of Myanmar 2008. Section 7(f) of the Pyithu Hluttaw Election Law provides that a foreigner or person who has assumed foreign citizenship shall not be eligible to vote at the election. All citizens have the right to elect and the right to be elected to the different Hluttaws, but foreign nationals have no right to vote in elections. Elections are held in Myanmar every five years. Every citizen is entitled to vote, including associated citizens and naturalized citizens. In addition to these three types of citizens, temporary certificate (white card) holders had voted in the 2008 referendum for the adoption of the constitution of the state. On 10 February 2015, the Pyidaungsu Hluttaw passed the Referendum Law for the Approval of the Draft Constitution of the Republic of the Union of Myanmar (2008) by Law No. 2/2015. Section 11(a) of this Law provides that every citizen, associate citizen, naturalized citizen and temporary certificate holder who has completed the age of eighteen years on the day of referendum shall have the right to vote at the referendum. Regarding the right to vote of temporary certificate holders, the representatives of the Amyotha Hluttaw headed by Rakhine National Party leader U Aye Maung submitted the case to the Constitutional Tribunal.[5]

The Constitutional Tribunal decided that a temporary certificate holder included in Section 11(a) of the Referendum Law for the Approval of the Draft Constitution of the Republic of the Union of Myanmar (2008) means a person who holds a certificate issued instead of a registration card and it represents a proof of identity valid for a certain period that is specified on the certificate under Rule 2(e) of the 1951 Registration of Residents in the Union of Myanmar Rules. On 11 February 2015, the Office of the President of Myanmar issued a Notification Number 19/2015 declaring that the validity of the Temporary Identification Card or White Card expired on 31 March 2015 and that cards were to be surrendered not later than 31 May 2015. Accordingly, the temporary certificate card has expired and the validity of the temporary certificate holder has been declared void according to the above-mentioned notification, the provision mentioned in the Law that temporary certificate holders are eligible to vote is no longer in effect.[6]

Moreover, a temporary card holder issued under Rule 13(1)(c) of the 1951 Registration of Residents in the Union of Myanmar Rules means a person who has remained to scrutinize

[1] Section 55 of the Myanmar Citizenship Law 1982.
[2] Section 56, Ibid.
[3] Section 10(m) of the Pyithu Hluttaw Election Law 2010.
[4] Section 10(m) of the Amyotha Hluttaw Election Law 2010.
[5] The Republic of the Union of Myanmar, Constitutional Tribunal of the Union: 2015 Rulings, 1st Edition, 2016, P.49.
[6] The Republic of the Union of Myanmar, Constitutional Tribunal of the Union: 2015 Rulings, 1st Edition, 2016, P.49.

citizenship and if he was allowed to vote together with citizens in the referendum, such allowing to vote is not consistent with the provisions of Section 38(a) and Section 391(a) and (b) of the Constitution of the Union of Myanmar (2008). Therefore, it is held that the provision mentioned in Section 11(a) of the Referendum Law for the Approval of the Draft Constitution of the Republic of the Union of Myanmar (2008) that temporary certificate holders are eligible to vote at the referendum is inconsistent with the provisions of the Constitution of the Union of Myanmar (2008).

On 25 June 2015, the Pyidaungsu Hluttaw enacted the Law Amending the Referendum Law for the Approval of the Draft Constitution of the Republic of the Union of Myanmar (2008) by Law No. 36/2015. Section 11(a) of the Referendum Law for the Approval of the Draft Constitution of the Republic of the Union of Myanmar, (2008) was substituted by Section 2 of the Law Amending the Referendum Law for the Approval of the Draft Constitution of the Republic of the Union of Myanmar (2008). Accordingly, each of every citizen, associate citizen, and naturalized citizen who has completed the age of eighteen years on the day of the referendum is eligible to vote at the referendum. It should be noted that every citizen including citizens, associate citizens, and naturalized citizens has the right to vote in elections, but foreign nationals are not allowed to vote in the elections.

In Thailand, a naturalized citizen can benefit from the same rights and duties as a Thai citizen. However, a person who has acquired Thai nationality by naturalization does not gain the right to vote until five years after naturalization.[1] Moreover, naturalized citizens have no right at all to stand for election to the House of Representatives[2] or the Senate.[3] Immigrants have no right to vote in elections.

Removal of Naturalized Citizenship

Removal of naturalized citizenship is outlined in Sections 8(b), 50, 51, 52, 57, 58, 59, and 60 of the Myanmar Citizenship Law 1982. A naturalized citizen who leaves the State permanently, who acquires the citizenship of or registers himself as a citizen of another country, or who takes out a passport or a similar certificate of another country ceases to be a naturalized citizen. If a person married to a citizen or to an associate citizen or to a naturalized citizen, who is holding a Foreigner's Registration Certificate anterior to the date this Law comes into force applies for naturalized citizenship and the husband or wife of such a person dies or is divorced from such a person before acquiring naturalized citizenship, the application for naturalized citizenship of such a person shall lapse.

Where one of the parents is a citizen, an associate citizen, or a naturalized citizen and the other a foreigner, and if the mother or father who is a citizen, an associate citizen or naturalized citizen loses her or his citizenship, associate citizenship, or naturalized citizenship, the children included in the certificate held by her or him, who have not completed the age of eighteen years, and the children included in the certificate held by her or him, who have completed the age of eighteen years, but have not made an affirmation cease to be naturalized citizens. Where both the parents lose their naturalized citizenship, the children included in their certificate of naturalized citizenship, who have not completed the age of eighteen years and the children included in their

[1] Section 95 of the Thailand's Constitution of 2017.
[2] Section 97 of the Thailand's Constitution of 2017.
[3] Section 108, Ibid.

certificate of naturalized citizenship, who have completed the age of eighteen years, but have not made an affirmation cease to be naturalized citizens. If affirmation is not possible within one year, an application may be submitted to the Central Body through the organizations prescribed by the Ministry of Immigration and Population, providing adequate reasons. If he does not have a sufficient explanation after reaching the age of twenty-two years, he shall lose his naturalized citizenship.

Dealing with revocation of citizenship, the President of the State or the Union Government may, in the interest of the State, revoke the citizenship or associate citizenship or naturalized citizenship of any person other than a citizen by birth. Section 59 of the Myanmar Citizenship Law, 1982 prescribes that a naturalized citizen who has obtained such citizenship through false representation or concealment shall have his naturalized citizenship revoked and shall also be liable to imprisonment for a term of ten years and to a fine of kyats fifty thousand. Under Section 60 of the Myanmar Citizenship Law, 1982, a naturalized citizen who has abetted in a fraudulent acquisition of a certificate of citizenship, a certificate of associate citizenship, or a certificate of naturalized citizenship for another person shall have his naturalized citizenship revoked, as well as be liable to imprisonment for a term of seven years and a fine of kyats ten thousand.

Section 58 of the Myanmar Citizenship Law, 1982 provides that if a person violates any of the following provisions, the Central Body may revoke his naturalized citizenship: (a) trading or communicating with enemy countries or countries assisting the enemy country, or with citizens or organizations of such countries during a war in which the State is engaged, or abetting such an act; (b) Trading or communicating with a hostile organization or a member of such an organization, or abetting such an act; (c) committing an act that is likely to threaten the State's sovereignty and security, or public peace and order, or giving cause to a reasonable belief that he is about to conduct such an act; (d) demonstrating disaffection or disloyalty to the state through any act, speech, or other means; (e) giving information relating to a state secret to any individual, organization, or other country or countries, or abetting such an act; (f) committing a moral turpitude offence for which he was sentenced to imprisonment for a minimum of one year or a fine of kyats one thousand.

Result and Findings

The Myanmar Citizenship Law, 1982 provides three types of citizenship: citizens, associate citizens, and naturalized citizens. Naturalized citizenship can only be acquired by application via one of five criteria. Myanmar is a strict *jus sanguinis* state, so a child born in Myanmar whose parents are noncitizens will not be eligible for Myanmar citizenship. A noncitizen cannot acquire naturalized citizenship through marriage to a Myanmar citizen, if such marriage is entered into after 15 October 1982. A foreigner who is adopted by a citizen, by an associate citizen, or by a naturalized citizen is not eligible for any of these three types of citizenship. Furthermore, immigrants in Myanmar, especially the third generation of Bengalis who arrived before 1948 can be granted naturalized citizenship. Regarding the qualifications for naturalization, an applicant for naturalized citizenship in Myanmar needs not to be a permanent resident. The Myanmar Citizenship Law, 1982 does not mention civic knowledge requirement and citizenship test, although it provides a national language requirement for naturalization. In connection with the rights of naturalized citizens, a naturalized citizen is entitled to enjoy the rights of a citizen under the laws of the State, but there are some differences. A significant

difference between the rights of a citizen and the rights of a naturalized citizen is eligible to stand for election to the Hluttaws. In the case of immigrants' voting rights, immigrants have not been allowed to vote in elections since 2015. Myanmar's naturalized citizenship may be revoked on account of obtaining naturalization illegally through the concealment of a material fact or willful misrepresentation, and obtaining naturalization in another country. In addition, a child's naturalized citizenship may be revoked where one of their parents, or parents have lost naturalized citizenship. States have the authority to determine who is allowed to enter their territories, for how long, from which countries, and what rights to provide to them in their laws. Depending upon the national interest of States, their immigration laws are different from each other.

Discussion

The current study excludes the immigration control of legal immigrants in Myanmar. Myanmar does not have a system to accept immigrants with permanent resident permits at the time of entrance. A person who has entered the country with a type of visa that is not entitled to settle can apply for permanent resident status after three years. Myanmar does not allow a permanent resident to acquire naturalized citizenship. It can be seen that further studies are needed in the fields of immigration control of legal immigrants and the national verification process after June 2016.

Conclusion

It is observed that Myanmar only grants naturalized citizenship to a noncitizen who meets certain requirements under the Myanmar Citizenship Law 1982 and a noncitizen married to a citizen or to an associate citizen or to a naturalized citizen, who is holding a Foreigner's Registration Certificate anterior to the date the Myanmar Citizenship Law 1982 comes into force. Regarding immigrants, especially the third generation of Bengalis who arrived before 1948 can be granted Myanmar citizenship. It is recommended that, in determining the citizenship of immigrants, the citizenship knowledge requirement and the citizenship test should be added to the Myanmar Citizenship Law 1982 in the national interest of the state.

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THE IMPACT OF LAND ISSUES ON FOREIGN DIRECT INVESTMENTS IN DEVELOPMENT OF MYANMAR AGRICULTURAL SECTOR

Mya Hnin Thet Paing*

Abstract

Foreign Direct Investments in the agricultural sector are vital in the improvement of productivity and the raising of incomes and food security as well as in ensuring a long-term growth of the agro-business. Foreign Direct Investment (FDI) is central to achieving Sustainable Development Goals especially in reduction of poverty. The development in Myanmar's agricultural sector can be promoted by attracting FDI. FDI may support financial and technological needs in the Myanmar agricultural sector. However, due to the numerous land issues and weak administration in addressing the land issues, foreign investors are concerned about investing in Myanmar even though there have been numerous concessions in inviting the foreign investments. Thus, this paper discusses the role of FDI in the development of Myanmar's agriculture which is the best solution for reduction of poverty in rural areas. This paper also critically analyzes the underlying legal issues related to the conflict of land rights under the Vacant, Fallow and Virgin Lands Management Law, 2012 (VFVML Law) and the Myanmar Investment Law, 2016. It is found out that there is an unclear definition in classifying the various lands under VFVML Law and inconsistent provisions under VFVML Law and Myanmar Investment Law. Therefore, it is necessary to amend the existing land laws to reconcile the land types and classifications in order to Foster, Secure and Well-defined Land Rights.

Keywords: Foreign Direct Investments, Myanmar Agricultural Sector, Land Issues

Methodology

This paper used the descriptive methods by analyzing both primary data from legislations and secondary data from literature, government's websites, official publications, and analytical review on FDI in development of the Myanmar Agriculture sector as well as the impact of land issues on FDI by law firms and mainstream newspapers. Data utilized in this paper are collected from legislations, literature books, research papers, Publications, Journals and relevant websites. First, it studies the situation of the Myanmar Agriculture Sector and inflow of FDI. Second, it studies the land issues based on the Myanmar legislations. Finally, it discusses whether secure land rights are one of the best ways in attracting FDI which may eliminate the rate of poverty in Myanmar.

Introduction

Myanmar is the second largest country in Southeast Asia with a total land mass of 261,228 square miles (676,557 sq. km). The agricultural sector is the backbone of the economic development in Myanmar. Under Myanmar agro-based industrial sector, the main commodity is mainly engaged in the processing of agricultural produce either consumptions such as food crops, oil, seeds, sugarcane, fruits and vegetables, etc. or for consumer goods such as cotton for fabric and clothing, rubber for rubber products, etc. and the inputs for the sector such as fertilizers and farm machineries.[1] After emerging from the isolation period, Myanmar paved a comprehensive path of political and economic reforms by introducing elements of popular representation into the political sphere, in fostering economic growth and inclusive social development, in improving

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the business environment, attracting foreign investments and in reducing the rate of poverty.[1] The government has acknowledged agriculture development as a way to achieve a sustainable development goal of reducing poverty and in 2018, the Ministry of Agriculture, Livestock and Irrigation (MOALI) proposed the "5 Years Myanmar Agriculture Development Strategy and Investment Plan" to intervene rural development and increase national economy growth. Moreover, the Myanmar government encourages investment opportunities in every step of the agricultural supply chain and a significant amount of land has been allowed to make investments by the foreign investors.[2]

On the other hand, because of the insufficient in the financial access to cover up the seasonal crops, many of the farming and rural population depend upon the microfinance institutions (MFI) and the informal sectors such as traders, shopkeepers and money lenders for their credit needs, usually with a high rate of interest.[3] Therefore, farmers are not able to increase or improve production standards. Moreover, Myanmar agriculture still needs improvement in quality such as a system of quality control and assurance that will help farmers and enterprises to get higher prices. This system relies upon various measures aiming at developing product standards certifications, quality grading, quality control measures, the application of standard weights and measures, and reliable assessment procedures. Thus, the modernization of the sector is a crucial factor in the economic and social development agenda for the government as increased agricultural production and reduced poverty are noted as the first priorities in the Poverty Alleviation and Rural Development Action Plan.[4] In the long term, productivity and competitiveness of the agricultural sector relied upon access to and adoption of advanced technology and the effective management of natural resources and other inputs to achieve total factor productivity increase.[5] Thus, FDI is an important element in poverty alleviation (the first Sustainable Development Goal) as it creates jobs and stimulates technological progress which is an ultimate driving force behind sustained economic growth.

Situation of Myanmar Agricultural Sector

Myanmar's economy largely depends upon agriculture. It has been estimated that there has been a contribution of 30% of Gross Domestic Product (GDP) by the agricultural sector while industry accounts for about 25% and services about 45%. Moreover, the former sector also accounts for about 25% of total exports by value. 2015 and 2016 witnessed $1,152 million as the largest agricultural export in beans and pulses, with rice, livestock and fisheries, the other main agricultural export items, each generating between $400-500 million. Between 2016 and 2017, the estimated 28.2 million metric tons of the production of paddy rice is still a dominator of Myanmar's agricultural production, as 45.7% of harvested area and 53.4% of production volume of major crops produced in Myanmar. The other key crops such as beans, pulses, oilseeds,

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[4] Virginia Chimenti, (2016) "Agriculture Value Chain Finance in Myanmar: A Role for UNDP" *United Nations Capital Development Fund Myanmar*, p-3.

[5] MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-23.

rubber, sugar, maize, a wide range of fruits and vegetables, palm oil, coffee and tea are also exported.[1]

However, the Myanmar agricultural sector has been characterized because of the low productivity, inequality and high volatility.[2] These are caught in a "low equilibrium trap". As stated in the FinScope Survey, 2013, 58% of the population is engaged in the sector, particularly in crop production.[3] Since such two-thirds of its population is engaged in the sector, this "low equilibrium trap" has contributed to high rates of poverty and food security.[4] Among the 72% of the population who reside in the rural areas, 85% face poverty and 24% of rural households are considered as vulnerable.[5] In accordance with Integrated Household Living Conditions Survey (IHLCS), the poverty rate in 2011 was about 25.6%, with about 66.9% of total employees with the wages of $2 per day. Furthermore, 56% of the employment engaged in the agricultural sector and 54.2% in agriculture, hunting and forestry plunged to the general poverty line. In accordance with per capita income of the United States Dollar (USD) 1,205, Myanmar is ranked 165th out of 180 countries in the world.[6]

Even though Myanmar's agricultural sector has potential, it has suffered decades of inadequate investment in basic infrastructure as well as the weak knowledge in technological and post harvested systems and the weak financial support service. Specifically, in matter of the rice supply chain, only 25.8% of the total milling capacity is standardized with high-quality. The main deficiency is in cleaning equipment and color sorters to manufacture the qualified rice as well as the need for more rubber roller equipment.[7] Since rice is the staple food and main exporter, Myanmar still needs to improve in modernization of the plant genetics, seed certification, paddy processing and marketing and logistics systems. The output side includes not only the traditional areas such as storage, processing and marketing but also value-adding in packaging and branding logistics services.[8] On the input side, it comprises the fertilizers and agro-chemicals, seeds, feed, irrigation equipment, power tillers, tractors, threshers, combine harvesters, and increased access to pluralistic sources of extension and finance.[9] Among the 11,666 Myanmar's rice mills, 88% are small mills with low quality and very old machinery. In accordance with the Department of Trade, the rate of milling quality for Head and Broken Rice is about 66%.[10] However, Myanmar Agribusiness Public Company (MAPCO), a joint venture with a Japanese Company made investments in the rice milling industry. Moreover, Wilmar Myanmar (a subsidiary of Singapore Based Wilmar International) commenced a four mill and consumer pack edible oil processing plant in the Thilawa Special Economic Zone in Oct 2019 with the

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1 MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-3-8.
2 Ibid, p-8.
3 Virginia Chimenti, (2016) "Agriculture Value Chain Finance in Myanmar: A Role for UNDP" *United Nations Capital Development Fund Myanmar*, p-3.
4 David A. Raitzer, Larry C. Y. Wong, & Jindra Nuella G. Samson, (2015) "Myanmar's Agricultural Sector: Unlocking the Potential for Inclusive Growth" *ADB Economic Working Paper Series,* No. 470, p-4.
5 MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-7.
6 Ibid.
7 San Thein, (2006) "Agro-based Industries in Myanmar: The Long Road to Industrialization" *Japan External Trade Organization,* V.R.F. Series, No.414, p-10.
8 MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-13.
9 Ibid.
10 Swe Mon Aung, (2019) "Burma- Union of Grain and Feed Annual Report" *USDA Foreign Agricultural Service,* BM 9002.

purpose of selling and distributing rice and rice related products.[1] U Ye Min Aung, the Managing Director of MAPCO said, "The establishment of the high-end rice mills from the foreign investors and government initiatives will boost both the local and export market. Because of such establishments, Myanmar is seeing action in poverty reduction by focusing efforts in improving the agriculture industry."[2]

Furthermore, in order to cope with the seasonal expenses and to modernize the farming practice, farmers need to have financial access. A large infusion of funds is necessary in order to generate revenues for farmers and the country. The main sources of financing in the sector are the Myanmar Agriculture and Development Bank (MADB) which grant subsidized credits to farmers by two types; seasonal crop production loans that meet about 50% of production costs and term loans and its sisterhood organization, the Myanma Livestock and Fisheries Development Bank (MLFDB).[3] But, the loans offered by the MADB are poorly structured and do not match the crop cycles. Because of these pressures, farmers need to sell the crop quickly in order to pay the debt even though the crops are not fully processed. Moreover, the other private banks grant loans to small businesses and traders, who in turn might lend to farmers with higher interest.[4] This adversely affects the quality of the product and farmers can only access the lower prices and thus lead to an endless cycle of debt and poor farmers sink into poverty. As a result, this can hinder the development of Myanmar's agricultural sector with a serious disincentive to productive industry.

Therefore, because of the limited access of farmers to timely and quality inputs, including seeds, fertilizers, pesticides, post-harvest infrastructures and animal health drugs and services, the limited access of smallholder farmers to financial services, the limited quality and safety of agricultural products and low value added produced by agroindustry, the sector remains behind compare to the other countries.[5] Therefore, in case of the reduction of poverty in the countryside and access to finance, the affiliation between agriculture and other economic sectors play an important role since the growth of the economy depends upon the development of agro activities.

Foreign Direct Investments in Myanmar Agricultural Sector

With the experience from the Asian economies, one of the successful ways to stimulate development in agriculture is by generating an enabling investment climate for agricultural entrepreneurs and by creating increased access to the critical knowledge and inputs needed to implement the high levels of productivity.[6] FDI is vital in the contribution of value-addition and increasing profitability for agricultural industries in case of selling the finished, processed goods. Moreover, these industries will also give opportunities for employment and skill development in the workplace as well as improve the standard of living.[7]

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[1] Logistic Cluster, "Myanmar Milling Assessment", https://dlca.logcluster.org/myanmar.
[2] Aye Chan, (2017) "The Relevance of Foreign Direct Investments in Myanmar's Agricultural Sector" https://borgenproject.org/the-agriculture-sector-for-the-poor-in-myanmar/.
[3] Virginia Chimenti, (2016) "Agriculture Value Chain Finance in Myanmar: A Role for UNDP" *United Nations Capital Development Fund Myanmar*, p- 4-5.
[4] MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-17-18.
[5] Ibid, p-9.
[6] Ibid, p-35.
[7] Ibid, p-25.

Since 2012, there has been a significant increase in FDI levels. During the 1988-1989 FY, among the total foreign investment of more than $77.7 billion, $395 million has reached to the agricultural sector which was only 0.51%. There is no FDI in the sector between 2011-2012 FY. In 2012-2013 FY, over $9.6 million, over $20.2 million in 2013-2014 FY, in 2014-2015 over $39.66 million. In 2015-2016 FY, the rate of FDI in the agricultural sector was over $7.1 million. Even though there was no FDI in such sector in the 2016-2017, the rate reached $134.485 million. However, only $10.650 million accounts in the initial months of 2018.[1] As of the end of February 2022, Myanmar attracted a total of $530.775 million in foreign direct investment and the agricultural sector received at slightly more than $5.043 million.[2] According to the Directorate of Investment and Company Administration (DICA), there was the amount of more than $446 million of the foreign investment in the agricultural sector which is 0.49% of total foreign investments of the country during the 2022-2023 FY.[3] China, Hong Kong, Singapore, Japan, South Korea, Vietnam and Thailand are the main investors in the sector. Most of the large investors are engaged in the rubber and palm oil plantation while small and medium scale investments are investing in the sugarcane, corn, bio fuels, fruit and vegetable plantation.[4]

In the sector, currently, the government and private investors make investments particularly in the fields of growing fertilizer. From the International Finance Corporation, Myanmar Awba Group received a $10 million loan for the construction of a chemical plant to produce fertilizer. In August 2018, Hmawbi Agricultural Input Complex was launched in order to meet the 50% of the demand of the fertilizer. Moreover, in the Thilawa Special Economic Zones, the Japanese conglomerate Marubeni Corporation made a financial investment of about $18.5 million in the fertilizer facility.[5] Since Myanmar is facing low infrastructure, productivity and poor seed quality, in January 2019, CITIC Corporation functioned jointly with Myanmar Agribusiness Public Corporation (MAPCO) by investing $500 million into the construction of high-end rice mills and agribusiness service centers across Myanmar.[6] Moreover, a number of companies have also invested in the seed industry, particularly for vegetables. In 2013, the Charoen Pokphand Group (CP Group) from Thailand had made a large contribution to the agricultural sector with a poultry supply chain relating to the maize seed industry.[7] In the financial supporting sector, the China EXIM Bank grants a loan of $400 million nation-wide for rural development and poverty reduction and a $100 million for hire purchase for mechanization. Moreover, there have been lending Organizations for agricultural projects such as the World

[1] "Agriculture sector receives US$ 3.5 m of foreign investment within eight months of 2022-2023 FY" December 28, 2022, Eleven, https://elevenmyanmar.com/news/agriculture-sector-receives-us-35-m-of-foreign-investment-within-eight-months-of-2022-2023-fy.

[2] "Myanmar attracted most of its FDI in service sector for the first five months of the current fiscal year, followed by manufacturing sector and construction sector" April 22, 2022, THAI BIZ (Thailand), http://www.thaibizmyanmar.com/en/news/detail.php?ID=3728.

[3] "Agricultural sector receives over $446 million in foreign Investment" May 31, 2022, Global New Light of Myanmar,https://www.gnlm.com.mm/agricultural-sector-receives-over-446-million-in-foreign-investment/#:~:text=The%20foreign%20investment%20amount%20in,Investment%20and%20Company%20Administration%2DDICA.

[4] Aye Chan, (2017) "The Relevance of Foreign Direct Investments in Myanmar's Agricultural Sector" https://borgenproject.org/the-agriculture-sector-for-the-poor-in-myanmar/.

[5] Ibid.

[6] Aye Chan, (2017) "The Relevance of Foreign Direct Investments in Myanmar's Agricultural Sector" https://borgenproject.org/the-agriculture-sector-for-the-poor-in-myanmar/.

[7] Livelihood and Food Security Trust Funds, "Study on Agricultural Investments Final Report" p-14.

Bank, Japan International Cooperation Agency (JICA), etc.[1] Even though the smallholder production is efficient and competitive, financial and economically viable are the urgent need to undertake rural poverty and raise the rural incomes that makes the improvement of smallholder agriculture a high priority. The development of a well-functioning financial system will be able to provide the appropriate support services such as access to improved related technology. Thus, the following will discuss the dependence of agricultural growth upon FDI including the rate of poverty in Myanmar.

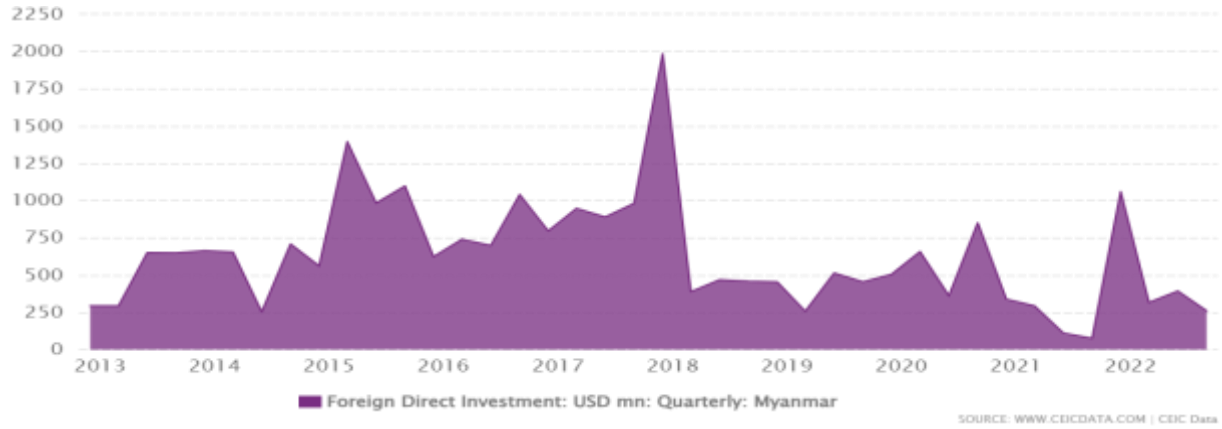

Table 1: Foreign Direct Investment in Myanmar from 2013-2022

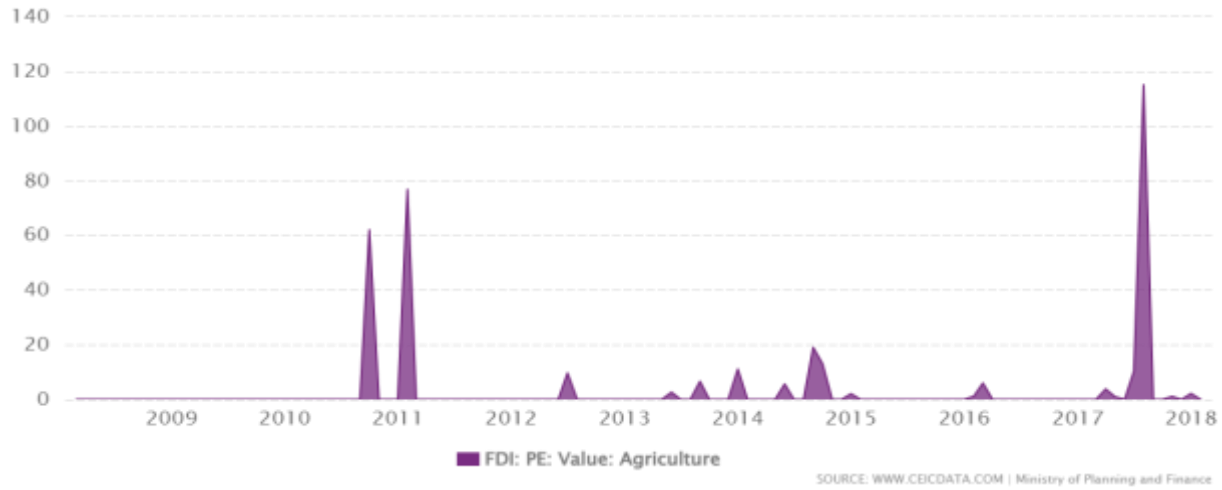

Table 2: Foreign Direct Investment in Myanmar's Agricultural sector from 2010-2018

[1] MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-31.

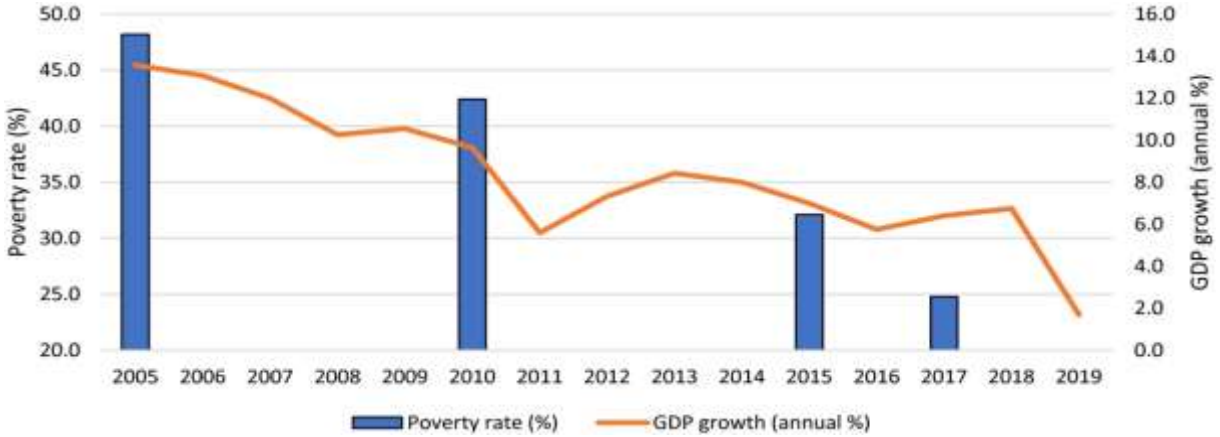

Table 3: The Rate of Poverty in Myanmar from 2005-2017

Source:https://onlinelibrary.wiley.com/doi/full/10.1111/rode.12836

In Table 1, the rate of FDI in all sectors in Myanmar from 2013 to 2022 is described. Table 2 shows the rate of FDI in the Myanmar agriculture sector from 2010 to 2018. In Table 3, the rate of poverty in Myanmar from 2005 to 2019 is described. Based on the data from table 2 and 3, between 2017 and 2018, the rate of FDI in agricultural sectors reached a peak. Together with many FDI, the rate of poverty in 2017 reduced to 24.80% from 32.10% in 2015. By comparing these tables, it can be denoted that the rate of poverty in Myanmar depends upon the flow of foreign direct investments which is one of the main actors for agricultural development.

Investment Promotion in Agricultural Sector

In order to promote and facilitate both foreign and domestic investments, the Myanmar Government introduced a new Myanmar Investments Law (MIL) in 2016. MIL opened the door for more FDI by reducing the number of prohibited sectors and simplifying the legal procedure for investors to make their business in Myanmar. Furthermore, it regulates equal treatment for both foreign and domestic investors. Thus, under MIL, the investors may enjoy the National Treatment and Most Favored Nation Treatment, Fair and Equitable Treatment, right to use land, Investment Guarantee, etc. Myanmar Investment Commission (MIC) also prioritizes agriculture and its related services, value-added production of agricultural products and livestock production, breeding and production of fishery products when the investors submit their proposals. Since 2016, 80% of investment in the agricultural sector has been opened for the foreign investors after withdrawing the previous restriction of 40% investment in accordance with the MIC.[1] In accordance with Sec-36 of MIL, in the agricultural sector, only investments requiring more than 1,000 acres are required to request permission from MIC.[2] Besides, the Myanmar Companies Law allows non-Myanmar investors to own 35% of stake in a local business before reaching under the category of foreign company in order to seek overseas expertise and capital from joint-ventures.[3] In accordance with Myanmar Investment Rule 22 and Notification No. 15/2017 (c), the ratio for joint-venture must be 80% for foreigners and 20% for citizens.

[1] Thiha, (2018) "Myanmar allows up to 80% of Foreign Investment in Agriculture sector" https://www.consult-myanmar.com/2018/08/06/myanmar-allows-up-to-80-of-foreign-investment-in-agriculture-sector/.

[2] Section 36, Myanmar Investment Law, 2016, Berwin Leighton Paisner, "Guide to the Myanmar Investment Law" p-3.

[3]DICA, "Investment in Myanmar" https://www.dica.gov.mm/sites/default/files/news-files/pamphlet_-_invest_in_myanmar.pdf.

In order to remove tax burden and to be a proportionate development of Regions and States, MIL offers exemptions and reliefs for income tax, customs and other kinds of tax. Income tax exemptions shall only be granted to the promoted sectors which are specified by MIC. With respect to the income tax exemption, the Commission may, with the approval of the Government, grant income tax exemptions to investment business in Zone-1 (less developed regions) for a period of 7 consecutive year including the year of commencement of commercial and investment operation, in Zone-2 (moderate developed regions) for a period of 5 consecutive years including the above-mentioned year, in Zone-3 (adequate developed regions) for a period of 3 consecutive years including the commencement year.[1] In the designated 162 areas of the less developed regions[2], most areas from three main agro ecological zones: Delta, Central Dry Zone (CDZ) and the Hilly zone are included. In the Delta zone, about 22 million of the population occupy in rice production, in the CDZ, about 19 million and in the Hilly zone, about 6.5 million and most of them are from Shan States.[3] Moreover, many of the agricultural activities are classified as the promoted sectors under the categories of agriculture and its related services and manufacturing which can access the income tax exemptions.[4] Foreign investors may invest 100% without any local partners in the promoted sectors.[5] Furthermore, the law also grants such tax exemptions in case of the reinvestment activities if such reinvestment is functioning with the profits obtained from the investment in the same or similar types within one year. It also grants the right to deduction, depreciation regarding this kind of tax.[6] In order to elevate the profitability of the newly established or expansion of the existing business which will contribute to the country's economy, the law also offers relief from customs duties on imports of equipment and other construction materials. MIC may grant exemptions and reliefs from customs duty and other internal duties and taxes or both of machineries, equipment, instruments, machinery components, spare parts, construction materials unavailable locally and the other rights to access to reimbursement such duties and taxes.[7]

In accordance with the data collected by DICA, during the 2020-2021 financial year, a total of 48 FDI projects have been applied for investment promotion under the MIL. Among them, 22 projects were granted a permission while 26 projects received endorsements, bringing the capital inflow of $3,791.398 million into the country. Myanmar Investment Commission permitted 22 FDI projects and endorsed 4 investment project proposals. Meanwhile, other States/Regions Investment Committees across the country approved 22 investment projects which helped in creation of 23,956 job opportunities for local workers.

Therefore, the Myanmar Government offers tax holidays, investment allowances, or accelerated depreciation on the basis of the location of the investment, including the less-developed areas and also to ascertain the economic activities such as skills development, Research and Development (R&D), and environmental protection.

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[1] Section 75(a), Myanmar Investment Law, 2016.
[2] Myanmar Investment Commission, Designation of Development Zone (No. 10/2017, 22 February 2017).
[3] MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-7.
[4] Myanmar Investment Commission, Classification of Promoted Sector (No. 13/2017, 1 April 2017).
[5] DICA, "Investment" https://www.dica.gov.mm/en/Investment.
[6] Section 78, Myanmar Investment Law, 2016.
[7] Section 77, Myanmar Investment Law, 2016.

Land Issues and Foreign Direct Investments

Land usage in Myanmar is regulated by the various laws on the basics of the different lands such as urban area land, forest land, farmland and fallow land, etc. Private individuals may hold land by applying the right to use land with applicable forms of grants from the government. Most land authorities grant a land lease for up to 30, 60, or 90 years. The length of time should be sufficiently long enough so that the landholders have the ability and confidence to recover the income system generated by the investment.

In accordance with the commentary from Myanmar Investment Promotion Plan (MIPP), the cooperative function between Directorate of Investment and Company Administration (DICA) and Japan International Cooperation Agency (JICA), the reasons for being limited in the inflow of FDI including the agriculture sector and the other land based FDI, even though there is the concession and amendment upon the MIL and Myanmar Investment Rules, is, because of the unsecure possession of land rights. Because of no openness upon the management and weak administration in land issues, most of the FDIs hesitate to invest in such sectors. This could lead to the adverse impact upon the development of Myanmar Agriculture because of the less FDI.[1] Furthermore, due to the weak understanding with respect to the socio-legal environment concerned with the land resources in Myanmar, foreign investors consider investing in places where there is no mapped territory which can lead to conflicts relating to land.[2]

Among the main barriers in attracting foreign investments, in Myanmar, it is important to address the weak security of land tenure because of the unclear definition upon the various lands, weak administration in the allowance of land use. Moreover, there are some contradictions regarding to the period of land lease between MIL (initial 50 years plus 10 years with 2 times extension) and the VFVLM Law (initial allowance 30 years and frequent allowance without exceeding 30 years)[3] even though it is required to get approval from MIC.[4] To be more secure in tenure which is the major incentive for FDI, the government should enact strong laws and legislations to regulate property rights and to identify the need for additional subject matters. The enactment of new Land Rights Law is required to identify the nature of rights over the land and uniform land lease term based on the land types.[5] The current VFVLM law also needs to make clear definitions in categorizing the various VFV lands or by adding the specific length of time in defining the vacant and fallow lands. Moreover, the law also needs to cover the true tests for addressing the issues of land acquisition for public purpose and private investments. It also needs to address the issues of customary land rights and to implement a rigid and strong administration for the recognition, documentation and registration of customary land for the success in agricultural development. Thus, the legal certainty for FDI would be guaranteed which is one of the best ways in eliminating poverty in Myanmar.

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[1] မောင်ဋီကာ၊ (၂၀၂၁) "နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုနှင့် မြေအခက်အခဲ" *MIFER BULLETIN,* p-2.

[2] Alvin Hoi-Chun Hung, (2023), https://blogs.lse.ac.uk/seac/2023/05/04/myanmars-land-laws-and-foreign-direct-investment-why-investors-need-to-consider-smallholder-farmers-rightstext=However%2C%20lack%20of%20understanding%20regarding,rights%2C%20of%20the%20local%20population.

[3] မောင်ဋီကာ၊ (၂၀၂၁) "နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုနှင့် မြေအခက်အခဲ" *MIFER BULLETIN,* p-2.

[4] Rule 16(c), The Vacant, Fallow and Virgin Lands Management Rules, 2012.

[5] MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-17.

Discussion

There are numerous factors which may cause land issues such as the inconsistency between legislations, no specific definition in classification of the land types, weak administration over land allowance and weak knowledge upon the provisions by the farmers. According to Chapter II of the National Land Use Policy, it is mentioned that based on the general land types such as agricultural land, forest land and the other land, various land classifications may be determined. In other land, urban land, village land, religious land, public land, government administrated vacant, fallow, virgin land and wasteland, etc are included. To determine appropriate land types and land classifications, the relevant government departments and organizations shall transparently review and amend the existing land types and classifications in accordance with the rule of law, national land use policy and national land law. Therefore, it may be denoted that the various land types are determined in accordance with the relevant law.[1] Firstly, with respect to Sec 2(e) of the Vacant, Fallow and Virgin Lands Management Law (VFVLM Law), Vacant Land and Fallow Land mean "the land on which agriculture or livestock breeding business can be carried out and which was tenanted in the past and abandoned for various reasons and without any tenant cultivating on it and the lands which are specifically reserved by the state".[2] Under the phrase "which was tenanted in the past and abandoned for various reasons", it may be misunderstood with the farmland because only under the Farmland Law, person who has the right to use farmland shall have the right to sell, mortgage, lease, exchange and gift on the whole or part of the right to use the farmland in accord with the stipulated terms and conditions.[3] Moreover, in accordance with Sec 11 of the Land and Revenue Act, 1879, "Any landholder who, except as provided in section 12, voluntarily relinquishes the possession of any land shall at once forfeit his status of a landholder in respect of such land".[4] Moreover, since there is no specific timeframe for the term "abandoned", it may be assumed that the abandoned land may be under the applicants for use of vacant and fallow land even if it was originally cultivated as farmland or other types of land, but it has been abandoned for various reasons such as due to the war security or family livelihood.[5] Such unclear definitions and perceptions of these lands, no specific classifications, provisions in case of the location of such lands and outdated mapping lead to the alienation of land from customary landowners who do not qualify to secure and failure to register their land under the Farmland Law.[6] Many reporters pointed out that various classifications of land in Myanmar are poorly defined in the legislative framework that can lead to land issues as well as unsustainable management of land classification and management of land resources in the future.[7] Therefore, in Myanmar, there is no harmonization between the actual land use on the ground and rural land classifications.[8] Thus, many reports on land confiscation have arisen. Due to the confusion and insecure land tenure in Myanmar, the Former Secretary-General of the Thai-Myanmar Economic Council, Thanit Sorat, said that "the uncertainty over land ownership would definitely constrain investments by Thais in

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[1] Chapter II, National Land Use Policy, 2016.
[2] Section 2(e), The Vacant, Fallow and Virgin Lands Management Law, 2012.
[3] Section 9 (c), The Farmland Law, 2012.
[4] Section 11, The Land and Revenue Act, 1879.
[5] ဦးမောင်မောင်ညွန့်၊ (၂၀၁၈) "မြေသိမ်းသည် ဆိုလေတိုင်းနှင့် မြေယာရေးရာ လက်တွေ့အသုံးချစာတမ်းများ" *Wisdom House*, p-26-27.
[6] MOALI, (2018) "Myanmar Agriculture Development Strategy and Investment Plan (2018-2019 2022-23)", p-17.
[7] L Gum Ja Htung, (2018), "Land Grabbing as a Process of State-Building in Kachin Areas, North Shan State, Myanmar" *Chiang Mai University Press*, p-51-52.
[8] Ibid.

Myanmar". Moreover, he also mentioned that due to the lack of an effective IT system for checking the land areas, the title of the deeds may overlap in case of renting in the rural areas.[1] Therefore, land issues are one of the barriers that foreign investors are concerned about making investments in Myanmar because of the reputational risk of their business from the land grabbing.[2]

Secondly, according to the MIL, foreign investors may lease land from the government or governmental organizations or from the private landowners up to an initial period of 50 years with an extension of 10 consecutive years and a further 10 consecutive years.[3] Separate Land-Rights Authorization shall not be required, if the investor proposes to sub-lease immovable property from another investor, who has received a Land-Rights Authorization from the MIC.[4] Moreover, the Special Economic Zones Law (SEZ Law) permits foreign investors to lease land for long-term within the SEZ for a period of up to 50 years with a further period of 25 years after the expiration of initial years.[5] However, the land lease still needs to be consistent with the other land laws. Under the Vacant, Fallow and Virgin Lands Management Law, the foreign investors who obtained the permission to carry out the businesses may enjoy the right to cultivate or utilize vacant, fallow and virgin land after applying to the Central Committee for the management of Vacant, fallow and Virgin Lands.[6] Such functions must be carried out with the approval of the MIC.[7] With respect to the period, the Central Committee may, in the agricultural business, for perennial plant and orchard, permit not exceeding 30 years commencing from the year of permission; for seasonal crops, permit so long as there is no breach of the stipulated terms and conditions and for the breeding business not exceeding 30 years commencing from the year of permission. Moreover, such period can extend not exceeding 30 years after expiration.[8] Therefore, such two laws are not consistent with each other and it may face difficulty in making investments.

