# CHINA'S WATER DIPLOMACY IN LOWER MEKONG BASIN COUNTRIES

Aye Ei Ei Aung Than<sup>1</sup>, Hein Myat Thu<sup>2</sup>

### 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.

<sup>&</sup>lt;sup>1</sup> Department of International Relations and Political Science, University of Yangon

<sup>&</sup>lt;sup>2</sup> Department of International Relations and Political Science, University of Yangon

# **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 12<sup>th</sup> 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, reservoirtriggered 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 21<sup>st</sup> 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 17<sup>th</sup> 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 1<sup>st</sup> 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 1<sup>st</sup> 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 2<sup>nd</sup> 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 3<sup>rd</sup> 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 2<sup>nd</sup> 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 1<sup>st</sup> Lancang-Mekong Water Resources Cooperation Forum was launched. In December 2018, the 4<sup>th</sup> LMC Foreign Ministers' meeting reviewed LMC progress and committed to collaborate other cooperation mechanisms. The meeting issued the Joint Press Communiqué of the 4<sup>th</sup> 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 1<sup>st</sup> Ministerial Meeting of Lancang-Mekong Water Resources Cooperation was convened and issued the Joint Statement of the 1<sup>st</sup> 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 5<sup>th</sup> 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 3<sup>rd</sup> LMC Leader's Meeting was held in August 2020 and Vientiane Declaration of the 3<sup>rd</sup> 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 3<sup>rd</sup> International Forum on Water Security and Sustainability, the cooperation program between MRC and LMWRC were discussed. In June 2021, the 6<sup>th</sup> 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 2<sup>nd</sup> 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 3<sup>rd</sup> 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 1<sup>st</sup> 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 projectbased 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.

#### Acknowledgement

The authors would like to express appreciation to Dr. Thida Aung, Professor and Head of the Department of International Relations and Political Science, University of Yangon, for her encouragement to accomplish this research. We would also like to thank our respected teachers from Department of International Relations who are the board members of Myanmar Academy of Arts and Science (MAAS) for their insightful assessments.

#### References

- A Brief Introduction of Lancang-Mekong Cooperation http://www.lmcchina.org/eng/2017-12/13/content\_ 41449851.html
- A dam-building race threatens the Mekong River, http://dw.com/en/a-dam-building-race-threatens-the-mekongriver/a-50049206
- Cuppari R., "Water Diplomacy," Policy Report (Koblenz: International Centre for Water Resources and Global Change, 2017), https://www.adelphi.de/en/system/files/medi athek/bilder/the\_rise\_of\_hydrodiplomacy\_adelphi.pdf.
- Davis, L. W, (2006) "Reversing the Flow: International Law and Chinese Hydropower Development on the Headwaters of the Mekong River", New York International Law Review, Vol.19 No.2
- Deputy Prime Minister and Minister of Foreign Affairs attended the 8th Mekong-Lancang Cooperation Foreign Ministers' Meeting in Beijing https://www.mfa.go.th/en/content/post-pr-mlc-fmm-20232? cate= 5d5bcb4e15e39c306 000683e
- Devlaeminck, J. D., (2022) Softness in the Law of International Watercourses: The (E)merging Normativities of China's Lancang-Mekong Cooperation, Cambridge University Press
- Eyler, B., Regan Kwan, Courtney Weatherby, New Evidence: How China Turned off the Tap on the Mekong River, (2020 April 13), https://www.stimson.org/2020/new-evidence-how-china-turned-off-the-mekong-tap/
- Fan, H., Daming He, and Hailong Wang, (2015) "Environmental consequences of damming the mainstream Lancang-Mekong River: A Review"
- Five Years of Lancaung-Mekong Cooperation: Progress, Challenges and Deepening Paths, China International Studies, 2021 August
- Five-Year Plan of Action on Lancang-Mekong Cooperation (2018-2022) https://data.opendevelopmentmekong.net /dataset/9893dac1-83ec-474a-b49e-669f1c9c1c84/resource/ 2116a77e-e493-42dd-90cb-edce1d3693df/ download/ ministry-of-foreign-affairs-and-international-cooperation-201801-1599.pdf
- Floods in Cambodia, https://earthobservatory.nasa.gov/images/76212/floods-in-cambodia
- Guidelines on Project Application and Management Lancang-Mekong Cooperation Special Fund https://ora.oou.cmu.ac.th/wp-content/uploads/2022/05/Guidelines-2.0.pdf
- Griinwald, R., (2021) "Lancang-Mekong Cooperation: Overcoming the Trust Deficit on the Mekong," ISEAN Yusof Ishak Institute, ISSUE: 2021 No.89
- Ha, H. T., (2022) "China's Hydro-Politics Through the Lancang-Mekong Cooperation", ISEAN Yusof Ishak Institute, ISSUE: 2022 No.116
- Hennig, T., Wenling Wang, Darrin Magee, Daming He, (2016 October 22) Yunnan's Fast-Paced Large Hydropower Development: A Powershed-Based Approach to Critically Assessing Generation and Consumption Paradigms, Multidisciplinary Digital Publishing Institute (MDPI)
- Hongzhou, Z., and Li Mingjiang, (2020) "China's Water Diplomacy in the Mekong: A Paradigm Shift and the Role of Yunnan Provincial Government" in *Water International*, Vol. 45, No. 4
- International Water Law, https://iwrmactionhub.org/learn/iwrm-tools/international-water-law
- Jie, M., (2021 August) Five Years of Lancaung-Mekong Cooperation: Progress, Challenges and Deepening Paths, China International Studies
- Joint Press Communiqué of the Seventh Mekong-Lancang Cooperation Foreign Ministers' Meeting https://www.mfa.gov.cn/eng/wjdt\_665385/2649\_665393/202208/t202208/t20220815\_10743231.html
- Koga, K., (2020 April) "The Emerging Power Play in the Mekong Subregion: A Japanese Perspective", Aisia Policy Lancang-Mekong Cooperation http://www.lmcchina.org/eng/node\_1009669.html