Finally, in MIL, since there are no provisions regarding to acquiring land areas by MIC, the foreign investors face difficulty in finding the appropriate land. Furthermore, rather than allowing the land to be used, MIC may only assess the proposals from the investors. Since foreign investors face difficulty in communication with the Ministry in lending the land from the Government Ministry as well as in lending the private lands, as private landowners desire to lend short-term with high rental rates rather than long-term leasing and due to the limitation upon long-term leasing in some areas, less guarantee relating to carrying out the business may be caused. The allowance land areas have overlapping due to the decisions from different organizations. Besides, when the investors question about the conditions and land rent rate, the MIC may not give the accurate answers.[9] With respect to these matters, the foreign investors hesitate to make investments in the country. Thus, it is important to amend the laws as a response

[1] The Nation, (2023), "Investors warned on Myanmar Land" https://www.nationthailand.com/business/30200556.
[2] Alvin Hoi-Chun Hung, (2022) "Land Laws and Foreign Direct Investment in Myanmar: Why American Investors Need to Reconsider the Customary Rights of Smallholder Farmers" *Journal of Law and Commerce,* Vol-40, No.2, p-223.
[3] Rule 135, The Myanmar Investment Rules, 2017.
[4] Section 50(b)(c), Myanmar Investment Law,2016.
[5] Section 79, Special Economic Zones Law, 2014.
[6] Section 4,5, The Vacant, Fallow and Virgin Lands Management Law, 2012.
[7] Rule 16(c), The Vacant, Fallow and Virgin Lands Management Rules, 2012.
[8] Section 11, The Vacant, Fallow and Virgin Lands Management Law, 2012.
[9] မောင်ဦးကာ၊ (၂၀၂၁) "နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုနှင့် မြေအခက်အခဲ" *MIFER BULLETIN,* p-3-7.

to the large concerns upon these land issues which have a negative impact on the development in Myanmar in order to Foster, Secure and Well-defined Land Rights.

Conclusion

Foreign Direct Investments is an important contribution to the development of Myanmar's agricultural sector. It is a critical source in filling the needs in improving seed quality, better agronomic practices, optimizing inputs and the integration of past management which are crucial for agricultural productivity. Thus, FDI is a crucial determinant of agricultural production from technology transfer and skills that benefit Myanmar's farmers. Moreover, such investments in agriculture have become increasing scope and scale in the aspects of reducing hunger and promoting food security. Together with population growth, rising incomes and urbanization increase the demand for food, investment in agriculture is essential and critical. Better governance on land tenure is also positively associated in the productive use of land. However, in Myanmar, because of the numerous land issues and the weak administration in land registration and allowing to cultivate and utilize the various lands, it can lead to the deterrence of foreign investors to make investments. Restructuring in the land policies in matters of the land lease such as rental rate, land lease term for private lands, in overlapping land areas for land use allowance and effective mapping system are necessary. Moreover, provisions relating to specific definitions for Vacant and Fallow lands, consistent land lease terms between Myanmar Investment Law and the Vacant, Fallow and Virgin Lands Management Law are the urgent need in the sector. By providing secure land rights, FDI in the agricultural sector will be enhanced which has medium-to long-term positive effects on Myanmar agriculture and also in achieving sustainable growth and significant reduction in poverty.

Acknowledgement

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SUI GENERIS APPROACH TO INTELLECTUAL PROPERTY PROTECTION OF TRADITIONAL MEDICINE KNOWLEDGE (TMK) FOR MSMES IN MYANMAR

Khaing La Pyae Win[1] and Dr. Nu Nu Yi[2]

Abstract

Traditional medicinal knowledge carries substantial economic and cultural importance. Its economic and cultural value is considerable. Exploitation of medicinal plants and associated knowledge has occurred without sufficient compensation, with instances where researchers or companies have laid claim to it as intellectual property. Consequently, safeguarding traditional knowledge systems appears imperative. Since the existing system of intellectual property protection safeguards such knowledge, nations globally, especially those in the developing phase, should address these perceived inadequacies in existing laws by formulating or implementing additional legislation. Internationally, numerous treaties address traditional medicine, including the Convention on Biological Diversity (CBD) (1992) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) (1994). Therefore, various components of a national *sui generis* system, including a law aimed at protecting traditional medicinal knowledge, could be incorporated into national legislation.

Keywords - IP, TMK, MSME, TRIPS Agreement

Introduction

Myanmar's traditional medicine knowledge is deeply rooted in its rich cultural and historical heritage. Preserving and improving this knowledge is essential for maintaining cultural identity and promoting a sense of pride and connection within the community. Traditional medicine knowledge often forms the basis for unique products and services. Improving and leveraging this knowledge can unlock economic potential by enabling Micro Small and Medium Enterprises (MSMEs) to develop distinct offerings that cater to both local and global markets.

MSMEs rooted in traditional Medicine knowledge can become sources of employment and income for local communities. By improving and modernizing these enterprises, there is an opportunity to empower local communities economically and enhance their overall well-being.

The research will contribute to the national implementation of the Intellectual Property system, aiming to achieve the highest attainable standard of healthcare for the people by striking a balance between individual patentee rights and public interests. Additionally, it offers valuable insights for national enterprises in MSMEs.

The aim and objective of this paper are to protect the safeguarding of Traditional Medicine Knowledge (TMK) in Myanmar's MSMEs. This includes a comprehensive exploration of legal and policy measures applicable to TMK protection within MSMEs and the development of *sui generis* laws in Myanmar. The possible methods are Patent, Copyright, Industrial Design, and Intellectual Property Rights. Among them, the *sui generis* system would be the most effective for traditional medicine as it could be designed to cover the specific needs of a particular country.

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Materials & Methods

The paper employs qualitative and analytical legal research methods. The primary data is sourced from international conventions and national legislation, while the secondary data is derived from literary books, articles, online resources, news, cases, and events.

Findings

Since health is an inherent human right of every individual, knowledge of Traditional Medicine Knowledge should be accessible to everyone. Therefore, training should be provided and distributed. There is no effective, specific law in Myanmar to protect traditional medicine knowledge or apply for a business license. However, even related laws National Drug Law, Small and Medium Enterprises Development Law, the Traditional Medical Council Law, the Patent Law, and the Promotion of Cottage Industries Law, such as in Myanmar have proven inadequate to safeguard their effectiveness. Additionally, Traditional Medicine Knowledge should be fully protected under Intellectual Property Law. Therefore, *sui generis* legislation must be enacted in Myanmar for Traditional Medicine Knowledge.

Discussion

Intellectual Property Rights and Traditional Medicine Knowledge

The term "Intellectual Property" (IP) is reserved for types of property that result from creations of the human mind. Intellectual property rights are exclusive rights given to the results generated by the intellectual activities of human beings and they mean intangible rights that which have economic values.[1] Intellectual property rights (IPRs) refer to the legal rights granted to protect one's intellectual creations. This term encompasses copyright, patents, industrial designs, trademarks, and various other forms of intellectual property rights.[2] Ownership refers to the legal right of an individual, group, corporation or government to the possession of a thing. The subject of ownership is made up of two types material and immaterial things. Material ownership is that which is tangible like property, land, a car, a book, etc. Immaterial ownership is that which is intangible like patent, copyright, trademark, etc.[3]

IP is usually divided into two branches, namely industrial property and copyright. industrial property includes patents for inventions, industrial designs (aesthetic creations related to the appearance of industrial products), trademarks, service marks, layout-designs of integrated circuits, commercial names and designations, geographical indications and protection against unfair competition.[4] Copyright relates to literary and artistic creations, such as books, music, paintings and sculptures, films and technology-based works (such as computer programs and electronic databases).[5] These two categories of Intellectual Property tend to give the owner of the property exclusive rights to an invention which has to be novel, involve an inventive step and have industrial applicability.[6]

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[1] Dr Nu Nu Yi, Protection of Traditional Medicine Knowledges in Myanmar Naing Ngan,Jour. Myan. Acad. Arts & Sc.2007 Vol.V.No.7.

[2] Section 2 (i) of the Patent Law 2019, (The Pyidaungsu Hluttaw Law No. 7, 2019).

[3] https://www.toppr.com/guides/legal-aptitude/jurisprudence/kinds-of-ownership/,Jurisprudence Kinds of Ownership.

[4] WIPO, Understanding Industrial Property, 2nd edition, P.O. Box 18 CH-1211 Geneva 20, Switzerland, 2016, p-6.

[5] Ibid.

[6] Dr. Nu Nu Yi, Study on Protection of Traditional Knowledge.

The importance of protecting IP was first recognized in the Paris Convention for the Protection of Industrial Property (1883) (Paris Convention) and the Berne Convention for the Protection of Literary and Artistic Works (1886) (Berne Convention). Both treaties are administered by the World Intellectual Property Organization (WIPO).[1]In Myanmar, Section 37(c) of the Constitution of the Republic of the Union of Myanmar (2008) states that "The Union shall permit citizens' rights of private property, right of inherence, right of private initiative and patent in accord with the law."[2]And also The Union guarantees the right to ownership, the use of property and the right to private invention and patent in the conducting of business if it is not contrary to the provisions of this Constitution and the existing laws.[3]

Article 1(3) of the Paris Convention provides that industrial property shall be understood in the broadest sense and shall apply not only to industry and commerce proper but likewise to agricultural and extractive industries and to all manufactured or natural products, for example, wines, grain, tobacco leaf, fruit, cattle, minerals, mineral waters, beer, flowers, and flour.[4] According to one definition knowledge is "Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".[5]

Traditional knowledge (TK) is accumulated knowledge and understanding of the human place in relation to the universe.[6]It includes a variety of data, such as insights into the utilization of biological and other substances in areas such as agriculture, manufacturing processes, design, literature, music, rituals, artistic techniques, and medical treatment (traditional medicine), among others. Traditional knowledge can also refer to the knowledge passed from generation to generation of their traditional or cultural heritage in indigenous communities. Therefore, Traditional knowledge refers to knowledge or practice for which Indigenous communities act as guardians or custodians. The type of knowledge considered within this scope includes information about the medicinal properties or effects of flora and fauna, as well as hunting or fishing techniques.[7]

Traditional knowledge (TK) systems exist in fields such as medicine, food and agriculture, environmental management and biodiversity conservation, nutrition, and cultural objects to name a few. Some traditional knowledge systems are codified, others are not. Not all traditional knowledge is produced collectively and/or is inter-generational. Accordingly, a broad definition of traditional knowledge may not be limited to codified or systematic forms, or

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[1] WIPO, Understanding Industrial Property, 2nd edition, P.O. Box 18 CH-1211 Geneva 20, Switzerland, 2016, p-5.

[2] Section 37(c) of the Constitution of the Republic of the Union of Myanmar (2008), The State Peace and Development Council, No. 7/2008.

[3] Section 372, Ibid.

[4] Article 1(3) of the Paris Convention for the Protection of Industrial Property, 1883.

[5] Secretariat of the Convention on Biological Diversity, 1996 Knowledge, Innovations and Practices of indigenous and Local Communities: Implementation of Article 8(j). Document UNEP/CBD/COP/3/19, pp-8-9.

[6] WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, May 20, 2002, Geneva, Publication WIPO/GRTKF/IC/3/9, p. Annex III (8).

[7] https://www.business.qld.gov.au/running-business/risk/ip/ip-kit/browse-ip-topics/traditional-knowledge/definitions, Queensland Government, What is meant by the terms traditional knowledge and Indigenous cultural expression?, Last reviewed: 26 Sep 2020.

knowledge may have originated in a collective way. Even to an external observer, a knowledge system may not be apparent or when a system is not documented, there may well be a traditional system in use by the community concerned. In any event, TK holders may be unwilling to accept that traditional knowledge need to conform to a recognised or documented knowledge system to be potentially eligible for legal protection.[1]

Traditional Cultural Expressions refer to various expressions or combinations, whether tangible or intangible, in which traditional culture and knowledge are conveyed, presented, and demonstrated:

(i) verbal expressions such as stories, epics, legends, poetry, riddles and other narratives, words, signs, names, and symbols;

(ii) musical expressions such as songs and instrumental music;

(iii) expressions by action such as dances, plays, ceremonies, rituals; and,

(iv) tangible expressions (special creations and productions of art), such as drawings, designs, paintings including body-painting, carvings, sculptures, pottery, ceramic, terracotta, mosaic, woodwork, metal ware, jewellery, lithographic work, weaving work, needlework, attires, glassware, carpets, costumes, handicrafts, musical instruments, and architectural forms, folk heritage written records such as palm-leaf manuscripts, folding manuscripts (parabeik), stone inscriptions, votive tablet scripts, bell-inscriptions, ink writings and mural paintings.[2]

The World Intellectual Property Organization (WIPO) currently uses the term traditional knowledge to refer to tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields.[3]

Another area of uncertainty is the relationship between "traditional knowledge" and "indigenous knowledge." "Indigenous knowledge" (IK) is either used to describe knowledge held and used by communities, peoples and nations that are indigenous, or to denote knowledge that is itself indigenous, in the sense of specifically originating in a certain region or country: 'indigenous' means belonging to, or specific to, a particular place. Whichever sense of 'indigenous knowledge'(IK) is used, however, the general usage seems to suggest that all indigenous knowledge is traditional knowledge, although it is likely that some traditional knowledge may not have the specific characteristic of being "indigenous".[4] Indigenous knowledge is one aspect of traditional knowledge.[5]

Traditional Medicine (TM), a manifestation of historical wisdom, has been a longstanding remedy for treating ailments. Since the emergence of humans on Earth, they have consistently turned to their native forms of medicine for healing and wellness. Traditional medicine, as defined by the World Health Organization, is the sum total of the knowledge, skills, and practices

[1] WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, May 20, 2002, Geneva, Publication WIPO/GRTKF/IC/3/9, Pg.13.

[2] Section 2(z) (bb) of the Copyright Law, (The Pyidaungsu Hluttaw Law No.15, 2019).
WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, May 20, 2002, Geneva, Publication WIPO/GRTKF/IC/3/9, Pg.11.

[4] Ibid, Pg.10.

[5] Shahid Alikhan, Benefits of Intellectual Property Protection in Developing Countries, WIPO, 2001, p- 84.

based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness.[1] Traditional medicine is widely and increasingly being used in both developing and developed countries.[2]

Types of Traditional Medicine Knowledge

Traditional Medicine refers to remedies designed for the physical well-being and longevity of individuals, aligning with any of the four perspectives of traditional medicine, namely Desana naya, Bethistsa naya, Netkhata veda naya, and Vissadara naya.[3]Traditional medicine is sometimes seen as pre-scientific, its practices and treatments are to be replaced by modern, better, more efficient science-based medicine.[4] According to the WHO Global Report on Traditional and Complementary Medicine (2019), various systems of traditional medicine being used around the world include acupuncture, herbal medicines, indigenous traditional medicine, homeopathy, traditional Chinese medicine, naturopathy, chiropractic, osteopathy, ayurvedic and Unani medicine.[5]

Based on the therapies, traditional medicine can be categorized into medication and non-medication. Traditional medication involves the use of herbal medicines, animal parts and minerals. Traditional non-medication involves various techniques, primarily without the use of medication. They include, for example, acupuncture and related techniques, chiropractic, osteopathy, manual therapies, qigong, tai ji, yoga, and other physical, mental, spiritual and mind-body therapies.[6]

Around 40% of pharmaceutical products today draw from nature and traditional knowledge, including landmark drugs like aspirin, artemisinin, and childhood cancer treatments. A closer look at these drugs reveals that the scientists behind them built off traditional knowledge to achieve their breakthrough discoveries.[7] The following are the forms of TK to identify some of the IP implications;

- unfixed TK and fixed TK, to which are related: (a) documented TK and non-documented TK and (b) codified TK and non-codified TK;

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1 https://www.sciencedirect.com/science/article/abs/pii/B9780128021040000020, C.-T.Che, Fundamentals, Applications and Strategies 2017, Academic Press, Pg-15-30.

2 WHO, EM/RC49/13, Agenda item 12, The WHO Strategy for Traditional Medicine: Review of the Global Situation and Stretegy Implementation in the Eastern Mediterranean Region, August 2002.

3 Section 2 (a) of the Traditional Medical Council Law 2000, (The State Peace and Development Council Law No. 2/2000).

4 https://www.who.int/news-room/feature-stories/detail/traditional-medicine-has-a-long-history-of-contributing-to-conventional-medicine-and-continues-to-hold-promise, WHO, Traditional medicine has a long history of contributing to conventional medicine and continues to hold promise, 10 August 2023.

5 https://www.who.int/news-room/feature-stories/detail/traditional-medicine-has-a-long-history-of-contributing-to-conventional-medicine-and-continues-to-hold-promise, WHO, Traditional medicine has a long history of contributing to conventional medicine and continues to hold promise, 10 August 2023.

6 WHO, EM/RC49/13, Agenda item 12, The WHO Strategy for Traditional Medicine: Review of the Global Situation and Stretegy Implementation in the Eastern Mediterranean Region, August 2002.

7 https://www.who.int/news-room/feature-stories/detail/traditional-medicine-has-a-long-history-of-contributing-to-conventional-medicine-and-continues-to-hold-promise, WHO, Traditional medicine has a long history of contributing to conventional medicine and continues to hold promise, 10 August 2023.

- disclosed TK and non-disclosed TK, to which are related: (a) TK directly controlled by indigenous and local communities and TK on longer in the control of indigenous and local communities and (b) TK held by indigenous and local communities;
- sacred TK and secular TK;
- TK "as such" and TK-based innovations and creations;
- indigenous knowledge and traditional knowledge;
- individual TK and collective TK; and,
- commercialized TK and non-commercialized TK.[1]

Traditional knowledge (TK) can be either codified or non-codified. Codified TK is that which is in some systematic and structured form, in which the knowledge is ordered, organized, classified and categorized in some manner. Codified TK may be imbued with some "authority" or legitimacy.[2]

The Traditional Medicine Team of the World Health Organization (WHO) distinguishes between codified systems of traditional medicine and non-codified traditional medicinal knowledge. Codified systems have been documented in ancient scriptures and are fully in the public domain, while non-codified knowledge, often undisclosed by traditional knowledge holders, is passed on through oral traditions from generation to generation.[3]

Rationale for Protection of Traditional Medicine Knowledge

The rationale for TMK protection is (i) equity, (ii) preservation, (iii) preventing misappropriation, (iv) promoting self-determination, (v) promoting use and development (vi) avoiding bio-piracy. However, as a major portion of traditional medicine is based on medicinal plants and herbs, the prevention of bio-piracy is also a very important goal for the protection of traditional medicine under intellectual property rights. IN this case involving bio-piracy which have attracted international attention are the so-called "Turmeric and "Neem" Cases.[4]

Turmeric is a tropical herb grown in east India. Turmeric powder is widely used in India as a medicine, a food ingredient and a dye to name a few of its uses. For instance, it is used as a blood purifier, in treating the common cold, and as an anti-parasitic for many skin infections. It is also used as an essential ingredient in cooking many Indian dishes. In 1995, the United States awarded patent on turmeric to University of Mississippi medical center for wound healing property. The claimed subject matter was the use of "turmeric powder and its administration", both oral as well as topical, for wound healing. An exclusive right has been granted to sell and distribute.[5]

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[1] WIPO/ GRTKF/IC/17/INF/9, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, November 5, 2010.

[2] WIPO/ GRTKF/IC/17/INF/9, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, November 5, 2010.

[3] WIPO/ GRTKF/IC/17/INF/9, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, November 5, 2010.

[4] Dr Nu Nu Yi, Protection of Traditional Medicine Knowledges in Myanmar Naing Ngan,Jour. Myan. Acad. Arts & Sc.2007 Vol. V.No.7.

[5] https://www.mondaq.com/india/patent/586384/traditional-knowledge-and-patent-issues-an-overview-of-turmeric-basmati-neem-cases, Saipriya Balasubramanian, India: Traditional Knowledge And Patent Issues: An Overview Of Turmeric, Basmati, Neem Cases, 18 April 2017.

The Indian Council for Scientific and Industrial Research (CSIR) had objected to the patent granted and provided documented evidences of the prior art to USPTO. Though it was a well-known fact that the use of turmeric was known in every household since ages in India, it was a herculean task to find published information on the use of turmeric powder through oral as well as topical route for wound healing. Due to extensive researches, 32 references were located in different languages namely Sanskrit, Urdu and Hindi. Therefore, the USPTO revoked the patent, stating that the claims made in the patent were obvious and anticipated, and agreeing that the use of turmeric was an old art of healing wounds. Therefore, the TK that belonged to India was safeguarded in Turmeric case.[1]

The neem tree (Azadirachta indica) originates from the Indian subcontinent and now grows in the dry regions of more than 50 tropical countries around the world. The neem tree has multiple uses. It is mentioned in Indian texts written over 2000 years ago and has been used for centuries by local communities in agriculture as an insect and pest repellent, in human and veterinary medicine, toiletries and cosmetics. It is also venerated in the culture, religions and literature of the region. The neem tree, is known in Sanskrit as "*sarva-roga nivarini*". It is also seen as a prominent resource in the country.[2]

The patent for Neem was first filed by W.R. Grace and the Department of Agriculture, USA in European Patent Office. The said patent was deemed to be a method of controlling fungi on plants comprising of contacting the fungi with a Neem oil formulation. A legal opposition was filed by India against the grant of the patent. The legal opposition to this patent was lodged by the New Delhi-based Research Foundation for Science, Technology and Ecology (RFSTE), in cooperation with the International Federation of Organic Agriculture Movements (IFOAM) and Magda Aelvoet, former green Member of the European Parliament (MEP).[3]

Since the grant of the patent, Dr. Shiva, one of the activists in India, along with the International Federation of Organic Agriculture Movement and the Green Party in European Parliament, had been opposing it. Later, in 2000, the European Patent Office revoked the patent but the victory was short-lived as the revocation was followed by an appeal. The European Patent Office in Munich in 2005 dismissed an appeal against revoking a patent granted by it for the preparation of a fungicide derived from the seeds of the neem tree. Because it was neither a novel idea nor was it invented. It is the major victory that the appeal has been dismissed.[4]

Concept on Ownership and Knowledge

There are three concepts of ownership of knowledge. One concept is that all the knowledge existing in the world is in the public domain. Another concept is that knowledge exists in the private domain and is protected by customary law and intellectual property rights laws. A third concept holds that there are three domains of knowledge: individual, community and public. It may, hence, be ("individual knowledge"), ("distributed knowledge") or ("common knowledge").[5]

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[1] Ibid.

[2] https://www.mondaq.com/india/patent/1286020/the-neem-patent-case, Tarun Khurana, India: The Neem Patent Case, 23 February 2023.

[3] https://www.mondaq.com/india/patent/1286020/the-neem-patent-case, Tarun Khurana, India: The Neem Patent Case, 23 February 2023.

[4] Ibid.

[5] Dr Nu Nu Yi, Protection of Traditional Medicine Knowledges in Myanmar Naing Ngan,Jour. Myan. Acad. Arts & Sc.2007 Vol. V.No.7.

In view of the high prices generally charged for patented medicines, traditional medicine is of vital importance in the developing world. The WHO whose Traditional Medicine Strategy incorporates four objectives, policy, safety, efficacy and quality, access and national use, encourages and supports member states to integrate traditional and alternative medicine into the national health care system and to ensure their national use.[1]

Demands for traditional medicine from the public and the growing economic importance of traditional medicine have led to increased interest on the part of both governments and academic communities worldwide in protecting not only traditional medicines themselves but also the knowledge, i.e., the intellectual property on which they are based.[2]

Traditional Medicine Knowledge and Main International Conventions

Traditional medicines have been used in many countries throughout the world for many centuries. Today, these medicines still represent an important part of healthcare in some countries. For example, more than 100 countries have regulations for herbal medicines, but the practices of traditional medicine vary greatly from country to country and from region to region, as they are influenced by factors such as culture, history, personal attitudes, and philosophy. While customization of legislation and implementation to align with the unique needs and traditions of individual countries is frequently essential, several universal themes and concerns persist. These include the crucial emphasis on practitioner training, the challenges associated with ensuring safety, the imperative to advance research in both product development and practices, and the significance of clear and informative labeling.[3]In the United States of America, 66% of women had confidence in the safety of herbal medicines and 37% of women believed that herbal medicine was effective. Even 57% of doctors believed herbal medicines had good benefits.[4]

Article 8(2) of the "Protection of Traditional Knowledge states that "[i]n particular national authorities may exclude from the principle of prior informed consent the fair use of traditional knowledge that is already readily available to the general public, provided that users of that traditional knowledge provide equitable compensation for industrial and commercial uses of that traditional knowledge".[5]

The Government of Myanmar recognizes health as an inherent right for all its citizens and, more broadly, for all individuals.[6] Two primary international agreements pertain to the legal protection of traditional knowledge, and Myanmar is a party to both. They are the Convention on Biological Diversity (CBD) (1992), and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) (1994).

Biodiversity comes from two words Bio meaning life and diversity meaning variability. Biodiversity is the variety of all living things; the different plants, animals, fungi, and

[1] Ibid.
[2] Ibid.
[3] https://www.sciencedirect.com/topics/medicine-and-dentistry/traditional-medicine,Pierre-Louis Lezotre MS, International Cooperation, Convergence and Harmonization of Pharmaceutical Regulations, 2014.
[4] WHO, EM/RC49/13, Agenda item 12, The WHO Strategy for Traditional Medicine: Review of the Global Situation and Stretegy Implementation in the Eastern Mediterranean Region, August 2002.
[5] WIPO/GRTKF/IC/17/5, Article 8 (2) of the "Protection of Traditional Knowledge: Revised Objectives and Principles".
[6] https://www.fao.org/3/ad813e/ad813e.pdf, Dr. Yin Yin Htwe, FDA Myanmar Department of Health.

microorganisms, the genetic information they contain and the ecosystems they form. Biodiversity is usually explored at three levels: genetic diversity, species diversity and ecosystem diversity. These three levels work together to create the complexity of life on Earth.[1]

Genetic diversity is the variety of genes within a species. Each species is made up of individuals that have their own particular genetic composition. This means a species may have different populations, each with different genetic compositions.[2] Species diversity is the variety of species within a habitat or a region. Some habitats, such as rainforests and coral reefs, have many species. Others, such as salt flats or a polluted stream, have fewer.[3] Ecosystem diversity is the variety of ecosystems in a given place. An ecosystem is a community of organisms and their physical environment interacting together. An ecosystem can cover a large area, such as a whole forest, or a small area, such as a pond.[4]The Convention on Biological Diversity has created a new environment for the protection of biodiversity and indigenous knowledge and for benefit sharing, because it differs substantially from other treaties in that it takes a comprehensive, rather than a sectoral approach to the conservation and sustainable use of biological resources.[5]

Article 3 of the Convention on Biological Diversity recognizes that "states have the sovereign right over their biological and genetic resources".[6] Article 8 (j) of the Convention on Biological Diversity confirms that "subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".[7] Article 10 (c) of the Convention on Biological Diversity recommends protecting and encouraging customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.[8] The Convention on Biological Diversity advocates for the fair and equitable sharing, under mutually agreed upon terms, of benefits derived from the utilization of genetic resources and associated knowledge.

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of 1994 does not impose uniform legal requirements on WTO member countries. Countries must meet the minimum standards it calls for, but are left with considerable leeway within which to develop their own laws according to the characteristics of their legal systems, public health situations and development needs.[9] Article 1(1) confirms Members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice. [10]Article 8 states that "Members may, in formulating or amending their laws

[1] https://australian.museum/learn/science/biodiversity/what-is-biodiversity , Australian Museum, 8.11.2023.
[2] Ibid.
[3] Ibid.
[4] Ibid.
[5] Dr. Nu Nu Yi, Study on Protection of Traditional Knowledge.
[6] Article 3 of the Convention on Biological Diversity, 1992.
[7] Ibid.
[8] Article 10 (c) of the Convention on Biological Diversity, 1992.
[9] United Nations, Printed in Switzerland, ISSN 1816-5540, Training Module on the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 2010, P-6.
[10] Article 1 (1) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) 1994, Morocco on 15 April 1994.

and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement".[1]

Under Article 27(3) (b), it mentions among other things that "Members may also exclude from patentability plants and animals other than microorganisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof".[2]TRIPS mandates the provision of protection for plant varieties but allows countries to choose between utilizing the patent system or implementing an effective *sui generis* system for this purpose.

There is no statutory law specifically dedicated to intellectual property (IP) protection in Myanmar, which may result in higher risk or perceived risk for businesses intending to set up shop in Myanmar or work with local companies. Some forms of IP protection are offered for certain patents and designs but these are considered outdated and offer limited protection for intellectual property (WIPO, 2016[12]).[3]

Importance of Traditional Medicine knowledge and MSMEs in Myanmar

The role of traditional medicine has played an important part in Myanmar's history. Although the use of modern medicine has dramatically increased, it is not easily accessible for much of the population due to prohibitively high costs and limited availability, especially in rural areas. Even when it is readily available, many people are reluctant to use it because of cultural differences and concerns about side effects. Traditional medicine has been used for generations and is more affordable and easily obtainable – even in rural areas – therefore it continues to be widely used and plays a significant role in health care in Myanmar.[4]

In accordance with Myanmar's traditional beliefs, it is acknowledged that there are 96 diseases that can affect humans. The traditional knowledge and medicinal practices in Myanmar are reputed to possess the capability to remedy all these ailments, utilizing various ingredients such as fresh or dried roots, stems, leaves, buds, and flowers. Rooted in akin traditional medicine systems found in neighboring countries, Myanmar's traditional medicine has evolved over centuries, incorporating a wealth of traditions, adapting to changing circumstances, and adopting diverse practices that have contributed to its richness and efficacy.[5]

In Myanmar, a drug is defined as any substance, whether administered internally or externally, utilized for the purposes of diagnosis, prevention, and treatment of diseases, birth control, or for producing any beneficial effect in both human beings and animals. This term also encompasses substances officially designated as drugs by the relevant Ministry through periodic

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[1] Article 8 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) 1994, Morocco on 15 April 1994.

[2] Article 27.3 (b), ibid.

[3] https://www.oecd-ilibrary.org/sites/9789264305434-10-en/index.html?itemId=/content/component/9789264305434-10-en#endnotea7z2 .

[4] https://www.wipo.int/web/ip-advantage/w/stories/providing-affordable-traditional-medicine?p_l_back_url=%2Fweb%2Fip-advantage%2Fsearch%3Fdelta%3D20%26start%3D14 , August 31, 2010.

[5] https://www.wipo.int/web/ip-advantage/w/stories/providing-affordable-traditional-medicine?p_l_back_url=%2Fweb%2Fip-advantage%2Fsearch%3Fdelta%3D20%26start%3D14 , August 31, 2010.

notifications.[1] An Essential Drug is identified by the Board of Authority and is deemed crucial for the healthcare needs of the majority of the population.[2]

The small and medium enterprises development agency shall collaborate with relevant departments and organizations to boost the production capacity and competitiveness of small and medium enterprises. This coordination aims to facilitate the transition of new technologies derived from research results, progressing from the pilot stage to full-scale commercial production.[3]

The Ministry of Industry, Central Department of Small and Medium Enterprises Development, has released the list of the top 100 SMEs in Myanmar on its official website. Among them, 34 are involved in the food and food-related sectors, while 20 focus on non-food enterprises, specializing in the production of traditional and indigenous medicine, shoes, slippers, clothing, and more.[4] A Small Enterprise is defined as a business primarily engaged in wholesale operations, with a workforce not exceeding 30 permanent employees, and an annual income from the previous year not exceeding 100 million kyats.[5] A Small Enterprise is characterized as a business involved in retail operations, with a limit of 30 permanent employees and an annual income from the previous year not exceeding 50 million kyats.[6]

Small-scale Industry refers to cottage industries that employ no more than nine workers, utilizing power ranging from 0.25 horsepower and above but under 5 horsepower. Additionally, it encompasses cottage handicraft industries employing more than three workers, and engaging in the production or processing of goods either by family members, hired workers, or through collective efforts.[7]

A Medium Enterprise is characterized as a business primarily engaged in wholesale operations, with a workforce not surpassing 60 permanent employees, and an annual income ranging from 100 million to 300 million kyats from the previous year.[8] A Medium Enterprise is defined as a business primarily involved in retail operations, with a workforce not exceeding 60 permanent employees, and an annual income ranging from 50 million to 100 million kyats from the previous year.[9] An entrepreneur is defined as an individual or a business entity that operates a small enterprise, a medium enterprise, or both, utilizing full percent of the capital owned by citizens.[10] Entrepreneurship involves the innovation of marketable and highly functional technology, products, manufacturing processes, and services.[11]And also the Promotion of Cottage

[1] Section 2 (b) of the National Drug Law 1992, (The State Law and Order Restoration Council Law No. 7/92).
[2] Section 2 (c), Ibid.
[3] Section 25 (f) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).
[4] https://www.mdn.gov.mm/en/supporting-and-promoting-msmes-myanmar-personal-thought , Aug 28, 2019.
[5] Section 2 (a) (3) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).
[6] Section 2 (a) (4), Ibid.
[7] Section 2(a) of the Promotion of Cottage Industries Law 1991, (The State Law and Order Restoration Council Law No. 13/91).
[8] Section 2 (b) (3) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).
[9] Section 2 (b) (4) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).
[10] Section 2 (c), of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).
[11] Section 2 (o), Ibid.

Industries Law of 1991, mentions that "an entrepreneur is defined as an individual who has received registration approval to operate a Small-scale Industry under this Law. This definition also extends to include heirs, legal representatives, and any succeeding lawful organization".[1]

The fundamental principles of the Small and Medium Enterprises Development Law of 2015 mention fostering innovation among small and medium entrepreneurs, promoting the creation of cutting-edge products, enhancing service development, augmenting production capacity, and advocating the adoption of advanced technology and facilities in both production and distribution processes.[2]

Regulations for Traditional Medicine Knowledge in MSMEs

Invention is the act of creating a product or process that offers a resolution to a particular issue within the realm of technology. This definition also encompasses utility models.[3] An individual engaged in or aspiring to undertake a Small-scale Industry, and seeking registration under this Law, must submit an application in the manner specified by the Cottage Industries Department.[4] The duties of the entrepreneur include abiding by the existing laws.[5]

One significant regulatory challenge faced by policymakers is the potential lack of familiarity among MSMEs with formal business practices. Some may even opt for informal operations to evade administrative burdens and taxation. This situation poses challenges for regulatory authorities, particularly when MSMEs show reluctance to participate in the initial stage of the regulatory process, which involves registering their businesses. The government has introduced various policies and programs to encourage SMEs to register including capacity building, access to loans, lower tax rates, tax holidays and business matching.

The agency, in alignment with the guidance of the Working Committee, shall provide recommendations to relevant departments and organizations for the development of small and medium enterprises and the enhancement of their competitiveness. This includes advising on tax exemptions and reliefs for the manufacturing of advanced new products through research.[6] While both the Cottage Industries Law and the SME Law indicate financial penalties for failure to register, these penalties are rarely enforced in practice.[7] Anyone engaging in small-scale industries without completing registration under the Promotion of Cottage Industries Law 1991, shall, upon conviction, face a penalty ranging from a minimum of fifty thousand kyats to a maximum of one hundred thousand kyats.[8]

The patent applicant shall, if necessary, provide a statement regarding legal access and use of genetic or biological resources, as well as traditional knowledge associated to with or not with

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[1] Section 2(b) of the Promotion of Cottage Industries Law 1991, (The State Law and Order Restoration Council Law No. 13/91).

[2] Section 4 (f) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).

[3] Section 2 (j) of the Patent Law 2019, (The Pyidaungsu Hluttaw Law No. 7, 2019).

[4] Section 4 of the Promotion of Cottage Industries Law 1991, (The State Law and Order Restoration Council Law No. 13/91).

[5] Section 7(e), ibid.

[6] Section 27 (a) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).

[7] https://www.oecd-ilibrary.org/sites/9789264305434-10-en/index.html?itemId=/content/component/9789264305434-10-en#endnotea7z2.

[8] Section 22 of the Promotion of Cottage Industries Law 1991, (The State Law and Order Restoration Council Law No. 13/91).

those resources, directly or indirectly utilized in the creation of the claimed invention.[1] The Patent Law 2019 in Myanmar provided that "Pharmaceutical products or processes are not eligible for patent protection until January 1, 2033, unless specifically determined otherwise by the Union Government in accordance with the policies of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Council under the World Trade Organization (WTO)".[2]

Generally speaking, patents are the most important type of IP protection for medicines. To obtain a patent, an invention must be novel, inventive and industrially applicable. A patent grants a set of exclusive rights for a limited time, usually 20 years, that allow the inventor to prevent others from making, using, selling, offering for sale or importing the patented invention without permission. Patents based on traditional medical knowledge include patents based on maca, a traditional Peruvian food and medicine first cultivated by the Incas, and a patent based on kava, a medicinal plant first domesticated in Vanuatu. In China, patent law protects new traditional medicine-based products, methods of processing and new uses of traditional medicine, including herbal preparations, extracts from herbal medicines, foods containing herbal medicines and methods for preparing herbal formulas.[3]

In Myanmar, enterprises of all sizes, including SMEs, are subject to all business-related laws, notifications, regulations, and directives. Given that SMEs constitute the majority of domestic private sector businesses in Myanmar, one can assert that the existing business regulatory framework is effectively comprehensive for accommodating local SMEs.[4] The Small and Medium Enterprises Agency is tasked with collaborating with relevant departments and organizations to boost the production capacity and competitiveness of small and medium enterprises. This involves coordinating efforts to identify and disseminate suitable technologies that can contribute to these objectives.[5] When determining compensation for the issuance of a compulsory license for a patent covering a pharmaceutical product or its manufacturing process, especially when an alternative process is either unknown or unavailable, one may take into account the terms and conditions outlined in the decision of the General Council of the World Trade Organization dated August 30, 2003.[6]

In 1997, the World Health Organization (WHO) drafted the Declaration on Health Development in the South-East Asia Region in the 21st Century (the Declaration), in which member states laid out their proposals for health reform. An important focus has been on traditional medicine, and the Myanmar government has implemented measures to increase the role of traditional medicine as a globally recognized and natural alternative to modern medical practices. As part of this initiative, the Myanmar Ministry of Industry and the Myanmar Food and Drug Administration (MFDA) actively advocate for policies that benefit private pharmaceutical companies involved in producing high-quality traditional medicine.[7]

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[1] Section 20 (vii) of the Patent Law 2019, (The Pyidaungsu Hluttaw Law No. 7, 2019).
[2] Section 14 (b), of the Patent Law 2019, (The Pyidaungsu Hluttaw Law No. 7, 2019).
[3] WIPO, Intellectual Property and Traditional Medical Knowledge, Background Brief No. 6, p- 4.
[4] https://www.oecd-ilibrary.org/sites/9789264305434-10en/index.html?itemId=/content/component/9789264305434-10-en#endnotea7z2.
[5] Section 25 (a) of the Small and Medium Enterprises Development Law, (The Pyidaungsu HluttawLaw No. 23, 2015).
[6] Section 69 (a) of the Patent Law 2019, (The Pyidaungsu Hluttaw Law No. 7, 2019).
[7] https://www.wipo.int/web/ip-advantage/w/stories/providing-affordable-traditional-medicine?p_l_back_url=%2Fweb%2Fip-advantage%2Fsearch%3Fdelta%3D20%26start%3D14.

The Food and Drug Administration was established in 1995, and notifications are currently in progress.[1] The Food and Drug Administration (FDA) is responsible for safeguarding public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, the nation's food supply, cosmetics, and products that emit radiation. Additionally, the FDA offers accurate, science-based health information to the public. [2]The Food and Drug Administration (FDA) holds the responsibility for the registration of domestically produced food, issuing the Import Recommendation (IR) and Import Health Certificate for imported food, licensing both food and drugs, and conducting quality control assessments for registered drugs, processed food, imported food, and items intended for export. The FDA comprises five divisions, namely the Administrative Division, Drug Control Division, Food Control Division, Cosmetic and Medical Device Control Division, and Laboratory Division.[3] Myanmar has been a longstanding member of the WHO, FAO, CAC (Codex Alimentarius Commission), and WTO. Myanmar actively engages in the ASEAN Trade Protocol and regional agreements such as the Sanitary & Phytosanitary Agreement (SPS) and the Technical Barrier to Trade Agreement (TBT). The FDA serves as the contact point for CAC.[4] There is currently no specific provision for business registration for small and medium businesses in the traditional medicine sector in Myanmar. Additionally, there is no mention in the Patent law, 2019 to protect creativity in this context. As a result, the sole avenue for registration and protection is through the FDA.

Protection of Traditional Medicine Knowledge in Myanmar

Some countries have implemented specific *sui generis* laws and measures designed explicitly to safeguard traditional medical knowledge. For example, Thailand's Act on Protection and Promotion of Traditional Thai Medicinal Intelligence protects "formulas" of traditional Thai drugs and "texts on traditional Thai medicine". Only individuals or entities who have registered their intellectual property rights are permitted to conduct research, development, and production of drugs utilizing traditional medical knowledge. At the international level, the legal instrument on the protection of traditional knowledge negotiated by the WIPO IGC is designed to encompass a *sui generis* approach.[5]

For Indigenous and local communities to safeguard their knowledge, they may find it necessary to align with Western constructs of order, such as sui generis systems of protection, databases, and/or Western education systems. *Sui generis* systems, denoting 'a special kind' or 'of its own kind,' are specialized measures or laws designed exclusively to address the unique characteristics of specific subject matter.[6]

The *sui generis* system of protection for Traditional Knowledge (TK) may grant exclusive rights in an effort to ensure fairness and equity, particularly in the face of neo-liberal market forces affecting primarily Indigenous peoples. The comprehensive and distinctive nature of TK

[1] https://www.fao.org/3/ad813e/ad813e.pdf , Dr. Yin Yin Htwe, FDA Myanmar Department of Health.
[2] https://www.usa.gov/agencies/food-and-drug administration#:~:text=The%20Food%20and%20Drug%20Administration,and%20products%20that%20emit%20radiation.
[3] Swe Mon Aung, Food and Agricultural Import Regulations and Standards, BM 8001, 1.11.2018.
[4] https://www.fao.org/3/ad813e/ad813e.pdf , Dr. Yin Yin Htwe, FDA Myanmar Department of Health.
[5] WIPO, Intellectual Property and Traditional Medical Knowledge, Background Brief No. 6, p- 6.
[6] https://link.springer.com/article/10.1007/s11196-023-09989-8 , Jacqueline Paul, Traditional Knowledge Protection and Digitization: A Critical Decolonial Discourse Analysis, 25 April 2023.

under a *sui generis* system permits the development of specialized measures or laws tailored exclusively to address the distinctive characteristics of specific subject matter.[1]

A *sui generis* system of protection aims to safeguard Traditional Knowledge (TK), foster the equitable distribution of benefits, guarantee that the utilization of the knowledge occurs with the prior informed consent of Indigenous peoples or local communities, and prevent misappropriation.[2]

Conclusion

Policies and regulations play a vital role in shaping the involvement of Traditional Medicine Knowledge (TMK) and Complementary and Alternative Medicine (CAM) within national healthcare delivery systems. They are instrumental in establishing effective regulatory and legal frameworks to foster the production of herbal medicines while upholding standards of quality and good practices. Policies are also essential for addressing concerns related to safeguarding the knowledge of indigenous traditional medicine and the preservation of natural resources.

As a member of TRIPs and CBD, Myanmar must respect, protect, and maintain Intellectual Property Rights (IPRs). Existing laws in Myanmar do not protect sufficient intellectual property rights (IPRs), and conventional IPRs are also not designed for the protection of traditional medicine. According to Article 27(3) of TRIPs, countries are permitted to establish *sui generis* protection mechanisms for intellectual property, allowing them to implement customized and specific approaches to safeguarding rights. the *sui generis* system proves beneficial in Myanmar. In Myanmar, a *sui generis* system should be implemented to protect traditional medicine knowledge.

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[1] Ibid.

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A COMPARATIVE STUDY ON LABOUR DISPUTE SETTLEMENT MECHANISMS IN MYANMAR AND THAILAND

Chit Chit Kyaw Myint[1]

Abstract

Labour disputes, including concerns such as unhealthy workplaces, unprotected facilities, and equipment, pose pervasive challenges shared by nations worldwide. Recognizing the gravity of these issues, Myanmar and Thailand have dedicated substantial efforts to establish effective mechanisms for dispute resolution and ensure decent working conditions. This study delves into the occupational safety regulations of both countries, focusing on Myanmar's Labour Dispute Settlement Law (LDSL) enacted in 2012 and Thailand's Labour Protection Act (LPA) amended in 2019. The study begins with an exploration of Myanmar's LDSL, dissecting its multi-level framework designed to address disputes between employers and workers. Particular emphasis is placed on the challenges within Myanmar, highlighting the necessity to clarify and streamline resolutions for both individual and collective disputes. Shifting to Thailand, the research navigates through the amendments made to the LPA in 2019. This pivotal Thailand legislation serves as a robust instrument aimed at resolving labor disputes, fortifying worker protection, and ensuring overall well-being. The LPA imposes significant penalties on non-compliant employers, underscoring a commitment to fostering equitable work environments. Both countries grapple with challenges in achieving optimal fairness and equity, reflecting the complexities of evolving labor landscapes and distinct socio-economic contexts. By examining the occupational safety regulations and dispute resolution mechanisms in Myanmar and Thailand, this study contributes valuable insights to the ongoing efforts in both countries to create conducive working conditions and establish a framework for just and harmonized labor practices.

Keywords: *grievance, occupational safety, dispute resolution, workplace, productivity, economic growth*

Introduction

All employers and employees fall under Labour Disputes Settlement Law, 2012 in Myanmar and the protection of the Labour Protection Act of 1998 in Thailand (except for the government administration and state enterprises). The Act acts as a minimum legal protection for the mentioned parties and defines their working hours, welfare funding, holidays, days of sick or educational leave, overtime, safety and more. Furthermore, it also contains the rules regarding the end of an employment contract and the procedure to be followed in case of a wrongful dismissal (one of the most frequent labour disputes).

In Myanmar, the Settlement of Labour Disputes Law (2012) guides the labor resolution system, emphasizing the creation of Workplace Coordinating Committees (WCC) for workplaces with over 30 employees. Similarly, in Thailand, labor relations are governed by the Thailand Labor Protection Act (LPA), a comprehensive legislative framework setting minimum standards for pay and working hours. The Ministry of Labor and Social Welfare, charged with enforcing labor laws, conducts inspections across the country to ensure a fair work environment, protect against labor exploitation, and preserve workers' rights.

Workplace conflicts between employers and employees, known as employment disputes, can arise from various issues like working conditions, benefits, hours, wages, and more. These conflicts may extend to critical matters like terminations, social benefits, and compensation for accidents, leading to disruptions like strikes. It's crucial to address or, better yet, prevent these

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disputes swiftly. These laws cover essential aspects such as working hours, overtime pay, minimum wages, safety, vacation time, holidays, and maternity leave. Government departments, like the Ministry of Labour, oversee labor administration to ensure fair work environments.

This study delves into the intricate dynamics of labor dispute resolution mechanisms, focusing on the Labour Dispute Settlement Law (LDSL) in Myanmar and the Labour Protection Act (LPA) in Thailand. As the world emphasizes sound employment relations, understanding dispute resolution mechanisms becomes crucial, leading nations to enhance their systems for effective resolution services.

Method of Study

This paper adopts a simple descriptive approach in examining labor dispute settlement mechanisms in Myanmar and Thailand. Data is gathered from international conventions and national legislation relevant to the topic. Secondary sources include books, articles, online materials, and news, offering additional context. By using a descriptive method, this study aims to provide a clear and concise overview of the legal aspects related to labor dispute resolution in Myanmar and Thailand.

Definition of Labour Disputes

Worker means a person who relies on his labour to engage in economic activity or to generate a livelihood, including a daily wage earner, temporary worker, worker engaged in agriculture, domestic worker, government employee and apprentice under Section 2 (a) of the Settlement of Labour Disputes Law, 2019.

Employer means a person who carries out by hiring one or more worker on wages of mutual consent in any trade under the relevant employment agreement, including a person who manages, supervises and administers directly or indirectly and is responsible to pay wages to the worker and responsible for employing and terminating the employment of the worker.[1]

Dispute means the labour dispute or disagreement between an employer or employers or employer organization which represents them and a worker or workers or the labour organization which represents them in respect of employment, working, termination of a worker or workers and in respect of working or service including pension, gratuity, bonus and allowances or compensation for work related grievance, injuries, accidents, deaths or occupational diseases or in respect of any other matters of worker including worker's holiday, leave.[2]

"Employee" means a person who agrees to do work for an employer in return for a wage, regardless of the name given to describe his status.[3]

"Employer" means a person who agrees to employ another person to carry out all or part of any work for his own benefit, in return for employment remuneration for satisfactory performance of the work.[4]

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[1] Section 2 (c) of the Settlement of Labour Disputes Law, 2019. (Law No. 5 of 2012)
[2] Section 2 (m) of the Settlement of Labour Disputes Law, 2019. (Law No. 5 of 2012)
[3] Section 5 (2) of the Labour Protection Act. (No.2) B.E. 2541(1998)
[4] Section 5 (3), ibid.

Labour Disputes are controversies that may arise between employers and their employees.[1]

An individual dispute arises from a disagreement between an individual worker and his or her employer over an aspect of their employment relationship. [2]

Problem Statement

In the realm of labor disputes, the challenge lies in navigating the delicate balance between protecting the rights of workers and fostering harmonious employer-employee relationships. With more conflicts arising, especially with changing work conditions, there's a real challenge in how to handle these disagreements. The central problem pertains to the efficacy of existing mechanisms in addressing the multifaceted nature of labour disputes, encompassing issues such as working conditions, termination protocols, and social benefits. As workers increasingly voice their concerns, there is a pressing need to critically examine the effectiveness of current labor laws and dispute resolution frameworks in ensuring fair outcomes for both employers and employees

Common Causes of Labour Disputes

Labour disputes often arise due to differences between employers and employees. One significant trigger is disparities in how they see things like pay, benefits, working conditions, and how the company operates. If not addressed, these disagreements can quickly turn into bigger issues. Poor working conditions, such as uncomfortable workplaces or a lack of facilities like parking or break rooms, also contribute to employee dissatisfaction, becoming potential sources of disputes.

Moreover, differing expectations between organizations and employees regarding working hours and conditions play a pivotal role in triggering disputes. Varied interpretations of organizational procedures and hours worked can lead to misunderstandings, fostering an environment ripe for conflicts. The legal framework and its implementation also significantly impact labour relations, especially in countries like Myanmar. Wage-related disputes have been a notable area of debate in Myanmar, with frequent demands for wage increases. The government responded to these issues by passing the Minimum Wages Law in 2013. Strikes and industrial relations challenges, particularly in private sector enterprises in Myanmar, have become increasingly common. These challenges encompass demands for wage increases and difficulties in implementing employment contracts and pay slips, indicating the complexity of labour relations in the region.[3]

In Thailand, the growth in the workforce due to thriving businesses has resulted in more labour disputes. These disputes often involve conflicts between labour and management, especially regarding benefits and employment conditions. Thailand has a set of laws covering

[1] https://www.sciencedirect.com/topics/social-sciences/labour-dispute.

[2] Anne Trebilcock, Chapter 21 - Labour Resources and Human Resources Management, Fourth Edition, 2011, pp-121-125

[3] Thomas Bernhardt, S Kanay De, Mi Win Thida; Myanmar labour issues from the perspective of enterprises: findings from a survey of food processing and garment manufacturing enterprises,2017, p-VIII, IX.

various aspects of labour rights, even for foreign workers. Resolving labour disputes in Thailand involves filing cases and attempting to find peaceful solutions. This could even lead to criminal cases. Violations of the rules set by these laws give employees grounds to file cases against their employers. Thailand courts consider either reinstating employees or compensating them based on factors like age, length of service, and hardship in cases of unfair termination. Recent changes in Thailand legal practices also acknowledge damages caused by emotional and psychological stress.[1]

Thus, labour disputes in both Myanmar and Thailand stem from various challenges, from disagreements over pay and working conditions to how laws are enforced and how disputes are resolved. Understanding these common causes is crucial for finding effective ways to prevent disputes and build better relationships between employers and employees.

Regulatory Dimensions Impacting Labour Disputes

The realm of labour disputes is intricately woven with the regulatory fabric governing wages, overtime, and leave policies. Wage-related conflicts have been a focal point in Myanmar, prompting the enactment of the Minimum Wages Law in 2013. The minimum wage rate of 4,800 Kyat per day, effective since September 2015, spurred debates, especially within labor-intensive industries like the garment sector. Disagreements persist, with companies expressing concerns about competitiveness. The awareness of national labor laws and international standards remains low among both employers and workers in Myanmar, contributing to a complex legal landscape.

The current minimum wage in Myanmar stands at K600 per hour and 4,800 Kyat per day, according to the Minimum Wages Law. Starting from October 1, 2023, the total payment of 5,800 Kyat through 1,000 Kyat allowance has been effective, considering the economic situation in Myanmar. It's crucial to note that this daily rate is calculated based on an 8-hour workday and excludes overtime, bonuses, incentives, or other allowances, necessitating separate consideration. Part-time workers are entitled to payment on a pro-rata basis.[2]

About working hours, adult workers employed in factories, shops, and establishments are legally restricted from working beyond 8 hours per day or 44 hours per week. Rest periods are unpaid, and the organization of work within a given day must prevent employees from toiling continuously for more than five hours without a rest of at least 30 minutes. Regardless of the arrangement, the total duration of the workday, including work and rest intervals, should not exceed 10 hours.[3]

Regarding overtime work, in scenarios requiring overtime work, workers in shops and establishments are limited to 16 hours per week, with the additional stipulation that overtime work should not extend beyond midnight. Factories adhere to a directive, restricting overtime hours to 20 per week for non-continuous work, such as 15 hours from Monday to Friday (3 hours x 5 days) and 5 hours on Saturday. Employees exceeding 8 hours per day or 44 hours per week are entitled to twice the ordinary wage rate for overtime hours, excluding allowances. Adult male

[1] Ekachai Keesookpun , Labour Situatio in Thailand HIDA/Employers' Organizations Joint Study Workshop and Bilateral Meeting, January 19-22, 2016, Kuala Lumpur, Malaysia, Country Report by Thailand,2016,p-6.

[2] Thomas Bernhardt, S Kanay De and Mi Win Thida , Myanmar Labour Issues from the Perspective of Enterprises , Findings from a Survey of Food Processing and Garment Manufacturing Enterprises ,2017, p- X,IX.

[3] Section 59, The Factories Act,1951 (Act No. 65 of 1951)

workers engaged in continuous work in factories start accruing overtime at twice the ordinary wage rate after surpassing 48 hours in a week.[1]

In the context of public holidays, employees required to work on public holidays receive double the normal rate plus a cost-of-living allowance. Importantly, public holidays coinciding with a rest day or another holiday may not be rescheduled. Non-Buddhist workers can negotiate the observance of religious holidays with their employers, and such leave does not necessarily have to be paid.[2]

Concerning medical, maternity/paternity leave, employers are obligated to grant leave without wage deductions for medical treatment when workers are incapacitated due to illness. Workers presenting a medical certificate are eligible for paid medical leave, up to 30 days per year, provided they have worked for a minimum of six months. Those with less than six months of service may take unpaid medical leave. Pregnant employees are entitled to six weeks of prenatal leave and 8 weeks of postnatal leave, totaling 14 weeks of maternity leave. Additionally, fathers are granted 15 days of paternity leave.[3]

Amidst these regulations shaping Myanmar's labor landscape, Thailand, where recent amendments to the Labor Protection Act (effective May 5, 2019) signify a commitment to enhancing working conditions. The Thailand regulatory framework encompasses various facets, from payment of wages to necessary business leave.

As outlined in Section 54 of the Labour Protection Act, the fundamental principle is that all wages must be disbursed in Thai currency, unless the employee explicitly consents to alternative payment methods such as cheques or foreign currencies. The minimum daily wage is not uniform across Thailand, with rates ranging from 148 Baht in certain provincial areas to 203 Baht in Bangkok. The enforcement of this wage structure has been in effect since June 1, 2008. Section 55 emphasizes that wage disbursement should typically occur at the employee's workplace unless an alternative arrangement is mutually agreed upon. Moreover, Section 70 sets the timeframe for wage payments, generally stipulating at least a monthly frequency, with specific provisions for overtime pay, holiday pay, and holiday overtime pay.[4] In the unfortunate event of employee dismissal, Section 70 mandates that the employer promptly settles basic pay, overtime pay, holiday pay, and holiday overtime pay within three days from the termination date.[5]

Regarding overtime pay, section 61 of the Act provides clarity on the calculation of overtime pay. Employers are obligated to remunerate overtime at a rate not less than one and a half times the hourly basic pay earned during normal working hours for the overtime duration. For employees receiving basic pay based on output, the overtime rate should similarly be at least one and a half times the output-based rate for each unit on a working day.[6]

In the context of severance pay, employees with an uninterrupted service period of 20 years or more are entitled to severance pay equivalent to 400 days of the most recent pay rate. Notably, recent changes have increased the severance pay for those with ten or more years of

[1] Section 73, The Factories Act,1951 (Act No. 65 of 1951)
[2] Section 16-22, The Leave and Holiday Rules, (69/2018)
[3] Section 46-48The Leave and Holiday Rules, (69/2018)
[4] Section 54-55, the Labour Protection Act (No.2) B.E. 2541(1998).
[5] Section 70, the Labour Protection Act. (No.2) B.E. 2541(1998).
[6] Section 61, the Labour Protection Act. (No.2) B.E. 2541(1998).

continuous service from 300 to 400 days. Section 118 clarifies that these provisions do not apply to employees with definite-term employment contracts, restricted to specific projects, occasional work, or seasonal employment, provided that a written contract is established at the commencement of the employment.[1]

Related to maternity leave, under section 41, maternity leave spans 98 days, inclusive of weekends and public holidays. Employers are required to pay a minimum of 45 days at the most recent pay rate during the maternity leave. Additionally, maternity leave encompasses periods for medical appointments and examinations before delivery.[2]

Concerning necessary business leave, employers are obliged to grant employees a minimum of three days of paid necessary business leave per year. While the Labour Protection Act acknowledges the existence of necessary business leaves, the specific criteria for implementation are left to the discretion of the employer, typically outlined in the work rules.[3]

Navigating the complexities of labor laws in Myanmar and Thailand is crucial for understanding the factors contributing to labor disputes and fostering fair and harmonious labor relations. Decent work principles play a pivotal role as these countries grapple with regulatory intricacies, serving as critical touchpoints in the pursuit of equitable and respectful employment relationships.

Settlement Mechanisms for Labour Disputes

The Settlement of Labour Dispute Law (SLDL) in Myanmar delineates a comprehensive process for dispute resolution at various levels: workplace, township, regional, and national. The process accommodates individual and collective disputes, involving input and support from knowledgeable parties to facilitate agreement. Individual disputes involve employers and one or more workers, while collective disputes concern employers (and employer organizations) and labor organizations.

The Workplace Coordination Committee (WCC) initiates the process, comprising stakeholders from both labor and employer sides. Employers with over 30 workers must establish a WCC for collective agreement negotiation and grievance resolution. Comprising two employer and two worker representatives, the WCC functions more effectively in labor-dominated workplaces, resolving 50-90% of issues. Unresolved disputes proceed to the Township Conciliation Body (TCB), composed of 11 members representing government, employers, unions, and distinguished persons. The TCB's four-person panel hears disputes, with the option to involve eight members for complex cases. If disagreements persist, the case advances to the relevant Arbitration Body (AB) at the regional or state level. ABs, like TCBs, consist of 11 members, deciding cases based on a majority vote within seven days. Dissatisfied parties have seven days to submit disputes to the Arbitration Council (AC), the highest arbitration level. While AB decisions are binding, parties can appeal to the Supreme Court if unsatisfied.[4]

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[1] Section 118, the Labour Protection Act. (No.2) B.E. 2541(1998).
[2] Section 41, the Labour Protection Act. (No.2) B.E. 2541(1998).
[3] https://orbis-alliance.com/orbis-news/new-amendments-on-labor-laws-thailand.
[4] Ediger, Laura and Chris Fletcher, "Labor Disputes in Myanmar: From the Workplace to the Arbitration Council.", 2017, p-11.

On the other hand, Thailand's approach to labor dispute prevention and resolution emphasizes information exchange, joint consultation, and collective bargaining to modernize labor-management relations. The Labour Relations Act establishes bipartite committees, such Labour Welfare Committee, fostering consultation on working conditions, safety, health, and welfare. However, collective bargaining occasionally fails, leading to disputes. Tripartite cooperation involves organizations like the National Advisory Council for Labour Development, aiming to prevent and solve labor issues. The Labour Relations Act provides procedures for negotiations, mediation by labor officials, and arbitration by the Labour Relations Committee. If negotiations fail, a labor dispute may be referred to the Conciliation Officer, with further appeals to the Minister of Interior. The Act encourages consultative employees' committees, promoting bipartisanship.[1]

Both Myanmar and Thailand employ multi-tiered mechanisms for labor dispute resolution. While Myanmar's SLDL emphasizes workplace committees and hierarchical arbitration, Thailand's approach integrates bipartite and tripartite committees, highlighting cooperation and negotiation.

- **Myanmar's Labor Dispute Resolution: SLDL Mechanism**

The Settlement of Labour Dispute Law (SLDL) was enacted in 2012 in Myanmar aims to ensure workers' rights, foster peaceful workplaces, and expedite just resolution of employer-worker conflicts. This legal framework replaced the 1929 Trade Dispute Act, marking a significant shift in the resolution of disputes between employers and workers. The revised system introduces various levels of dispute resolution bodies, including the Workplace Coordinating Committee (WCC), Township Conciliation Body (TCB), Dispute Settlement Arbitration Body, Dispute Settlement Arbitration Council, and Courts.

The law addresses occupational diseases, deeming them as injuries by accident unless proven otherwise by the employer. Part B of Schedule III outlines specific diseases, and if certified by a qualified medical practitioner to be work-related within twelve months, compensation is recoverable from the last employer in the relevant field. [2]A case study involving Maung Nyunt Sein[3] illustrates the intricacies of compensation claims, emphasizing the significance of timely reporting. Maung Nyunt Sein was an employee serving as the driver of a lorry owned by U Shein Gyi. On April 3, 1962, an unfortunate incident occurred when the lorry caught fire, resulting in injuries to Maung Nyunt Sein. Subsequently, on January 5, 1963, Maung Nyunt Sein applied for compensation to the Commissioner of Pyi State. The basis for his compensation claim was a medical certificate that certified a 70% reduction in his capacity to perform work duties due to the injuries sustained in the incident. As a result, he was granted a compensation amount of 5292 MMK. U Shein Gyi, the owner of the lorry, decided to appeal the decision. The appeal contended that Maung Nyunt Sein's delayed application for compensation, which came after a period of two and a half years following the injuries, was in violation of Section 10(1) of the Workmen’s Compensation Act, 1923. Additionally, it argued that granting compensation based solely on a medical certificate, without an actual interview with the doctor,

[1] Ekachai Keesookpun , Labour Situatio in Thailand HIDA/Employers’ Organizations Joint Study Workshop and Bilateral Meeting, January19-22, Kuala Lumpur, Malaysia, Country Report by Thailand,2016,p-5.
[2] The Settlement of Labour Dispute Law (The Pyidaungsu Hluttaw Law No. 5/2012), March 28, 2012.
[3] 1996, B.L.R, H.C, p-991

was against the law. In response to the appeal, Judage U Sein Thin presided over the case and held that Maung Nyunt Sein's compensation claim was significantly delayed, thus contravening Section 10 of the Workmen's Compensation Act, 1923. This section specifies that no claim for compensation shall be entertained unless notice of the accident is given as soon as practicable and the claim is preferred within two years of the occurrence of the accident. The case underscores the importance of timely reporting in compensation claims and adherence to statutory timelines, as failure to meet these requirements can impact the validity of the claim. In regards to this, there are still many challenges and issues to ensure that disputes cases could be resolved in an effective and efficient manner, with no backlog of disputes. Currently, the resolution bodies under SLDL mechanism do not have enough capacity to move the cases quickly in a timely manner.

Despite timely reporting, challenges persist, particularly in distinguishing individual and collective disputes. The law defines individual disputes as those between an employer and one or more workers, while collective disputes involve an employer (or employer organization) and a labor organization. In practice, discerning the nature of a dispute remains complex, often leading individual disputes to navigate the arbitration system for perceived effectiveness.[1]

To enhance Myanmar's dispute resolution process, several recommendations are proposed.[2] Ongoing amendments to the SLDL based on practical experiences, fostering collective bargaining for comprehensive agreements, and supporting the training of labor officials are essential. The call for a consistent and professional decision-making process, improved enforcement mechanisms, and transparent selection processes for dispute resolution bodies is crucial.

Moreover, the contributions of labor organizations, NGOs, employers, and international buyers are pivotal in navigating and improving the dispute resolution system. Stakeholders are encouraged to strengthen their roles through collective bargaining, training initiatives, or transparent participation in dispute hearings. Employers play a crucial part in raising awareness, communicating within organizations, and negotiating in good faith across all resolution levels.[3]

Furthermore, international buyers have a unique opportunity to influence the process by requiring functioning WCCs, incorporating dispute resolution into due diligence procedures, and encouraging training in supplier factories. Buyers and investors value a fair, efficient, and consistent dispute resolution process, contributing to upholding the rights and obligations of both workers and employers.[4]

The varied perspectives on the effectiveness of Myanmar's dispute resolution system underscore the challenges inherent in establishing a new framework. Time, effort, and stakeholder collaboration are vital in building confidence and trust, ensuring the system evolves into a fair, efficient, and equitable mechanism for all parties involved.

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[1] Ediger, Laura and Chris Fletcher, Labor Disputes in Myanmar: From Workplace to Arbitration Council: An Overview of Myanmar's Labor Dispute Resolution Process in Practice, May 2017, p-6.
[2] ibid
[3] Myanmar Times, Vol.14, No.263,2015, p-3.
[4] ibid

- **Thailand's Labor Dispute Resolution: Labour Protection Act**

The Labour Protection Act in Thailand is designed to regulate the rights and responsibilities of both employers and employees, establishing minimum standards for various aspects of labor, including general workforce utilization, regulations concerning women and child labor, remuneration, severance, and the Employee Welfare Fund. The primary objective is to ensure fairness in employment practices, promote occupational health, and contribute to the overall development of the nation.

Thailand introduced a new version of the Labour Protection Act, incorporating amendments that came into effect on May 5, 2019. The central focus of these changes is the enhancement of compensation, leave allowances, and overall protection for workers. The amendments seek to improve the well-being of employees, bring stability to employment conditions, and provide clarity on existing entitlements.

Key amendments include changes to default interest imposition, procedures for changing employers, business leave entitlements, maternity leave duration, and provisions for temporary cessation of business operations. Furthermore, adjustments have been made to severance pay rates and regulations regarding the relocation of workplaces.[1]

Despite these positive developments, certain aspects of the amended law, such as the definition of "necessary business," remain unclear, leaving room for interpretation. The interpretation of such circumstances is often at the discretion of employers and their respective policies. It is strongly recommended that companies review and revisit their work rules and regulations to ensure compliance with the amended laws. Non-compliance may lead to penalties, even though the current regulations no longer mandate the registration of work rules and regulations with the Labor Department.[2]

Thus, the amendments not only extend penalties for non-compliance but also introduce significant benefits for employees and impose additional duties on employers. These changes highlight the importance for employers to thoroughly review their employment agreements and work rules, ensuring alignment with the new rules to avoid severe penalties. The amendments reflect a commitment to prioritizing employee protection while emphasizing the responsibility of employers to comply with the updated regulations.

A Comparative Analysis of Labour Disputes Resolution Frameworks

The Law of Labour Disputes Settlement (SLDL) in Myanmar demonstrates strengths in its comprehensive framework designed to address a wide spectrum of labor disputes. At various organizational levels, from the workplace to national forums, the SLDL provides a structured and multi-tiered approach for the resolution of conflicts. Notably, this framework encompasses both individual and collective disputes, reflecting a commitment to fostering a fair and inclusive labor environment. The involvement of stakeholders from both labor and employer sides, facilitated through mechanisms like Workplace Coordination Committees (WCC) and Township Conciliation Bodies (TCB), contributes to a balanced and participatory decision-making process. However, challenges are evident within the SLDL, particularly in the face of capacity constraints within resolution bodies. The current limitations in capacity result in delays in handling cases,

[1] Pimvimol “June” Vipamaneerut, Partner, Tilleke & Gibbins. (2019), Thailand’s new Labour Protection Act
[2] https://www.thailand-business-news.com/law/71906-thailands-new-labour-protection-act.html

potentially undermining the overall efficiency and effectiveness of the dispute resolution process. Another notable weakness lies in the complex nature of distinguishing between individual and collective disputes. This complexity often leads individual disputes to navigate arbitration system, causing inefficiencies and procedural challenges. Addressing these challenges requires ongoing amendments based on practical experiences, with a focus on enhancing the overall efficacy of the SLDL.

In contrast, the Labour Protection Act in Thailand stands out for its recent amendments aimed at enhancing worker protection. The focus on improved compensation, extended leave allowances, and an overall commitment to worker rights reflects a proactive approach to creating a fair and supportive labor environment. The Act further strengthens workplace relations through the establishment of bipartite committees, including the Employees' Committee, Occupational Safety, Health and Environment Committee, and Labour Welfare Committee. These committees provide platforms for meaningful consultation on various labor-related issues, fostering cooperation and communication. However, challenges persist within the Labour Protection Act, primarily related to unclear definitions. Ambiguities, such as those surrounding the definition of "necessary business," create room for interpretation and potential inconsistencies in application. Additionally, the discretionary nature of employer policies introduces a potential weakness, as the interpretation of circumstances often relies on the discretion of employers, leading to variations in application and understanding of the law.

Comparing the two legal frameworks, both Myanmar's SLDL and Thailand's Labour Protection Act share a commitment to addressing labor disputes and enhancing worker rights. Myanmar's SLDL employs a multi-tiered approach with structured arbitration bodies, while Thailand emphasizes bipartite committees and tripartite cooperation. Myanmar faces capacity constraints within resolution bodies, leading to delays, which is a challenge explicitly addressed in Myanmar's context. In contrast, while Thailand's capacity constraints exist, their impact on the efficiency of the resolution process is not explicitly highlighted.

Examining the interconnectedness of effective labour disputes resolution mechanisms with the Sustainable Development Goals (SDGs) which emphasize the crucial role of decent work and economic growth in building resilient and sustainable societies, Myanmar's SLDL is instrumental in aligning with SDG 16, which advocates for peace, justice, and strong institutions. The establishment of arbitration bodies and structured dispute resolution mechanisms under the SLDL contributes to the creation of strong institutions that foster fair and just labor practices. By addressing disputes systematically, Myanmar's legal framework aligns with SDG 16's objectives of promoting peace within workplaces and ensuring access to justice for all. Likewise, the recent amendments to Thailand's Labour Protection Act demonstrate the country's commitment to addressing poverty concerns (SDG 1) and promoting inclusive employment practices (SDG 10). SDG 1 aims to eradicate poverty in all its forms, and the amendments, emphasizing improved compensation, extended leave allowances, and overall worker rights, contribute significantly to this goal. Furthermore, the emphasis on inclusive employment practices aligns with SDG 10, aiming to reduce inequalities. The amendments in Thailand's labor laws contribute to the broader vision of creating more inclusive and equitable societies by ensuring fair treatment of workers across different sectors.

Furthermore, the provisions related to maternity leave and anti-discrimination measures in both Myanmar and Thailand's labor laws address workplace issues that may disproportionately

affect women. Achieving gender equality in the labor market is crucial for realizing SDG 5's objectives, which include ending discrimination, violence, and harmful practices based on gender.

Thus, both legal frameworks demonstrate unique strengths and weaknesses in their approaches to labor dispute resolution. Ongoing amendments, capacity-building efforts, and a commitment to transparency are vital for both Myanmar and Thailand to address existing challenges and create more effective and equitable disputes resolution mechanisms for the benefit of workers and employers.

Findings

Both Myanmar and Thailand demonstrate a commitment to enhancing their labor dispute resolution mechanisms by implementing timely amendments to existing laws. In Myanmar, the Settlement of Labour Dispute Law (SLDL) was enacted in 2012, replacing the outdated Trade Dispute Act of 1929 and amendments were made in 2019. This shift marked a significant step toward addressing the evolving needs of employer-worker relations. Similarly, Thailand introduced amendments to the Labour Protection Act in 2019, focusing on improving compensation, leave allowances, and overall worker protection. These legislative changes reflect a proactive approach by both countries in adapting to the dynamic nature of labor relations.

The amendments made in the labor laws of both Myanmar and Thailand contribute to the creation of decent work conditions for employees. In Myanmar, the SLDL aims to ensure workers' rights, foster peaceful workplaces, and expedite just resolution of disputes. Specific provisions address issues such as occupational diseases, compensation claims, and the importance of timely reporting. In Thailand, amendments to the Labour Protection Act emphasize various aspects, including minimum wages, working hours, maternity leave, and necessary business leave. These changes collectively aim to enhance working conditions, promote fairness, and provide a framework for equitable employer-employee relations.

The amendments in labour laws play a crucial role in reducing grievances between employers and employees in both countries. In Myanmar, the SLDL establishes a multi-tiered mechanism for dispute resolution, involving workplace committees, township bodies, arbitration councils, and courts. This structured approach provides avenues for addressing both individual and collective disputes, contributing to the reduction of conflicts. In Thailand, the amended Labour Protection Act introduces changes in default interest imposition, procedures for changing employers, and provisions for various types of leaves. These adjustments contribute to clearer guidelines, potentially minimizing disputes arising from ambiguities in labor regulations.

Furthermore, it becomes evident that Myanmar and Thailand's legal amendments hold implications for achieving Sustainable Development Goals (SDGs). The emphasis on decent work conditions and equitable employer-employee relations aligns with SDG 8, which advocates for sustained economic growth and decent work for all. Furthermore, the amendments address poverty concerns (SDG 1), reduce inequalities (SDG 10), and contribute to gender equality (SDG 5) through provisions such as enhanced maternity leave and anti-discrimination measures.

Despite these positive strides, challenges persist, particularly in Myanmar, where the SLDL mechanism faces capacity constraints. This underscores the need for ongoing practical

amendments, collective bargaining, and comprehensive training initiatives to further align with SDG 4 (Quality Education) by enhancing the skills of labor officials. Stakeholder collaboration, a key element in both countries' efforts, resonates with SDG 17 (Partnerships for the Goals), emphasizing the importance of cooperative endeavors for effective labor dispute resolution.

In conclusion, the collective endeavors of Myanmar and Thailand in amending their labor dispute resolution mechanisms highlight not only a shared commitment to fostering equitable employer-employee relationships but also a recognition of the dynamic nature of establishing effective dispute resolution systems. To fully align with SDGs, continual improvements, stakeholder collaboration, and targeted initiatives are imperative, ensuring that labor laws contribute significantly to the broader global goals of sustainable development.

Recommendations

Myanmar and Thailand have undergone significant legislative reforms in their labor dispute settlement mechanisms, reflecting a commitment to promoting workers' rights. Myanmar's commitment to legislative reforms in labor dispute settlement mechanisms under the Settlement of Labour Dispute Law (SLDL) can be further fortified through targeted initiatives. Capacity building for key dispute resolution bodies, as outlined in the SLDL, should be prioritized. Also, comprehensive training programs are essential to address existing capacity constraints, ensuring these bodies can efficiently navigate and resolve disputes. Efforts to expedite dispute resolution processes within the multi-tiered mechanism should be intensified. Streamlining procedures and fostering collaboration among resolution bodies is vital to prevent backlogs and maintain effective labor relations. Moreover, conducting workshops and awareness campaigns, particularly targeting employers and employees, will empower stakeholders with legal awareness. This proactive approach enhances understanding of rights and obligations, contributing to more effective dispute resolution. Besides, advocacy for regular reviews of labor laws is crucial. Periodic assessments will enable Myanmar to address emerging challenges and ensure alignment with international standards, fostering a fair and adaptable legal framework. In addition, encouraging collaborative engagement among labor organizations, employers, and government bodies is essential. Dialogue and cooperation will help identify challenges and collaboratively develop solutions that prioritize the well-being of all involved parties.

Likewise, Thailand's significant legislative reforms under the amended Labour Protection Act present opportunities for further improvement. Implementing targeted training programs for bodies overseeing labor protection is imperative. Strengthening the skills and knowledge of these bodies will contribute to more effective dispute resolution. Furthermore, fine-tuning and improving mechanisms for timely resolution outlined in the amended Labour Protection Act is necessary. This includes revisiting default interest imposition, procedures for changing employers, and provisions for various types of leaves. Moreover, launching campaigns aimed at raising legal awareness among both employers and employees will empower stakeholders to navigate the dispute resolution process with greater understanding. Also, advocating for periodic reviews of labor laws is essential to address emerging challenges and maintain alignment with international standards. Regular updates will contribute to a fair and adaptable legal framework. Additionally, promoting collaboration across sectors, including government bodies, labor unions, and employer organizations, is crucial. Building a collaborative approach will enhance

understanding, trust, and cooperation among stakeholders, contributing to a positive working environment.

These recommendations underscore a commitment to equitable and efficient labor relations, ensuring a positive working environment that upholds the rights and well-being of all stakeholders involved.

Conclusion

The effective resolution of labor disputes relies on the responsible participation of key stakeholders, namely employers, employees, and the government. Employers play a crucial role by adhering to established rules and regulations and fostering work environments that prioritize fairness and well-being. Decent workplace should be provided according to rules and regulations to reduce complaints and grievances of the labour force. Similarly, employees contribute to a healthier workplace by demonstrating commitment and dedication to their roles, enhancing overall productivity. The government, as a regulatory authority, plays a pivotal role in ensuring the enforcement of labor laws. The government needs to maintain a system of checks and balances, ensuring that rules are effectively implemented and followed by both employers and employees. When these stakeholders fulfill their respective responsibilities, the occurrence of labor grievances diminishes. Reducing conflicts between employers and employees not only improves working conditions but also fosters economic growth through increased productivity by aligning with the broader goals of sustainable development. The collaborative efforts of all parties involved contribute to a balanced and successful work environment. Therefore, to ensure equitable labor relations and foster economic growth in alignment with SDGs, it is essential to establish effective mechanisms for resolving labor disputes. By fulfilling these roles and resolving disputes collaboratively, stakeholders can reduce grievances, improve working conditions, combat inequality and poverty, and enhance productivity, thereby supporting sustainable economic development.

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LEGAL PROTECTION OF PERSONS WITH DISABILITIES IN SEXUAL ABUSE

Khin Myo Win[1]

Abstract

Sexual abuse is the inducement or coercion of a person to engage in any sexual activity. It is a crime to knowingly cause another person to engage in an unwanted sexual act by force or threat. It can happen to any person such as children, men or women of any age. Among them, women and children, especially persons with disabilities are most likely to be sexually abused. Persons with disabilities often are excluded from the mainstream of the society and denied their human rights. Disability is a cross-cutting issue recognized in the sustainable development golds and no one left behind principle. This paper aims to prevent and protect the persons with disabilities who are abuse, neglect, exploitation and violence and experiencing harm. Because of the Convention on the Rights of the Child (CRC), Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and Convention on the Rights of Person with Disabilities (CRPD) are also ratified in Myanmar, the sexual abuse of the persons with disabilities are prevented by Criminal Law and Special Laws. However, it is necessary to provide the wide definition and how to protect in all forms of sexual abuse for persons with disabilities. To be able to prevent sexual abuse effectively, sexual offences law should be enacted or the provisions relating to sexual abuse should be inserted.

Keywords: sexual abuse; disability; violence; persons with disabilities.

Introduction

Persons with disabilities comprise an estimated 15% of world's population or one billion people, of whom 80 % live in developing countries and are overrepresented among those living in absolute poverty. Persons with disabilities often encounter discrimination and exclusion on a daily basis. The Convention on the Rights of Person with Disabilities (CRPD) enhances the visibility of disabled people in international human rights law. Sexual abuse against persons with disabilities happens regardless of where they live, and regardless of their race, class, religion or culture. It is never justifiable. Sexual abuse is the inducement or coercion of a person to engage in any sexual activity. It occurs when the offender or coerces a person into any kind of sexual activity without consent. It can happen in all people of races, languages, religions and sexes. It is a serious crime which affects the community. It can also be said that sexual abuse is a secret if sexually abused person does not tell someone about it.

Sexual abuse includes a wide range of acts, including acts of physical and non-physical, such as vaginal, anal or oral rape, touching or fondling, showing or watching indecent photos and videos through internet, etc. Therefore, sexual abuse can be distinguished into two types, contact abuse and non-contact abuse. Contact abuse involves touching activities where an abuser makes physical contact with a person. It includes rape, cheating for sex, assault or criminal force to woman with intent to outrage her modesty, unnatural intercourse against the order of nature. Non-contact abuse involves non-touching activities, such as words, gesture or act intended to insult the modesty of a woman, pornography and sexual abuse in online environment.

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The Universal Declaration of Human Rights and the International Bill of Human Rights- the two International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights- underline that recognition and respect for human dignity is fundamental to ensuring the human rights of everyone. "Everyone" includes person with disabilities: they have an equal right to this respect. Concerning with the protection against exploitation, violence sexual abuse, there are international conventions ratified by Myanmar and local laws that have been enacted in Myanmar.

Materials & methods

In drawing up this research, principles and legal norms of UDHR, ICCPR, ICESCR, CAT, CEDAW, CRC, CRPD and other relevant laws in Myanmar such as Penal Code of Myanmar (1861) and Other Special Laws are studied together with the data collection, events and cases.

Nature of Sexual Abuse in respect of Persons with Disabilities

The purpose of the Convention on the Rights of Persons with Disabilities states to promote and ensure the full and equal enjoyment of the all-human rights and fundamental freedoms by all persons with disabilities. Person with Disabilities include those who have long-term physical, mental, intellectual or sensory, impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.[1] According to the 2014 Census and National Disability Survey, there were four kinds of disabilities:(1) physically impaired, (2) visually impaired, (3) hearing impaired and (4) intellectually impaired. "Person with Disabilities" refers to a person who has one or more of the long-term physicals, vision, speaking, hearing, mental, intellectual, or sensory impairment from birth or not.[2] Department of Social Welfare has already development the rights of the persons with disabilities law. "Disabilities" means being unable to fully participate in the society due to the various barriers/ hindrances in physical and environment, attitude and perspective and others.[3] Abuse is any control exerted by another person on women with disabilities against her will. There are many types of abuse. Some examples are physical abuse, emotional abuse, verbal abuse, sexual abuse, etc. Among them, there is no specific definition relating to sexual abuse in Myanmar. Sexual abuse is a crime. It includes any sexual activity imposed by a person on another of any age, against which he or she is entitled to protection by Criminal Law. Sexual abuse is a crime to knowingly cause another person to engage in an unwanted sexual act by force or threat. Sexual abuse can happen to male or female of any age. Among them, women and children, especially disabled persons are most likely to be sexually abused.

Types of sexual abuse

There are two different types of sexual abuse. These are

(a) Contact abuse and
(b) Non-contact abuse.[4]

[1] Article 1 of the Convention on the Rights of Persons with Disabilities, 2008.
[2] Section 2 (a) of the Rights of Persons with Disabilities Law, 2015.
[3] Section 2 (b) of the Rights of Persons with Disabilities Law, 2015.
[4] http://www.nspcc.org.uk/preventing-abuse/child-abuse-and-neglect/child-sexual-abuse.

Physical (or) Contact Abuse

Contact abuse involves touching activities where an abuser makes physical contact with a child or woman.

Contact abuse may include touching with the hand, mouth or other body part of the victim's body by the abuser, touching of private parts of the body with something other than the abuser's hand, rubbing up against the victim in a sexual way, forcing the victim to touch the abuser's genitals with hands, mouth or other body part, forced sexual intercourse and forced anal intercourse.[1]

Sexual abuse is generally regarded to include the following physical acts;

(a) Sexual touching of any part of the body, clothed or unclothed, including using an object,
(b) All penetrative sex, including penetration of the mouth with an object or part of the body;
(c) Encouraging a child to engage in sexual activity, including sexual acts with someone, or making a child strip or masturbate;
(d) Intentionally engaging in sexual activity in front of a child.[2]

Moreover, contact abuse is the touching of the sexual portions of the partner's body (genitals or anus) or touching of the breasts of the female or the child. Contact sexual abuse is of two types; penetration and non-penetration. Penetration includes injection of an object to the vagina, mouth or anus. Non-penetration includes fondling of sexual portions of the body and sexual kissing.

Non-physical (or) Non-contact Abuse

Non-contact abuse includes such activities as forcing the victim to watch sexual acts, forcing tire victim to perform sexual acts while being watched by the abuser, forcing the victim to listen sexual talks.[3]

Sexual abuse is generally regarded to include the following non-physical acts;

(a) Taking, making, permitting to take, distributing, showing or advertising indecent images of children;
(b) Forced to watch sexual acts;
(c) Forced to listen to sexual talks, including comments, tapes, and obscene phone calls;
(d) Forced to look at sexual parts of the body includes buttocks, genital area, breasts and mouth;
(e) Paying for the sexual services of a child or encouraging them into prostitution or pornography;
(f) Showing images of sexual activity including photographs, videos, DVDs, magazines, or via webcams through the internet.[4]

[1] www.rebuildingyou.com/sexual-abuse-types.
[2] UNICEF, Analysis of Domestic Laws Related to Violence against Children in ASEAN Member, States, 2015, p. 116.
[3] www.rebuildingyou.com/sexual-abuse-types.
[4] UNICEF, Analysis of Domestic Laws Related to Violence against Children in ASEAN Member States,2015, p.116.

Sexual abuse encompasses a wide range of acts, including acts involving physical contact, such as vaginal, anal or oral rape, touching or fondling. Sexual abuse can also include non-physical acts, including showing children pornography, forcing children to engage in or watch sexual activities or encouraging children to behave in sexually inappropriate ways. An abuser may use force, coercion, threats, trickery or pressure to inflict sexual abuse on children, and may also use a tactic called grooming, whereby they befriend a child in order to lower his or her inhibitions and inflict sexual abuse on him or her.[1]

The rise of the online environment has not created crimes of sexual abuse and exploitation of children. But new venues for the content, contact or conduct online do allow much easier access to a wide range of children, increasing the scale of 'opportunity' and the potential for causing harm. Images of children are easier to create and distribute, viewers can easily turn into exchangers, and traders and producers of child abuse materials can open new arenas for distribution of their 'products'. The internet environment has allowed children themselves to initiate and engage in sexually explicit behaviours with an apparent degree of anonymity, and adults who seek to perpetrate online or offline sexual exploitation and abuse to make contact with children and young people.[2]

Sexual abuse and exploitation of children through images span material that is suggestive to images depicting explicit sexual activity. Although' most international and much national legislation refer to these images as child pornography, there is increasing preference among law enforcement and child protection agencies for the term 'child abuse images', which places a stronger emphasis on, and recognition of, the abuse and exploitation of children perpetrated through such images.[3]

Non-contact sexual abuse includes activities as exhibitionism and the involvement in making of pornography and speaking obscene words and doing obscene behavior, and watching online images and videos.

For using online in the field of pornographic photos and videos, Section 66(d) of the Telecommunications Law provides for up to three years in prison for extorting, coercing, restraining wrongfully, defaming, disturbing, causing undue influence or threatening any person using a telecommunications network.

Therefore, it is necessary to review the available research on the scale of online sexual abuse and exploitation, the forms they take, the children who are abused online, and the nature and numbers of online abusers.

Causes of Sexual Abuse

Any person can be affected by sexual violence. But they may be more at risk if they are disabled person, isolated person, person from poor family or broken family.

Sexual abuse is very secret crime, and unless the victim is bold to tell someone about it, it can be hidden for a lifetime. Sexually abused children are often vulnerable children (e.g. children with disabilities, isolated children or teenagers from poor or broken family).[4]

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[1] UNICEF, Analysis of Domestic Laws Related to Violence against Children in ASEAN Member States,2015, p.116.
[2] UNICEF, Child Safety Online: Global Challenges and Strategies, Technical Report, May 2012, p. 13.
[3] Ibid.
[4] https://www.eschooltoday.com/child-abuse/sexual-child-abuse/causes-of-child-sexual-abuse.html.

Young or disabled person may not be able to tell someone what's happening, or may not understand that they're being abused.

Disabled persons are more likely to be abused or neglected than non-disabled persons. Some disabled person may not understand that what is happening to them is abuse and that it is wrong. Even if they do, they might not be able to ask for help. If a disabled person is being abused by someone who looks after them or who they rely on to meet their needs it can be even harder for them to speak out or protect themselves.[1]

Some abusers target persons who are neglected by their parents, or persons who don't have many friends.[2]

Family poverty significantly increases the risk of sexual abuse. Persons with disabilities who grow up in poverty might live in a poorly maintained, unsafe or temporary home or have disruptive neighbours.[3]

In economically poor countries, young girls take to prostitution. It is a sign of poverty and economic distress. A study carried out in India (1995) showed that girl prostitutes are primarily located in low-middle income areas and business districts.[4]

In Myanmar, there have no sex education and that is important to lessen sexual abuse cases. The majority of sexual violence and abuse cases occur within poor and uneducated families and communities.[5]

Therefore, poverty is one of the causes of sexual abuse.

Moreover, there are girls and family characteristics that significantly heighten or lower risk of sexual abuse. Family structure is the most important risk factor in sexual abuse. Persons with disabilities who live with two married biological parents are at low risk for abuse. The risk increases when persons with disabilities live with step-parents or a single parent.[6]

Therefore, disabled person, isolated person, persons from poor or broken family can fall victim to abusers, who pretend to help them, but take advantage of them.

In the case of women, some forms of abuse are distinctive to women with disabilities. For instance, sexual abuse of a woman with a disability may include forced sterilization or forced abortion. Besides, failure to provide too constitutes abuse. For example, many women with disabilities miss out on sex education. When abuse occurs, they know something is wrong but are not sure what it is. The failure to provide places the woman in a more vulnerable position. Women with disabilities lack of opportunity to think about themselves as women, or be accepted as women first, can lead to lack of access to sexuality awareness and women's health issues.[7]

Moreover, persons with disabilities are particularly vulnerable to abuse. They may not have accurate knowledge about their bodies, abuse prevention and self-protection.

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[1] https://www.nspcc.org.uk/preventing-abuse/child-abuse-and-neglect/child-sexual-abuse.
[2] https://www.nspcc.org.uk/preventing-abuse/child-abuse-and-neglect/child-sexual-abuse.
[3] https://www.pcar.org/poverty-and-sexual-violence.
[4] https://www.ncbi.nlm.nih.gov/poverty.
[5] Unheard Voices, qualitative research on conflict-related sexual violence in Myanmar (2016-2021) 2022 1st ed, p-106.
[6] https://www.cachouston.org/child-sexual-abuse-facts.
[7] Dr. Rathin Bandyopadhyay, Law and Gender: A Quest for Justice, 1s' edition, 2012, p.49.

Therefore, disability is factor that can be integrally linked with sexual abuse.