- MRC Secretariat, LMC Water Center ink first MOU for better upper-lower Mekong management https://www.mrcmekong.org/news-and-events/news/mrc-secretariat-lmc-water-center-ink-first-moufor-better-upper-lower-mekong-management/
- Patrick Huntjens et al., The Multi-Track Water Diplomacy Framework: ALegal and Political Economy Analysis for Advancing Cooperation over Shared Waters (e Hague: e Hague Institute for Global Justice, 2016). https://www.adelphi.de/en/system/files/medi athek/bilder/the\_rise\_of\_hydro-diplomacy\_adelphi.pdf.
- Pham, L., (2020) "What behind the Mekong-US Partnership? Vietnam-ASIA 2023 SMART CITY SUMMIT, Hanoi Times, https://hanoitimes.vn/whats-behind-the-mekong-us-partnership-314316.html
- Ruben van Genderen and Jan Rood, "Water Diplomacy: A Niche for the Netherlands" (e Hague: Netherlands Institute of International Relations "Clingendael," 2011), https://www.clingendael.org/sites/default/ files/pdfs/20111200\_cling\_report\_waterdiplomacy\_rgenderen\_jrood.pdf.
- Stromseth, J., (2019 November) The Testing Ground: China's Rising Influence in Southeast Asia and Regional Responses
- The Joint Study on the Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin and Adaptation Strategies September 2023 https://www.mrcmekong.org/resource/bd0zhw
- The Mekong Report China doesn't want to see, Thai PBS World, (2021 January 24), https://www.thaipbsworld.com/ the-mekong-report-china-doesnt-want-to-see/
- The 2nd Lancang-Mekong Water Resources Cooperation Forum Kicks http://www.mwr. gov.cn/gate/big5/ www.mwr.gov.cn/english/Medianews/202112/t20211220\_1556112.htmloff
- Understanding the 1995 Mekong Agreement and the five MRC Procedures, Mekong River Commission (MRC), (2020), ISSN: 2706-8439
- Wei X., Lancang-Mekong River Cooperation and Trans-Boundary Water Governance a Chinese Perspective, China Quarterly of International Strategic Studies Vol. 3, No. 3
- Zhang, L., and Hongzhou Zhang, (2021) "Water Diplomacy and China's Bid for Soft Power in the Mekong", Journal Article, Vol.21, No.4, SPECIAL ISSUE: Southeast Asian
- Zhao, S., China's periphery policy and its Asian neighbors, (1999 September), Vol. 30, No. 3, Sage Publications, Ltd
- 3+5 Cooperation Framework, Imcchina, (2017 December 14) http://www.Imcchina.org/eng/2017-12/14/ content\_41449855.html