A woman may face sexual abuse as a daughter, a sister, a wife, a mother, a partner, or a single woman in her lifetime. They will be assaulted by someone who is known to them, will most likely be assaulted by a man and it will most likely be in private, in their place of residence, or in the home of a friend or relative.[1]

Besides, all working women, regardless of their age, physical appearance, social status and job security may encounter sexual harassment. Sexual harassment is a serious and insufficiently recognized problem at workplaces. A vast majority of women though at the receiving end of sexual harassment at workplace do nothing about it, mostly due to the fear of losing their jobs if they speak up.[2]

Sexual abuse inflicted against a woman by a person intimately connected to her through marriage, family relation, or acquaintanceship is universal. The perpetrators often been found to be males and the victims are their sexual partners. Internationally, one in three women have been beaten, coerced into sex or abused in their lifetime by member of her own family.[3]

Therefore, abuse is an actuality in the lives of numerous women and children (including persons with disabilities). It is still difficult to fully estimate the degree of the problem and lacking intelligence, poverty, disability and isolation can falls the victims easily to abusers. Besides, many persons with disabilities do not know how to respond to abuse and violence. Barriers to obtaining help may make it hard for persons with disabilities to escape and protect themselves from abuse. Identified barriers include: lack of knowledge of disability issues by domestic violence and sexual assault professionals, lack of accessible transitional housing and shelters.

International instruments for the protection of persons with disabilities

Parties to the ICCPR, CERD, CEDAW, CRC and CRPD are obliged to take all appropriate legislative, administrative, social, educational and other measures to protect the persons whose rights are guaranteed by those treaties from all forms of exploitation, violence and abuse. Myanmar is a party to international human rights treaties. The right to protection from exploitation, violence and abuse is contained in article 20(2) of the International Covenant on Civil and Political Rights (ICCPR), article 10(3) of the International Covenant on Economic, Social and Cultural Rights (ICESCR), articles 4 and 5(b) of the Convention on the Elimination of All Forms of Racial Discrimination (CERD), article 6 of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), article 19(1) of the Convention on the Rights of the Child (CRC) and article 16(1) of the Convention on the Rights of Persons with Disabilities (CRPD). The ICCPR and CERD require that incitement to discrimination, hostility or violence through the advocacy of national, racial or religious hatred be prohibited by law. The CRC and the Optional Protocol to the CRC on the Sale of Children, Child Prostitution and Child Pornography also require countries to take measures to prevent and suppress the abduction, sale of or traffic in children, to combat the illicit transfer and non-return of children overseas, to protect children from economic exploitation, to protect children from the illicit use of narcotic

[1] Dr. Rathin Bandyopadhyay, Law and Gender: A Quest for Justice, 1st' edition, 2012, p.55.
[2] Dr. Rathin Bandyopadhyay, Law and Gender: A Quest for Justice, 1st' edition, 2012, p.49.p.116.
[3] Ibid, p.144.

drugs and to protect children from all forms of sexual exploitation and sexual abuse. The CRC and the Optional Protocol to the CRC on the Sale of Children, Child Prostitution and Child Pornography and CEDAW require countries to take measures to prevent and suppress the traffic in and exploitation of prostitution of women. The CRPD requires that positive measures be taken to prevent exploitation, violence and abuse of persons with disabilities.

In June 2019, at the Centenary Conference of the International Labour Organization (ILO), the Violence and Harassment Convention (No.190) and its accompanying Recommendation (No.206) were adopted. The Convention recognizes that everyone has the right to a world of work free from violence and harassment. The Convention defines violence and harassment as "a range of unacceptable behaviours and practices, or threats thereof, whether a single occurrence or repeated, that aim at, result in or are likely to result in physical, psychological, sexual or economic harm, and includes gender-based violence and harassment." The Convention No. 190 and Recommendation No.206 provide a comprehensive framework for action capable of taking into account such specificities through prevention, protection, enforcement and remedial measures.

Myanmar has signed, ratified and acceded to the following international instruments relating to exploitation, violence and sexual abuse;

(a) International Covenant on Economic, Social and Civil Rights (ICESCR), 1966.
(b) Convention on the Rights of Persons with Disabilities (CRPD), 2006.
(c) United Nations Convention on the Rights of the Child (UNCRC), 1989.
(d) Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1997.
(e) Convention for the Suppression of the Trafficking in Persons and of the Exploitation of the Prostitution of other, 1950.
(f) The Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography (OPSC), 2002.
(g) The Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime, 2000.

National Laws for the Protection of Persons with Disabilities

Protection against sexual abuse in Myanmar existing laws such as Penal Code of Myanmar (1861) and Other Special Laws. The Constitution of the Republic of the Union of Myanmar (2008) is the foundation of all existing laws, and includes a description of the principles of the constitution of a sovereign nation, civil rights and responsibilities.

Protection of Persons with Disabilities under Penal Code of Myanmar

Problems of rape, cheating for sex, assault or criminal force to woman with intent to outrage her modesty, unnatural intercourse against the order of nature, word, gesture or acts intended to insult the modesty of a woman and pornography are assumed to be domestic violence. Nowadays, these cases tend to be sexual abuse. There are no specific laws relating to sexual abuse, it is taken action under the Penal Code.

Abduction, means taking somebody away illegally, especially using force.[1] Child abduction, sometimes referred to as kidnapping, is the unauthorized removal of a child from the custody of the person with whom the child lawfully lives. Abduction can occur when a member of the public removes the child from their place of habitual residence.[2]

In Sections 361,363,366,366 A of the Penal Code are provided in respect of aduction.

Therefore, the abduction is linked with particular types of violence against children and will normally be for the purpose of sexual abuse of the child, such as sex trafficking or the use of child for illicit activities.

For the protection against sexual abuse sections under the Penal Code are as follow;

In Sections 292, 293 and 294 states that sale of obscene books, objects and songs to young person. In Sections 354, 359, 360, 361, 362, 366, 371 and 372 provides that assault and criminal force, of kidnapping, abduction, slavery and forced labour.

Similarly, rape is the crime of forcing somebody to have sex especially threatening or using violence.[3] Rape is a type of sexual assault usually involving sexual intercourse or other forms of sexual penetration carried out against a person without that person's consent. The act may be carried out by physical force, coercion, abuse of authority, or against a person who is incapable of giving valid consent, such as one who is unconscious, incapacitated, has an intellectual disability or is below the legal age of consent. The term rape is sometimes used interchangeably with the term sexual assault.

Whoever commits rape shall be punished with transportation for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine, unless the women who raped is his own wife and is not under twelve years of age, in which case he shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.[4]

The expression "transportation for life" shall be substituted by the expression "imprisonment for a term of twenty years".[5]

In the event of the case, while Daw Sein Nu who is resided in Yangon Region was at home at around 2 o'clock in the afternoon, her sister Ma Khin Khin came and told the plaintiff, Daw Sein Nu that her daughter Ma Khin Than Myint (14 years) was taken Ng Hlaing (39 years) to his home about 10 days ago. Ma Khin Than Myint is mentally disabled. When Ma Khin Than Mynit was asked, when she went to buy bread and eat on one day, she met Ng Hlaing and he said that he would pay for the bread. After saying that she was called, kissed and sexual abuse to his home. And then the mother, Daw Sein Nu sued a complaint in the Township Court.

In the above case, the accused is sentenced rigorous imprisonment for 8 years under Section 376 of the Penal Code.

Therefore, it was founded that the disabled girl is only 14 years of age and mentally disabled. As a result, there is difficultly in investigating the case, vulnerability to effective

[1] Oxford Advanced Learner's Dictionary, 9th edition, 2015, p.2.
[2] UNICEF, Analysis of Domestic Laws Related to Violence against Children in ASEAN Member States,2015, p.164.
[3] Oxford Advanced Learner's Dictionary, 9th edition, 2015, p. 1272.
[4] Section 376 of the Penal Code of Myanmar, 1861. p.98.
[5] Section 7 of the Penal Code (Amendment) of Myanmar, 2016. p.2.

medical treatment and the weakness of special arrangements for disabled persons in the court and police stations, etc.

Thus, if the victim is mentally disabled, it was founded that the difficulties in investigation the case and in effective medical treatment. If the victim is disabled because of paralysis, it can be seen that she is unable to understand and answer when she was asked in court. It is necessary to make accessible for the disabled persons in court and easy-to-understand testing. In addition, it is necessary to examine the women victims of sexual abuse in ways that do not cause further trauma and to make special measures (temporary protection) so that the defendant and the plaintiff do not see each other in the courtroom. It was also considered that there is a need for legal staff, women staffs in the police force and the staffs who respect and understand women's right. Besides, it was founded that need for a special court and special procedures.

Protection of Persons with Disabilities under Myanmar Special Laws

Problem of Trafficking women and children, online chatting from sexual abuse, human rights commit and other problem are assumed to be internal and external violence. Today, these cases tend to be sexual abuse, it changed variable types. Therefore, many types of sexual abuse, it is taken action under the special laws. The special laws relating to sexual abuse for the protection against persons with disabilities, such as;

(a) The Rights of the Persons with Disabilities Law, 2015
(b) The Anti-Trafficking in Persons Law, 2022
(c) The Child Rights Law, 2019
(d) The Telecommunications Law, 2013
(e) The Suppression of Prostitution Act, 1949

Sex trafficking is human trafficking for the purpose of sexual exploitation. Sex trafficking is a global problem. Most events of sex trafficking are derived from human trafficking.

Myanmar has promulgated the Anti-Trafficking in Persons Law by a State Administration Council Law No.41/2022 on 16 June, 2022. In this Law, Section 4(b) aims in preventing and suppressing trafficking in persons to pay particular attention to women, children and youth including disabled person.

The Trafficking in Persons shall have jurisdiction on any person who commits any offence cognizable under this Law in the Union of Myanmar, or on board a vessel or an aircraft registered under the existing law of the Union of Myanmar, or on a Myanmar citizen or foreigner residing permanently in the Union of Myanmar who commits the said offence outside the country.[1]

'Trafficking in persons' means recruitment, transportation, transfer, sale, purchase, lending, hiring, harbouring or receipt of persons after committing any of the following acts for the purpose of exploitation of a person with or without his consent:

(a) Threat, use of force or other form of coercion;
(b) Abduction;

[1] Section 2 of the Anti-Trafficking in Persons Law, Myanmar, 2022.

(c) Fraud;
(d) Deception;
(e) Abuse of power or authority;
(f) Abuse of power or of position taking advantage of the vulnerability of a person;
(g) Giving or receiving of money or benefit to obtain the consent of the person having control over another person.[1]

Therefore, sex trafficking as the abuse of position of trust occurred from human trafficking.

Myanmar has ratified the United Nations Convention on the Rights of the Child, which includes four core principles- non-discrimination, the best interest of the child, the right to life, survival and development.

The Child Rights Law was passed by Pyidaungsu Hluttaw in July, 2019, appropriately sets 18 as the minimum age of marriage, regardless of gender. Disabled child is hard to track in Myanmar. Now, Myanmar should create a national action plan to end all child marriage, aligning implementation of the law to Target 5.3 of the 2030 UN Sustainable Development Golds. Relevant Ministries should work together and develop a comprehensive plan.

In 2013, Myanmar's Ministry of Social Welfare's, Relief and Resettlement (MoSWRR) sought to implement a cross-cutting development and humanitarian strategy, the National Strategic Plan for the Advancement of Women (NSPAW 2013-2022) and set-up four technical working groups, supervised by its Department of Social Welfare (DSW) – formerly the Myanmar National Committee on Women's Affairs (MNCWA) – to focus on violence against women, women's participation in politics and economics, women, peace and security, and gender mainstreaming.

The persons with disabilities are entitled to protection from abuse, exploitation and discrimination including coercion and various kinds of domestic violences.[2]A poor and disabled child shall be considered as children in need of care and protection.[3]

Whoever commits touching and groping the sexual parts of the child shall, on conviction, be punished with imprisonment for a term from a minimum of three months to a maximum of one year or with a fine from a minimum of three hundred thousand kyats to a maximum of five hundred thousand kyats or with both.[4]

Prostitution means the offering of her body by a woman for sexual intercourse or other sexual activities in return for payment.[5]

Child prostitution is defined as the use of child in sexual activities for remuneration or any other form of consideration.[6] The guardians or parents should not allow their children earning a livelihood by prostitution. In the case of prostitution, the Suppression of Prostitution Act prohibits for prostitution of children, women including disable persons, etc.

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[1] Section 3(b) of the Anti-Trafficking in Persons Law, Myanmar, 2022.
[2] Section 50(d) of the Child Rights Law, 2015.
[3] Section 57 of the Child Rights Law, 2015.
[4] Section 100(c) of the Child Rights Law, 2015.
[5] Oxford Law Dictionary, 4th edition, 1997, p.364.
[6] UNICEF, Analysis of Domestic Laws Related to Violence against Children in ASEAN Member States, 2015, p. 123.

Moreover, it can be seen that women and children are commonly sold to Chinese men as wives and abused in many ways where they can raise more money than through any other work. Therefore, poverty, illiteracy, lack of job, can also fall victim to abusers, who pretend to help them, but take advantage of them. So, many women and children are abducted to earn money or have a job. And then, they are trafficked for sex or prostitution by the abusers.

For using online in the field of pornographic photos and videos, Section 66(d) of the Telecommunications Law provides for up to three years in prison for extorting, coercing, restraining wrongfully, defaming, disturbing, causing undue influence or threatening any person using a telecommunications network. [1]

Myanmar has promulgated the Rights of Persons with Disabilities Law by the Union Parliament Law No.30/2015 on 5 June, 2015. In this Law, it aims to protect the persons with disabilities, especially women and children from being abused and exploited including domestic violence and bullying.[2]

The National Committee is responsivity for the protection the persons with disabilities from discrimination, exploitation, violence, bullying, abuse, neglecting of either a person, organizations or business or departments in different means.[3] It was said that the actions and manners which would cause the physical and mental effect on the persons with disabilities are prohibited.[4]

Similarly, persons with disabilities shall have the rights of protection from the different types of abuse including bullying domestic violence, exploitation, and discrimination.[5]Therefore, no one shall abuse, use violence and force the persons with disabilities to work. Anyone who violates any of the prohibitions under S 77, shall, on conviction, be punished with imprisonment for a term which may not exceed one year or with the fine not exceeding fifteen hundred thousand kyats or with both.[6]

Although there is punishment for outrage of modesty against women, it has a low maximum penalty. Therefore, it should be passed serious penalty under the heading of sexual abuse.

Finding

Although there are Conventions and Protocols for the protection of sexual abuse, it is the duty of State Party to provide necessary provisions in line with international standards. In Myanmar, there is no specific definition of sexual abuse, it can be taken action under the relevant national laws. Although there are provisions for abuse mentioned in the Penal Code and Special Laws, they are inadequate to protect effectively. There is punishment for outrage of modesty against women, it has a law maximum penalty. It should be passed serious penalty under the heading of sexual abuse. To be able to prevent sexual abuse effectively against persons with disabilities, sexual offences Law should be enacted or effective punishment system should be incorporated in the law. Furthermore, it is insufficient to protect legal provisions. So, it should be

[1] Section 66(d) of the Telecommunications Law, 2013.
[2] Section 3(h) of the Persons with Disabilities Law, 2015.
[3] Section 7(d) of the Persons with Disabilities Law, 2015.
[4] Section 10 of the Persons with Disabilities Law, 2015.
[5] Section 16(d) and 17(d) of the Persons with Disabilities Law, 2015.
[6] Section 82 of the Persons with Disabilities Law, 2015.

performed other methods such as awareness, education to all including disable persons might help to protect sexual abuse.

Conclusion

Therefore, abuse is an actuality in the lives of numerous women and children (including persons with disabilities). Sexual abuse can happen to men or women of any age. By studying the cases, it can be seen that women, children and disabled persons are most likely to be sexually abused. It is difficult to fully estimate the degree of the problem and lacking intelligence, poverty, family structure, disability and isolation can fall the victims easily to abusers. Besides, many persons with disabilities do not know how to respond to abuse and violence. Barriers to obtain the help may make it hard for persons with disabilities to escape and protect themselves from abuse. Identified barriers include lack of knowledge of disability issues by domestic violence and sexual assault professionals, lack of accessible transitional housing and shelters. Thus, such barriers should be excluded with effective enforcement of legal measure.

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THE ROLE OF SUSTAINABLE DEVELOPMENT GOALS IN ANTI-TRAFFICKING OF WOMAN AND GIRLS IN MYANMAR

Ei Ei Thae[1], Nyein Nyein Cho[2]

Abstract

Trafficking in persons (TiP) is a severe crime that infringes on the rights of trafficked victims and is a crucial issue for development. The Sustainable Development Goals (SDGs) address the root causes and underlying elements of trafficking, with a focus on Goals 5, 8, and 16. The implementation of the SDGs is crucial for combating trafficking. The study primarily examines the trafficking of women and girls as a type of abuse against them. This study intends to analyze methods to decrease trafficking in women and girls by utilizing the Sustainable Development Goals. The study is carried out using qualitative research approach. The major findings demonstrate how the SDGs are interconnected in reducing the trafficking of women and children, emphasizing the areas where Myanmar incorporates the SDGs in its strategic goals. It highlights the difficulties of coordinating national initiatives with the Sustainable Development Goals (SDGs). The study highlights the important role of the Sustainable Development Goals (SDGs) in combating the trafficking of women and girls as a form of violence against women. It also aims to conduct further research to help make real advancements in ending the trafficking of women and girls in Myanmar while promoting wider sustainable development goals. This study is important because it contributes to the discussion on sustainable development frameworks aimed at eradicating the trafficking of women and girls in Myanmar.

Keywords: Sustainable Development Goals (SDGs), trafficking in persons (TiP), trafficker, trafficked victim, violence against women

Introduction

Trafficking in persons is a severe crime and involves the acts of recruiting, transporting, transferring, harboring or receiving persons through use of force, coercion or other means for the purpose of exploitation. The effective prevention of and response to trafficking in persons, especially women and children requires the implementation of a comprehensive approach that includes prevention of trafficked in persons, protection of and assistance to victims of trafficking in persons, prosecution of crimes of trafficking in persons, and partnership against trafficking in persons.[3] When trafficking in persons concerns women and girls, it is also considered as violence against women, and as such, responses to trafficking must be connected to the targets of the Sustainable Development Goals relating to the elimination of all forms of violence against women and girls.[4]

The study on anti-trafficking of women and girls is conducted from the perspectives of trafficked victims of women and girls, violence against women and sustainable development. It aims to highlight the efforts to address the gender dimensions of trafficking, with a special focus on the connection between the trafficking in women and violence against women.

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[3] United Nations Global Plan of Action to Combat Trafficking in Persons, 2010.
[4] Trafficking in Women and Girls, Report of the Secretary-General, A/73/263, p. 5.

Research Methods

The methods used in this study are the collection of data on trafficking of women and girls from the reliable internet sources, and the analysis of data to provide a global and national overview of anti-trafficking in women and girls.

Research Question

How do the Sustainable Development Goals (SDGs), specifically the SDG Target 5.2, align with Myanmar's initiatives to address the trafficking of women and girls as a form of violence against women?

Trafficking in Women and Girls

Trafficking continues to be a gender-specific worldwide issue. Globally, female victims (women and girls) account for 60 percent of the total number of detected victims in 2020. With regard to forms of exploitation, female victims continue to be the most detected among those trafficked for the purpose of sexual exploitation. Nearly two-thirds of detected victims of trafficking for sexual exploitation are women and another 27 percent are girls.[1]

Connection between trafficking and gender-based violence

According to the most dependable figures from the United Nations Office on Drugs and Crime (UNODC), trafficking in persons primarily impacts women and girls. Furthermore, women and children are subjected to more brutality by traffickers.

The United Nations Office on Drugs and Crime (UNODC) conducted content analysis of all the supplied court case summaries and elaborated a four-level scale of violence reported in the cases: (1) when the narrative explicitly mentioned that no violence was perpetrated against the victim, it was labelled “no violence”; (2) when the case reported the use of threats, retainment of passport and/or other forms of psychological violence to install fear in the victims, but not physical violence, it was labelled “threats or psychological violence”; (3) when the narrative reported physical segregation, beating or slapping the victim, it was labelled “explicit physical violence”; and (4) when the case reported sadistic or systemic violence, rape and sexual violence, it was labelled “extreme violence”. [2]

Analysis of the court case summaries collected by UNODC shows that traffickers use more violence with women and child victims, especially girls. Female victims are three-times more likely to suffer physical or extreme violence (including sexual violence) during trafficking than males. The same dataset shows that children (girls and boys) are 1.7 times more likely to suffer physical or extreme violence than adults (men and women), and girls are 1.5 times more likely to suffer violence than women. [3]

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[1] UNODC, 2023, Global Report on Trafficking in Persons (2022), the United Nations, p. 25.

[2] UNODC, 2023, Global Report on Trafficking in Persons (2022): Collection of Court Case Summaries (2010-2020), the United Nations, footnote 16, p. 25.

[3] Ibid.

As per analysis of the court case summaries, UNODC suggests the possible responses that increasing access to specialized care and services for victims who have suffered extreme violence, integrating gender-based violence interventions into anti-trafficking strategies, considering/including the use of explicit and extreme violence as an aggravating circumstance for the offence of trafficking in persons in national legislation, and integrating training of the judiciary to examine trafficking in persons as a form of gender-based violence within the context of international women's rights frameworks, including the Convention on the Elimination of All Forms of Violence against Women (CEDAW). [1]

There is significant evidence that gender-based violence (GBV) is a tool to control the trafficked victims. It is also a factor contributing to the vulnerability of women and girls to trafficking. In 2019, globally, an estimated 245 million women and girls aged 15 years and older were subjected to sexual and/or physical violence by an intimate partner in the previous year.[2] The connection between intimate partner violence and trafficking is increasingly understood. The United Nations Office on Drugs and Crime (UNODC) found that in around 25 percent of cases, trafficking survivors were subjected to multiple forms of gender-based violence prior to being trafficked.[3] The most recent data on detected trafficking victims also found that the intimate partner was the trafficker in 13 percent of cases. The broader patriarchal culture and social norms related to men's control of women's sexuality, and acceptance and justification of violence against women, are key underlying factors of women's vulnerability to trafficking. [4]

There are two major links between gender-based violence (GBV) and trafficking in persons (TiP):

(1) Certain forms of TiP target or affect women and girls disproportionately and therefore constitute a form of GBV themselves. According to the UNODC Global Report on Trafficking in Persons, women make up 60 percent of detected victims of trafficking for sexual exploitation and most victims trafficked for the purpose of forced marriages are women and girls.

(2) Among trafficked victims, there are often persons who experience different forms of GBV before, during or after the trafficking. This may include physical and mental abuse, including rape, deprivation of liberty or forced abortion by traffickers. It may also include violence, abuse and exploitation at the hands of persons not typically considered as 'professional' criminals but rather as members of the household where the victim ends up.[5]

Many of the trafficked victims around the world have faced both trafficking and gender-based violence (GBV). Therefore, the connection between trafficking in persons and gender-based violence cannot be ignored and must be effectively addressed.

Trafficking in women and girls: Violence against women and girls

Trafficking constitutes a violation of international law because it is contrary to the international prohibition on sex-based discrimination. A refinement of this position identifies

[1] UNODC, 2023, Global Report on Trafficking in Persons (2022), the United Nations, p. XII.

[2] United Nations, UN-Women and Women Count, Progress on the Sustainable Development Goals: the Gender Snapshot, 2023, p. 10.

[3]https://www.unodc.org/documents/human_trafficking/2020/final_Female_victims_of_trafficking_for_sexual_exploitation_as_defendants.pdf

[4] Trafficking in women and girls: crises as a risk multiplier, Report of the Secretary-General, A/77/292.

[5] UNODC, 2022, Quick Reference Guide for the Identification of Gender-Based Violence in Trafficked Persons, the United Nations Publication, p. 6.

trafficking as a form of violence against women and, therefore, a violation of the norm prohibiting discrimination on the basis of sex.[1]

With regard to violence against women, General Recommendation No. 19 on violence against women issued by the Committee on the Elimination of Discrimination against Women, and the Declaration on the Elimination of Violence against Women adopted by the General Assembly in 1993 are significant.

General Recommendation No. 19 brings the issue of violence against women within the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) by stipulating that the definition of discrimination contained in article 1 includes gender-based violence, i.e., violence that is directed against a woman because she is a woman or that affects women disproportionately. It makes specific reference to trafficking by identifying it as a form of violence against women that is incompatible with the equal enjoyment of rights by women and with the respect for their rights and dignity, putting women at special risk of violence and abuse.[2]

The Declaration on the Elimination of Violence Against Women (1993) defines 'violence against women' as 'any act of gender-based violence that results in or is likely to result in physical, sexual or psychological harm or suffering to women'.[3] Since trafficking results in all these three kinds of harms, the declaration clearly lists trafficking as one of the forms of violence against women.

Additionally, the Beijing Declaration and Platform for Action identifies trafficking as a form of violence against women. It recommend the detailed action to be taken by Member States against violence against women, including trafficking in women, in particular "appropriate measures to address the root factors, including external factors, that encourage trafficking in women and girls for prostitution and other forms of commercialized sex, forced marriages and forced labour in order to eliminate trafficking in women". [4]

While trafficking is itself a form of violence against women, violence against women can also be a factor increasing vulnerability to trafficking. Women may also be more vulnerable than men to coercion and force at the recruitment stage, increasing their susceptibility to being trafficked in the first place. [5]

States (particularly countries of origin) can address increases in vulnerability to trafficking related to violence against women through practical measures that could include: providing safe shelter for women experiencing violence; setting up crisis hotlines; and establishing victim support centres equipped with medical, psychological and legal facilities. Longer term measures that seek to address the social, cultural and structural causes of violence are also important. These may include: reforming legislation that either discriminates against women or fails to address violence against women; ensuring the prompt investigation and prosecution of complaints related to violence against women; providing access to effective

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[1] OHCHR, 2010, Recommended Principles and Guidelines on Human Rights and Human Trafficking Commentary, United Nations Publication, p. 39.

[2] Paragraph 13(b), General Comment on Article 6 of CEDAW, General Recommendation No. 19: Violence against women, 1992.

[3] Article 1 of the United Nation Declaration on the Elimination of Violence against Women, 1993.

[4] Paragraph 113(b), Strategic Objective and Action D, Chapter IV, Beijing Declaration and Platform for Action, 1995 (A/ CONF.177/20).

[5] OHCHR, 2010, Recommended Principles and Guidelines on Human Rights and Human Trafficking Commentary, United Nations Publication, p. 111.

remedies for gender-based violence; implementing education initiatives aimed at educating the public about violence against women and combating negative attitudes towards women; and training police, immigration, judicial and medical personnel and social workers on the sensitivities involved in cases of violence against women. [1]

The trafficking of women and girls is a form of violence against women that impedes the social and economic development of communities and States, as well as the achievement of the internationally agreed development goals.[2]

Therefore, preventing and responding to trafficking of women and girls should be linked to the Sustainable Development Goals focused on eradicating all types of violence against women and girls.

Links between trafficking, violence against women and the Sustainable Development Goals (SDGs)

The SDGs provide a framework for addressing the root causes of trafficking in persons and offer opportunities to connect with other global partnerships and initiatives to combat this issue. Out of the 17 SDGs, trafficking in persons is specifically mentioned in three targets under three goals: Goal 5 (gender equality), with target 5.2 seeking to eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation, the indicator agreed to measure this target is 5.2.1 and 5.2.2; Goal 8 (decent work and economic growth), with target 8.7 being to take immediate action and effective measures to eradicate forced labour, end modern slavery and human trafficking, the indicator agreed to measure this target is 8.7.1; and Goal 16 (peace, justice and strong institutions), with target 16.2 being to end abuse, exploitation and all forms of violence against and torture of children, the indicator agreed to measure this target is 16.2.2 (refer to Table 1).[3]

Table 1: The SDGs relevant to anti-trafficking in persons, especially women and girls[4]

Goals	Targets	Indicators
Goal 5. Gender Equality "Achieve gender equality and empower all women and girls"	5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age
		5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence

[1] OHCHR, 2010, Recommended Principles and Guidelines on Human Rights and Human Trafficking Commentary, United Nations Publication, p. 111.

[2] Strengthening crime prevention and criminal justice responses to violence against women, General Assembly Resolution 65/228.

[3] Trafficking in Women and Girls, Report of the Secretary-General, A/73/263, p. 5.

[4] Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development, A/RES/71/313, E/CN.3/2018/2 and E/CN.3/2019/2,E/CN.3/2020/2.

Goals	Targets	Indicators
Goal 8. Decent Work and Economic Growth "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"	8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	8.7.1 Proportion and number of children aged 5–17 years engaged in child labour, by sex and age
Goal 16. Peace, Justice and Strong Institutions "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels"	16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children	16.2.2 Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation

However, trafficking of women and girls is a multifaceted issue cutting across human rights, rule of law, migration, labour, inequality, anti-corruption, education, gender, violence, and conflict issues. Many of the root causes and underlying factors for the trafficking of women and girls are covered in the Sustainable Development Goals. They include gender-specific factors such as: the vulnerability of women to poverty, addressed in Goal 1; the limited access for women and girls to education, addressed in Sustainable Development Goal 4; and the acceptance and normalization of violence against women and girls, which is addressed in Goal 11. Broader socioeconomic factors also play a role, such as inequalities within and between countries, which is addressed in Goal 10, and insecurity as a result of conflict, addressed in Goal 16, or as a result of climate change and natural disasters, which is addressed in Goals 12, 13, 14 and 15. As such, the implementation of several Goals is critical to the elimination of trafficking in women and girls.

Anti-trafficking efforts of Myanmar: The 3Ps Paradigm

Myanmar serves as both the source and transfer location for human trafficking, with the primary destinations being China, Thailand, and Malaysia. The main types of trafficking in Myanmar were forced marriage, forced labor, and forced prostitution. In Myanmar, the primary reason driving human trafficking is the increasing demand for employment possibilities. The traffickers successfully persuade the victims that they will secure respectable and well-paying jobs elsewhere. There seems an especially strong connection with the demand vacuum of other countries since domestic trafficking comprises only 19.68 per cent while transnational trafficking does 80.32 per cent (refer to Figure 1). In 2021, most detected victims of trafficking were women and made up 79.31 per cent. Out of the children trafficking, girls made up 71.43 percent.[1]

[1] Central Body for Suppression of Trafficking in Persons (CBTIP), Ministry of Home Affairs, Annual Report of Anti-trafficking (2021), p. 64.

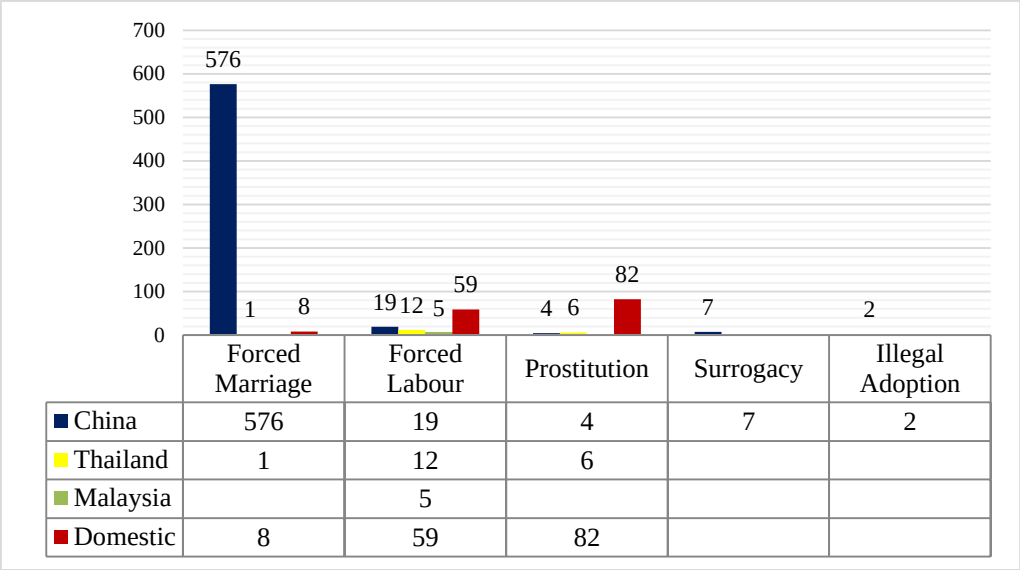

Figure 1: Patterns and Trends of Human Trafficking in Myanmar, 2017 - 2020 [1]

In 1995, Myanmar signed the Beijing Declaration and Platform for Action which is a global blueprint for advancing women's rights through various actions including anti-human trafficking measures. As part of the commitments made under the Beijing Declaration, Myanmar adopted a National Plan of Action for Trafficking in Women and Children in 1997 followed by a Five-Year National Plan of Action to Combat Human Trafficking in 2007. Consequently, in 2004, Myanmar became a member state to the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime. In 2005, Myanmar adopted the first national legislation on anti-trafficking, the Anti- Trafficking in Persons Law in which acts of human trafficking are criminalized. In 2017, Myanmar had ratified the ASEAN Convention against Trafficking in Persons, Especially Women and Children. In 2022, the Anti-Trafficking in Persons Law (2005) is repealed by the Prevention and Suppression of Trafficking in Persons Law. The new law criminalizes all forms of trafficking in persons, especially women and children, in line with the UN Trafficking Protocol and the ASEAN Trafficking Convention.[2] It contains the provisions relating to the criminalization of acts committed for the purpose of enabling trafficking such as document fraud, participation in an organised criminal group, disclosure of confidential information relating to the trafficking victim, obstruction of justice, and attempting or being an accomplice in the commission of human trafficking. Furthermore, it introduces the new penalty for the traffickers using internet and technology.[3] With regard to trafficking in persons, the Central Body for Suppression of Trafficking in Persons (CBTIP) is the key agency in developing and implementing the Five-Year National Plans of Action to Combat Human Trafficking with the participation of the relevant ministries. Currently, community-based anti-trafficking task forces are organized to prevent and combat trafficking. [4]

[1] Data yearly issued by the Anti-Trafficking in Persons Division of Myanmar Police Force.
[2] Section 3(b) of the Prevention and Suppression of Trafficking in Persons Law, 2022.
[3] Section 43 of the Prevention and Suppression of Trafficking in Persons Law, 2022.
[4] Chapter 5 of the Prevention and Suppression of Trafficking in Persons Law, 2022.

As regard protection of trafficked victims, the provisions relating to measures of trafficked victim protection such as non-punishment of trafficked victims, means for repatriation, reintegration and rehabilitation of trafficked victims, and compensation for damage suffered by trafficked victims are mentioned in the Prevention and Suppression of Trafficking in Persons Law of 2022. In giving assistance to victims of human trafficking, the Ministry of Social Welfare, Relief and Resettlement is the main agency. When exploited persons are rescued and are identified as victims, they are placed under protection in a shelter home of the Department of Rehabilitation. This department provides a two-week program of "rehabilitation" for most victims of trafficking returning from abroad. Providing basic needs and physical and mental care, are also being performed while temporarily receiving the victims of trafficking in persons in the shelters. In accordance with "National Standard Operating Procedures on Repatriation, Reintegration and Rehabilitation of Victims of Trafficking in Persons", providing travel expenses, medical care and food for victims of trafficking, and supporting individual needs for rehabilitation are being implemented.

The role of prevention is vital in addressing human trafficking. As an origin country for human trafficking, interventions focus primarily on prevention, including awareness raising and vulnerability reduction. Regarding the awareness-raising activities on anti-trafficking in persons and on the risks of human trafficking, preventive activities such as distributing pamphlets, erecting billboards and posters, conducting training and talks, broadcasting educational stories through multi-media, and putting stickers on the passenger buses and at the highway bus stations; sending public information via SMS through telephone operators; and at the basic education level, teaching the knowledge relating to human trafficking in the life skills subject are being carried out.

Alignment between anti-trafficking efforts of Myanmar and the SDGs

Although efforts to prevent trafficking mainly focus on awareness-raising and information-sharing, more emphasis is needed on tackling the root causes of trafficking and on preventing trafficking as an integral part of Myanmar's implementation of the Sustainable Development Goals. Myanmar has been in the process of reforms that are in line with the Five-Point Road Map and nine objectives of the State Administration Council. Among the priorities in the process of reforms, the balance between economic development, social development and environmental protection is the priority. The following table illustrates the alignment between the SDGs and their respective targets with the strategies and action plans outlined in the Myanmar Sustainable Development Plan (MSDP) (2018-2030) related to anti-trafficking.

Table 2: The alignment between MSDP[1] and the SDG Target 5.2, with a focus on anti-trafficking

Pillar	Goal	Strategy	Action Plan	Strategic Outcome	Relevant Agencies	Relevant SDG Target
3 People and Planet	4 Human resources and social development for a 21st century society	4.1 Improve equitable access to high quality lifelong educational opportunities	4.1.2 Eliminate abuse, discrimination, and exploitation faced by young people, including girls and other vulnerable groups, in all educational environments	All children have access to, progress through and successfully complete a quality basic education	MoEDU, MoSWRR	**SDG 5.2**
		4.3 Expand an adaptive and systems based social safety net and extend social protection services throughout the life cycle	4.3.5 Introduce programmes and services to prevent and punish human trafficking	Children and young people have services to protect them against risk and support their development	MoSWRR, MMCWA, MoALL, MoLIP, MoHA	**SDG 5.2**

In order to combat human trafficking, one of the best ways to do that is to align anti-trafficking efforts with the UN SDGs. The above alignment demonstrates the concerted efforts and targeted strategies outlined in Myanmar Sustainable Development Plan to address the multifaceted issue of trafficking, recognizing its intersection with the SDGS relevant to counter-trafficking.

Implementation of the SDG Target 5.2 in Myanmar

The trafficking of women and girls is a form of violence against women, and as such, responses to trafficking must be connected to the targets of the Sustainable Development Goals relating to the elimination of all forms of violence against women and girls, SDG 5, Target 5.2. Under The Sustainable Development Goals Report 2023, insufficient progress has been made in reducing intimate partner violence over the past two decades. Despite growing global awareness and evidence on effective prevention strategies, rates of violence against women were reported to

[1] Myanmar Sustainable Development Plan (2018 – 2030), 2018, Ministry of Planning and Finance, Myanmar, pp. 13, 28 and 46; A Monitoring Framework against the Myanmar Sustainable Development Plan (MSDP), 2021, the Central Statistical Organization (CSO), Ministry of Planning and Finance, Myanmar, pp. 10, 25 and 41.

have increased. It is need to pass laws and put in place emergency response plans that prevent and eliminate violence against women and girls, both online and offline, by 2030.

The United Nations states that gender-based violence is a silent emergency in Myanmar.[1] Myanmar Demographic and Health Survey (2015-2016) highlights that 15 percent of women have experienced physical violence since age 15 and 3 percent have ever experienced sexual violence. 3 percent of ever-pregnant women report having experienced physical violence during any pregnancy. 21 percent of ever-married women have experienced spousal violence; the most common type of spousal violence is physical violence (15 percent), followed by emotional violence (14 percent). Only 3 percent of ever-married women have ever experienced spousal sexual violence. 37 percent of ever-married women who have experienced spousal violence report suffering physical injuries, including 7 percent who have had serious injuries such as deep wounds, broken bones, and broken teeth. Only 22 percent of women who have experienced physical or sexual violence committed by anyone have sought help to stop the violence, and 37 percent have never told anyone about the violence.[2]

The MDHS (2015-2016) indicates that 51 percent of women and 49 percent of men held that a husband would be justified in beating his wife in certain circumstances.[3] Culturally, wife beating is still not widely believed to be a social problem in Myanmar. As recognized by the General Assembly, violence against women is often embedded in and supported by social values, cultural patterns and practices.[4]

It is therefore essential that States must comply with international commitments when addressing violence against women. Myanmar is a signatory to the 1979 Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1997. In doing so, Myanmar agreed to develop law to implement it. In signing the United Nations Convention on the Rights of the Child in 1991, Myanmar also agreed to end violence against both girls and boys. The 1993 UN Declaration on the Elimination of Violence against Women is a significant global standard that Myanmar as a UN member state should adhere to. These norms were further advanced by the 1995 Beijing Declaration and Platform for Action, through which States agreed 12 priorities to accelerate progress to implement CEDAW. At the regional level, Myanmar signed the 2004 Association of Southeast Asian Nations (ASEAN) Declaration on the Elimination of Violence against Women.[5]

Following the Beijing Platform for Action (1995), Myanmar National Committee on Women (MNCW) (previously named Myanmar National Committee of Women's Affairs - MNCWA) was established on 3 July 1996 as a national mechanism chaired by the Union Minister for the Ministry of Social Welfare, Relief and Resettlement for inter-ministerial cooperation and the implementation on women development programmes in order to integrate women rights and gender issues into government policy. In 2013, the MNCWA developed the

[1] www.burmalibrary.org/docs22/Justice_Base-2016-04-22-Women_in_Myanmar-Plural_legal_systems.pdf.
[2] Ministry of Health and Sports (MoHS) and ICF, 2017, Myanmar Demographic and Health Survey 2015-16, Nay Pyi Taw, Myanmar, and Rockville, Maryland USA: Ministry of Health and Sports and ICF, p. 261.
[3] https://dhsprogram.com/pubs/pdf/FR324/FR324.pdf.
[4] General Assembly Resolution 65/228.
[5] Cate Buchanan, 2022, "Preventing Gender-Based Violence in Myanmar", Constitution Assessment for Women's Equality Series No. 3, p. 4.

National Strategic Plan for the Advancement of Women (NSPAW) (2013–2022), in which violence against women was listed as one of the twelve priority areas. [1]

Myanmar upholds the zero-tolerance policy against any form of sexual violence. Myanmar signed Joint Communiqué on Prevention and Response to Conflict Related Sexual Violence on December, 2018. To implement this Joint communiqué, the National Committee on Prevention and Response to Violence against Women in Conflict and its working committee are organized. In June 2020, this committee's name have been changed to the National Committee on Prevention and Response to Conflict-Related Sexual Violence and its working committee to overall response all forms of sexual violence. With the lead of the State Administrative Council, the working committee of Prevention and Response to Conflict-Related Sexual Violence was reorganized and it is undertaken to approve the action plan. [2]

The Ministry of Social Welfare, Relief and Resettlement is drafting the Prevention and Protection on Violence against Women Law to effectively protect women and girls from all forms of violence including sexual violence. Moreover, the Prostitution law is being drafted to protect the sex workers from being exploited and to achieve the equal rights in access to health care services in cooperation with the relevant ministries, non-governmental organizations and international non-governmental organizations and CSOs.[3] Prostitutes are especially vulnerable to violence because their unlawful status tends to marginalize them. They need the equal protection of laws against rape and other forms of violence. [4]

The Department of Social Welfare (DSW) carries out strengthening gender equality and protection programmes for vulnerable groups with prevention, protection and responses approaches. As the prevention activities, DSW conducts the GBV awareness activities such as '16 Days of Activism against Gender-Based Violence' which is an international campaign, and takes place each year and runs from 25 November (International Day for the Elimination of Violence against Women) to 10 December (Human Rights Day). DSW conducts '24 hours Helpline Service' started from November 2016 for the protection and response of the gender-based violence against women. DSW has assigned well-trained DSW Case Managers in States and Regions including Naypyitaw Union Territory and provides services in order to respond the complaints systematically. Besides, DSW sets up 'One Stop Women Support Center - OSWSC' in Yangon, Mandalay, Mawlamyine, Laishio, Loikaw, Monywa and Sittwe for women and girls survivors affected by violence. These centers provide shelter, health care, legal aid, psychosocial support, vocational training, cash support and reintegration into community.[5]

To reach the SDG Target 5.2, Myanmar is working to improve the protection of violence against women and girls by monitoring the violence against women and girls by collecting data on the survivors. The following table shows the gender-based violence handled by the Department of Social Welfare (DSW) during 2017 and 2023 (November).

Table 3: Record of Gender-Based Violence (2017-2023, November) [6]

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[1] Ibid, p. 5.
[2] https://www.ohchr.org/sites/default/files/2022-02/Myanmar.pdf
[3] Ibid.
[4] OHCHR, 2010, Recommended Principles and Guidelines on Human Rights and Human Trafficking Commentary, United Nations Publication, p. 41.
[5] https://www.ohchr.org/sites/default/files/2022-02/Myanmar.pdf
[6] Data on gender-based violence issued by the Department of Social Welfare, the Ministry of Social Welfare, Relief and Resettlement of Myanmar.

No	Year	Rape for girls under 16 years of age	Rape for women over 16 years of age	Attempt to rape for girls under 16 years of age	Attempt to rape for women over 16 years of age	Sexual Harassment and assault	Domestic Violence	Other	Total
1	2017	113	7	3	-	13	61	49	246
2	2018	330	42	38	-	31	114	60	615
3	2019	442	65	18	3	-	31	99	658
4	2020	407	72	19	3	16	171	137	825
5	2021	162	29	7	10	-	64	31	303
6	2022	230	38	-	-	7	32	31	338
7	2023 (November)	95	17	-	7	14	76	69	278
	Total	1779	270	85	23	81	549	476	**3263**

The crime can be prevented by identifying and reducing the risk factors, and identifying and increasing the protection factors that help shield a person from the crime.[1] In anti-trafficking of women and girls, it is necessary to observe the victimisation of human trafficking created by a combination of violence and gender-based discrimination that worsens the vulnerability of a woman or girl in an economic and social plight. It is recognized that human trafficking and GBV are interrelated issues that must be tackled together, and the comprehensive efforts to prevent and respond to human trafficking include the efforts to prevent and respond to GBV. [2] The efforts to combat human trafficking will be strengthened by passing the Prevention of Violence against Women Law.

On the other hand, proper message in public awareness campaigns is an important component. Men and boys can play as agents of change in addressing the harmful impact of gender stereotypes and negative social norms and in preventing violence against women and human trafficking, and it is need to educate and engage men and boys for this purpose.[3] Women and girls victims of human trafficking, owing to pervasive and persistent gender equality, are further disadvantaged and marginalized by a general lack of information on or awareness and recognition of their human rights and by the stigmatization often associated with human trafficking, as well as by the obstacle they meet in gaining access to accurate information and recourse mechanism in cases of the violations and abuses of their rights. Therefore, special measures are required for their protection and to increase their awareness.[4]

The Sustainable Development Goal 5, with target 5.2 of the 2030 Agenda for Sustainable Development refers to trafficking in women and girls as a form of violence against women. Violence against women and girls takes many forms, including physical, sexual, psychological,

[1] https://sherloc.unodc.org/cld/en/education/tertiary/organized-crime/module-12/key-issues/key-crime-prevention-typologies.html

[2] Shujiro Urata, Kazuo Kuroda and Yoshiko Tonegawa, 2023, "Sustainable Development Disciplines for Humanity", Springer, p. 141.

[3] Resolution adopted by the General Assembly on 17 December 2018, A/RES/73/146.

[4] Ibid.

and economic. It occurs in many settings, including home, school, community and over the Internet. Similarly, a wide range of perpetrators commit violence against women and girls, such as family members, intimate partners, and strangers. Such violence not only inflicts harm, pain and humiliation on women and girls but also kills them. Without addressing violence against women and girls, the relevant SDGs targets for counter-trafficking of women and girls cannot be achieved.

Findings

Myanmar has integrated its action plan to prevent and respond to trafficking into the MSDP. Myanmar's action plan aims to establish an adaptive social safety net by introducing programs and services to prevent and punish human trafficking, aligning with the goal of ensuring children and young people have protective services and developmental support. Aligned with Sustainable Development Goal Target 5.2, another pertinent initiative aims to eradicate abuse, discrimination, and exploitation experienced by young individuals, particularly girls and other susceptible groups, in educational settings. The goal is to ensure that all children can access, advance in, and effectively complete a high-quality primary education.

Recommendations

The life skills subject at the basic education level which includes the basic skills that will enable people to adapt to social life according to their age should be taught effectively. The use of explicit and extreme violence should be considered or included as an aggravating circumstance for the offence of trafficking in persons in national anti-trafficking legislation. And the Prevention and Protection of Violence Against Women Law need to pass without delay.

Conclusion

Trafficking in persons, especially women and girls, is a persistent challenge in Myanmar. It is characterized by the violation of the right of survivors to a life free from coercion, abuse and violence. Myanmar women and girls face particularly marginalization, due to gender gaps in access to education, economic inequality, insecurity compounded by decent work deficits and limited access to social protection, prevalent and persistent violence and abuse. As a result, women and girls are at heightened risk of being trafficked into some of the most exploitative situations. It is evident that efforts to tackle the causes of trafficking and respond to emerging challenges are increasingly critical to ensure that intersecting gendered inequalities do not continue to leave the most marginalized behind.

The commitment to leaving no one behind in the implementation of the Sustainable Development Goals is particularly important for the elimination of trafficking in women and girls. The trafficking of women and girls is a form of violence against women, and therefore, the responses to trafficking must be connected to the targets of the Sustainable Development Goals relating to the elimination of all forms of violence against women and girls. As such, all women and girls live a life free from violence including trafficking.

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IMPORTANCE OF TRANSPARENCY IN PUBLIC-PRIVATE PARTNERSHIPS IN THE PURSUIT OF SDG GOAL 16

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Abstract

Public-private partnerships (PPPs) have been defined by the World Bank as "a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance." PPP aims to deliver good quality projects through a transparent and competitive process. However, transparency obligations in a PPP contract are typically subject to a number of limited exceptions in order to protect commercial or sensitive information of the parties and they can also be prone to and be a source of corruption. This paper focuses on addressing transparency as a key tool to implement SDG Goal 16 (Peace, Justice and Strong Institution) through Target 16.5 (to substantially reduce corruption and bribery) in the implementation of the 2030 Agenda for the Sustainable Development Goals (SDGs). This paper uses a qualitative research approach with the use of case studies to highlight the role of transparency in combating corruption and to highlight the factors threatening the transparency of PPP projects. It has been found that confidentiality of commercial information, if over protected, would threaten the integrity of PPPs and foster a lack of trust, unfair competition and unaccountability. It is also important that the PPP process maintains a zero tolerance for corruption since it can damage the quantity and quality of public services at any stage of the duration of a PPP project. For there to be a successful PPP regime, the process must be free of corrupt practices under good governance which demands elements of transparency, equal treatment, and open competition.

Keywords: Public-Private Partnership, Transparency, Corruption

Methodology

This paper uses qualitative research approach with the use of case studies to highlight the role of the transparency in combating corruption and to highlight the factors threatening the transparency of PPP projects. A literature review on PPPs has been carried out to understand the important of confidential and transparent nature of PPPs. And it analyzes the important role of transparency in the challenges that corruption pose for an efficient PPP regime using the case study approach. Then it studies the legal framework for PPPs in Myanmar and discuss for the further enhancement of transparency obligations within the PPP framework. This paper uses information collected from both primary and secondary sources which includes international conventions, legislations, government documents, books, academic papers and relevant websites.

Findings

Although Myanmar has made progress with initiatives such as the Project Bank Notification and the PPP Center, but transparency gaps remain throughout the project lifecycle, eroding public trust and investor confidence. Therefore, a specific PPP law that governs all public-private collaborations, should be enacted, incorporating detailed transparency requirements, clearing mandating what kind of information should be disclosed and what will be kept confidential, ultimately guaranteeing the regular disclosure of contracts and project monitoring reports.

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Introduction

The 2030 Agenda for Sustainable Development adopted by 193 United Nations member countries aims at transforming the world through the implementation of its 17 Sustainable Development Goals in critical areas like infrastructure, health, education, gender equality, and water and sanitation, among others.[1] The United Nations has acknowledged the role of PPPs in achieving the SDG goals where financing is needed for new infrastructure to provide these services. PPPs are becoming increasingly significant as governments attempt to solve the enormous difficulties brought on by pandemics, population expansion, climate change, and economic inequality. PPPs are essential for identifying and implementing innovative and economical solutions by combining public sector resources with the creativity, efficiency, current technology, and knowledge of the private sector.[2]

If PPPs are not properly planned and designed, they may be vulnerable to corrupt activities. Promoting transparency in the bidding, contract award, and implementation processes can help to lower corruption in PPPs.[3] The Sustainable Development Goals (SDGs) are contingent upon the successful combat of corruption. With regard to target 16.5, which attempts to significantly reduce corruption and bribery in all of its forms, goal 16 of the SDGs specifically aims to "build effective, accountable, and inclusive institutions at all levels". This goal reflects the growing understanding of the significance of addressing corruption for achieving sustainable development. Combating corruption frequently requires bolstering accountable, open, and efficient public institutions.[4] Inclusivity, accountability, transparency, and participation are further institutional principles that the 2030 Agenda has accepted and are critical to the fight against corruption.[5]

Definition of Public-Private Partnership

There is no commonly acknowledged definition of the term public-private partnership. Public-private partnership (PPP) is the term used to describe the partnership between the public and private sectors.[6] Infrastructure deficit is brought on by financial constraints, competing demands on public resources, and the skyrocketing prices associated with infrastructure procurement. As a result, in order to access resources like finance and experience, the public sector looks to collaborate with the private sector. With the PPP model, a government provide a consortium from the private sector the sole authority to design, build, and/or run an infrastructure project under specific guidelines for a fixed period of time, which is usually long-term.[7] PPPs have been defined by the World Bank as "a long-term contract between a private party and a

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[1] Jane Lethbridge & Pippa Gallop, (2020) *Why Public-Private Partnerships (PPPs) are still not delivering,* EPSU, p-1.

[2] Alexei Zverev, Chris Tassis & Zeynep Boba, (2023) *Public-Private Partnerships for Promoting Sustainable Development Goals.* EBRD, p-74.

[3] PPPLRC, (2022) "Transparency, Good Governance and Anti-Corruption Mechanisms" https://ppp.worldbank.org/public-private-partnership/overview/practical-tools/good-governance-anticorruption.

[4] United Nations, (2019) *Sustainable Development Goal 16: Focus on Public Institutions.* p-40.

[5] Ibid, p-xii.

[6] Akogwu Agada, (2019) *Combating the Menace of Corruption in Nigeria: A Multi-Disciplinary Conversation.* Black Tower Publishers, p-131.

[7] Nathan Associates, (2017) *Public-Private Partnerships: A Basic Introduction for Non-Specialists.* EPS-PEAKS, p-11.

government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance".[1]

Public-private partnerships (PPPs), which aim to improve public services or the management of public sector assets, combine the deployment of private sector capital with occasionally public sector capital.[2] The definition of PPP given by the Organization for Economic Co-operation and Development (OECD) is that PPPs unite the public and private sectors in a manner that shares risks and allows the private partner to use a capital asset to fund and deliver public services. PPPs can provide public services in relation to both infrastructure assets like bridges and highways as well as social infrastructure assets, such as hospitals, utilities, and prisons.[3] In a broader sense, PPPs encompass all forms of collaboration between the public and private sectors. It should be noted that since the relationship between two parties is based on the terms of the PPP contract, it is contractual rather than a partnership in the legal sense.[4]

Confidentiality and Transparency in Public-Private Partnership

PPP contracts are governed by commercial and competition laws, where confidentiality clauses are subject to stricter regulations than those found in public administration. As a result, there is less information about the project and less opportunity for public inspection, which threatens democratic accountability and encourages corrupt behavior.[5] Scholars generally agree that PPP agreements are frequently kept secret from the public and that PPPs suffer from a severe lack of transparency. Furthermore, the contractual agreement frequently contains commercially sensitive information by permitting private actors to provide public services, which may impede transparency.[6] In order to preserve the integrity of the PPP procedures and guarantee competitive, equitable, and transparent private investment, it is therefore essential to keep the proper balance between the requirement for transparency and the protection of commercially sensitive information.[7]

A key component of any PPP contract is the confidentiality of information shared between the contracting authority and bidders. The majority of commercial contracts include clauses requiring the parties to maintain the secrecy of any information disclosed in connection with the contract, including pricing and intellectual property, as well as the terms of the agreement.[8] The fundamental justification for maintaining confidentiality is to protect commercially sensitive information that, in the event that it were made public, may harm the government's finances or those of a rival bidder. In order to prevent bidder from abusing the system and preserve the integrity of the bidding process, confidentiality is necessary to prevent

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[1] World Bank, (2017) *Public-Private Partnerships: Reference Guide.* p-1.

[2] Micheal B. Gerrard, (2001) "Public-Private Partnerships", https://www.imf.org/external/pubs/ft/fandd/2001/09/gerrard.htm.

[3] OECD, " OECD Principles for Public Governance of Public-Private Partnerships", https://www.oecd.org/gov/budgeting/oecd-principles-for-public-governance-of-publicprivatepartnerships.htm#:~:text=Public%2DPrivate%20Partnerships%20(PPPs),asset%2C%20sharing%20the%20associate d%20risks.

[4] E. R. Yescombe, (2007) *Public–Private Partnerships: Principles of Policy and Finance*. Elsevier Ltd., p-3.

[5] María José Romero, (2015) *What Lies Beneath? A Critical Assessment of PPPs and Their Impact on Sustainable Development.* Eurodad, p-26.

[6] Sodhi S. I., (2008) "Public Private Partnerships in India: How to Ensure Transparency and Accountability" *Indian Journal of Public Administration*, vol.54 (3), p-675.

[7] Walter Amoko, (2018) "A Matter of Competing Principles: Confidentiality and Disclosure in PPP Procurement", https://www.oraro.co.ke/a-matter-of-competing-principles-confidentiality-and-disclosure-in-ppp-procurement/.

[8] World Bank, (2019) *Guidance on PPP Contractual Provisions.* p-155.

bidders from learning the contents of each other's submissions.[1] The private partner is typically the one with the greatest information to protect when it comes to information that could give its competitors a competitive advantage. But in some cases, such as when a PPP contract is related to the defense industry, the contracting authority may also want to keep some information confidential. In certain extremely sensitive projects, the contracting authority may demand that the private partner sign a written promise to be bound by national security laws, as well as other companies and individuals directly involved in providing the service.[2]

Public accountability and transparency have been negatively damaged by the overuse of "commercial-in-confidence" clauses in privatization projects. Restricting or obscuring information that was previously accessible to stakeholders of government decisions exposes governments to significant risk. Specifically, the incorporation of commercial confidentiality provisions into Public-Private Partnership (PPP) agreements significantly restricts citizens' access to publicly owned information, thereby endangering the possibility of well-informed public discourse and positive outcomes related to public accountability.[3] Since PPPs enable private actors to deliver services that are typically delivered by public actors, transparency is crucial to fostering confidence between the public authority and the population. The promotion of transparency and disclosure has been acknowledged internationally under the right to access information[4] enshrined in Article-19 of the International Covenant on Civil and Political Rights[5] and national laws, even though both private and public sector parties may want to keep certain information confidential and it has also become a crucial factor for governments, non-governmental organizations, and international organizations in their operations.[6]

In addition to helping to improve governance and give service users a better understanding of the quality of care they should be receiving, the World Bank states that "there are reasons to believe that significant disclosure can help PPP programs achieve desired value-for-money and better outcomes."[7] Transparency is required in order for the public and the legislature to know who will pay what to whom, when, and from which budget. Studies also indicate that strict transparency requirements are viewed as a potentially effective countermeasures against corruption.[8]

The following situation can be studied as an example of transparency issue which is the Queen Mamohato Memorial Hospital built in Lesotho.[9] The Lesotho government initiated a PPP project in 2006 to build a national hospital to replace the aging and outdated main public hospital, Queen Elizabeth II, and to upgrade the network of urban filter clinics. The 425-bed hospital and a network of renovated urban clinics were designed, constructed, and operated for

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[1] Walter Amoko, (2018) "A Matter of Competing Principles: Confidentiality and Disclosure in PPP Procurement", https://www.oraro.co.ke/a-matter-of-competing-principles-confidentiality-and-disclosure-in-ppp-procurement/.

[2] World Bank, (2019) *Guidance on PPP Contractual Provisions.* p-155.

[3] Valarie Sands, (2006) "The Right to Know and Obligation to Provide: Public Private Partnerships, Public Knowledge, Public Accountability, Public Disenfranchisement and Prison Cases" *UNSW Law Journal*, vol.29 (3), p-337.

[4] The General Comment no. 34 of the Human Rights Committee, CCPR/C/GC/34, paras 18–19.

[5] Article 19, The International Covenant on Civil and Political Rights (ICCPR).

[6] World Bank, (2019) *Guidance on PPP Contractual Provisions.* p-155.

[7] World Bank Institute, (2013) Disclosure of project and contract information in public-private partnerships. p-16.

[8] Iossa, E., Spagnolo, G., & Vellez, M, (2013) "The Risks and Tricks in Public-Private Partnerships", *Centre for Research on Energy and Environmental Economics and Policy,* p-7.

[9] Oxfam, (2014) "A dangerous Diversion: Will the IFC's flagship health PPP bankrupt Lesotho's Ministry of Health?" *Oxfam Briefing Note*, p-2.

eighteen years by a private sector consortium known as Tsepong. The project is an availability-based PPP model, using performance-based contracts. The Tsepong consortium contributed US$ 474.665 in equity capital and the Lesotho government contributed US$ 58 million in direct finance in addition to a US$ 94.9 million loan from the Public Development Bank of South Africa (DBSA).

Since the Tsepong intends to reimburse the loan with government fees, the loan is recognized as a private sector contribution. Nonetheless, the Lesotho government signed the loan and offered guarantees, meaning that the government would be responsible for payment if Tsepong defaulted. The loan is worth ten times the annual budget of the health ministry, which puts the government at great risk given that the Tsepong is already known to have failed on a number of loan installments. This PPP project is an example of highly risky and costly finance, where the majority of the detailed discussions and calculations were conducted in secret and were covered by commercial confidentiality.[1] This reduces the likelihood of substantive public scrutiny.

Transparency can have a variety of fundamental objectives, including reducing the degree of corruption, boosting private sector investment in infrastructure, raising public awareness and confidence, achieving value for money, promoting competition, and enabling better informed markets.[2] PPP projects may also take into account the public interest, human rights, social and environmental factors, and other aspects in favor of enhanced transparency and disclosure.[3]

Confidentiality and transparency are therefore two fundamentals of PPPs that must be carefully balanced since without information, accountability and transparency are nearly impossible to achieve. Information that is commercially sensitive could put the government and bidders in danger if the flow of information is not monitored, especially during the pre-award and contract execution phases. This might seriously affect the value for public funding and call into question the competitiveness of the entire process.[4]

Transparency as a Key in Combating Corruption

PPP seeks to develop high-quality projects through a transparent and competitive procedure. Transparency is fundamental to and essential for the exercise and protection of human rights. The public cannot properly scrutinize the use of a state's powers if there is insufficient transparency. Understanding the scope and methods of government through data monitoring is crucial for the general public and civil society. PPPs demand transparency at every stage of their implementation, including public tendering procedures, technology deployment regulations, and the effects or outcomes of deployments.[5]

The concept of transparency refers to the facilitation of public access to data regarding the functions, composition, results, and performance of the public sector.[6] Transparency in a Public-Private Partnership (PPP) is defined by the OECD as "efficient access to information throughout

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[1] María José Romero, (2015) *What Lies Beneath? A Critical Assessment of PPPs and Their Impact on Sustainable Development.* Eurodad, p-21.

[2] World Bank, (2019) *Guidance on PPP Contractual Provisions.* p-155.

[3] Privacy International, (2021) *Safeguards for Public-Private Surveillance Partnerships.* p-5.

[4] Walter Amoko, (2018) "A Matter of Competing Principles: Confidentiality and Disclosure in PPP Procurement", https://www.oraro.co.ke/a-matter-of-competing-principles-confidentiality-and-disclosure-in-ppp-procurement/.

[5] Privacy International, (2021) *Safeguards for Public-Private Surveillance Partnerships.* p-5.

[6] United Nations, (2019) *Sustainable Development Goal 16: Focus on Public Institutions.* p-15.

the PPP procurement process, which benefits public and private partners and enhances project management, accountability, and transparency."[1] Transparency also ensures that project tenders are fair and that the estimated costs are available for public review. Private companies will have a greater chance of competitive modeling and strong project development if they have access to PPP data, especially from previous bidding and ongoing project assessments.[2] Since transparency is a fundamental component of any public procurement process, the private sector will only be interested in PPP programs if the procurement rules guarantee and uphold transparency and fairness in the selection process, as well as access to relevant data and studies on the projects to help prospective bidders evaluate the opportunity effectively. Governments are responsible for their decisions in PPP procurement, which means that all relevant data, including those about the PPP project's performance and the process's fairness, must be accessible for auditing. [3]

A few of the primary issues and challenges concerning transparency are: attracting enough bidders without favoring any of them; choosing the private actor in a transparent manner; establishing clear objectives and guidelines; providing the public with access to information about funding and other subjects; negotiating appropriate terms and ensuring that there are clear guidelines about what information can be disclosed to the public; and managing certain parties with power and influence that impede information sharing.[4] Regardless of the challenges in ensuring transparency, transparency is regarded as one of the most effective means of preventing misappropriation of funds, corruption, procrastination, and poor quality of goods and services. It is essential since it guarantees administrative responsiveness, equity, and equal treatment in all interactions. Additionally, transparency benefits the public by providing a means of understanding and monitoring the PPP process; it upholds equality and growth; it reinforces democratic principles; it provides public and private actors with an incentive to perform well; it improves the legitimacy of the decision-making process; it increases public confidence in public agencies by demonstrating that they are willing to listen to the public's needs and concerns; and it facilitates the control of corruption in public life and so on.[5]

Being a standard of both anti-corruption and human rights law, transparency is thus linked to the public's right to know about official procedures and acts.[6] Article 10 of the United Nations Convention against Corruption (UNCAC) highlights the importance of transparency in the fight against corruption which states that "Taking into account the need to combat corruption, each State Party shall, in accordance with the fundamental principles of its domestic law, take such measures as may be necessary to enhance transparency in its public administration, including with regard to its organization, functioning and decision-making processes, where appropriate."[7] It is widely accepted that the likelihood of discovering corruption is increased when information on a decision-making process is made public and readily verifiable with regard to the rules and the identities of the decision makers. Therefore, transparency discourages corruption by raising the likelihood of being discovered. Furthermore, transparency lowers the

[1] OECD, (2008) Public-Private Partnerships: In Pursuit of Risk-sharing and Value for Money. p-125.
[2] Ibid, p-126.
[3] Asian Development Bank, (2016) *The APMG Public Private Partnership (PPP) Certification Guide*. p-101.
[4] Sodhi S. I., (2008) "Public Private Partnerships in India: How to Ensure Transparency and Accountability" *Indian Journal of Public Administration*, vol.54 (3), p-675.
[5] Ibid, p-676.
[6] UNDOC, (2019) *Anti-Corruption Module 6: Detecting and Investigating Corruption.* p-9.
[7] Article 10, The United Nations Convention against Corruption (UNCAC).

information barrier, allowing for examination and monitoring, which enables identification and lessens the possibility of corrupt behavior.[1]

Corruption impedes efforts to fulfill the Sustainable Development Goals. The World Bank discovered that USD1 trillion is paid in bribes annually, and the World Economic Forum calculated that corruption costs at least USD2.6 trillion, or 5 percent of the world's gross domestic product.[2] According to World Bank, high levels of corruption steal between 20 and 40 percent of official development assistance, or USD 20 billion to USD 40 billion every year. The detrimental effects of corruption are numerous and diverse. Corruption promotes poverty in terms of income, distribution of resources, and access to public services. It also hinders economic growth and causes enormous economic losses and reduces innovation. It reduces economic growth directly by raising the price of goods or services, and indirectly by distorting incentives and expenses of economic actors.[3] Corruption weakens both institutional and interpersonal trust and intensifies conflict. It is present at every level of the public service delivery chain, including budgetary planning, policy creation, acquisitions, and procurement. Conversely, it has been determined that one essential element of good governance is the absence of corruption.[4]

PPPs contracts are public contracts that are subject to manipulation in the same way as public procurement contracts, despite the fact that they are not the same as "traditional" public procurement. As a result, it is critical that corruption be treated with zero tolerance within the PPP process.[5] In this sense, a well-designed procurement procedure is intended to be provided by the United Nations Commission of International Trade Law (UNCITRAL) Model Law on Public Procurement. The objectives of this model law are to maximize economy and efficiency, encourage involvement in the process, stimulate competition for the procurement's subject matter, treat all parties fairly and equally, encourage integrity, fairness, and stakeholder confidence in the process, and attain transparency in the process.[6]

The following situation highlights the failure to uphold transparency in the PPP administration as well as the widespread impact of corruption on sustainable development both at the national and international level.

Corruption by Odebrecht Company in Brazil

The Odebrecht corruption emerged as a result of the Lava Jato investigation in Brazil. The Lava Jato investigation started out as a minor investigation of money laundering by doleiros, black market foreign exchange dealers operating through car washes and gas stations. As the Lava Jato investigation progressed, it uncovered a separate corruption scheme run by the construction firm Odebrecht. Odebrecht is one of Latin America's most significant engineering and construction company operating in power, transport, sea, and airports. It has been found that Odebrecht had bribed about 600 politicians and public officials in ten Latin American countries

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[1] UNDOC, (2019) *Anti-Corruption Module 6: Detecting and Investigating Corruption.* p-9.
[2] World Bank, (2020) https://www.worldbank.org/en/events/2020/10/06/early-detection-of-fraud-and-corruption-in-public-procurement-through-technology.
[3] United Nations, (2019) *Sustainable Development Goal 16: Focus on Public Institutions.* p-40.
[4] Ibid, p-41.
[5] Akogwu Agada, (2019) *Combating the Menace of Corruption in Nigeria: A Multi-Disciplinary Conversation.* Black Tower Publishers, p-141.
[6] United Nations, (2011) UNCITRAL Model Law on Public Procurement, Annex I.

and two African countries to win the public bidding process of large infrastructure projects, and to renegotiate the projects at higher prices after winning them.[1]

The US Department of Justice (DOJ) had jurisdiction in the Odebrecht case and prosecuted Odebrecht under the U.S. Foreign Corrupt Practices Act of 1977[2], since the company made payments from bank accounts in New York, and held some meetings to negotiate bribes in Miami.[3] On December 21 2016, 77 Odebrecht executives signed plea agreements with the US Department of Justice, as well as with Swiss and Brazilian authorities in exchange for leniency. The plea agreement between the US Department of Justice and Odebrecht has led to judicial investigations in several countries, leading to plea bargains and additional disclosures of political corruption. The former CEO of Odebrecht, Marcelo Odebrecht and two other executives were sentenced in Brazil to 19 years in prison for corruption, money laundering, and criminal association. However, the sentence was later reduced, and Marcelo Odebrecht was instead placed under house arrest.[4]

According to the DOJ plea agreement, the Odebrecht case involved bribes of US $788 million given to high-level public officials and politicians for more than 100 projects in Angola, Argentina, Brazil, Colombia, Dominican Republic, Ecuador, Guatemala, Mexico, Mozambique, Panama, Peru and Venezuela in exchange for ill-gotten benefits worth approximately $3.336 billion.[5] In order to manage the large sums of money required to win contracts, Odebrecht established the Division of Structured Operations (DSO), a separate department dedicated to corruption, The actual negotiations took many different forms, such as outright bribes or change evaluations to win contracts and, to avoid arbitration and regulation that could hinder procurement of the contract. For Odebrecht, any increase in renegotiation would allow for a more significant market share. For the people of Brazil, on the other hand, this would simply reduce public funding or ensure lower-quality services or infrastructure that are necessary for urban development.

Odebrecht distorted the firm selection process in various ways. It used bribery to influence subjective bid criteria in order to disadvantage or exclude competitors. The evaluation of the technical expertise of participants was often biased in projects that were tendered competitively. In the event that the technical score was a weighted average of objective and subjective components, the weights would be chosen to favor Odebrecht. As an alternative, Odebrecht might be arbitrarily awarded the maximum technical score, while its rivals would be given a lower score. In other cases, potential bidders were disqualified by imposing technical requirements that only Odebrecht could meet.[6]

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[1] Nicolás Campos, et al, (2021) "The Ways of Corruption in Infrastructure: Lessons from the Odebrecht Case", *Journal of Economic Perspectives*, vol.35 (2), p-172.

[2] The U.S. Foreign Corrupt Practices Act, 1997.

[3] Fergus Shiel & Sasha Chavkin, (2019) "Bribery Division: What is Odebrecht? Who is Involved?" https://www.icij.org/investigations/bribery-division/bribery-division-what-is-odebrecht-who-is-involved/.

[4] Nicolás Campos, et al, (2021) "The Ways of Corruption in Infrastructure: Lessons from the Odebrecht Case", *Journal of Economic Perspectives*, vol.35 (2), p-174.

[5] U.S. Department of Justice, (2016) "Odebrecht and Braskem Plead Guilty and Agree to Pay at Least $3.5 Billion in Global Penalties to Resolve Largest Foreign Bribery Case in History" icij.org/investigations/bribery-division/bribery-division-what-is-odebrecht-who-is-involved/.

[6] Nicolás Campos, et al, (2021) "The Ways of Corruption in Infrastructure: Lessons from the Odebrecht Case", *Journal of Economic Perspectives*, vol.35 (2), p-177.

The following demonstrates how Odebrecht bribed different individuals as projects progressed. In 2010, a public-private partnership contract was awarded to a consortium headed by Odebrecht to build and operate the Ruta del Sol, a 528-kilometer highway that connects Puerto Salgar to San Roque in Colombia. Odebrecht paid $6.5 million to Vice Minister for Transportation, Gabriel Garcia Morales, who ensured that the National Infrastructure Agency (ANI), which tendered the project, tailored the auction in the favour of Odebrecht. To this effect, it included a discretionary pass/fail qualification stage that verified a bidder's financial capacity, the fulfillment of legal requirements, and the bidder's experience delivering public-private partnerships. Due to the efforts of GarcÍa Morales, one of the competitors of Odebrecht failed on the experience requirement, and the remaining bidder failed on all criteria. Presuming to be the sole bidder in the auction, Odebrecht placed a bid that was almost at the highest amount that could be charged.[1]

Moreover, Odebrecht paid bribes in the expectation that it would renegotiate the contract to its advantage after the projects were awarded. An example of renegotiations that added major works to the original project is the hydroelectric plant Pinalito in the Dominican Republic. In order to add a fully independent project to the original contract, Odebrecht bribed the Vice President of the Dominican Corporation of State-Owned Electric Companies (CDEEE). The value of the contract was raised by $88 million due to the addition of the El Abanico-Constanza road project. The Pinalito contract was eventually renegotiated six times resulting in an increase in total cost from $131 million to $231 million.[2]

Sometimes, bribes were given in order to circumvent the regulations designed to stop opportunistic renegotiation. As an example, in the contract between Odebrecht and the Ministry of Transport and Communications for the IIRSA Norte highway, the Peruvian section of an East-West transcontinental highway, Odebrecht also agreed to add $28.3 million in expenses and additional investments with the head of the unit responsible for public-private partnerships. It is required that the agreement has to be approved by an arbitration panel according to Peruvian law. According to the prosecutors, Odebrecht allegedly bribed two panel members $110,000 to guarantee that the firm would win the arbitration process.[3]

The Odebrecht corruption had significance economic and political consequences throughout Latin America. In many cases, anti-corruption provisions in contracts have frequently resulted in the suspension or cancellation of significant projects. For example, construction of Gasoducto del Sur, a large pipeline duct in Peru that would transport natural gas from the Camisea fields to the south of the country, was suspended even though the generating plants that would use the gas had already been built. The IMF estimates that the macroeconomic cost brought about by the Odebrecht case in Peru was approximately 0.8 percent of GDP in 2017.[4] Though there are no definitive estimates, several reports speculate that the Lava Jato and the associated Odebrecht case had a significant macroeconomic impact in Brazil as well: for

[1] Nicolás Campos, et al, (2021) "The Ways of Corruption in Infrastructure: Lessons from the Odebrecht Case", *Journal of Economic Perspectives*, vol.35 (2), p-181.
[2] Ibid, p-179.
[3] Ibid.
[4] International Monetary Fund, (2018) *Peru: 2018 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for Peru.* p-21.

example, the Lava Jato case has generated a suspension of projects worth approximately $27 billion.[1]

Brazil is an official signatory to the United Nations Convention against Corruption (UNCAC), committed to reducing corruption by prevention, law enforcement, international cooperation, asset recovery, technical assistance, and information exchange. Additionally, in pursuance of governance, the nation has committed to the United Nations Convention against Transnational Organized Crime (UNTOC), the Convention on the fight against the Bribery of Foreign Public Officials in International Commercial Transactions, the Inter-American Convention against Corruption and in coordination with the OECD, the National Strategy against Corruption and Money Laundering (ENCCLA). Brazil is also a signatory to the 2030 Agenda for Sustainable Development Goals but Brazil has systemically obstructed improvements to ending poverty, climate change, the preservation of ecosystems, peace, justice and strong institutions and corruption in the implementation of SDG Goals.

Reducing poverty and inequality is significantly hampered by the drain of corruption on public funding Thus, the extent of Odebrecht's bribery in public-private partnerships would inevitably act as a catalyst for decreasing opportunities for sustainable development nationally and internationally. Bribes to officials for contracts, lawyers suppressing evidence, and judges dropping charges all contribute to the breakdown of strong institutions and governance for justice. Subsequently, corruption hinders and destroys any potential for social, economic and environmental growth.

Legal Framework for Public-Private Partnerships in Myanmar

Myanmar's infrastructure need is massive and it lags far behind its neighboring countries by various indicators. Therefore, one of the top priorities of Myanmar government is to attract private investors to fund infrastructure projects. PPPs are actually not new to Myanmar; in the past, they were largely associated with the road and electricity sectors and mostly known as BOT (Build-Operate-Transfer). There are both greenfield and brownfield projects in the category of BOTs.[2] Instead of going through competitive bidding process, the majority of the PPPs in the past were based on unsolicited proposals and bilateral negotiations. The public trust in private investments in infrastructure projects has been eroded as a result of these PPPs projects.[3]

Since 2018, Myanmar has made significant progresses in developing a regulatory framework to facilitate Public-Private Partnerships (PPPs). A key development was the issuance of the Project Bank Notification on November 30, 2018, by the Office of the President. The President Office issued the Project Bank Notification (Notification No. 2/2018), with the objective of "ensuring that Government plans for Project development and implementation are predictable and transparent, and are employed as effectively as possible to achieve national development objectives."[4] It set guidelines and procedures for developing projects in accordance with strategies and action plans in Myanmar Sustainable Development Plan (MSDP) using

[1] Nicolás Campos, et al, (2021) "The Ways of Corruption in Infrastructure: Lessons from the Odebrecht Case", *Journal of Economic Perspectives*, vol.35 (2), p-176.

[2] Jeffrey Delmon, (2010) 'Understanding Options for Public-Private Partnerships in Infrastructure' (Policy Research Working Paper No 513/2010, World Bank) 31.

[3] Sie Sein, (2020) "Legal Development to Promote Public-Private Partnerships System", *University of Mandalay Research Journal*, vol.11 p-56.

[4] Office of the President, (2018) *Project Bank Notification* (Notification No 2/2018) Section 2(a).

multiple financing mechanisms including public private partnership. Moreover, Project Bank, a publicly accessible online portal, has been established to enhance transparency and competitiveness in the open tender system when implementing the projects under Myanmar Sustainable Development Plan.[1] In conjunction with the Project Bank, the government initiated the establishment of a Public-Private Partnership Center (PPP Center) within the Ministry of Planning and Finance (MoPF).[2] The PPP Center is tasked with facilitating and implementing PPP projects, providing a dedicated institutional framework to support private sector engagement in infrastructure development.

According to the Project Bank Notification, 2018, Public-Private Partnership (PPP) means an investment mechanism based on a contractual agreement between an Implementing Government Agency (IGA) and a private party for providing a public asset or infrastructure or service that includes but is not limited to financing, designing, implementing, managing, and/or operating infrastructure facilities and services traditionally provided by the public sector in an effort to reduce the Government's capital and operating expenditures while improving the quality of assets and services.[3]

The Myanmar government is committed to creating an enabling environment for the private sector to engage in PPPs and to use PPPs to deliver infrastructure and services in the future. The government is implementing PPPs in three main sectors: energy, telecommunications and transport.[4] To prevent corruption in the tendering process, there needs to be in place a number of procedures that can address such a problem. These include requirements for preparing in advance feasibility studies, open procedures and known criteria for the award of contracts, and mechanisms which deter and punish offenders.[5] The major legal and regulatory framework governing procurement of Myanmar's states and region governments is Presidential Directive 1/2017, known as "Tender Procedure for Procurement of Civil Works, Goods, Services, Rental and Sale of Public Properties for the Government Departments and Organizations". Directive 1/2017 guides tender processes for the procurement of construction, goods and services undertaken by union, state and region government departments and organizations. It provides detailed information on the process and procedures of public procurement.

The tender procedures include a number of provisions designed to promote transparency, provide a complaint mechanism, and reduce conflicts of interest and opportunities for bribery and corruption. Upcoming tenders must be publicly announced on government notice boards and websites with the method and timeframe varying according to the size of the tender.[6] On the tender opening day, the tender has to be opened in front of the tender bidders in compliance with the procedure, place, and time stated in the tender documents. When opening the tender, names of the tender bidders, bidding price, tender period, and the amount and time period of the tender guarantee have to be publicly announced.[7] The tender winner is then publicly announced in front

[1] Ibid, Article 1.
[2] Ibid, Article 11.
[3] Office of the President, (2018) *Project Bank Notification* (Notification No 2/2018) Section 1(n).
[4] Kate Geary, (2020) *In the dark: Secrecy and The Myingyan Public Private Partnership Gas Power Plant in Myanmar.* Re-course, p-12.
[5] United Nations, (2004) *Governance in Public Private Partnerships for Infrastructure Development.* p-7.
[6] Office of the President, (2017) Tender Procedures for Construction, Procurement of Goods and Services, Lease and Sale by the Government Departments and Organizations (Directive No 1/2017) Paragraph 10.
[7] Ibid, Paragraph 23.

of other tender bidders.[1] This directive also sets out actions that can be taken if there are instances or suspicions of bribery or corruption. These can include the cancellation of the contract and the tender, disciplinary or administrative actions against the employees from the procuring departments and organizations per the existing rules and regulations, and banning the bidders, suppliers, or purchasers from other tenders.[2] Under the Anti-corruption Act 2013, it is provided that "any other competent authority except the person who possesses the political post commits the bribery, on conviction, he shall be punished with imprisonment for a term not exceeding 12 years, and shall also be liable to fine."[3]

While it is important that bidding processes and contract awards are made public, disclosure of the actual terms of agreement and performance of PPPs is vital. The purpose of the Project Bank is to strengthen the development of Projects that will enable the Government to effectively implement the MSDP, including by publishing government plans for the priority projects needed to achieve national development objectives in a predictable and transparent way.[4] The Ministry of Planning and Finance shall publicize Projects contained in the Project Bank via various means that include but shall not be limited to an interactive, web-based, publicly accessible database.[5] While the database includes information about the name, location, cost, schedule and contact details,[6] vital information such as terms of the PPP contracts and financial information are not publicly available. It is crucial for PPP contracts to be made publicly available, accessible and written in the language of the concerned communities. Mandated proactive disclosure of contracts requires the posting of important project and contract information in the public domain by departments and other public agencies within a given time period after award of contract. It also requires updating for additions, modifications, deletions and variations in the information disclosed from time to time.[7]

The process of disclosure should consider the possibility that disclosing certain information can harm the competitive positions of the companies bidding for or participating in PPPs. However, performance and penalties would not be very useful to stakeholders without essential information on pricing, payments and asset transfers, etc.[8] Consequently, there is a need for clear provision on what kind of information should be kept confidential since the private sector needs to be aware of what specific information will be disclosed and what will be kept confidential before the signing of the agreement. Under the Myanmar Official Secrets Act 1923, "If any person having in his possession or control any secret official code or password or any sketch, plan, model, article, note, document or information to which he has access owing to his position as a person who has held a contract on behalf of the Government or as a person who is or has been employed under a person who holds or has held such an office or contract, willfully communicates the code or password, sketch, plan, model, article, note, document or information

[1] Ibid, Paragraph 37.
[2] Ibid, Paragraph 45.
[3] Anti-corruption Law 2013, Section 56.
[4] Office of the President, (2018) *Project Bank Notification* (Notification No 2/2018) Section 2(a).
[5] Ibid, Article 8.
[6] Ibid, Article 9.
[7] World Bank, (2013) *Disclosure of Project and Contract Information in Public-Private Partnerships.* p-19.
[8] Ibid, p-25.

to any person other than a person to whom he is authorized to communicate it, he shall be guilty of an offence under Section-5.[1]

Moreover, Article 46 of the Project Bank Notification provides that IGAs shall monitor and supervise PPP Projects to ensure compliance with terms and conditions stated within respective PPP contracts and shall send a copy of monitoring reports to the PPP Center on a 6-month basis.[2] But there is no provision concerning the disclosure of such monitoring reports to the public and these reports should be available for public scrutiny together with the terms of the contract itself. Information on the performance of PPPs should be disclosed on a regular basis to provide service users with an understanding of what levels of service they should be getting. Therefore, contract and project information disclosure may produce more sustainable contracts and benefit both public and private sector by reduced risks of renegotiation. Therefore, a specific PPP law that governs all public-private collaborations, should be enacted, incorporating detailed transparency requirements, clearing mandating what kind of information should be disclosed and what will be kept confidential, ultimately guaranteeing the regular disclosure of contracts and project monitoring reports.

Discussion

Since PPPs are long-term contractual agreements based on predetermined performance standards, performance monitoring by the public entity is even more crucial to ensure that the terms of the agreement are followed. To achieve this, transparency which is widely understood to be the public's unrestricted access to timely and accurate information on the decisions and performances made in the public sector,[3] has emerged as a central element of accountability and anti-corruption strategies and policies. Transparency is essential in every stage of PPP lifecycle, from procurement and contract making to project monitoring. Contract documents, namely the main agreement identifying any changes made since the contract was originally signed and relevant side agreements including government guarantees should be disclosed proactively by the government with minimal redactions which reflect commercially confidential information. However, it should be remembered that disclosing commercially confidential information might harm the business interests of a party to the contract.[4] Therefore there should be clear provision about what kinds of information of the project are to be kept confidential in order to facilitate the prompt delivery of PPP documents.

Information on the performance of PPPs should be disclosed together with budget documentation on a regular basis to reduce uncertainty for investors, potentially lowering the risk and the cost for the government.[5] Increasing transparency increases the risk of detection of corrupt practices and this can act as a deterrent to future corruption. Even though, the PPP model is structured to discourage corruption, it is possible the process can be manipulated. Where this is the case, it undermines citizens' confidence in public institutions. The effect is that the cost of the provision of the project will be unnecessarily high or its quality will be significantly lower at the expense of end-users and tax payers. By making information public, it is easier for economic and

[1] Myanmar Official Secrets Act 1923, Section 5.
[2] Office of the President, (2018) *Project Bank Notification* (Notification No 2/2018) Article 46.
[3] Madeleine C. Fombad, (2013) "Accountability Challenges in Public–Private Partnerships from A South African Perspective" *African Journal of Business Ethics*, vol.7 (1), p-15.
[4] World Bank, (2013) *Disclosure of Project and Contract Information in Public-Private Partnerships.* p-16.
[5] International Monetary Fund, (2021) *Mastering the Risky Business of PPP in Infrastructure.* p-38.

social actors to identify evidence of corruption and malfeasance and to act accordingly, punishing corrupt behaviour through market and investment choices. Also, transparency will increase the risks of discovery and the expected costs of corruption, if sanctions are credible.

Conclusion

Transparency is considered one of the major factors that contribute to the success of PPPs and the transparency and sustainability of the investment are negatively affected by the limitation of public access to PPP documents. The reason that the PPP agreements encompass certain commercial confidentialities, make it impossible for the public to correct and control the risks conditions and quality of services pertaining to the public interest. The lack of transparency could result in the enhancement of corruption. Therefore, the government has introduced measures to promote transparency by creating Project Bank, an official database for providing information on the development of PPPs under the Project Bank Notification. However, there has been certain necessity in the details of conflict of interest disclosure requirements and the degree to which transparency requirements are put into practice. A high level of transparency in the conclusion of PPP agreements are essential for the supervision of the agreement execution by both the partners and the public. Therefore, a specific PPP law governing all partnerships between public and private should be enacted ensuring transparency at every stage of the PPP, where both parties, as well as the general public, could monitor the ongoing performance of the PPP and the outcome of the collaboration. Specifically, information on the utilization of public resources, criteria of decision making, results of decisions, and financial statements should be accessible and available to the partners and the public.

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LEGAL STUDY ON HOMICIDAL OFFENCES UNDER CRIMINAL LAW IN MYANMAR

Thiri Kalyar Pa Pa Win[1], Htwe Htwe Thet[2]

Abstract

Homicide refers to the act of killing a human being. Homicide can be lawful or unlawful. Culpable homicide is punishable by law is divided into two categories; such as culpable homicide amounting to murder and culpable homicide not amounting to murder. Culpable homicide is a kind of unlawful homicide. It is provocation caused by grave and sudden circumstances, exceeding the right of private defence. Murder means to commit the crime of intentionally killing a person. All the cases of murder are culpable homicide but culpable homicide in not murder. Murder is the highest offence in the Criminal Law. Intention and knowledge are important points of the culpable homicide amounting to murder. There is a thin line between murder and culpable homicide. In practice, the circumstance of two offenses of are closely connective. In deciding of a culpable homicide or murder, it must be decided and considered based on the facts whether there is premeditation or not, kind of injury. It is important to clarify that engaging in actions with the aim to cause death or harm that is likely to result in death constitutes culpable homicide or murder. The paper is focused on examining the degree of criminal liability for homicidal offenses. Moreover, the offences affecting life do not include group homicide, there is no specific offence for group killing in Myanmar. It is necessary to regulate an offence to solve the group homicide in Myanmar. It is the duty of National to protect life of the people because of the promoting the peaceful and inclusive societies for the sustainable development, providing access to justice for all and building the effective, accountable and inclusive institutions at all levels. A summary of the interplay between the Sustainable Development Goals and homicidal offence is provided below.

Keywords: Culpable homicide, Homicide, murder

Introduction

In Criminal Law, there are two kinds of offences affecting the human body; offences affecting life, and offences affecting human body. The existing prohibition can be seen in Penal Code of Myanmar since 1879 as the offences relating to human life. The offences affecting life includes culpable homicide, murder, causing death by negligence and suicide or abetment of suicide. The word homicide simply means one human being killed another and a homicide may therefore not be criminal. It is divided into two categories namely, lawful and unlawful homicide.

The Penal Code contains three primary homicide offences. In order of seriousness, they are culpable homicide not amounting to murder, murder and causing death by rash or negligent conduct. These offences attract very different penalties, ranging from the death penalty for murder to a maximum of two years' imprisonment for causing death by negligent conduct.

In Myanmar, the law governing offences of culpable homicide and murder are provided in Section 299 and Section 300 of Penal Code. The elements of the offences are an act or omission, which caused a death of a human being, with intention and/ or knowledge to cause death. The state of mind of the person that caused the death determines whether the said act falls under culpable homicide or murder.[3]

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[3] The Myanmar Penal Code, 1861

Culpable homicide is a kind of unlawful homicide. It is provocation caused by grave and sudden, exceeding the right of private defence, public servant exceeding power given by law, of the right of private defence, death caused without premeditation in a sudden fight and death caused by consent, there are culpable homicide. It can be punished for a term which may extend to ten years imprisonment, or twenty years imprisonment and fine for the one who break up a culpable homicide.[1]

Murder is the act of killing a human being. All instances of murder are considered culpable homicide, although not all culpable homicides are classified as murder. Murder is the highest offence in the Criminal law. 'Intention' and 'knowledge' are important points of the culpable homicide amounting to murder. Whoever commit murder being under sentence of imprisonment for a term of twenty years, or with premeditation, or in the course of committing any offence punishable under Penal Code with imprisonment for a term which may extend to seven years, shall be punished with death, and shall also be liable to fine. Whoever commits murder in any other case shall be punished with imprisonment for a term which may extend to ten years, and shall also be liable to fine.[2] The paper is focused on examining the degree of criminal liability for homicidal offenses. Moreover, the offences affecting life do not includes group homicide, there is no specific offence for group killing in Myanmar. It is necessary to regulate as offence to solve culpable homicide in Myanmar.

Aim and Objectives

This paper aims to analyze the homicidal offences and other offences affecting life in Penal Code. The objective of the paper is to examine the degree of criminal liability between culpable homicide and other offences affecting life.

Materials and Methods

An analysis was conducted on the Concept of Criminal Law and various forms of homicide. Analytical analysis of offenses impacting life and related instances is conducted.

Research Questions

1. How does the Penal Code define the crimes of Homicide and other related offenses?
2. What are the unlawful acts?

I. Concept of Homicide

The word 'homicide' has been derived from Latin term homo (man) and cido (cut). Homicide is the act of one human being causing the death of another human being. A Homicide includes an act or an omission of a person which results in the death of another. Hence, it can be said that when one has caused another to die, it is a homicide. There can be a lawful homicide and unlawful homicide in Law. The term lawful does not mean it is legal to cause a person's death; it means that the homicide is either excusable or justifiable under certain situations under the law.

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[1] Section 299 of the Myanmar Penal Code, 1861
[2] Section 300, Ibid.

Other than the stipulated situations, a homicide is an unlawful one. By law, the offence of Criminal homicide can be broken down into different levels, according to it seriousness, guided by the Penal Code. There are three primary homicide offences, which includes culpable homicide not amounting to murder, murder, and causing death by rashness or negligence.[1]

Meaning of Homicide

Homicide is any killing of a human being by another human being; most commonly used to refer to an unlawful homicide such as murder or manslaughter.[2] Homicide is the act of killing a human being. Unlawful homicide, which constitutes the crime of murder, manslaughter or infanticide, can only be committed if the victim is an independent human being, the act itself causes the death, and the victim dies within a year after the act alleged to have caused the death. Lawful homicide occurs when somebody uses reasonable force in preventing crime or arresting an offender, in self- defence or defence of other, or in defence of his property, and causes death as a result.

The word 'homicide' has been derived from the Latin terms homo which means man and cido which means cut. Homicide, therefore, is a word denoting the killing of a human being by another. It is divided into two categories namely; lawful and unlawful homicide.[3]

According to the Black's Law Dictionary, the killing of any human creature. The killing of one human being by the act, procurement, or omission of another. The act of a human being. Homicide is not necessarily a crime. It is a necessary ingredient of the crime of murder and manslaughter, but there are other cases in which homicide may be committed without criminal intent and without criminal consequences, as, where it is done in the lawful execution of a judicial sentence, in self-defense, or as the only possible means of arresting an escaping felon. The term 'homicide' is neutral; while it describes the act, it pronounces no judgment on its moral or legal quality.[4]

II. Kinds of Homicide

Homicide is the act of one human being killing another human being. There are two types of homicide:

(1) Lawful and

(2) Unlawful.

Lawful homicide or simple homicide, includes several cases falling under the General Exception of Penal Code. Unlawful homicide includes: (1) culpable homicide not amounting to murder; (2) murder; (3) rash or negligent homicide; (4) Suicide.

Lawful Homicide

Lawful homicide is those types of homicide which are not amount to any offence. These are distinct from criminal homicide.

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1 Ratanlal and Dhirajlal, The Law of Crimes, 25th Edition, 2002, p. 1261
2 Law Dictionary Third Edition, Steven H. Gifts, p. 221
3 Elizabeth A. Martin (ed.), Dictionary of Law, 5th edition, Oxford University Press, 2003, p. 232
4 Black's Law Dictionary, Fifth Edition,2016.

A culprit in a case of Homicide cannot always be culpable. This derives the nation of lawful homicide where the accused had a valid reason to commit the crime. In these cases, the person will not tend to be tried by the law and can also be exempted from the charges.

These can include death caused in self-defense or by mistake of fact or there was a bonafede execution of the law etc. Hence Homicide can be lawful as well as unlawful. Lawful Homicide may include justifiable and excusable homicide.[1]

Lawful homicide or simple homicide is committed where death is caused in one of the following ways:

(1) Where death is caused by accident or misfortune and without any criminal intention or knowledge in the doing of a lawful act, in a lawful manner, by lawful means, and with proper care and caution.[2]

(2) Where death is caused justifiable that is to say;

- (a) By a person, who is bound, or by a mistake of fact, in good faith, believes himself, bound, by law.[3]
- (b) By a judge when acting judicially in the exercise of any power which is, or which in good faith he believes to be, given him by law.[4]
- (c) By a person acting in pursuance of the judgment or under of a court of justice.[5]
- (d) By a person who is justified, or who, by reason of a mistake of fact, in good faith, believes himself to be justified by law.[6]
- (e) By a person acting without any criminal intention to cause harm, and in good faith, for the purpose of preventing or avoiding other harm to person or property.[7]
- (f) Where death is caused in the exercise of the right of private defence of persons.[8]
- (g) Where death is caused in the exercise of the right of private defence of property.[9]

(3) Where death is caused unintentionally by an act done in good faith for the benefit of the person killed, when: -

- (a) Act not intended and not known to be likely to cause death or grievous hurt, done by consent.[10]

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1 Bryan, A. Garner, Black's Law Dictionary, 9th edition, West, 2006, p. 1615
2 Section 80 of the Myanmar Penal Code, 1861
3 Section 76, of the Myanmar Penal Code, 1861
4 Section 77, Ibid.
4 Section 76, Ibid.
5 Section 78, Ibid.
6 Section 79, Ibid.
7 Section 81, Ibid.
8 Section 100, Ibid.
9 Section 103, Ibid.
10 Section 87, Ibid.

(b) Act not intended to cause death, done consent in good faith for person's benefit.[1]

(c) Where it is impossible for the person killed to signify his consent or where he is in capable of giving consent and has no guardian from it is possible to obtain consent in time for the thing to be done with benefit (S.92).

Lawful homicide is those types of homicide which are not amount to any offence. These are distinct criminal homicide.

Lawful or simple homicide may be divided into two classes. Excusable homicide and Justifiable homicide.[2]

Excusable Homicide

Excusable homicide is the accidental or self-defence killing of another person. Blackstone defined excusable homicide as,

'Excusable homicide is of two sorts: either per infortunium; or se defendendo, upon a principle of self-preservation.

Per infortunium homicide is where a man, doing a lawful act without any intention of hurt, unfortunately kills another, as where a man is at work with a hatchet, and the head thereof flies off and kills a stander by.

Homicide in self defence upon a sudden affray is also excusable. They cannot legally exercise this right of private but in sudden and violent cases, when certain and immediate suffering would be the consequence of waiting for the assistance of the law.

Excusable homicide are those of homicide committed by the offender but they are in one of the exceptions mentioned in section 80, 82, 83, 84, 85, 87, 88, 92 of the Penal Code.

Therefore, as it been stated before the concept of lawful homicide is also recognized by Penal Code, 1860. Lawful homicide is committed where death is caused in one of the following ways under the Penal Code:

Where the death is caused by accident or misfortune, and without any criminal intention or knowledge in the doing of a lawful act, in a lawful manner, by lawful means, and with proper care and caution.[3]

1. Nothing is an offence which is done by a child under seven years of age.[4]
2. Nothing is an offence which is done by a child above seven years age and twelve, who has not attained sufficient maturity of understanding to judge of the nature and con-sequences of his conduct on the occasion.[5]
3. Nothing is an offence which is done by a person who, at the time of doing it, by reason of unsoundness of mind, is incapable of knowing the nature of the act, or that he is doing what is either wrong or contrary to law.[6]

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1 Section 88, Ibid
2 Ratanlal and Dhirajhal, The Law of Crimes, 25th Edition, 2002, p.1262
3 Section 80 of the Myanmar Penal Code, 1861
4 Section 82, Ibid.
5 Section 83, Ibid.
6 Section 84, Ibid

4. Nothing is an offence which is done by a person who, at the time of doing it, is, by reason of intoxication, incapable of knowing the nature of the act or that he is doing what is either wrong or contrary to law: provided that the thing which intoxicated him was administered to him without his knowledge of against his will.[1]

5. Where the death is caused unintentionally by an act done in good faith, for the benefit of the person killed, when-

   i -he or, if a minor or lunatic, his guardian, has expressly or impliedly by consented to such an act, or

   ii -Where it is impossible for the person killed to signify his consent, or where he is incapable of giving consent, and has no guardian from it is possible to obtain consent in time for the thing to be done with benefit.[2]

Justifiable Homicide

Justifiable homicide includes cases where the death is caused: -

(i) By a person, who bound, or by a mistake of fact, in good faith, believe himself, bound, by law.[3]

(ii) By a judge when acting judicially in the exercise of any power which is or which is or which in good faith, he believes to be given him by law.[4]

(iii) By a person acting in pursuance of the judgment or order of a court of justice.[5]

(iv) By a person is justified, or who, by reason of a mistake of fact, in good faith, believes himself to be justified by law.[6]

(v) By a person acting without any criminal intention to cause harm, and in good faith, for the purpose of preventing or avoiding other harm to person or property.[7]

(vi) Where the death is cause in exercising the right of private defence of person.[8]

(vii) Where the death is cause in exercising the right of private defence of property.[9]

Under the Myanmar Penal Code, justifiable homicide are those kinds of homicide committed by the offender but they are in one of the exceptions mentioned in sections 76,77,78,79,81,100,103 of the Penal Code.

Justifiable homicide or privilege: Due to the circumstances, although a homicide occurs, the act of killing is not unlawful for example, a killing on the battlefield during war is normally

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1 Section 85, Ibid.
2 Ratanlal and Dhirajlal, The Law of Crimes, 25th Edition, 2002, p. 1262
3 Section 76 of the Myanmar Penal Code, 1861
4 Section 77, Ibid.
5 Section78, Ibid.
6 Section 79, the Myanmar Penal Code, 1861
7 Section 81, Ibid.
8 Section 100, Ibid.
9 Section 103, Ibid.

lawful, or a police officer may shoot a dangerous suspect in order to protect the officer's own life or the lives and safety of others.

III. Unlawful Homicide

Unlawful homicide is the killing of a human being in circumstances where the law does not excuse killing. Unlawful homicide is generally classified as either murder or manslaughter. The distinction between murder and manslaughter is seen to reflect degrees of seriousness of unlawful killings, based on the everyday understanding that some killing are more blameworthy than others. Both murder and manslaughter require proof that the accused's act, or failure to act, caused the death of another human being. The assessment of the seriousness of particular killing, is based on the state of mine of the accused at the time.

Unlawful Homicide includes -

(1) Culpable homicide not amounting to murder,

(2) Murder,

(3) Causing death by rash or negligent act

(4) Suicide.[1]

The distinguishing features of these different categories of unlawful homicide are:

- the degree of intention,
- knowledge, or recklessness with a particular homicide is committed.[2]

In Myanmar, culpable homicide have been provided in Chapter - 16 of the Penal Code. The offence of culpable homicide is defined in –

Section 299-

(1) whoever causes death by doing an act with the intention of causing such bodily injury as is likely to cause death commits the offence of culpable homicide not amounting to murder.

(2) whoever causes death by doing act with the intention of causing death, or with the intention of causing such bodily injury as in fact is sufficient in the ordinary course of nature to cause death, commits the offence of culpable homicide not amounting to murder in any of the following cases: -

(A) If he, whilst deprived of the power of self- control by grave and sudden provocation, causes the death of the person who give the provocation, or causes the death of any other person by mistake or accident:

Provided-

Firstly - that the provocation is not sought or voluntarily provoked by the offender as an excuse for killing or doing harm to any person;

[1] Ratanlal and Dhirajlal, Law of Crimes, 25th Edition, 2002, p.1257
[2] Ashok K. Jain, Criminal Law-1, fifth Edition, 2015, Ascent Publications, p. 171-172

Secondly - that the provocation is not given by anything done is obedience to the law, or by a public servant in the lawful exercise of the power of such public servant; and

Thirdly - that the provocation is not given by anything done in the lawful exercise of the right of private defence.

Explanation - Whether the provocation was grave and sudden enough to deprive the offender of the power of self- control is question of fact.

(B) If he, in the exercise in good faith of the right of private defence of person or property, exceeds the power given to him by law and causes the death of the person against whom he is exercising such right of defence without premeditation and without any intention of doing more harm than is necessary for the purpose of such defence.

(C) If he, being a public servant or aiding a public servant or aiding a public servant for the advancement of public justice, exceeds the power given to him by law, and causes death by doing an act which he, in good faith, believes to lawful and necessary for the due discharge of the duty of such public servant and without ill-will towards the person whose death is caused.

(D) If he acts without premeditation in sudden fight in the heat of passion upon a sudden quarrel and without having taken undue advantage or acted in a cruel or unusual manner.

Explanation. - It is immaterial in such cases which party offers the provocation or commits the first assault.

(E) If he causes the death of a person who is above the age of eighteen years and who suffers death or takes the risk of death with his own consent.

In Myanmar, the intention is absent, then the crime is dealt under section 299 of Penal Code.

This section defines culpable homicide as the act of causing death:-

(1) with the intention of causing death or

(2) with the intention of causing such bodily injury as is likely to cause death, or

(3) with the knowledge that such act is likely to cause death.

This statement that the first and second clauses of the section refer to intention apart from knowledge and the third clause refers to knowledge apart from intention.[1]

(1) Culpable homicide is the first kind of unlawful homicide. Culpable homicide is genus and murder its specie. Every 'murder' is 'culpable homicide' but not vice versa.

Culpable Homicide include two categories under Section 299 of the Penal Code. Firstly, any person accusing death by doing an act with the intention of causing such bodily injury as is likely to cause death under Section 299 sub-section (1) of the Penal Code. Secondly, if

[1] Ratanlal and Dhirajlal, Law of Crimes, 2002, 25th Edition, p. 1260

amounting to murder and act fall within five exception of Section 299, sub-section (2) of the Penal Code are culpable homicide[1].

Whoever commit culpable homicide not amounting to murder shall be punished with imprisonment for a term of twenty years or imprisonment of either description for a term which may extend to ten years and shall also be liable to fine.[2]

This Section provides punishment for culpable homicide not amounting to murder. Under it there are two kinds of punishment applying to two different circumstances.

(1) If the act by which death caused is done with the intention of causing death on such bodily injury as is likely to cause death, the punishment is twenty years or imprisonment of either description for a term which may extend to ten years and fine.

(2) If the act is done with the knowledge that it is likely to cause death but without any intention to cause death or such bodily injury as is likely to cause death, the punishment is imprisonment of either description for a term which may extend to ten years or with fine, or with both[3].

This section are defined for the punishment of culpable homicide under Section 299(1) and (2) of the Penal Code. It is not usual to present to court for the case of death normally. The burden of proof that is culpable homicide not amounting to murder is on the accused under Section 105 of Evidence Act, so it can take action by 'Murder'

It is amounting to culpable homicide if the following any condition is inclusive in the case of cause death.

(1) Causing such bodily injury as is likely to cause death, (or)
(2) Committing cause of sudden provocation,
(3) Causing death because of using the right of private defence more than necessary in the protection of property or person,
(4) Causing death by the action in good faith of public servant as to use more than necessary undue the law;
(5) Causing death, while it is sudden provocation without premeditation or without having taken under advantage, (or)
(6) Causing death by the consent of the person who above the age of eighteen, if it will be homicide[4].

In the case of Mg Tin Mya Vs. The Union of Myanmar,[5] it was held that, it can be punished to the accused although it has one believe able witness because there is no limitation of the witnesses to convict. But it is very difficult to accept the testimony of witnesses that memorized in the condition of lacking light, and threating condition.

[1] The Phay, U, The Knowledge of Criminal Law, 5th Edition, 2009, p. 533
[2] Section 304 of the Myanmar Penal Code, 1861
[3] Ratanlal and Dhirajlal, Law of Crimes, 22nd Edition, 1959, p. 250
[4] Thet Phay, U, The Knowledges of Criminal Law, 5th Edition, 2009, P. 551
[5] 1966, M.L.R, p. 644

In the case of Mg Tin Phay Vs. The Union of Myanmar[1], the Court decided that, Mg Tin Phay pointed by the tough light to the place where he heard the voice, the deceased standing by holding sword that he saw, he shot to that person cause of lacking response, so he cause the death. The distance from the deceased and offender are nearly 24 feets, besides while the deceased stood without moving was shot that is appeared, then the deceased gone up and was arrested, he could not release that is decided by court. Thus, it is cleared that Mg Tin Phay acted more than necessary, he is convicted by culpable homicide then he is sentenced from 10 years imprisonment to 3 years with rigorous imprisonment lightly by lowest Court.

In the case of Mg Min Aung Vs. The Union of Myanmar[2], the Court held that, in confession, "I attacked U Aye attack me, that stick is using before the Court" on the evidence stick and the spade, there is human blood that is a clear as (evidence-B) that the death the death person U Aye blow Win Nyunt by stick, so Win Nyunt attacked U Aye that statement must be considered. The accused should be enhanced sentence because Win Nyunt attack to the death person more than the right of private defence because the forehead and skull of person crushed.

If such was his purpose and design, or such his knowledge, and non of the General Exception of this Code are applicable, the act is an offence within this definition, although there is no apparent motive for it. If the intention or knowledge is clearly shown, it is needless to enquire into the motives. It must not, however, be forgotten that under certain circumstances the existence of a motive may become an important element is a chain of presumptive evidence, as tending to show the intention of the accused person.[3]

It can be arrested to the offender without warrant who commit “culpable homicide”. It can be non-bailable after arrest with warrant. That is the case of un compoundable. It is a congnizable offence.

By studying above the provision, we can find that, it can be sentenced for the case of culpable homicide under this section. It is obvious that to learn the punishment of culpable homicide is from the ten years imprisonment and the highest form the twenty years. The Criminal Law will be great value to promote the rule of law at the national and international levels and ensure equal access to justice for all.

(2) Murder occurs when one human being unlawfully kills another human being. In another word murder is the killing of another person without justification or valid excuse, and it is especially the unlawful killing of another person with malice aforethought Murder occurs when one human being unlawfully kills another human being. In another word murder is the killing of another person without justification or valid excuse, and it is especially the unlawful killing of another person with malice aforethout. Murder is the most serious type of criminal homicide. Definition of murder is enunciated in section 300 of the Penal Code. An offence cannot amount to murder unless it falls within to culpable homicide without amount to murder.

Elements Necessary to Constitute an Offence

1. It must be proof clearly that the death of a person.
2. Obviously, it must be proof that the death is caused by the accused.

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[1] 1966, M.L.R(H.C), p. 1001
[2] 1994, M.L.R, p.140
[3] Ratanlal and Dhirajlal, Law of Crimes, 2002, 25th Edition, p. 1550

3. It must the distinctly proof that the death is caused with the intention of causing bodily injury as in fact is sufficient in the ordinary course death by the accused.[1]

To be punished with murder by the accused, the following facts must be appeared.

(1) The accused caused death by doing any act to someone.
(2) In that death is caused, the accused
    (a) Being intention to cause death to the deceased;
    (b) Being intention of causing bodily injury is sufficient in the ordinary course of nature to cause death.

The following any fact doesn't appear.

(a) Death caused by grave and sudden provocation.
(b) Death caused by exceeding right of private defence.
(c) Death caused by exceeding power given by law by the public servant.
(d) Death caused without premeditation in a sudden fight.
(e) Death caused by taking the risk with his own consent by the person who is above the age of eighteen years.[2]

It is decided based on the circumstances and the effect of action because it can't be known what a person did some action by any kind of intention. It can be assumed surely that the accused committed with the intention to be death cause of the action cutting to the someone's neck, thus it is death.[3]

In the case of Mg Aung Htwe Vs. The Union of Myanmar[4], the Court held that, the accused shot to the deceased person who is sleeping in his home. The Appellate Court decided that the accused is with rifle and in any other house before shooting, committing the robbery of gun, threating to the deceased person that he would kill him, shooting to the deceased person with intention by 8 stiff of bullets, based on all these facts committed the murder with intention.

In the absence of direct evidence of the common intention, which is available only in rare cases[5].

In the case of Mg Khin (a) Aye Maung Vs. The Union of Myanmar[6], the Court decided that, no need to argue that at the night of robbery, the insurgent was shooting at the show. Based on the kinds of injury and the death of two villagers, the robbers are inclusive under Section 302 of the Penal Code.

It is needed to criticize based on the facts that the action of the accused has intention or not position of injury, the used force, action by the big arms or not, cutting until it is death or not[7].

By studying the above mention facts, we can find that it is amounts to murder if cases death by doing an act with the intention of causing death or with the intention of causing bodily

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1 Ba Kyain, U, Murder, Culpable Homicide and Hurt of Criminal Law, 2004, p. 2
2 Mya, U, Legal Case of Culpable homicide and Murder, 1984, p. 4
3 Thet Phay, U, The Knowledges of Criminal Law, 5th Edition, 2009, p. 532
4 1965, M.L.R, (C.C), p. 611
5 Ibid, p. 1300
6 1971, M.L.R, (C.C), p. 24
7 Ba Kyain, U, Murder, Culpable Homicide and Hurt of Criminal Law, 2004, p. 3

injury is sufficient in the ordinary course of nature to cause death. Intention is essential element in the offence of murder.

(3) **Rash or negligent homicide** is a kind of unlawful homicide. Definition of causing death by negligence in section 304A of the Penal Code. This section deals with homicide by negligence and covers that class of offences, where death is caused neither intentionally nor with the knowledge that the act of the offender is likely to cause death, but because of the rash and negligent acts which cause death, but falls short of culpable homicide of either description.

(4) **Suicide** at common law, suicide was a crime. Section 305 and 306 apply when suicide is in fact committed, whereas 309 applies where a person attempts to commit suicide. 'suicide' is self-destruction by a person.

Therefore, Unlawful homicide which includes culpable homicide not amounting murder, murder, rash or negligent homicide and suicide under the Penal Code. The legal aspect of culpable homicide and murder are review in the paper. The paper was made of the Concept of Criminal Law and types of homicide. Moreover, unlawful homicide not includes corporate homicide no specific offence in Criminal Law. It is necessary to solve culpable homicide in Myanmar.

Mens Rea in Homicide

Mens Rea means a guilty mind; the mental state accompanying a forbidden act. For an act to constitute a criminal offense, the act usually must be illegal and accompanied by a requisite mental state. Criminal offenses are usually defined with reference to one of four recognized criminal states of mind that accompanies the actor's conduct: (1) intentionally; (2) knowingly; (3) recklessly; and (4) grossly (criminally) negligent. The *mens rea* may be general, a general intent to do the prohibited act, or SPECIFIC, which means that a special mental element is required for a particular offense such as 'assault with intent to rape' or larceny which requires a specific intent to appropriate another's property. In a criminal prosecution, the state must prove beyond a reasonable doubt that the required mental state coexisted with the doing of the proscribed act. Defenses of insanity, intoxication and mistake may either nullify or mitigate the existence of a SPECIFIC MENS REA. Crimes that are prohibit often do not require any specific *mens rea*.[1]

The mental element in culpable homicide, that is the mental attitude of the agent towards the consequences of his conduct, is one of the intention. Motive is immaterial so far as the offence is concerned, and need not be established. The intention refers to either the death itself or a bodily injury which is likely cause death, that is an injury dangerous to life.

The term, '*mens rea'* meaning 'a guilty mind; a guilty or wrongful purpose; a criminal intent,' is shorthand for a broad network of concepts encompassing much of the relationship between the individual and the criminal law.[2]

[1] Steven H. Giftis, Law Dictionary, Third Edition, 1991, p. 296
[2] Cases and Materials on Criminal Law, Second Edition,1999, p. 131

Mens rea or criminal intent, is the essential mental element considered in court proceeding to determine whether criminal guilt is present, while *actus reus* function as the essential physical element.

Mens rea has roughly four different degrees of magistrate, which are intention or purpose, knowledge recklessness and gross or criminal negligence. The same offence (eg. killing a man) can incur a wide range of punishment, mind at the time of crime was committed. Depending entirely on what level of *mens rea* is found present in the criminal's mind at the time of crime was committed.

Findings

Homicidal offences include both offences that do not amount to murder and those that amount to murder. In practice, these two offences of circumstance are closely connected, and an important factor for consideration is often misunderstood. The determination of whether an act constitutes culpable homicide or murder must be based on the facts, such as whether there was premeditation and the type of injury caused. Therefore, it is essential to distinguish whether the act was committed with the intention to inflict in injury lively to result in death to constitute culpable homicide or murder.

Conclusions

Homicide means killing of a human being by a human being. A homicide includes an act or an omission of a person which results in the death of another. It includes, lawful homicide and unlawful homicide. Lawful homicide may justifiable and excusable homicide. A homicide is excusable if it is the result of an accident that occurred during a lawful act and that did not amount to criminal negligence. Justifiable homicide are intentional killings done in accordance with legal obligation, or in circumstance where the recognizes no wrong.

Committing culpable homicide involves intending to cause physical injury likely to cause death, intending to cause death, or intending to cause bodily injury that is sufficient to cause death in the ordinary course of nature. A person can be punished to a maximum of 10 or twenty years in prison for committing culpable homicide under Section 304 of the Penal Code.

Where there is an intention to kill, the offence is always murder. It is committing the murder if the act done with the intention to cause death is caused death. It is committed the murder. It can be sentenced to the offender who commits murder from at least ten years imprisonment to the highest death sentence, according to section 302 of the Penal Code.

In homicide is divided into two forms; culpable homicide not amounting to murder and culpable homicide amounting to murder. Both of these have a very minimal difference but these differences prove to be very crucial for the legal system as delivery of a fair judgment is dependent on these differences. There is a thin line between murder and culpable homicide. Then it can be noted that focused on examining the degree of criminal liability for homicidal offenses. This paper advocates for supporting peaceful and inclusive societies to achieve sustainable development, ensuring access to justice for everyone, and establishing effective, responsible, and inclusive institutions at all levels. Additionally, countries with higher levels of violence tend to have a higher prevalence of mental health concerns, which adds strain to public health facilities.

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LEGAL STUDY ON *JUS COGENS* NORMS

Zin Mar Oo[1]

Abstract

Jus Cogens means the compelling law and as such, a *jus cogens* holds the highest hierarchical position among all other norms and principles. As a consequence of that standing, *jus cogens* could be a exceptionally capable and contested concept in international law. According to the Vienna Convention on the law of Treaties, a peremptory norm of general international law is a norm accepted and recognized by the whole international community of states. It also reflects the constitutional norms of the international community as a whole. These norms can be found in the Charter of the United Nations and also many multilateral treaties, especially those concerned with human rights, contain peremptory norm and which are non-derogable. State Practice and decisions of International Court of Justice confirmed the prohibition of genocide, slavery, torture, racial discrimination and the right to life as having the character of *jus cogens*. From the identification of *jus cogens* norms, there may be an impact of peremptory norms on state and official immunities and the immunity of international organizations.

Keywords*: jus cogens*, peremptory norm, compelling law, non-derogable, *erga omnes*

Introduction

Jus Cogens means 'compelling law'. The norms of *jus cogens* are universal and obligatory. They do not depend on the consent of States. *Jus Cogens* are found in the Vienna Convention on the Law of Treaties (VCLT), 1969. The concept of *jus cogens* appeared at the end of the 19th century when a few international law writers claimed the conceivable invalidity of international agreement opposite to certain basic standards of international law in spite of the fact that it was not possible to identify those norms. *Jus Cogens* or peremptory norms are defined as rules from which no derogation is permitted and which can be amended only by a new general norm of international law of the same value.

Furthermore, the authoritative character of numerous broadly acknowledged accepted *jus cogens* rules is clearly within the interests of most, in the event that not all, States, as those States see and show those interests to be. Most States consider rules just like the prohibitions on aggression and genocide, which ensure the establishment of the advanced nation-State. These prohibitions are very important as to allow of no exceptions. *Jus Cogens* is considered that the standards secure the basic values of the universal community.

Aims and Objectives

The purpose of this paper is to outline the emergence of *jus cogens* in the Vienna Convention on the Law of Treaties. For the purpose of this paper, *just cogens* is relevant to both treaty law and customary international law, which is the most significant aspect of this conceptual development. It is to understand the significance of obligations *erga omnes* in order to safeguard the interests of the whole community, and then to observe the relationship between *jus cogens* and *erga omnes.* It aims to examine the extent of the concept of *jus cogens* in an effort to identify its defining criteria.

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Methodology

This study will conduct as a qualitative research by reviewing, examining and collecting relevant information and literatures relating to *jus cogens*. The relevant international instruments will also be reviewed, including the Vienna Convention on the Law of Treaties, draft article, and reports of the International Law Commission.

Findings

Jus cogens restrict unilateral acts like treaties due to the recognition of the importance and necessity of the concept of *jus cogens* in protecting the fundamental interests of the international community. The VCLT does not provide a list of *jus cogens* norms. The International Law Commission gave examples of listing and made references to the norms in commentaries and discussions. Therefore, there is confusion about the sources, the content, and the scope of the application of *jus cogens*. The violation of *jus cogens* norm may result in the responsibility of a state for an internationally wrongful act; however, there have been no efforts by the international community to reserve the effects of alleged violations of *jus cogens* or to ensure that offending states compensated their victims.

Concept of *Jus Cogens*

Jus cogens, or peremptory norms of international law, are an extraordinary kind of international law in that they are generally pertinent standards that take priority over all other sources of international law, such as treaties or custom, in any case of state consent. Early seventeenth to nineteenth century international law writers argued that there are certain essential principles of international law (*jus scriptum*) that bind all states, regardless of consent, *jus scriptum*. These rules did not permit any exceptions as they derived from a higher law, natural law. Any treaties and customs that violated this law were prohibited. The concept of a limitation on State Sovereignty and certain non-derogable obligations continued after the First World War. The principle of non-derogable rights in the context of law of treaties was mentioned in the League of Nations Covenant of 1919.[1]

The concept of *jus cogens* is formally entered into international law in Articles 53 and 64 of the Vienna Convention on the Law of Treaties (1969), which establish the illegality of treaties conflicting with a peremptory norm of general international law. Article 53 of the 1969 Vienna Convention on the Law of Treaties provides that a treaty is void if, at the time of its conclusion, it conflicts with a peremptory norm of general international law. For the purpose of the present Convention, a peremptory norm of general international law is a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.[2]

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[1] Aniel Cardo de Beer, Peremptory Norms of General International Law (*Jus Cogens*) and the Prohibition of Terrorism, Leiden; Boston, 2019, p.62.

[2] Article 53 of the Vienna Convention on the Law of Treaties, 1969.

As to the provisions of Article 64 of the VCLT, any treaty that is in conflict with a newly established peremptory rule of general international law will be nullified and void.[1]

An existing treaty which is inconsistent with an emergent *jus cogens* rule shall terminate on the date on which the rule arises. Article 53 and Article 64 aim to prevent this outcome by declaring that a treaty which is incompatible with a rule of *jus cogen*s shall terminate or become void.

Where a treaty is void under Article 53, Article 71 provides that the parties are to eliminate as far as possible the consequences of any act performed in reliance on any provision which conflicts with *jus cogens* and bring their mutual relations into conformity with the peremptory norm. Where a treaty terminates under Article 64, the parties are released from any obligation further to perform the treaty, but this does not affect any right, obligation or legal situation of the parties created through the execution of the treaty prior to its termination, provided that the rights, obligations or situations may be maintained thereafter in conformity with the new peremptory norm.[2]

Draft Article 26 of the Articles on State Responsibility for Internationally Wrongful Acts provides that nothing in this chapter precludes the wrongfulness of any act of a State which is not in conformity with an obligation arising under a peremptory norm of general international law.[3] According to this article, in the case of a conflict between fundamental obligations, one of which concerns a peremptory norm, the obligation of the peremptory norm has priority.

The subject of "peremptory norms of general international law (*jus cogens*)" was initially brought up in the annex 2 to the Commission's report on its sixty-sixth Session, 2014, and was later added to the long-term work programme of work. The Commission decided to include the subject in its work agenda at its 67th session in 2015, and Mr. Dire Tladi was chosen to serve as the subject's Special Rapporteur.

The concept of *jus cogens* is again set forth in the Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations, 1986. Although *Jus cogens* fundamentally lacks a substantive definition, it imposes the restrictions on the ability of States to enter into treaties. By definition, all States are a part of the international community as a whole, and the obligations at issue are collective commitments that safeguard the interests of the international community as a whole.

Jus Cogens and Positive Sources of International Law

Custom and treaties were the foremost cited sources of *jus cogens* norms aimed the Vienna Conference. General principles of law, whereas not unequivocally specified were similarly not invalidated as a source of jus cogens norms, but by Trinidad and Tobago.[4] There's, in any case, a few vulnerability as to the source of *jus cogens* rules. There are genuine issues related with statements that *jus cogens* rules can be the result of one or any of the by and large acknowledged essential sources of international law (treaties, customary international law, general principles of law), or may be natural law.[5]

[1] Article 64 of the Vienna Convention on the Law of Treaties, 1969.
[2] Article 71 of the Vienna Convention on the Law of Treaties, 1969.
[3] Article 26 of the Draft articles on Responsibility of States for Internationally Wrongful Acts, 2001.
[4] ILC, Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001, p.16.
[5] Micheal Buyer, Custom, Power and the Power of Rules, Cambridge University Press, 2004, p.187.

The foremost self-evident sign of general international law is customary international law. Without a doubt numerous see customary international law as the foremost common premise for the arrangement of *jus cogens* norms. Gérard Cahin, for illustration, observes that customary international law is "an ordinary and common, if not exclusive, implies of formation of *jus cogens* norms." The strong relationship between the rules of customary international law and norms of *jus cogens* is reflected within the articulations by States in the General Assembly over a long time. The idea that norms of *jus cogens* are constituted by rules of customary international law is similarly borne out in case law of both domestic and international courts. *In Questions Relating to the Obligation to Prosecute or Extradite*[1], the International Court of Justice recognized that the torture is prohibited according to the customary international law. Therefore, it has become a peremptory norm (*jus cogens*)."

As for how the idea of *jus cogens* came to be, there are actually two main schools of thought: either it came straight from international law, or it was derived from one of the preexisting sources of international law. Though some contend and concede that *jus cogens* acknowledges a completely new body of law capable of establishing widely applicable regulations.[2]

The VCLT's Article 53 was challenged by several States, but only because it was ambiguous and lacked a separate dispute resolution process. Only France and Turkey were able to consistently refute the existence of jus cogens in the end.[3] There are many who contend that the current sources have been altered to permit majority rulemaking within the framework of higher law. The idea that the concept of *jus cogens* arises as a new source of general international law, however, is not supported by the history of negotiations leading up to the Vienna Convention. Instead, it was evidently common to see *jus cogens* as the result of the sources that were already in existence."[4]

International law sources can serve as the foundation for *Jus Cogens*. Peremptory norms prevent some norms from being derogated from or created by a small group of law-making subjects, therefore, restricting the ability of international subjects, in particular States, to make laws.

Jus Cogens and Customary International Law

Only in the event of a clearly established *opinio juris*—a state's belief that a practice is binding because it sprang from customary rule—are customs binding. Nonetheless, any customary concept that is consistently opposed makes an exception to the rules' binding nature. Other methods exist for superseding customary laws, including the creation of special customary international law norms and the signing of treaties. The *jus cogens* laws, on the other hand, are too basic for states to avoid accountability for, and as such, they are binding regardless of the parties' permission or the state's own particular decision to be bound.[5]

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[1] *Belgium v. Senegal*, Judgment, Report of ICJ, 2012.
[2] Dire Tladi, Special Rapporteur, Second report on *Jus Cogens*, 2017, p.79.
[3] Sten Verhoeven, Norms Of *Jus Cogens* In International Law: A Positivist and Constitutionalist Approach, 2011, p.64.
[4] Kamrul Hossain, the Concept of *Jus Cogens* and the Obligation Under the U.N. Charter, Santa Clara Journal of International Law, Volume 3, 2005, p.79.
[5] Kamrul Hossain, the Concept of *Jus Cogens* and the Obligation Under the U.N. Charter, Santa Clara Journal of International Law, Volume 3, 2005, p.78.

However, Michael Byers prefers to demonstrate that the "process of customary international law," which is a component of the international constitutional order, is where jus cogens rules originate. He contends that the non-detractable nature of *jus cogens* laws can be attributed to *opinio juris*, or anything akin to it, because states do not seem to think that they can consistently object to or contract out of *jus cogens* rules. States cannot imagine an exception to these rules because they are so fundamental to the international society of states and how that society defines itself. However, there is no mention of any aspect of practice in Article 53 of the Vienna Convention. At that point, it was difficult to imagine *jus cogens* as a reinforced kind of custom. David Kennedy referred to the super-customary rule as *jus cogens*.[1]

The preeminent source of *jus cogens* norms can be identified, so justifying the peremptory nature of those rules in a manner that aligns with the traditional bipartite understanding of customary international law. States cannot 'opt out' of the idea of *jus cogens*, just as they cannot 'opt out' of particular *jus cogens standards*. Because customary international law is typically thought to be predicated on State permission, it may therefore appear to be a troublesome source for *jus cogens* rules. Additionally, the establishment of unique customary international law norms and persistent objection are rejected by *jus cogens* standards.

Jus Cogens and Treaties

Multilateral treaties are especially appropriate sources for *jus cogens* because they are often adopted by a wide majority of States and contain special language governing the substantive content of the norm. In determining whether a particular provision in a treaty also reflects a *jus cogens* norm, treaties have historically posed evidentiary difficulties because treaties were regarded “more as contracts of private law than as genuine normative instruments.”[2]

Treaties can, at most, only play a minor role in the creation of *jus cogens* rules, according to Professor Michale Byers of the Duke University Law School, for two reasons. First, a treaty cannot restrict the powers of its parties to amend its provisions or release a party from its responsibilities; this can only happen by a subsequent treaty that all parties have agreed to. Second, none of the treaties that have codified the generally accepted *jus cogens* rules have been unanimously ratified, despite the fact that these principles are globally applicable. A general norm of international law cannot be established by any treaty, not even the UN Charter. Only between the parties to a treaty, obligations can be created.[3]

Treaty law may comprise general international law, according to Grigory Tunkin. Furthermore, it seems that several delegations at the Vienna Conference held the belief that *jus cogens* standards might originate from treaties. Poland's declaration, which said the following, may have been the clearest acknowledging treaty law as a component of general international law:

"The form or source of such rules was not of essential importance in determining their peremptory character." Some were traditional, while some were conventional. Certain aspects

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[1] *Ibid.*.

[2] Fransciso Forrest Martin, Stephen J. Schnably, Richard J. Wilson, Jonathan S. Simon, Mark V, Tushnet, International Human Right & Humanitarian Law, Cambridge University Press, 2016, p.33.

[3] Kamrul Hossain, the Concept of *Jus Cogens* and the Obligation Under the U.N. Charter, Santa Clara Journal of International Law, Volume 3, p.77-78.

originated as customs and then became part of global accords. Conversely, several were only later incorporated into customary law after initially appearing in conventions."[1]

Regarding the function of treaties in the context of *jus cogens*, some have claimed that while they do not create *jus cogens*, they do serve as proof of their existence or a declaration of peremptory rules.[2]

Because multilateral treaties are frequently ratified by a large majority of States and include specific language governing the norm's substantive content, they are particularly suitable sources for *jus cogens*. Particularly, multilateral human rights treaties incorporate non-derogable, peremptory norms.

Jus Cogens and General Principles of Law

When it comes to the modern application of broad principles for jus cogens, the ILC sets the standard. "General principles of law may serve as bases for peremptory norms of general international law (*jus cogens*)," according to Conclusion 5(2). "It is appropriate to refer to the possibility of general principles of law forming the basis of peremptory norms of general international law (*jus cogens*)," the Commentary to Conclusion 5 goes on to clarify. The statement goes on to say that general legal principles are a component of general international law since they apply to all members of the international community equally and broadly."[3]

Furthermore, Verdross referenced "the general principle prohibiting states from concluding treaties *contra bonos mores*" in his discussion of treaties that were against *jus cogens*. Every juridical order that governs the morally and rationally coexisting members of a community has this ban, which is shared by the legal systems of all civilized nations."[4]

Some commentators have persuasively argued that *jus cogens* norms can also arise from general principles of law. This is supported by the language of Article 53 of the Vienna Convention on the Law of Treaties, which refers to peremptory norms of "general international law," a term which, in turn includes general principles of law.[5]

Constitutional recognition of *jus cogens* rules of international law would be a more dependable means of safeguarding them inside the domestic legal system. The 1999 revision of the Swiss Federal Constitution accomplished this. A recent addition makes it clear that a People's Initiative (referendum) seeking a constitutional amendment cannot go against the *jus cogens* standards. The Swiss government is required to nullify any initiative that violates *jus cogens*. Such clear acknowledgment can act as a "emergency break" to ensure that fundamental international responsibilities are always respected.[6]

Domestic laws typically provide that contracts that go against the *ordre public* or public policy are void. Because they contain the ideas that nations deem to be fundamental to the

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[1] Dire Tladi, Special Rapporteur, Second Report on *Jus Cogens*, 2017, p.27.
[2] Sten Verhoeven, Norms Oof *Jus Cogens* in International Law: A Positivist and Constitutionalist Approach, 2011, p.67.
[3] Anthony J. Colangelo, Procedural *Jus Cogens*, Columbia Journal of Transnational Law, 2022, p.412.
[4] *Ibid*, p.413.
[5] Brian D. Lepord, Customary International Law: A New Theory with Practical Applications, Cambridge University Press, 2010, p.243.
[6] Erika de Wet, *Jus Cogens* and Obligations *Erga Omnes*, Oxford Handbook on Human Rights, p.19.

organization of a given legal system, most significant, and hierarchically superior, constitutions are a particularly potent source of *jus cogens*.

Identification of *Jus Cogens*

The requirements outlined in Article 53 for a norm to qualify as a jus cogens standard are widely acknowledged.[1] Article 53, of particular significance, states that the identification of jus cogens principles requires the assent of the international community of States. Nevertheless, this article does not specify which entity has the authority to determine whether a norm of international law is jus cogens, nor does it offer procedures for establishing such consent.[2]

Article 53 does not include a (non-exhaustive) list of *jus cogens* rules because there is no "accepted criterion by which to identify a general rule of international law as having the character of *jus cogens*" and since this word is always changing. In spite of this, some Law of Treaties publications tried to define a *jus cogens* norm. The UN Charter's principles regarding the unlawful use of force, international laws that prohibit international crimes, and international laws that forbid the slave trade, piracy, or genocide are a few specific examples. Regretfully, the authors of Article 53 refrained from enumerating these standards for concern that doing so would restrict the applicability and breadth of the idea of *jus cogens*.[3]

Examples suggested of treaties conflicting with such rules included: (a) a treaty contemplating an unlawful use of force contrary to the principles of the Charter; (b) a treaty contemplating the performance of any other act criminal under international law; and (c) a treaty contemplating or conniving at the commission of acts, such as trade in slaves, piracy or genocide, in the suppression of which every State is called upon to co-operate.[4]

In its Commentary to the Draft Articles on State Responsibility in 2001, the ILC gave as examples of *jus cogens* the prohibition of aggression, slavery and slave trade, genocide, racial discrimination and apartheid, torture, basic rules of international humanitarian law applicable in armed conflict, and the right to self-determination.

The United Nations Charter contains the *Jus Cogens* norms. The foundation of international law is the Charter. The international legal system's guiding ideas have been embraced by the members. All of the rules in Chapter I of the Charter are regarded as related to *jus cogens*. The Charter empowers the Security Council to make a formal determination concerning violations of principles of the Charter.

Since the end of the Second World War, a catalogue of instruments enshrining basic human rights has been codified by States as public international law. Many multilateral treaties, especially those concerned with human rights, contain peremptory norm and which are non-derogable. State practice and decisions of International Court confirmed these rules as having the character of *jus cognes.* They are prohibition of genocide, slavery, torture, racial discrimination and the right to life. Any act or omission which leads to violation of human rights with *jus*

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[1] Aniel Caro de Beer, Peremptory Norms of General International Law (*Jus Cogens*) and the Prohibition of Terrorism, Leiden; Boston, 2019, p.69.

[2] Diana Contreras-Garduno and Ignacio Alvarez-Rio, A Barren Effort? The Jurisprudence of the Inter-American Court of Human Rights on *Jus Cogens*, p.116.

[3] *Ibid*.

[4] Report of the International Law Commission on the work of its Fifteenth Session, 1961, p.199.

cogens status necessarily represents a breach of international obligation and leads to state responsibility.

In the case of *Armed Activities on the Territory of the Congo*,[1] the ICJ described genocide as 'assuredly' being a peremptory norm of general international law, without engaging in any analysis of state practice.

Neither the International Law Commission nor the Vienna Conference on the Law of Treaties developed an accepted list of peremptory norms, although both made reference in commentaries and discussion to the norms against genocide, slave trading, and use of force other than in self-defense.

Functions of *Jus Cogens*

The goal of a general international law peremptory rule is to limit other members of the international community of States' capacity to take bilateral action. If other members of the international community of States as a whole establish a peremptory norm of general international law that limits the freedom of action of members of the international community of States as a whole to act bilaterally, there are two problems with incoherence that result. First, by limiting their own freedom of action, those members of the worldwide community of states are also limiting the freedom of other members of the international community of states in general. Second, this would contradict the notion of sovereign equality because it would suggest that those participants in the international.[2]

The asserted functions of *jus cogens* are particularly important because the very definition of the term is often stated in relation to the primary function it serves, that is, on its being as a norm from which no states can derogate by mutual agreement. A second function is sometimes asserted: that *jus cogens* imposes a duty on all states to respect such norms and as a consequence any unilateral act in violation of a *jus cogens* norm would be null and void. In determining the legitimacy of Security Council resolutions and incompatible domestic laws, as well as the effects of peremptory norms on state and official immunities and the immunity of international organizations, national and international tribunals have started to address some of the potential ramifications arising from the identification of *jus cogens* norms.[3]

Three recognized and sound legal functions have been argued to be primarily displayed by *jus cogens*: (i) a contractual *jus cogens*, which has the effect of nullifying treaties (Article 53 VCLT); (ii) a judicial *jus cogens*, wherein internal or international tribunals use peremptory norms as a standard of control over acts of the Security Council; and (iii) a sanctioning *jus cogens*, which outlines particular consequences of State responsibility.

Exceptions of *Jus Cogens*

One definition of "derogation" is "an exception to or relaxation of a rule of law." It is implied that the verb "to derogate from" means "to detract from" or "deviate from (a set of rules or agreed form of behavior)". "A person or thing that is excluded from a general statement or does not follow a rule" is defined as a "exception." The verb "specify as excluded from a

[1] Democratic Republic of the Congo v. Rwanda, Report of ICJ, 2006.
[2] Jan Anne Vos, The Function of Public International Law, T.M.C, Asser Press, 2013, p.264.
[3] Dinah Shelton, *Jus Cogens*: Quo Vadis? Netherland Yearbook of International Law, Volume 46, Asser Press, 2016, p.34.

category or group" is employed with the preposition "except," which implies "not including; other than." When it takes the form of a conjunction, it is "used before a statement that forms an exception to one just made." Taking into consideration all of these interpretations, it does seem that there is some overlap in the potential meanings of the terms exception and derogation.[1]

Exceptions can be distinguished from derogations by their level of generality," notes Helmersen. The level of generality of an exception is equal to that of the rules it amends. A "derogation" amongst all parties should actually be regarded as an exception, as the application of a derogation will only extend to certain parties who are bound by the relevant rule.[2]

Human rights conventions include fundamental safeguards, such the right to life and the prohibition on torture, arbitrary detention, slavery, and forced labor, that state parties may not, under any circumstances, temporarily, partially, or even in times of public emergency, suspend. There is a prevalent contention that the *jus cogens* character of many human rights commitments in international treaties is intimately linked to their non-derogability. State parties are not permitted to enter into contracts that exclude them from these duties *inter se* if an international legal standard is paramount.[3] These rules are crucial because they forbid exceptions

One specific example of a potential overlap between the concepts of derogation and exception is the absolute ban on the use of force in international relations, which allows for the exception of at least self-defense and possibly others (like humanitarian intervention and the protection of nationals). Self-defense, use of force in accordance with a Security Council authorization, and consent are examples of exceptions that would not count as derogations because they do not include the commission of aggression.

Jus Cogens and Obligations *Erga Omnes*

The concept of obligations *erga omnes* means obligations owed 'towards all' States. Like *jus cogens*, *erga omnes* lays down a procedural consequence flowing from the importance of certain substantive norms to the international public order. If an obligation is *erga omnes*, then it is owed to the whole community of States, such that any state has standing under international law to enforce compliance with it.[4]

The prominence of the values at stake determines both obligatory standards and erga omnes. The protection of significant international values serves as the basis for designating rules as having preemptive status. Similar to this, responsibilities *erga omnes* are determined by the significance of the rights they defend, which is why they provide each and every State a legal interest. Contrary to what some academics have claimed, obligations *erga omnes* are not defined by their non-reciprocal or non-bilateralisable characteristics. If that were the case, all absolute obligations—such as those requiring States to adopt a particular parallel conduct within their

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[1] De Hoogh, André, The Compelling Law of *Jus Cogens* and Exceptions to Peremptory Norms, Oxford University Press,2020, p.130.

[2] *Ibid*, p.130.

[3] Thomas Kleinlein, *Jus Cogens* as the 'Highest Law'? Peremptory Norms and Legal Hierarchies, Netherlands Yearbook of International Law 46 (2015), pp. 173–210.

[4] Gideon Boas, Public International Law: Contemporary Principles and Perspectives, Edward Elgar Publishing, 2012, p.101.

jurisdiction—and all interdependent obligations—that is, obligations that must be fulfilled by all parties in order to achieve the desired outcome—would be considered obligations *erga omnes*.[1]

State responsibility pertains to the idea of *erga omnes* duties. Due to the general rule of State responsibility not finding its way into a codifying convention, responsibilities *erga omnes*, aside from *jus cogens*, are not established in international treaty law. Finding widely accepted standards to identify *erga omnes* norms is challenging. Typically, state practices are examined in relation to situations when states that were not directly impacted by an international wrong adopted corrective action without being held accountable for their own wrongdoing.[2] The two specific obligations resulting from a serious breach of *jus cogens* norms are outlined in Articles 41 (1) and (2) of the Draft Articles on State Responsibility for Internationally Wrongful Acts. The positive obligation is to cooperate in order to bring an end to the situation, and the negative obligation is to neither recognize nor assist in maintaining the situation that was created by the breach.

Any State, excluding an injured State, may invoke the responsibility of another State in line with paragraph 2 of the Draft Articles on State Responsibility for Internationally Wrongful Acts, provided that: (a) the obligation violated is owed to a group of States, including that State, and is established for the protection of a collective interest of the group; or (b) the obligation is owed to the international community as a whole.

In *Barcelona Traction Light and Power Company, Limited*,[3] where the Court drew "an essential distinction" between obligations owed to particular States and those owed "towards the international community as a whole". With regard to the latter, the Court went on to state that "in view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes*".

In the judgment of ICJ on *Questions relating to the Obligation to Prosecute or Extradite*[4], the International Court of Justice determined that the Torture Convention's alternative obligation to prosecute or extradite was an obligation *erga omnes* partes, which grants all parties to the convention the right to demand respect with such a rule by another party without having to prove a particular interest.

By definition, all States are a part of the international community as a whole, and the obligations at issue are collective commitments that safeguard the interests of the international community as a whole. As the proscription of acts of aggression safeguards each State's survival and the security of its citizens, such responsibilities may, of course, also protect the specific interests of States.

Conclusion

All states must accept and follow *jus cogens* norms regardless of objection. However, the positive regulations of international law still respect the principle of equal sovereignty which recognizes that no state can be bound by an international norm in absence of its consent. Because of the universal nature of *jus cogens* norms, they possess the "highest status in international law"

[1] Sten Verhoeven, Norms of *Jus Cogens* on International Law: A Positivist and Constitutionalist Approach, p.230.
[2] Stefanie Schmahl, An Example of *Jus Cogens*: The Status of Prisoners of War, The Fundamental Rules Of the International Legal Order: *Jus Cogens* and Obligations *Erga Omnes*, Leiden/ Boston 2006, p.35.
[3] Belgium v. Spain, Judgment of ICJ, 1970.
[4] Belgium v. Senegal, ICJ Reports (2012)422.

and can be modified only by other *jus cogens* norms. The International Law Commission and the Vienna Conference on the Law of Treaties did not provide an accepted list of peremptory norms. Moreover, obligations *erga omnes* are not embodied in a provision of the VCLT, but they would bind as part of general international law even in the absence of a contractual obligation. Obligations *erga omnes* give legal effect to the importance of the interests of the international community protected by *jus cogens* norms. Therefore, States should not recognize as lawful a situation created by a serious breach nor render aid or assistance in maintaining that situation.

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ANIMAL WELFARE: PROTECTION ON WORKING ANIMALS

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Abstract

Animal welfare refers to the overall physical and emotional well-being of an animal in the environment it inhabits and during its life and death. An animal's welfare is considered good if it is in good health, comfortable, well-nourished, safe, free from suffering such as pain, fear, and discomfort, and able to exhibit behaviors essential for its physical and mental well-being. In numerous low and middle-income countries, individuals rely significantly on draught animals. Approximately 95% of animal caretakers live in extreme poverty, making working animals their most valuable and cherished possession. They empower their owners to engage in labor, enhancing their economic capabilities, while also advancing gender equality, facilitating access to crucial services, and offering chances to engage in cost-saving programs. Around 100 million working animals play a crucial role in agricultural systems, providing income for their owners and helping save approximately 20 million tons of fuel annually. The impact of legislation on animal welfare is contingent upon the actions and decisions made by the owner in using and maintaining the animals. Regardless of legislation, numerous individuals have criticized actions deemed as cruel to animals. Animals utilized by humans should not be seen as mere objects but should be safeguarded from any activities that could lead to their misery. This issue is ancient and prevalent throughout human culture. The study intends to assess the compatibility between reaching the United Nations (UN) Sustainable Development Goals (SDGs) and enhancing animal welfare for working animals. The document aims to acknowledge the crucial role of working animals in reducing poverty, eradicating hunger, controlling disease spread, and addressing environmental concerns. The research emphasizes the importance of safeguarding the well-being of working animals by asserting that "assisting animals equates to assisting people."

Keywords: Animal welfare, working animals, Sustainable Development Goals

Introduction

Animal welfare concerns the health of the animal's body and mental state. Only if an animal is healthy, comfortable, well-nourished, safe, able to express innate behaviour, and if it is free of pain, fear, and distress, is it considered to be in a reasonable state of welfare. Protecting the welfare of animals has unequivocally entered the public policy mainstream in a growing number of countries, with significant public and private regulations governing the welfare of animals in human care. The inclusion of animal welfare in the third strategic plan (2001-2005) by the World Organisation for Animal Health (OIE) recognized the increasing public awareness and the need for governmental leadership in the development of animal welfare policies and guidelines. Myanmar has been a member of the World Organization for Animal Health (OIE) since 24th August 1989. Animal Health and Livestock Development Law, 2020 is the main piece of legislation dealing with animal welfare in Myanmar. The main focus of this study is on sport and entertainment by animals and service animals.

Research Method

The study utilizes the qualitative method, involving a review of many sources such as studies, articles, books, and case analyses. This approach offers insights into the current situation,

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challenges, potential solutions for animal welfare, and their connection to the Sustainable Development Goals (SDGs). The study also examines current regulations and laws regarding the utilization of working animals, assesses their effectiveness, and identifies any shortcomings that could be causing welfare problems. The study examines the welfare of working animals in different countries and working conditions as dictated by their respective laws. This strategy can help find optimal practices and areas for enhancing and advancing animal welfare.

Research Questions

1. What is the concept of animal welfare and explain its significance?
2. How does animal welfare intersect with the legal regulations concerning working animals?

Concepts of Animals Welfare and Protection

Animals play many vital roles in the lives of people all over the world. Nearly half the world's population is involved in agriculture and livestock are important for food, for labour and for income.[1] World Animal Day is celebrated every year on 4th October to raise awareness about improving the welfare standards of animals across the globe. The theme of World Animal Welfare Day 2023 is "Great or small, love them all." The scientific study of animal welfare has developed rapidly during the last fifteen years. The concepts have been refined and a range of methods of assessment have been developed.[2]

The internationally recognized 'five freedoms': freedom from hunger, thirst, and malnutrition; freedom from fear and distress; freedom from physical and thermal discomfort; freedom from pain, injury, and disease; and freedom to express normal patterns of behaviour; provide valuable guidance on animal welfare.[3] Man as an animal species shall not arrogate to himself the right to exterminate or inhumanly exploit other animals. It is his duty to use his knowledge for the welfare of animals.[4] All animals have the right to the attention, care and protection of men.[5]

The concept of animals being inferior to humans and were, hence, lacking in thoughts and feelings was still apparent however, in 1637 when dogs were being nailed to boards and dissected without anesthesia in order to observe the functions of the lungs and circulatory system. Descartes tried to justify this practice on the grounds that animals are mere "automata" or machines.[6]

Nevertheless, the concept of animals as property was supported by Western philosophy with Rene Descartes, as mentioned above considering that animals were little more than

[1] Albert Schweitzer, Animal Welfare Matters, the Case for a Universal Declaration on Animal Welfare, 2007, p. 3.
[2] Donald M. Broom, Introduction- Concepts of Animal Protection and Welfare: Including Obligation and Rights, University of Cambridge, December 2006, p. 4.
[3] Article 7.1.2 (3), Guiding principles of animal welfare, Terrestrial Animal Health Code, Volume I, Twenty-Eight Edition, 2019, p. 333.
[4] Article 2 (2), Universal Declaration of Animal Rights, 1978.
[5] Article 2 (3), Ibid.
[6] Alex Bruce, Animal & the Law, 2015, p. 35.

automata without the capacity for pain. And Immanuel Kant considered that animals were means to human ends such that humans owed "indirect duties" towards them.[1]

The present-day concept that animals have legal rights is based on, John Stuart Mill's famous version in 1869 of the principle that, "the only purpose for which power can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others". This principle of the prevention of harm to others may also justify regulation relating to animal welfare which is, of course, principally the prevention of harm to animals. The case for regulating animal welfare might rely on the following propositions;

- that there is a need to protect the welfare of animals
- that there is sufficient community wide agreement on basic principles about animal welfare that provide a basis for regulating, namely that use of animals is acceptable, as long as it is humane
- that animal welfare can be genuinely promoted through regulation
- that the protection of animal welfare cannot be conveniently achieved in some way other than regulating it, principally because private and third parties cannot, through the legal system, satisfactorily vindicate those interests and because the unregulated market is incapable of delivering that outcome.[2]

A case indicative of this last point is the case of *Kama the Dolphin*. In 1991, a group of animal rights activists sued on behalf of Kama, a dolphin trained at great expense by the U.S Navy and transferred to the Naval Ocean System Centre in Hawaii from his previous home in a Boston aquarium. The suit held that Kama's life would be in jeopardy in his new environment, and that his rights were therefore violated by his forcible transfer. The court threw out the case on the grounds that Kama, being a dolphin, could not sue, either in Hawaii or Massachusetts.[3]

This case shows that there is a need to institute laws and regulations which recognize that animals have rights and which protect them from being harmed by humans, through making it possible for individuals or groups (private and third parties) to take legal action against an animal rights offender since the animals themselves, not being legal persons, cannot do so.

There is no official definition of the term "protection". It can be seen as a general principle which includes both abstaining from harmful activities and taking affirmative measures to ensure that environmental deterioration does not occur. Increasingly, the concept of protection includes comprehensive ecological planning and management, including substantive regulations, procedures, and institutions on a national scale.[4] Animals were considered as mere property that suffered no pain while in fact, animals like all living beings, are capable of feeling both physical pain and mental suffering.

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[1] Alex Bruce, Animal & the Law, 2015, p. 35.

[2] Geoff Bloom, regulating animal welfare to promote and protect improved animal welfare outcomes under the Australian Animal Welfare Strategy, 2008, p. 7.

[3] Roger Scruton, Animal Rights, City Journal, 2000, p. 2.

[4] Alexandre Kiss, Introduction to International Environmental Law, United Nations Institute for Training and Research, 1997, p. 79.

Animal Welfare under Sustainable Development Goals

All SDGs were found to be linked to animal welfare, it is not surprising that at least one of the targets under each SDG, but often several, could also be linked to animal welfare.[1] The relevance of good animal welfare and health for sustainable development is acknowledged elsewhere e.g., the Food and Agriculture Organization (FAO), the World Organization for Animal Health (OIE), and the World Health Organization (WHO) agreed in 2010 to share responsibilities and coordinate global activities to address health risks at the animal-human-ecosystems interfaces.[2] The first time in the UN's 71st year history that animal welfare had been identified as a global goal of sustainable agricultural policy. In light of these advances in sustainable agriculture policy, there is an underlying premise that there exists a universal definition of animal welfare.[3]

Nevertheless, it is no easy task to integrate targets for the many different categories of animals (food producing, working, laboratory, pet, sport, and wild animals) and the different ways in which we interact with them in a balanced way into the various SDGs.[4] The importance of animal care are brought together by their relevance to the UN Millennium Development Goals, as many of the goals will be helped by increased care of animals. Reducing poverty, hunger and child mortality, improving maternal health and combating disease (goals 1, 4, 5 and 6) will all be assisted by improving nutrition, including by appropriate use of products from healthy, productive livestock. Combating disease in people (goal 6) must also tackle diseases in animals. Ensuring environmental sustainability (goal 7) involves decisions on management of livestock and wildlife, for example choosing more sustainable grazing systems rather than intensive housing. Developing partnerships for development (goal 8) will be promoted by trade of organic and high-welfare animal products. Promoting gender equality (goal 3) will be aided by recognising the roles and opportunities men and women have in animal care, and supporting these appropriately to the benefit of both animals and people.[5]

The 2030 Agenda for Sustainable Development's Goals cover Goal 1: no poverty; end poverty in all its forms everywhere in relation to the case of working animals (e.g., equids), improved welfare contributes to increasing transport and carrying capacity, so promoting income. Goal 2: zero hunger; end hunger, achieve food security and improved nutrition and promote sustainable agriculture. In the case of working animals, it contributes to increasing agricultural production. Goal 4: quality education; provision of information to adults; ensure inclusive and equitable quality education; and promote lifelong learning opportunities for all, including consumers and citizens affects societal attitudes and demand related to animal production, as well as how pet and sports animals are treated. In Goal 6: clean water and sanitation, ensure availability and sustainable management of water and sanitation for all. Clean water and sanitation are important for the health of both animals and humans, so these two factors are

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[1] Linda Keeling, Hakan Tunón, Gabriela Olmos Antillón, Charlotte Berg, Mike Jones, Leopoldo Stuardo, Janice Swanson, Anna Wallenbeck, Christoph Winckler and Harry, Animal Welfare and United Nations Development Goals, 2019, p. 5.

[2] FAO, OIE, WHO, The FAO, OIE, WHO Collaboration: Tripartite Concept Note, 2010.

[3] Buller H, Blokhuis H, Jensen P, Keeling L, Towards Farm Animals Welfare and Sustainability Animals, 2018, p. 8.

[4] Linda Keeling, Håkan Tunón, Gabriela Olmos Antillón, Charlotte Berg, Mike Jones, Leopoldo Stuardo, Janice Swanson, Anna Wallenbeck, Christoph Winckler and Harry, Animal Welfare and United Nations Development Goals, 2019, p. 5.

[5] Albert Schweitzer, Universal Declaration on Animal Welfare, World Society for the Protection of Animals, 2008, p. 16.

mutual benefits. According to Goal 8: decent work and economic growth; promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Working with animals or having pets at the work place can also enhance the working environment. Working dogs (drug control, dogs for the blind, etc.) work better when their welfare is good.[1]

When developing national policies for animal health and human health, the above-mentioned SDGs goals and targets should be considered. As a result, the growing interface between humans and animals is a critical component that requires ongoing supervision and monitoring. Recognizing that all species are linked by their interactions is crucial to accomplishing the SDGs. Protecting and improving animal welfare helps to achieve many of the goals and targets outlined in the 2030 Agenda.

Source: OIE Global Forum on Animal Welfare, 2020.

Sport and Entertainment by Animals

A welfare approach accepts the legitimacy of the use of animals for food, sport, entertainment, fashion and science. This approach concerns itself with the need to treat animals humanely in the process of using them; A rights approach seeks a radical reassessment of the legal status of animals, advocating that animals are legal "persons" with associated legal interests.[2]

Some of the most passionate and politicized debates on animal issues have been over the use of animals in sports and entertainment. Many opponents of animals in entertainment have posted their ideas on web sites rather than in books.[3] A variety of animal sports are dog racing, bull fighting, rodeos, horse shows, horse racing and cock fighting and entertainment includes theatre, film, television, circuses, zoos and aquariums.

[1] Linda Keeling, Håkan Tunón, Gabriela Olmos Antillón, Charlotte Berg, Mike Jones, Leopoldo Stuardo, Janice Swanson, Anna Wallenbeck, Christoph Winckler and Harry, Animal Welfare and United Nations Development Goals, 2019, p. 6 & 7.
[2] Alex Bruce, Animal & the Law, 2015, p. 39.
[3] Helen Stoddart, Animals in Sport and Entertainment, 2004, p. 25.

Sport

Animals are forced to battle each other to the death in terrible blood sports like dog fighting and cock fighting. Dog fighting is extremely harsh and brutal, resulting in significant suffering and fatalities just for the purposes of entertainment and gambling. Dogs have an intricate domesticated bond with humans. One of the initial stages of domestication probably involved eliminating highly violent or territorial dogs to enable them to live alongside humans and other dogs. Organizing dog fights as a kind of entertainment can lead to the breeding of aggressive tendencies in dogs that are not typical of tamed animals. This process can result in the emergence of dangerous breeds in some nations. Cockfighting is prevalent in certain Latin American and Asian nations.

Concerning the animal fighting ventures provided in Section 31(1) of the Animal Welfare Act, New Zealand, 1999.

A person commits an offence who -

(a) knowingly owns, possesses, keeps, trains, or breeds an animal for the purposes of having that animal participate in an animal fighting venture; or

(b) knowingly sells, buys, transports, or delivers to another person any animal for the purposes of having the animal participate in an animal fighting venture.

(2) In this section, animal fighting venture -

(a) means any event that involves a fight between at least 2 animals and is conducted for the purposes of sport, wagering, or entertainment; but

(b) does not include any activity the primary purpose of which involves the use of or more animals in hunting or killing an animal in a wild state.[1]

In this connection, where a sport and entertainment animal suffer from cruelty at the hands of its handlers, the Animal Health and Livestock Development Law which was adopted in 2020 in place of the Animal Health and Development law 1993 and four other laws, could be applied. But where the sport or entertainment in question is conducted as an act of gambling where spectators place bets on the prowess of one of the animals competing in a dog-fight, a cock-fight, etc., which can cause severe injuries to the animals, action can also be taken under the Gambling Law, 1986.

A case in point occurred on January 3, 2016 in Homalin, Sagaing Division. Upon receiving news of a cock-fight being held at the premises of one U Mee Cho, members of the Homalin Police Station raided the premises and arrested U Mee Cho and 6 others. Kyats 109,000 and four game-cocks were also confiscated. Charges were filed against U Mee Cho and 6 other persons under the Gambling Law, 1986.[2]

Animals used as a sport at this time were subject to Gambling Law. But this law was repealed by the Gambling Law of 2018. In Myanmar, cock-fight is actioned under the Gambling Law but other countries inserted the animal cruelty of their Animal Welfare Law, Criminal Law, etc.

[1] Section 31 (1), Animal Welfare Act, New Zealand, 1999.
[2] The Mirror (Newspaper), p. 14, 6th January 2016.

Zoos and Aquariums

Today, there is much contention relating to the role of zoos and aquaria within society, as to whether these facilities serve purposes other than the display of animals for human entertainment. On the other hand, zoos and aquaria have been regarded as 'guardians of endangered species, and they claim to promote 'community education, research and conservation'. Zoos and aquaria can play a role in the conservation of endangered species, as a number of species which have died in the wild or were on the verge of extinction have been saved through captive breeding programs in zoos and aquaria.[1]

In spite of the positive roles played by zoos, it is noteworthy that in the region of 6,000 species are either threatened or endangered, yet only a handful are in captive breeding programmes and only around twenty have actually been returned to the wild with any degree of success. Out of an estimated 10,000 zoos worldwide, less than 500 register their animals on an international species database. Of these, it is estimated that only between five and ten per cent of space is devoted to endangered species. Most animals in zoos, for example the African lions, elephants, and giraffes, are no threatened - they are simply exhibits.

Dolphin aquaria are places where whales and dolphins are kept in captivity, and are usually trained to perform for human spectators. They cause many animal protection problems. The capture of cetaceans (and seals, turtles) from the wild has had an impact on wild populations, and the losses (mortality) between capture and placement in the exhibition give additional stress to wild populations. The methods used for wild capture (netting and driving to nets or to shore) are likely to be very stressful to the animals and there is a risk of injury and mortality to animals that escape.[2]

Nevertheless, since zoos and aquaria are also regarded as the "guardians of endangered species", they are permitted to be established under domestic laws and regulations in countries all over the world. In Australia, license requirements for animal display establishments are provided in Section 12 of the Exhibited Animals Protection Act, New South Wales, 1986 as:

(1) Each occupier of premises used as an animal display establishment of a prescribed class is guilty of an offence and liable to a penalty not exceeding 20 penalty units or to imprisonment for not more than 6 months, or to both, if the use of the premises as an animal display establishment of that class is not authorised by a licence.

(2) This section does not apply to or in respect of a zoological park established, maintained or controlled by the board, or any part of any such park.[3]

Section 13 of the Act, is on the classes of establishments, and states that "for the purposes of this Act, there shall be such classes of animal display establishments as are prescribed by the regulations", then goes on to enumerate the classes of animal display establishments.[4]

Section 14 (1) prescribes the standards for or with respect to:

(a) the facilities for the exhibition of animals

(b) the conduct of, animal display establishments of any class.[1]

[1] http://cetaceaninspiration.wordpress.com/2011/12/22/
[2] www.worldanimalnet
[3] Section 12, Exhibited Animals Protection Act, New South Wales, 1986.
[4] Section 13, Ibid.

The Section also addresses matters relating to the issue of licenses stated in Section 15 which states:

(1) A license for an animal display establishment of a prescribed class shall not be issued unless the Director-General is satisfied that the animal display establishment conforms to and will be conducted in accordance with any standards prescribed under Section 14 for animal display establishments of that class.

(2) Different animal display establishments shall each be the subject of a separate application and a separate license or separate licenses.[2]

Particulars to be specified in licenses prescribed in Section 16 of the Exhibited Animals Protection Act, are provided as:

(1) A license for an animal display establishment shall describe the animal display establishment which is the subject of the license.

(2) A license for an animal display establishment shall relate to an animal display establishment of the class specified in the license.

(3) Separate licenses relating to animal display establishments of different classes may be held concurrently for the same premises.[3]

With regard to dolphins used for entertainment, a number of countries have completely banned dolphin entertainment shows. Among these are the South American countries of Costa Rica and Chile. Some other countries permit the exhibition of dolphins under strict regulations. An example is the provision of limitation on dolphins and whales that may be exhibited in Section 36 of the Exhibited Animals Protection Act, New South Wales, 1986 which states that the Director-General of the Department of Agriculture may specify as a term of a license that only those dolphins and whales kept in captivity, at the premises are subjects of the license, and their progeny born in captivity at those premises, may be exhibited at those premises.[4]

With regard to the standard of care of animals kept for exhibition, the following case, *Jones V. Beame*,[5] was brought against Zoos in New York. The plaintiffs challenged the conditions in which wild and exotic animals were kept at Zoos in New York City, seeking declaratory and injunctive relief. The plaintiffs alleged that the city's Zoo animals were subject to lack of veterinary care, inadequate habitats, mistreatment by members of the public and inadequate care by untrained staff, and they alleged that animals were being sold to people unqualified to care for them. Their goal was to shut down the three zoos operated by the city of New York. The Court of Appeal acknowledged that the allegations of cruelty to the animals are true. Indeed, many of the disturbing and even dreadful conditions to which they refer were matters of common knowledge. However, the court held that because New York City was in a budgetary crisis, its choice not to provide adequate funding for veterinary care or other basics to

[1] Section 14 (1), Exhibited Animals Protection Act, New South Wales, 1986.
[2] Section 15, Ibid.
[3] Section 16, Ibid.
[4] Section 36, Ibid.
[5] 80 N.E.2d 277 (N.Y. 1978).

the zoo was a political question, best left to the executive branch and not reviewable by the courts.[1]

This case shows that under United States Law, legal charges can be instituted against anyone who mistreats any animal, including those that are kept for exhibition purpose.

In Australia, there is no federal legislation which specifically deals with the use of animals for entertainment. The Australian Constitution does not explicitly address matters of animal welfare, and therefore, the Commonwealth does not have a significant role in this area. In 2009, the Australian government drafted the Australian Welfare Standards and Guidelines: Exhibited Animals. These standards and guidelines have been reviewed by a panel of the Australasian Regional Association of Zoological Parks and Aquaria, and are open for public consultation. These standards aim to 'ensure animal health and welfare and public safety.[2]

Exhibited animals are also protected by the Proposed Protocol for the Care of Exhibited Wildlife, 1988, Article 3 of which applying to all public exhibitions, consisting of primarily captive wildlife, commonly known as zoos. According to Article 3,

1. Any person with a collection of animals may be considered a public exhibition even though:
    (a) it is a profit or not-for-profit enterprise;
    (b) the public is or is not charged an admission fee;
    (c) it is open for public viewing only during portions of the year; and
    (d) the wildlife is obtained from other public exhibitions of wildlife, or are the offspring of captured wildlife rather than wild-caught animals.
2. An aquarium otherwise qualifying under paragraph (1) shall be considered a public exhibition of wildlife, even if it has performing marine mammals.
3. If a collection of animals is found to qualify as a public exhibition under this Protocol, then the conditions of all animals contained in the collection, regardless of source or species, shall be governed by this protocol.
4. The following shall not be considered public exhibition of wildlife for purposes of this Protocol:
    (a) traveling carnivals, circuses and animal acts where animals are kept primarily for the purpose of performing tricks or maneuvers; and
    (b) county fairs, livestock shows or other temporary gathering of primarily domestic animals.[3]

Also in Australia, Section 23 (1) and (2) of the Exhibited Animals Protection Act, New South Wales, 1986, states that an approval authorizing the exhibition of animals of a species shall not be issued unless the Director-General is satisfied that the person to whom it is issued has appropriate qualifications or experience or both, to exhibit animals of that species. Approvals authorizes the holder to exhibit, or supervise the exhibition of animals of the species specified in

[1] Joyce Tishler, The History of Animals Law, Part I, 2008, p. 8.
[2] http://cetaceaninspiration.wordpress.com/2011/12/22
[3] Article 3, Proposed Protocol for the Care of Exhibited Wildlife, 1988.

the approval, but only when the animals are exhibited in accordance with the terms and conditions to which the approval is subject.[1]

Clever animal shows are performed on weekends and public holidays, particularly on Sundays at Yangon Zoo in the Yangon Region. The clever animals show is held every weekend, including Sundays and public holidays. "Yangon Zoo resumed an entertainment programme featuring well-behaved animals, offering families a chance to relax. This programme includes clever elephants, monkeys, and snakes. Additionally, magic shows are staged. Yangon zoological garden arranges a variety of small animals, including bears, birds, and falcons, and provides opportunities for visitors to take photo with them.[2] Elephants face the prospect of spending their lives confined to a small concrete platform while visitors thrust bamboo shoots at them. Tigers usually roam over vast areas in the wild but this big cat at Yangon Zoo is confined each day to a small, unstimulating concrete enclosure.[3] Animals shall not be deprived of any portion of their organs unnecessarily because anti-cruelty provisions apply to this type of animals.[4]

The Conversation of Biodiversity and Protected Areas Law, Myanmar, 2018, passed the provisions for the rights to establish zoological gardens and botanical gardens, as well as registration, but does not include protection and keeping of wild animals. In order to comply with international norms, Myanmar should enact policy or law regarding the use of animals for entertainment.

Service Animals

Destination Asia believes domesticated working animals such as horses or oxeas which may be used for transportation on our tours and excursions should have a decent life, where they are properly cared for and the positive aspects of their existence outweigh the negative. Most of the countries have some general guidelines for working animals.[5]

District of Columbia Official Code 2001 Edition, Division I Government of District, Title 7, Human Health Care and Safety, Subtitle B, Chapter 10, 2001, Section 7-1006 (b) states that housing "every blind or deaf person who has a dog guide, or who obtains a dog guide, shall be entitled to full and equal access to all housing accommodations referred to in this section, without being denied access because of the dog guide and required to pay an extra charge for the dog guide; but such blind or deaf person shall be liable for any damage done to the premises by such dog."[6]

The Australian Human Rights and Equal Opportunity Commission on Disability Rights addresses directly the rights of persons with a visual, hearing or other disability who have trained Assistance Dogs.

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[1] Section 23 (1) (2), the Exhibited Animals Protection Act, New South Wales, 1986.
[2] The Global New Light of Myanmar, Newspaper, p.2, 6th November 2023.
[3] Caged and exploited: Animals come last at Yangon Zoo, Frontier Myanmar, 14th March 2020.
[4] Section 36 (c), Animal Health and Livestock Development Law.
[5] Animal Welfare Policy, Introduction and Destination Asia Commitment, p.13.
[6] Section 7 - 1006 (b), Human Health Care and Safety Code, Columbia, 2001.

According to Australia Disability Discrimination Act 1992, Section 3, are;

(a) to eliminate, as far as possible, discrimination against persons on the ground of disability in the areas of:

(i) work, accommodation, education, access to premises, clubs and sport; and

(ii) the provision of goods, facilities, services and land; and

(iii) existing laws; and

(iv) the administration of Commonwealth laws and programs; and

(b) to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community; and

(c) to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.[1]

Australia Disability Discrimination Act 1992, Section 23 provides that "It is unlawful for a person to discriminate against another person on the ground of the other person's disability by refusing to allow the other person access to, or the use of, any premises that the public or a section of the public is entitled or allowed to enter or use (whether for payment or not); or by requiring the other person to leave such premises or cease to use such facilities.[2]

Australia Disability Discrimination Act 1992, Section 24 also states that "it is unlawful for a person who, whether for payment or not, provides goods or and Facilities services, or makes facilities available, to discriminate against another person on the round of the other person's disability or a disability of any of that other person's associates by refusing to provide the other person with those goods or services or to make those facilities available to the other person."[3]

In Disability Discrimination Act, Australia, 1992, Section 9, it is illegal to discriminate against a disabled person because of "a dog trained to assist the aggrieved person in activities where hearing is required, or because of any matter related to that fact; or any other animal trained to assist the aggrieved person to alleviate the effect of the disability."[4]

Statutes of New Zealand, Dog Control Act, Miscellaneous provisions, Section 75,1996 prescribed that "notwithstanding anything in any Act or regulations or bylaw prohibiting or regulating the entry or presence of dogs, any guide dog (hearing ear dog) or companion dog accompanying a blind or partially sighted person [a deaf or hearing impaired person] or a person with any other disability or any person bona fide engaged in training the guide dog [hearing ear dog] or companion dog may enter and remain-

(a) In any premises registered under regulations made pursuant to section 120 of the Health Act 1956; or

(b) In any public place, subject to compliance with any reasonable condition imposed by the occupier or person having control of the premises or public place, as the case may be."

[1] Section 3, Disability Discrimination Act, Australia, 1992.
[2] Section 23, Ibid.
[3] Section 24, Ibid.
[4] Section 9, Ibid.

Statutes of New Zealand, Dog Control Act, Prohibition on Import of Certain Dogs, 30 A (5a), 1996 describes that the importation of dogs is controlled, except that, "…..any guide dog, hearing ear dog, or companion dog accompanying a blind or partially sighted person, a deaf or hearing-impaired person, a person with any other disability, or a person genuinely engaged in training the guide dog, hearing ear dog, or companion dog" is exempted.

Statutes of New Zealand, Transport Services Licensing Act, Schedule 3, 12 (2), 1989 states that "any blind or partly blind person who uses a guide dog may, without being the holder of a dog control permit, take that guide dog into a national park.

In Statutes of New Zealand, Dog Control Act, Prohibition on Import of Certain Dogs, 30 A (4), 1996 "every person who contravenes subsection (1) (regulation on importation of dogs) commits an offence and is liable on summary conviction to a fine not exceeding $3,000."

New Zealand law makes special provisions for the blind or partially sighted, the deaf or hearing impaired, or persons with any other disability when accompanied by a dog.

Myanmar is an agriculture country, and most of the cultivation is done by animals. In central Myanmar, a cow-driven machine is used to produce peanut oil, grist mill, and harrow.[1] In respect of prevention of cruelty to animals, Section 36 (a) (b) of the Animal Health and Livestock Development Law, 2020 prescribed that animal shall not be loaded up and forced to tow in excess of the specified weight of load, animals shall not be treated with willful cruelty or shall not be forced to work excessively hard.[2]

Exploring the charm of Bagan, visitors enjoy a unique experience as they ride ox-carts, reminiscing about the past year's cultural journey.[3] The Areindama Tour Company said they are makings plan to offer horse-riding tours for local and foreigner travelers in Bagan Ancient Culture Zone. In the tourism season, horse-riding is a good habit for health. Although the service was available only for foreigners previously, they expended the service for Myanmar travelers as they showed their interests in horse-riding trips. The charges vary depending on the distance of the trip.[4] According to Section 24 (32) (33) of the Yangon City Development Law, 2018, the Yangon City Development Committee is responsible for detaining and seizing dangerous animals, establishing animal shelters, cleaning dangerous animals, and taking action, administering, and stipulating rules and regulations with domestic animals and cattle.[5]

Myanmar has no special laws for working animals, although all working animals are entitled to a fair limitation on the time and intensity of their jobs, as well as the required nutrition and relaxation.

Research Finding

Working animals, such as horses or oxen, that may be used for transportation in tours and excursions, should have a decent life in which they are adequately cared for and the positive parts of their existence outweigh the negative. It is not only ethical, but also necessary, to ensure their well-being. The working conditions of animals in various businesses which workload, rest time,

[1] The Global New Light of Myanmar, Newspaper, 22nd November 2023.
[2] Section 36 (a) (b), Animal Health and Livestock Development Law, 2020.
[3] The Global New Light of Myanmar, Newspaper, 2nd December 2023.
[4] The Global New Light of Myanmar, Newspaper, 24th October 2023.
[5] Section 24 (32) (33), Yangon City Development Law, 2018.

and exposure to hostile conditions may all be issues. Myanmar ought to establish regulations governing each breeder's and handler's obligations to their animals.

Evaluating the health and veterinary treatment of working animals, all breeder regular check-ups, vaccines, and easy access to medical care are critical to their health. Investigating the methods, all handler uses to train when the performance of working animals. All stakeholder cooperative with the positive reinforcement and humane training methods which help to improve animal welfare outcomes. State check on the examining current rules and practices pertaining to the protection of working animals and identify the result for more effective legal systems. People have a public awareness effort on the treatment of working animals is being investigated. Relevant ministries give to the educating communities about these creatures' needs and rights can lead to positive change. All of these provide useful information that can be used to enhance policy, procedures, and public understanding about how to treat working animals humanely.

Conclusion

Myanmar's Animal Health and Livestock Development Law would probably not undergo any significant amendments to animal welfare for sport and entertainment by animals or animals used in service and Myanmar has not implemented for the guidance of Terrestrial Animals Health Code (the OIE Code) and lack practice. It should have a greater impact in country with no animal welfare laws in place by providing a benchmark by which to set animal welfare laws and policies. Moreover, it must contain legally binding provisions that would make a difference to the treatment of animals during working time in accordance with SDGs.

It has been observed that the main laws concerning the protection of animals in Myanmar are the Animal Health and Livestock Development Law, 2020 and Yangon City Development Law, 2018. But animals are also protected in Myanmar under a number other laws which, although not specifically targeted at animal protection, contain provisions that cover the subject.

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LEGAL PROTECTION ON GEOGRAPHICAL INDICATIONS IN ASEAN COUNTRIES

Khine Wai Lin[1]

Abstract

Geographical indication is a symbol utilized on commodities that have a distinct topographical source and have characters or prominences that are because of that source. This paper describes why geographical indications are important to ASEAN countries, why we should protect geographical indications, and how we can protect geographical indications. The TRIPS Agreement, Madrid Agreement and Lisbon Agreement provide for the protection of geographical indications. In Myanmar, it should be raised legal awareness about valuable geographical indications more and more; effective implementation of cooperation with important organizations and industries is also needed for the protection of geographical indications. It should be enacted *sui generis* legislation for the protection of geographical indications in Myanmar.

Keywords: geographical indication, protection and source.

Introduction

A geographical indication is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. [2]

Geographical indications are typically used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.[3] Feta cheese, Champagne, Pisco, Darjeeling tea, Basmati rice, and Parma ham are all examples of well-known geographical indications. [4]

A geographical indication right enables those who have the right to use the indication to prevent its use by a third party whose product does not conform to the applicable standards. For example, in the jurisdictions in which the Darjeeling geographical indication is protected, producers of Darjeeling tea can exclude use of the term "Darjeeling" for tea not grown in their tea gardens or not produced according to the standards set out in the code of practice for the geographical indication.

Another example of GI is on 26 June 2023, the Registrar of trademarks determined a case that challenged the registration of a trademark and shed light on the registration of Geographical Indications in Kenya. In 2017, George Williamson & Co. limited (the proprietor) filed an application to register their mark "Tinderet Tea Farm" before the Registrar of trademarks at the Kenya Industrial Property Institute (KIPI). The Applicant got challenges that mark failed to meet the requirements for registration which was the term should have distinctive. The Applicants based their claims on three main issues namely: geographical description of the Tinderet area, distinctiveness of the mark, and registration of a geographical indication. The Applicants success those three issues and get GI protection. The Applicant was however partially successful in moving the Registrar to direct the Proprietor to record conditions of use of the 'Tinderet Tea Farm' trademark. These conditions were: that the mark will be used only on the tea grown in the Tinderet area; that the mark will be used to identify the origin of the Proprietor's tea; and that the Proprietor will not use the mark in a manner that would cause negative reputation to the Tinderet tea growing and production area.

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[1] Department of Law, Bago University.

[2] WIPO, (2021) *Geographical Indications, An Introduction*, Switzerland, Geneva.

[3] https://www.wipo.int>geo_indications

[4] Benavente, Daniela, (2013) *The Economics of Geographical Indications*, Geneva, Graduate Institute Publications.

It was, therefore, held that the trademark "Tinderet Tea Farm" is validly entered in the Register of Trademarks. In summation, the case is useful in contributing towards the understanding of the current Registry practice in registering and protecting geographical indications in Kenya, and the challenges faced in this regard. This is because it exposed the intricacies of geographical indications protection in Kenya and analysed collective and certification trademarks that have been incorporated in the law. However, a single comprehensive law tackling the issue of geographical indications protection in the country is still required so as to provide clarity and address emerging geographical indications issues. [1]

However, a protected geographical indication does not enable the holder to prevent someone from making a product using the same techniques as those set out in the standards for that indication. Protection for a geographical indication is usually obtained by acquiring a right over the sign that constitutes the indication. [2]

There are four main ways to protect a geographical indication:

1. so-called *sui generis* systems (i.e., special regimes of protection);

2. using collective or certification marks;

3. methods focusing on business practices, including administrative product approval schemes; and

4. through unfair competition laws.

Regarding crucial issues like the prerequisites for protection or the extent of protection, these approaches involve differences. The *sui generis* systems and collective or certification mark systems, on the other hand, share some characteristics, such as the establishment of rights for collective use by those who adhere to defined standards.

In general, geographical indications are protected in various national and regional systems using a wide range of strategies, frequently combining two or more of the strategies mentioned above. These strategies were created in accordance with various legal traditions and within the constraints of unique historical and economic circumstances. [3]

Materials and Methods

This research implements a qualitative method. It uses analytical research method. Data are collected from international conventions, all laws relating to trademark system and *sui generis* system in ASEAN countries. And some data are captured through studying on cases, published books, papers and websites.

Findings

In Myanmar, geographical indications are protected by trademark law that is included about geographical indications. Trademark system can only protect geographical indications as collective mark and certification mark. *Sui generis* legislation is needed for the protection of geographical indications in Myanmar. And it is also needed some agreements that our geographical indications will not become generic terms with some countries that will accept registration of our GIs. In ASEAN, it is required for effective single legal framework and Agreement for the protection of GIs. It is necessary to carry out specific minimum standards and functions for the protection of GIs in their ASEAN countries effectively.

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[1] https://cipit.strathmore.edu/a-case-for-geographical-indication-an-overview-of-the-tinderet-case.(20.9.2023)

[2] https://www.wipo.int/geo_indications.

[3] https://www.indiatimes.com/explainers/news/explained-what-are-gi-tags-which-products-have-been-added-to-the-list-recently-588077.html

Discussion

International Rules Relating to Protection of Geographical Indications

A number of international treaties deal partly or entirely with the protection of geographical indications. The relevant treaties relating to geographical indications are administered by WIPO, as well as to the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO).

National and regional laws governing the protection of geographical indications can vary country by country.

WIPO-administered treaties are provided general standards of protection as follows;

(a) Paris Convention for the Protection of Industrial Property (1883) is the first major international agreement covering patents, designs and marks. In that Agreement, Article 10 and 10*ter* of this Convention address false indications of the source of goods.[1] The Paris Convention, which was concluded in 1883, was the first multilateral agreement which included "indications of source or appellations of origin" as one of its objects of protection. The Paris Convention is of broad coverage as it not only deals with the repression of unfair competition, but also seeks to protect various types of industrial property, including patents, trademarks, industrial designs, utility models, service marks, trade names and geographical indications. As regards geographical indications, Article 1(2) provides that the treaty applies to "indications of source or appellations of origin", and Article 10*bis*(3)(3) protects against "the use of [indications] which in the course of trade is liable to mislead the public as to the nature, the manufacturing process, the characteristics, the suitability for their purpose, or the quality of the goods" and

(b) Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods (1891) ("Madrid Agreement"): The Madrid Agreement provides for the situations under which the seizure of infringing goods may be requested and carried out – Article 1 provides that "all goods bearing a false or deceptive indication by which one of the countries to which this Agreement applies, or a place situated therein, is directly or indirectly indicated as being the country or place of origin, shall be seized on importation into any of the said countries". While the Madrid Agreement did not add much to the protection already afforded by the Paris Convention, it extended protection to cover deceptive indications of source, in addition to false indications. In this regard, Article 3*bis* prohibits the use of all indications in the nature of publicity which is capable of deceiving the public as to the source of the goods, where such use is in connection with the sale, display or offering for sale of any goods. [2]

WIPO-administered treaties are governed registration systems for obtaining protection are as follows;

(a) Lisbon Agreement for the Protection of Appellations of Origin and their International Registration (1958) ("Lisbon Agreement"): The primary aim of the Lisbon Agreement is to provide for the protection of appellations of origin[9] in countries other than their country of origin. It does so by using one single registration procedure for an appellation, such that a single registration in one Member State would mean that a GI is protected in other Member States. Further, there is no requirement for international

[1] https://www.wipo.int/geo_indications/en/treaties.html.
[2] https://v1.lawgazette.com.sg/2014-07/1085.htm.

renewal, given that the duration of the protection given by international registration is co-terminous with the protection as an appellation of origin in the country of origin,

(b) Madrid Agreement Concerning the International Registration of Marks and

(c) Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks (which also provides for the international registration of certification marks)

In those Agreements, the two important Agreements of geographical indications are TRIPS Agreement and Geneva Act of the Lisbon Agreement.

The TRIPS Agreement (Articles 22 to 24) addresses the international protection of geographical indications within the framework of the World Trade Organization (WTO.)

The term "geographical indications", in its broad sense, includes a variety of concepts used in international treaties and national/regional jurisdictions, such as: appellation of origin (AO), protected designation of origin (PDO) and protected geographical indication (PGI). In particular, Articles 22, 23 and 24 of the TRIPS Agreement are concerned with the protection of GIs. While TRIPS does not establish a uniform standard of GI protection, it sets out the minimum standards to which each signatory must adhere to as part of its own internal legislation, as set out in Article 22 of the TRIPS Agreement.

Two levels of protection are offered in the TRIPS Agreement for: (i) all products; (ii) wines and spirits; and (iii) wines only.

The lower level of protection, which applies to all products, requires Members to "provide the legal means for interested parties to prevent … the use of any means in the designation or presentation of a good that indicates or suggests that the good in question originates in a geographical area other than the true place of origin in a manner which misleads the public as to the geographical origin of the good" Thus, in an action for infringement of a GI, the aggrieved party must prove that the GI is misleading to the public, or that the use thereof would constitute unfair competition.

In contrast, a higher level of absolute protection is accorded to wines and spirits, in that it is not necessary to prove misleading use of the GI. Article 23 of the TRIPS Agreement provides that Members are required to "provide the legal means for interested parties to prevent use of a geographical indication identifying wines for wines not originating in the place indicated by the geographical indication in question or identifying spirits for spirits not originating in the place indicated by the geographical indication in question, even where the true origin of the goods is indicated or the geographical indication is used in translation or accompanied by expressions such as 'kind', 'type', 'style', 'imitation' or the like".

The additional layer of protection accorded to wines only would be for signatories to accord protection for each geographical indication for wines in the case of homonymous indications, as well as the establishment of a multilateral system of notification and registration of geographical indications for wines eligible for protection in the jurisdictions of those Members participating in the system. [1] The distinction in the level of protection accorded to wines and spirits and of other products has been criticized to be discriminatory, not least from the perspective of developing countries, a majority of which are not producers of wines or spirits, but of agricultural foodstuffs. [2]

Article 24 of the TRIPS Agreement provides that members agree to enter into negotiations aimed at increasing the protection of individual geographical indications under

[1] https://v1.lawgazette.com.sg/2014-07/1085.htm.
[2] https://v1.lawgazette.com.sg/2014-07/1085.htm.

Article 23 under the TRIPS Agreement. [1] For instance, "Geographical indication" is defined in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and also expressed in the Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications. "Appellation of origin" is defined in the Lisbon Agreement for the Protection of Appellations of Origin and their International Registration and in the Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications. "Protected Designation of Origin (PDO)" and "Protected Geographical Indication (PGI)" are terms used within the European Union.

The Geneva Act of the Lisbon Agreement allows all contracting parties to benefit from rapid, high-level and indefinite protection for geographical indications through a single registration. The Lisbon Agreement of 1958 is a treaty administered by the World Intellectual Property Organization (WIPO). It provides for the protection of appellations of origin (AO) e.g. Bordeaux wine, and their international registration. AOs are a special kind of GI for products that have a particularly strong link with their place of origin. [2]

The Lisbon System sets a legal framework to facilitate the international protection of AOs and GIs in 43 Contracting Parties, covering 72 countries in Africa, Asia, Europe, Latin America and the Caribbean, without the difficulties and costs of filing and managing multiple registrations before different authorities. Through a single registration procedure with the World Intellectual Property Organization (WIPO), in one language and with only one set of fees in one currency, the Lisbon System grants registered AOs and GIs protection in several countries, based on the only legally binding international register. The Lisbon System can be used to protect AOs and GIs for any type of product, such as agricultural and foodstuffs, natural, artisanal and even industrial goods. [3]

Practices for the Legal Protection of Geographical indications

Geographical indications (GIs) that identify products of origin were born in each respective country and all are extensively internationalized thanks to the World Trade Organization 1994 Trade Related Aspects of Intellectual Property Rights Agreement. It investigates how GIs have developed in ASEAN and Asia, the most active new area for GIs worldwide. There are different legislations in different countries and their practical implementation in eight out of 10 ASEAN countries with a *sui generis* system (Vietnam, Cambodia, Thailand, Indonesia, Malaysia, Laos, Singapore, and Myanmar); and in India and Japan, two Asian countries with active GI policies. Building on a comparative analysis of these countries and their regulations on GIs, it is gradually becoming known that they have the following aspects of the GI system: the *sui generis* institutional system; in some countries, GI is protected under the Geographical Indication Act; and in a few countries, it is protected under the trademark system.[4]

GIs protection has a long tradition in many of the ASEAN countries through unfair competition, consumer protection, and food standards or even appellation of origin. However once they become WTO member, the adhesion to the WTO become the moment of adopting new legal scheme for GIs protection based on TRIPs standards. Since every member of ASEAN Community has already joined WTO, it is guaranteed that ASEAN countries must have the protection on IP at minimum standards of the TRIPs Agreement, including GIs.

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[1] https://www.wto.org/english/res_e/publications_e/ai17_e/trips_art24_oth.pdf.
[2] https://eur-lex.europa.eu>legal-content>summary>pr.
[3] https://www.wipo.int>lisbon.
[4] https://onlinelibrary.wiley.com/doi/epdf/10.1111/jwip.12155 (1.5.2020).

However, there are only seven out of ten ASEAN countries have national law regulating GIs protection. In the past three countries; Philippine, Brunei and Myanmar protected GIs through certifications or collective trademarks under national trademark laws. Nowadays, they try to implement *sui generis* system.

In 2022, the Philippines issued Rules and Regulation on GIs, whilst Myanmar allows protection through the Trademark Law of Myanmar 2019 which was enacted in 3.1.2019 and it was entered into force in 1.4.2023.

Myanmar tried to implement a *sui generis* protection system. Sections 18,34 and 42 of the Myanmar Competition Law, 2015; Sections 23,25 and 41 of the Consumer Protection Law, 2019; and Sections 3(b)(d), 2(o),(s),(u), 53,54(a),(b),(c), 55,56,57(a),(b),(c), (d), 58(a),(b),(c), 61(a),(b),(c) of the Trademark Law of Myanmar, 2019 are provided for protection of geographical indications.

Brunei Darussalam plans to develop a specific law on GIs. The legislations of all ASEAN countries allow producers, traders to register or claim on the GIs. The claim on GIs in ASEAN mostly base on registration.

At present, there are existing registration systems for GIs in Indonesia, Malaysia, Thailand and Vietnam.

In Singapore, GIs are protected as a new class of IP, but without a registration system, while the protection of GIs is also ensured under the trademark system in the Philippines.

Thailand, Vietnam, Malaysia, Cambodia, Lao, Myanmar and Indonesia allow and accept the registration and recognition for both national and foreign GIs. ASEAN countries start to establish cross registration of GIs within ASEAN countries.

To sum up, in **Brunei**, GIs are protected under the **Trade Marks Act (Cap 98) revised edition 2000** as collective or certification marks. [1] In **Cambodia**, GI is protected by **Law on Geographical Indications, 2014**, Declaration of Procedures for Registration and Protection of GI (December 23, 2016), and Geneva Act of the Lisbon Agreement. In **Indonesia**, GI is protected by **Law on Trademarks and GI Number 20 of 2016**, Government Regulation 51/2007, and the Minister of Justice and Human Rights Regulation 12/2019. In **Laos**, GI is protected by **Lao Intellectual Property Law, 2011** (revised in 2017), Decision of the Minister of Science and Technology on the Implementation of GI under the Law on IP No. 1119 (25 October 2016), Paris Convention, TRIPS Agreement, Geneva Act of the Lisbon Agreement. In **Malaysia**, GI is protected by the **Geographical Indications Act 2000**. In **Myanmar**, GI is protected by **Trademarks Law in Myanmar (2019**). [2] In **Philippines**, Geographical Indication is protected under the **law on the Intellectual Property Code of the Philippines (Republic Act No.8293), 1997.** In **Singapore,** GI is protected by **Geographical Indications Act 2014**, GI Rules 2019 and Trademarks Act (Cap. 332). In **Thailand**, GI is protected by **Geographical Indications Act** B.E. 2546, **2003**. In **Vietnam**, GI is protected by Civil Code 2005, Criminal Code 2015, **Intellectual Property Law 2005**, Decrees, Circular, Joint Circulars, and IP international legal instruments, notably: Paris Convention, TRIPS Agreement, international regional and bilateral agreements, and memorandums of cooperation related to GI. [3]

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[1] European Union Intellectual Property Office, (2019) "Geographical Indications in the ASEAN Region" Booklet on ASEAN Geographical Indications Procedure and Products, Bangkok, p.13.

[2] Miranda Risang Ayu Palar, (2022) "A Model of Geographical Indication's Product Specification for ASEAN Member Countries" Centre de Coopération Internationale en Recherche Agronomique pour le Développement [Cirad], Montpellier, France, pp.1-2.

[3] European Union Intellectual Property Office, (2019) "Geographical Indications in the ASEAN Region" Booklet on ASEAN Geographical Indications Procedure and Products, Bangkok, p.13.

In past, there is no common legal framework for the protection of GI at the level of ASEAN because is no standard of regional legal framework and no agreement as to the best methods to GIs protection.

Therefore, GIs protection seems uncoordinated and occurs in the most diverse approaches. The legal framework for GIs protection in each ASEAN country as the compliance to TRIPS Agreement has been established in a wide variety of different approaches mostly on three different major points of substance: definition and eligible indications; mean of protection; and scope of protection including ownership. In the past, the diverse of approaches did not only occur on the substance of regulation, but also the type of regulation that could be grouped into three groups: (a) *sui generis* protection system (in Thailand, Singapore, Malaysia, Laos, Indonesia and Cambodia); (b) protection under trademark system (the Philippines, Myanmar and Brunei) [1]; (c) protection under different legal means (in Vietnam, GIs are protected under the IP Law, while Indonesia combines the GIs protection under trademark law and *sui generis*). Nowadays, all ASEAN countries try to implement *sui generis* system for the protection of GIs. All ASEAN countries have unfair competition protection. [2]

Each countries have their roles and standards for their goals that to increase the legal protection of their geographical indications, to promote their economics and their sustainable development in their countries. This research have to be highlighted the Singapore which has *sui generis* law and Trademark Law, [3] in the past, the Philippines; it had only trademark system under Trademark Section of the Intellectual Property Code of 1997[4], it has been issued Rules and Regulations on Geographical Indications, 2022, nowadays, Philippines attempt to put in place a *sui generis* system [5] and Myanmar also try to implement *sui generis* system.

In Singapore, the *sui generis* system is as provided under the Geographical Indications Act, 2014 ("GI Act, 2014") and the Geographical Indications Rules, 2019 ("GI Rules") is practiced. GIs are registered as certification and collective marks under the Trade Marks Act 1998 (Cap. 332) and ("TMA") the TMA is practiced. [6]

In that, a collective mark is a sign used to distinguish the goods or services offered by members of an association from those goods or services of those who are non-members. Collective marks are often registered under the name of an association or a company, and they represent membership of the provider of the goods or services to a particular association. A certification mark is a sign used to distinguish goods or services certified by the proprietor from other non-certified goods or services. A GI may be used as a certification mark to indicate the geographical origin or quality of the goods. However, unlike an ordinary trade mark which is used by the proprietor of the trade mark, a certification mark cannot be used by its proprietor as the proprietor is the certifying body. Only parties authorized by the proprietor may use the certification mark.

The Geographical Indications Act 2014 ("GI Act") and its subsidiary legislation, the Geographical Indications Rules 2019, form the legislation governing geographical indications in

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1 Ass., Prof Dr Le Thi Thu Ha, Dr Delphine Marine-Vivien, (2017) "Facilitating the Protection of Geographical Indications in ASEAN" Working paper No. 01/2017, Switzerland, p.16.

2 Dr. Mas Rahmah, S.H,M.H,LL.M, (2018) "The Protection of Geographical Indications for Agricultural Development: Challenges for ASEAN" Faculty of Law, Airlangga University, Indonesia, p.6.

3 The ASEAN Secretariat, (2020) "Guidelines on Protection of Geographical Indication in ASEAN Member States, Jakarta, p.47.

4 https://www.origin-gi.com/25-05-2022-a-new-draft-law-on-gis-prepared-by-the-intellectual-property-office-of-the-philippines-ipophl.

5 http://www.federislaw.com.ph/geographical-indication-system-in-the-philippines.

6 ASEAN, (December 30, 2020) *Guidelines on Protection of Geographical Indication in ASEAN Member States*, Jakarta, Indonesia.

Singapore. Although it is not compulsory to register a GI in Singapore in order for it to be protected under TRIPS, a registered GI is better protected against infringement action. As such, it also safeguards the interests of consumers by providing greater assurance that the products in the marketplace which are identified by a GI truly carry the characteristics that the GI is known for and which are attributable to its geographical origin. The protection conferred by a GI registration is for an initial period of 10 years from the date of registration, and the registration can last indefinitely if it is renewed every 10 years. An application for registration of a GI may only be sought in respect of goods falling within one or more of the categories of goods set out in the Schedule of the GI Act, 2014. The categories of goods are as; wines, spirits, beers and etc. It is a criminal offence to falsely represent a GI as registered when it is not registered, or to make a false representation as to the goods for which a GI is registered. So, geographical indications are needed to get protection. [1]

Firstly, Geographical Indications Act 2014, which came into effect on April 1, 2019, envisioned a registry and registers for GIs and provided for the registration, publication, opposition, cancellation, and renewal of GIs specified as registrable, such as beers, cheese, spirits, wines, and agricultural products.

Secondly, the higher level of protection previously afforded to only wines and spirits under GI 1999 and TRIPS was extended to all registrable GIs, including cheese and agricultural products.

Such GIs are vulnerable to "biopiracy," the unauthorized extraction of biological resources, for commercialization. For example, in 1997, shortly before the enactment of Thailand's GI legislation, the producers of Thailand's unique Jasmine (Hom Mali) rice were confronted with "Jasmati" rice, a portmanteau of "Jasmine," the English name for a Thai rice strain and "Basmati," a famous Indian rice strain, but with no genetic connection to either strain. In another instance, Indonesia's tempeh, originally made from fermented soya beans in its Java region, was granted patent protection in Japan. The importance of effective GI protection for ASEAN countries cannot be understated. Currently, there are no GIs from ASEAN countries registered in Singapore.

Singapore's membership in ASEAN, as well as its status as a significant trading hub for goods in the ASEAN region, the EU, and beyond—makes the city-state well-suited to become a leader in GI protection. The *sui generis* GI regime in Singapore may have started a little late, but it is still a great start. [2]

Although Singapore uses *sui generis* system to protect their GI, the Philippines practice Rules and Regulations on Geographical Indications, 2022 and the Law on Intellectual Property Code of Philippines, 1997.

Registration of Geographical Indications is now available in the Philippines. The Rules and Regulations on Geographical Indications (GI-RR), which issued on 5 October 2022, establish a GI registration system. Any interested party may now apply to register a GI with the IP Office of the Philippines (IPOPHL).

Under this system GI is defined as any indication which identifies a good as originating in a territory, region or locality, where a given quality, reputation, or other characteristics of the good is essentially attributable to its geographical origin, and/or human factors.

GI receives protection in the Philippines only if registered under the GI-RR. A registered GI is protected against: (1) third party uses of geographical names other than the true place of

[1]Intellectual Property Office of Singapore, (2022) "Geographical IndicationsINFOPACK", Singapore, pp.4-6.
[2]https://www.inta.org/perspectives/features/the-geographical-indications-regime-in-singapore.

origin in a manner that can mislead the public, (2) use of GI which falsely represents that the goods originate in another territory, (3) and use of a GI on a good that does not originate from the place indicated in the GI even if accompanied by the name of the place where the goods originates from, or even if accompanied by expressions such as "kind", "type", "style", imitation", "method", "as produced in" or other similar qualifying terms, (4) use of a GI which constitutes an act of unfair competition within the meaning of Article 10bis of the Paris Convention.

The Bureau of Trademarks will maintain a Register of Protected Geographical Indications. The registration includes publication and allows for the filing of third-party observations or objections. [1]

Foreign applicants must be a national of, or a juridical entity organized in or has an effective commercial or industrial establishment in a country which is a party to the World Trade Organization or other international conventions concerning the protection of GI to which the Philippines is also a party.

Along with other standard application requirements, an applicant must submit a government certification validating the causal link between the specific quality, reputation or other characteristics of the goods and the geographic area which it originated and technical information pertaining to the product specifications.

A foreign applicant will be required to submit a certification from the competent government agency in the country of origin that the GI is a registered or protected GI in that country.

In Rule and Regulation on Geographical Indications in the Philippines, 2022, the system will protect homonymous GI's but may require owners to comply with certain conditions to differentiate one GI from another to avoid misleading the public. [2]

Myanmar made an attempt to put in place a *sui generis* protection system. The protection of geographical indications is provided by Sections 18, 34, and 42 of the Myanmar Competition Law, 2015; Sections 23, 25, and 41 of the Consumer Protection Law, 2019; and Sections 3(b)(d), 2(o),(s),(u), 53,54(a),(b),(c), 55,56,57(a),(b),(c),(d), 58(a),(b),(c), and 61(a)(b)(c) of the Trademark Law of Myanmar, 2019. The objectives of the Trademark Law in Myanmar, 2019 is to improve the qualities of the products of Myanmar by the protection of geographical indications, and to develop the economy of the public in locality by exporting to the international market. [3]

In Myanmar, geographical indication means any indication which identifies goods as originating in the territory of a country or a region or a locality in that territory, where a given quality, reputation or other characteristics of the goods is essentially attributable to its geographical origin. [4]

In our country, the persons or associations who can register GIs are any legal entity representing the following persons of the locality in which the relevant goods are produced, desirous of registration of a geographical indication, shall apply to the Registrar for registration in conformity with the stipulations:

(a) persons who produce goods by exploiting natural products or natural resources;

[1]http://www.federislaw.com.ph/geographical-indication-system-in-the-philippines.
[2]http://www.federislaw.com.ph/geographical-indication-system-in-the-philippines.
[3]Section 3(d) of the Trademark Law in Myanmar, 2019.
[4]Section 2(o) of the Trademark Law in Myanmar, 2019.

(b) producers of agricultural products;

(c) manufacturers of products of handicraft or industry;

(d) competent authorities from government departments and organizations on behalf of the persons indicated under subsections (a) to (c). [1]

The following points are needed to file to get registration of GIs;

(a) An application for the registration of a geographical indication shall specify the following points in accordance with the stipulations:

(i) name, nationality and address of the entity or representative;

(ii) the geographical indication for which registration is sought;

(iii) the geographical area to which the geographical indication applies;

(iv) the goods to which the geographical indication applies. [2]

The rights of the GIs producers who got registrations are; (a) only producers carrying on their activities in the geographical area specified in the register shall have the right to use a registered geographical indication, in the course of trade, with respect to the products specified in the register. As long as these goods meet the standards for reputation, quality, and other attributes listed in the registry.

(b) In the case of homonymous geographical indications, protection shall be accorded to each indication, provided that the practical conditions under which the homonymous indications will be differentiated from each other, taking into account the need to ensure equitable treatment of the producers concerned and that consumers are not misled.

(c) The right holder of the registered geographical indication shall have the rights to prevent the following matters:

(i) the use of any means in the presentation of the goods to be originated in a geographical area other than the true place of origin in a manner which misleads the public as to the geographical indication of the goods;

(ii) any use of a registered geographical indication which constitutes an act of unfair competition;

(iii) any use of a geographical indication identifying goods not originating in the place indicated by the geographical indication in question, even where the true origin of the goods is indicated or the geographical indication is used in translation or accompanied by expressions such as "kind", "type", "style", "imitation" or the same.

(d) The rights under subsections (a) and (c) do not apply to another geographical indication which, although literally true as to the territory, region or locality in which the goods originate falsely represents to the public that the goods originate in another territory. [3]

The punishment for infringement of GIs producers' rights is provided in Section 62 of the Trademark Law in Myanmar, 2019 as the enforcement provisions in case of the infringement of mark in this Law shall apply mutatis mutandis to the implementation of the rights to the geographical indication. And GIs producers should refrain the following points for consumers. They are; no businessman shall carry out any of the following acts which mislead the

[1]Section 53 of the Trademark Law in Myanmar, 2019.
[2]Section 54 of the Trademark Law in Myanmar, 2019.
[3]Section 57 of the Trademark Law in Myanmar, 2019.

consumers:(a) carrying out with intention to compete with the use of deceptive information which mislead the legally registered name of goods, business slogan, logo, packaging, geographical indication and other elements, and (b) carrying out business such as production of goods and services by using the information contained in sub-section (a). [1] Any person who violates the prohibitions contained in Section 18, Section 20, Section 21, Section 25 or Section 28 shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine not exceeding Kyat fifty lakhs or with both. [2] The consumers of GIs has the right to claim the following rights in respect of the goods guaranteed and sold to the consumer by the entrepreneur under Section 23; (a) to receive the goods that is in compliance with the guarantee; (b) to claim for refund, repair or replacement from the seller; and (c) to obtain compensation if the guarantee is not met. [3]

In Cambodia, One of the challenges met by GI producers is to keep constant compliance with the GI specifications. Another is the lack of competence and capacity for associations and producers to develop packaging and labeling. Another challenge is the enforcement of GI products to avoid copycats seeking to piggyback on the GI products' reputation, leading to unfair competition both on the national and international markets. WIPO is working with the Department of IP Cambodia to address key issues faced by the fledgling GI system and complement it with other branding strategies. There is a rising interest and awareness about GI products in the country and their potential for trade. The country expects more GIs will be registered in Cambodia soon. Cambodia has been a member of the Geneva Act since 2018.

In Laos, one of the challenges met by GI producers is the creation of an association, which is monitored by the government, and the marketing of the products. The six registered GIs have yet to benefit from their registration in the middle of the Covid-19 crisis, in 2020. WIPO is assisting the Department of IP in a brand development initiative for GIs. The potential benefits of GIs in terms of reputation and economic output are nonetheless starting to raise interest from producers and provincial mayors.

Thailand registers GIs for agricultural and industrial products, as well as handicrafts, and offers support to producers with the registration, control system, marketing, and promotion. Once the GI is registered, producers who agree to follow the producers' manual and control plan for GI members, will be able to use the Thai logo label. Although the GI protection is not limited in time, the use of the GI logo has to be renewed every two years, she said. Qualified GI traders can also use the GI logo. In Thailand, contrary to other countries, like in the European Union, producers do not need to set up an association through which the GI will be registered. Instead, producers usually group themselves into informal associations, or community associations, which register for the same product. Over 9,000 GI producers use the Thai GI logo. [4] In a nutshell, each country tries their best to protect their GIs. Even though they had only a trademark system to protect their GIs in the past, nowadays they are trying to implement a *sui generis* system in their countries.

Conclusion

To sum up, in the past, in Myanmar, Brunei and the Philippines, geographical indications were protected by trademark system. Generic terms cannot be recognized as trademark. GIs can be protected as certification mark. For example, Darjeeling tea and Basmati mark. Some country cannot recognize GIs that they have not heard some names, so they think that generic terms. So,

[1]Section 18 of the Competition Law in Myanmar, 2015.
[2]Section 42 of the Competition Law in Myanmar, 2015.
[3]Section 25 of the Consumer Protection Law in Myanmar, 2019.
[4]https://www.wipo.int/web/ip-advantage/w/stories/thailand-leads-the-way-to-gi-registration-in-asean-countries. (21.2.2023)

an agreement should be concluded between GIs register country and the country which accept that registration. And each country should have *sui generis* system to protect their GIs. *Sui generis* system is more suitable and secure for GIs. In Thailand, they grant informal association to submit GIs to registry. And it is meant that to get GIs, it does not need to set up association. Myanmar is trying to submit international registration for some GIs such as Shwe Bo Paw San, Pa Thein Paw San, A Yar Taw Thanakha, Shin Ma Taung Thanakha, Sein Ta Lone Mango. It should be considered that if Shwe Bo Paw San and Pa Thein Paw San have the same quality, which can get registration. So, each GIs should have their distinctive quality. In ASEAN region, it is needed to implement effective single legal framework and agreement for the protection of GIs. It should be appeared that minimum standards and specifications for the protection of GIs for all of ASEAN countries effectively.

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Annex (1)

Different specific and important laws for the protection of GIs in ASEAN

Country	Specific and important law
Burnei	Trade Marks Act (Cap 98) revised edition 2000
Cambodia	Law on Geographical Indications, 2014
Indonesia	Law on Trademarks and GI Number 20 of 2016
Laos	Lao Intellectual Property Law, 2011
Malaysia	Geographical Indications Act 2000.
Myanmar	Trademarks Law in Myanmar (2019)
The Philippines	Law on the Intellectual Property Code of the Philippines (Republic Act No.8293), 1997
Singapore	Geographical Indications Act 2014
Thailand	Geographical Indications Act B.E. 2546, 2003
Vietnam	Intellectual Property Law 2005

Source: Facilitating the Protection of Geographical Indications in ASEAN by Le Thi Thu Ha.

Annex (2)

Different legal systems for the protection of GIs in ASEAN

Country	*Sui generis* system	Trademark system	Unfair Competition protection
Burnei		★	★
Cambodia	★		★
Indonesia	★		★
Laos	★		★
Malaysia	★		★
Myanmar	★ (try to implement)		★
The Philippines		★	★
Singapore	★		★
Thailand	★		★
Vietnam	★		★

Source: Facilitating the Protection of Geographical Indications in ASEAN by Le Thi Thu Ha.

A CRITICAL REVIEW ON BENEFITS FOR EMPLOYMENT INJURY IN MYANMAR

Aye Moh Moh Tun[1]

Abstract

This research will focus on the benefits for employment injury under the Workmen's Compensation Act, 1923 and the problems of not losing worker's rights in the injury case. Employment injury means a worker who suffers injuries by an accident arising out of and in the course of employment. A safe and healthy working environment is very important for the worker. It is the duty of the employer and the worker. On the part of the employer, they need to provide a safe and healthy working environment for the prevention of danger to their workers. Similarly, every worker has to abide by the workplace rules and disciplines. In the analytical study, in Myanmar, if a worker is caused by injury at work, he has the right to file for workers' compensation. His employer shall be liable to pay compensation under the provisions of the Workmen's Compensation Act, 1923 if an injured worker is not covered by the Social Security Law, 2012. Under the Social Security Law, 2012, if a worker is an insured person, he or she has the right to enjoy benefits prescribed by the Law. However, there is a situation that cannot be entitled to receive compensation or enjoy benefits. As a result of this study, the amount of compensation payable is inadequate and insufficient for the current situation. Relating to the amount of compensation, the provisions of the amount of compensation under the Bill of Workmen's Compensation Law, 2018 is more than the amount of compensation under the Workmen's Compensation Act, 1923.

Keywords: benefits, injury, amount, compensation

Introduction

The employer and worker have to take care of each other and other people who might be affected by their acts. The employer needs to provide a safe and healthy working environment for their workers. Similarly, worker also needs to abide by the workplace rules, disciplines, instructions, and procedure given by their employer and use all devices properly for their protection. Worker has a right to a safe and healthy working environment but not only the employer is responsible for worker safety, but workers are responsible, too. A worker is entitled to receive compensation/benefit when he/she suffers injury by accident arising out of and in the course of his employment. Compensation relating to employment injury was covered by Workmen's Compensation Act, 1923 and Social Security Law, 2012. Workmen's Compensation Act does not describe the employer to contribute for his worker. A worker who is not insured under Social Security Law, 2012, is covered by the Workmen's Compensation Act relating to employment injury benefits. In 2018, the Bill of the Workmen's Compensation Law was drafted.

Material and Methods

- Studying on the Workmen's Compensation Act, 1923
- Studying on the Bill of the Workmen's Compensation Law, 2018
- Studying on journals and cases

[1] Department of Law, Meiktila University

Aim and Purpose

- To know the Workmen's Compensation Act in Myanmar
- To know the benefits for the workers relating to employment injury
- To know the amount of compensation in the case of employment injury

Findings

By carrying out a study of the benefits for employment injury under the Workmen's Compensation Act, 1923, the amount of compensation payable has been found to be inadequate and insufficient for the current situation. As a result, the Workmen's Compensation Bill was drafted in 2018. According to the bill, the minimum and maximum compensation for death shall be 15 lakhs and 30 lakhs. For permanent injury, the minimum and maximum compensation payable shall be 30 lakhs and 60 lakhs, respectively.

Employment Injury under the Workmen' Compensation Act

To get compensation or benefit for a worker who suffers injury by accident arising out of and in the course of his employment. Compensation relating to employment injuries was covered by the Workmen's Compensation Act, 1923. In order to get compensation under the Workmen's Compensation Act, the employee must be covered by the relevant law, and the accident must arise out of or in the course of employment.

Persons Concerned with Workmen's Compensation

Persons concerned with workmen's compensation are workmen under the Workmen's Compensation Act, 1923. The definition of workman was described in Section 2 (n) of this Act, 1923. Workman means any person who has entered into or works under a contract of service or apprenticeship with an employer, whether by way of manual labour, clerical work or otherwise, and whether the contract is expressed or implied, is oral or in writing and also includes a person engaged in plying for hire with any vehicle or vessel the use of which is obtained from the owner thereof under any contract(other than a hire purchase agreement) in consideration of the payment of a fixed sum or a share in the earnings or otherwise, but does not include-

(i) any person employed otherwise than by way of manual labour whose wages exceeds the amount prescribed by notification made by the Ministry of Labour with the approval of the Government or

(ii) a person employed in agriculture, that is to say, the cultivation of crops other than those grown on any estate which is maintained for the purpose of growing cinchona, rubber, coffee or tea on which any one day in the preceding twelve months twenty-five or more persons have been so employed; or

(iii) a person whose employment is of a casual nature and who is employed otherwise than for the purposes of the employer's trade or business, not being a person employed for the purposes of any game or recreation and engaged or paid through a club; or

(iv) any person working in the capacity of a member of the naval, military or air forces of the Union of Myanmar or

(v) member of a police force: or

(vi) an outworker; or

(vii) a member of the employer's family dwelling in his house[1]

It should be noted that public servants, self-employed workers, persons concerned with Military Law, members of a police force and persons covered by Social Security Law are not covered by the Workmen's Compensation Act, 1923.

In the case of **Daw Saw Mei V Maung Mya Than and Workmen's Compensation Scrutiny Committee**[2], the Court held that Maung Mya Than applied that he was an employee of Daw Saw Mei. He drove a taxi owned by Daw Saw Mei. He suffered an injury from the accident of this taxi. Maung Mya Than claimed the compensation from Daw Saw Mei. Daw Saw Mei appealed that Maung Mya Than was not her employee because he did not have the licence to drive a taxi. Maung Mya Than was only a relative and his injury did not occur in during working hours. According to the statement of witnesses, Maung Mya Than was an employee of Daw Saw Mei. Whether Maung Mya Than did not have a licence to drive a taxi or not, did not concern Maung Mya Than being an employee or not. The Court decided that Maung Mya Than was an employee of Daw Saw Mei under the Workmen's Compensation Act, 1923.

If personal injury is caused to a workman by accident arising out of and in the course of his employment, his employment shall be liable to pay compensation in accordance with the provisions of this chapter;

Provided that the employer shall not be so liable in respect of any injury, not resulting in death, caused by an accident which is directly attributable to-

(i) the workman having been at the time thereof under the influence of drink or drug, or

(ii) the willful disobedience of the workman to an order expressly given, or to a rule expressly framed, for the purpose of securing the safety of workmen, or

(iii) the willful removal or disregard by the workman of any safety guard or other device which he knew to have been provided for the purpose of securing the safety of workmen.[3]

In the case of **Daw Paw Law (a) Daw Dora V Daw Thein Shwe and Township Workmen's Compensation Scrutiny Committee**[4] decided by the Court, Daw Paw Law (a) Daw Dora was the owner of motorboat. Daw Thein Shwe's was an employee in this motorboat. At the port of Pathein, U Aye Maung went to drink alcohol. Then he returned to perform his duty on the motorboat. There were other three motorboats, he slipped down into the river then he died. Daw Thein Shwe applied for the Township Workmen's Compensation Scrutiny Committee in Pathein and the Commissioner decided to pay compensation. Employer appealed to the Court. U Aye Maung was an employee in this motorboat. When he went to drink alcohol, he met U Ohon Myint (master of this motorboat). U Ohon Myint ordered U Aye Maung to go back and to take up duty. While U Aye Maung was returning to motorboat for duty, he slipped down into the river

[1] Section 2 (n) of the Workmen's Compensation Act, 1923.
[2] Daw Saw Mei V Maung Mya Than and Workmen's Compensation Scrutiny Committee, 1974 M.L.R P-6.
[3] Section 3 (1) of the Workmen Compensation Act, 1923.
[4] Daw Paw Law (a) Daw Dora V Daw Thein Shwe and Township Workmen's Compensation Scrutiny Committee, 1977 M.L.R (C.C) P-38.

and then he died. So his accident arose out of and in the course of employment. Therefore, employer was liable to pay compensation under Section (3) of the Workmen's Compensation Act, 1923. This case employee was injured while doing his work. Relating to this case, the employee died in the course of employment and the employer was liable to pay compensation. It should be noted that the employee was injured while doing his work.

According to Section 3(2) of the Workmen Compensation Act , if a workman, whilst in the service of an employer in whose service he has been employed for a continuous period of not less than six months in any employment specified in List A of Schedule III, contracts any disease specified therein as an occupational disease peculiar to that employment, the contracting of disease shall be deemed to be an injury by accident within the meaning of this Section and unless, the employer proves to the contrary, the accident shall be deemed to have arisen out of and in the course of the employment.

According to the explanation of Section 3 (2) of this Act; a term of service which does not include a period of employment by any other employer shall be considered as continuous for the purposes of this subparagraph.

If a workman contracts any disease specified in List B of Schedule III, and it is certified by a qualified medical practitioner that the disease is directly due to the nature of any employment in which the workman was employed at any time within the twelve months pervious to the date of disablement, the contracting of the disease shall be deemed to be an injury by accident within the meaning of this Section, and unless the employer proves to the contrary the accident shall be deemed to have arisen out of and in the course of the employment aforesaid: Provided that the compensation shall be recoverable from the employer who last employed the workman during the said twelve months in the employment to the nature of which the disease was due.[1]

In the Schedule (III) List A and List B of the Workmen's Compensation Act states the occupational disease as follows; According to Schedule (III) List A of the Workmen's Compensation Act , Occupational diseases are anthrax, lead poising or its sequelae, mercury poisoning or its sequelae, phosphorus poisoning by phosphorus or its compound or its sequelae, aesenic poisoning by arsenic or its compounds and its sequelae, poisoning by benzene or its homologues, their intro-and amido-derivatives, and its sequelae, poisoning by intro-and amido-derivatives benzene or its homologues, poisoning by nitrous fumes or its sequelae etc.[2]

According to Schedule (III) List B of the Workmen's Compensation Act, occupational diseases are dermatitis produced by dust or liquids, ulceration of the skin produced by dust or liquids, ulceration of the mucous membrane of the nose or mouth produced by dust, writer's cramp twister's cramp caused by twisting of cotton or woolen yarns inflammation, ulceration, malignant disease of the skin and sub-cutaneous tissues, due to exposure to X-rays or radio-active substances.[3]

[1] Section 3(2) of the Workmen's Compensation Act, 1923.
[2] Schedule (III) List A of the Workmen's Compensation Act, 1923.
[3] Schedule (III) List B of the Workmen's Compensation Act, 1923.

A workman who contracts an occupational disease in the course of his work is to be considered as having suffered an injury by accident arising out of and in the course of his employment.

Procedure for Claiming Compensation

According to Section 10 of the Workmen Compensation Act, 1923, an employee who was injured can claim for compensation within twelve months of the occurrence of the accident or, in case of death, within twelve months from the date of death before Commissioner. Moreover, Section 30 of this law, an appeal can be made to the Supreme Court if decision of the Commissioner is not satisfactory. And the period of limitation for an appeal under this section shall be sixty days.[1]

Benefits and Compensation for Temporary and Permanent Disablement

In cases where the injury results in incapacity of such a nature that the injured workman must have the constant help of another person, additional compensation equivalent to twenty-five percent of the compensation payable in respect of the injury shall be paid to the injured workman.[2]

Under the Workmen's Compensation Act, 1923, "total disablement" means such disablement, whether of a temporary or permanent nature, as incapacitates a workman for all work which he was capable of performing at the time of the accident resulting in such disablement; provided that permanent total disablement shall be deemed to result from the permanent total loss of the sight of both eyes or from any combination of injuries specified in Schedule I where the aggregate percentage of the loss of earning capacity, as specified in that Schedule against those injuries, amounts to one hundred per cent;[3]

Where permanent total disablement results from the injury-

(i) in the case of an adult, a sum equal to 36 times 140 per cent of the workman's monthly wages calculated in accordance with this Act: Provided that the minimum and the maximum payment in such a case shall be 3,024 Kyats and 10,080 Kyats respectively, and

(ii) in the case of a minor twelve hundred kyats.[4]

And then, "Partial disablement" means, where the disablement is of a temporary nature, such disablement as reduces the earning capacity of a workman in any employment in which he was engaged at the time of the accident resulting in the disablement, and, where the disablement is of a permanent nature, such disablement as reduces his earning capacity in every employment which he was capable of undertaking at that time; Provided that every injury specified in Schedule I shall be deemed to result in permanent partial disablement;[5]

[1] Section 10 and Section 30 of the Workmen Compensation Act, 1923.
[2] Section 4 (1) (E) of the Workmen's Compensation Act, 1923.
[3] Section 2 (l) of the Workmen's Compensation Act, 1923.
[4] Section 4 (1) (B) of the Workmen's Compensation Act, 1923.
[5] Section 2 (g) of the Workmen's Compensation Act, 1923.

The amount of compensation where permanent total disablement results from the injury under proviso of clause B (i) and B (ii) of sub-section (1) of section 4 shall be from the minimum of 200,000 Kyats to a maximum of 600,000 Kyats.[1]

In the Bill of Workmen's Compensation Law, 2018, the minimum and maximum compensation payable shall be 30 lakhs and 60 lakhs, respectively for permanent injury.

Benefits and Compensation for Death

If the injured party is dead, their dependents can claim compensation. The definition of dependent was described in this Act. "Dependent" means any of the following relatives of a deceased workman, namely; (i) a widow a minor legitimate son and unmarried legitimate daughter, or a widowed mother; (ii) if wholly or in part dependent on the earnings of a workman at the time of his death, a widower, a parent other than a widowed mother, a minor illegitimate son. an unmarried illegitimate daughter, a daughter legitimate or illegitimate if married and a minor or if widowed, a minor brother, an unmarried or widowed sister, a widowed daughter-in-law, a minor child of a deceased son, a minor child of a deceased daughter where no parent of child is alive or, where no parent of the workman is alive, a paternal grandparent.[2]

In the case of **Ma Aye Mu (daughter of deceased U Hla Kyi) V U Moe Kyi and 2**[3], it was decided by the Court that appellant Daw Aye Mu applied for compensation because she was the eldest daughter of the deceased U Hla Kyi. This application was rejected by the Workmen's Compensation Committee under Section 2(1) (d) of the Workmen's Compensation Act. Although she was the daughter of deceased U Hla Kyi, she was married, and she was not entitled to compensation. So, she appealed to the Court under Section 30 of the Workmen's Compensation Act. Daw Kyin Hmwe was wife of the deceased U Hla Kyi. Daw Kyin Hmwe died on the fourth day after the death of U Hla Kyi before claiming compensation. In this case, defendant 1 and 2 was responsible to pay compensation for the death of U Hla Kyi. Daw Kyin Hmwe was alive at the time of U Hla Kyi's death and she was absolutely entitled to compensation by the defendants. In other words, it was Daw Kyin Hmwe's money. This money was entitled to the successors of Daw Kyin Hmwe. Daw Kyin Hmwe died before applying for compensation.

Therefore, Ma Aye Mu was a successor of Daw Kyin Hmwe. Ma Aye Mu was entitled to compensation for the death of U Hla Kyi.

Where death results from the injury, in the case of an adult, a sum equal to 36 times the workman's monthly wages calculated in accordance with this Act; provided that the minimum and the maximum payment in such a case shall be kyats 150,000 to kyats 450,000 respectively.[4]

Exactly the same minimum and maximum amount are contained in the Ministry of Labour which state the amount of compensation where death result from the injury under proviso of clause A (i) and A (ii) of sub-section 4, shall be from the minimum of kyats 150,000 to a maximum of kyats 450,000 respectively.[5]

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[1] Notification (1/2005) of the Ministry of Labour (Ministry of Labour, Immigration and Population).
[2] Section 2 (1) (D) of the Workmen's Compensation Act, 1923.
[3] Ma Aye Mu (daughter of the deceased U Hla Kyi) V U Moe Kyi and 2, 1976 M.L.R (C.C) P-83.
[4] Section 4 (1) A (i) of the Workmen's Compensation Act, 1923.
[5] Notification No (1/2005) of the Ministry of Labour (Ministry of Labour, Immigration and Population).

According to the Bill of the Workmen's Compensation Law, 2018, the minimum and maximum compensation for death shall be 15 lakhs and 30 lakhs.

Under Section 2 (2) of this Act, any reference to a workman who has been injured shall, where the workman is dead, include a reference to his dependents or any of them.

In the case of **Thein Thein Win Tiger Balm and Khin Maw Li Plastic Production V The Workmen's Compensation Commissioner**,[1] the court held that, there were no official starting and ending of working hours in the appellant's workplace and also that no announcement had been made about working hours to the public. The employee, Maung Thein Aung, did not live in the workplace or near the workplace, so he had to come to work early before the normal working hour. On the day of the incident, the employee arrived early at the workplace and started carrying out his duties for the benefit of his employer. In this case, there was no prohibition against starting work before normal working hours and the employee had died while carrying on his duties before the normal working hours. So it could be said that he died during working, that is, died in the course of employment.

This case pointed out that how claims for compensation for death in the course of employment are decided on whether or not the employee was at the time of engaged in work for the employer.

It should be noted that when workers suffer injury by accident arising out of and in the course of their employment, a worker is entitled to compensation. Compensation relating to employment injury was covered by Workmen's Compensation Act, 1923. In order to get compensation under the Workmen's Compensation Act, the employee must be covered by the relevant law and the accident must arise out of or in the course of employment

Conclusion

An injured person is entitled to workmen's compensation for an injury arising out of or in the course of employment. So, to get compensation under this practice, the employer must not have been under the influences of drugs or alcohol at the time of the injury, must not have disobeyed the rules and conditions of the workplace or neglected to use the safety guards event of the death of an employee, his spouse or dependents are entitled to the benefits or compensation. Relating to the amount of compensation, the amount of compensation payable has been found to be inadequate and insufficient for the current situation. In 2018, the Workmen's Compensation Bill was drafted. Under the bill, the minimum and maximum compensation for death shall be 15 lakhs and 30 lakhs. For permanent injury, the minimum and maximum compensation payable shall be 30 lakhs and 60 lakhs, respectively. Therefore, it should be found that to enact this law as early as possible, efforts should also be made.

[1] Thein Thein Win Tiger Balm and Khin Maw Li Plastic Production V the Workmen's Compensation Commissioner, 1967, M.L.R, P-752.

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