

SUSTAINABLE URBAN DEVELOPMENT FOR MYANMAR

Zin Nwe Myint¹, Yin May² and Frauke Kraas³

Abstract

Like other Southeast Asian countries, Myanmar is experiencing a continuous urbanisation process since its independence in 1948. The urban population has risen from 2.6 million in 1953 to 8.5 million in 1983 and up to 17.4 million 2021. This growth has transformed the Myanmar's urban system substantially. Today, it is characterised by a tripolar structure headed by the largest three cities – Yangon, Mandalay and Nay Pyi Taw, and almost 400 cities and towns of regional and local importance. While Myanmar's urban system is still remarkably balanced, numerous regional cities and local towns throughout the country are expanding and became drivers of regional development. Many cities and towns in border, mountain and coastal areas have expanded with growing economic activities and (inter)national investments which accelerated domestic migration. Substantial impulses have been drawn from international discussions. The 'National Sustainable Development Strategy for Myanmar' (2009) and the 'Myanmar Sustainable Development Plan' (2018) had already address the key principles of sustainability. These were applied in urban strategies inspired by the Millennium Development Goals (MDGs) and especially the Sustainable Development Goals (in particular: SDG 11) and the New Urban Agenda (2016). Against this background, this paper aims to investigate, first, the recent urbanisation dynamics in Myanmar and, second, general principles and strategies of urban sustainability in order to stimulate scientific discussion on sustainable development in Myanmar. The study is based on a mixed method approach, combining a review of (inter)national literature and planning documents with an analysis of secondary data and qualitative expert interviews. Finally, it summarises recommendations for priorities of a more sustainable urbanisation in Myanmar.

Keywords: Sustainable urban development, New Urban Agenda, urbanisation processes, urban systems, Myanmar

Introduction

Pathways to Sustainable Urbanisation

At the third World Summit on Human Settlements, the United Nations Habitat III Conference held at Quito, Ecuador, in 2016, the New Urban Agenda was adopted and signed by more than 170 nations, including Myanmar. After two previous conferences – in Vancouver in 1976 (focusing on the problem of housing) and in Istanbul in 1996 (the "Cities Summit", on issues of global slum formation and informal settlements), the Habitat III conference focused on sustainability goals. Thus, the main aims shifted from ensuring minimum services for all people – primarily: access to adequate housing, health and education facilities, and food security – to multidimensional issues of sustainable urban development as adopted in the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs). Since UN-Habitat's content reorientation in 2011, it has concentrated on seven thematic areas: (1) basic services and technology, (2) housing and upgrading informal settlements, (3) urban economy and (4) governance, (5) urban planning and spatial or urban design, (6) risk prevention and reconstruction, and (7) research and capacity building (UN-Habitat 2013). In the run-up to the Habitat III conference, three additional focal points were added, namely (8) issues of social cohesion and inclusion, (9) the right to the city, and (10) urban sociocultural heritage. Ten so-called Policy Units with core recommendations address these focal points in detail (UN-Habitat 2016).

¹ Department of Geography, University of Yangon

² Department of Geography, University of Yangon

³ Institute of Geography, University of Cologne, Germany, International Advisor of the University of Yangon

New Urban Agenda: Aims and Limitations

The New Urban Agenda aims to guide the next 20 years of global urban development and provide essential impetus for sustainable global urban development. The international community of states agreed on important policy goals, including (A) the ability of cities to act, (B) inclusive and people-oriented urban development, and (C) resource conservation (WBGU 2016). The action-oriented document provides key global urban principles, policies and standards required to achieve sustainable urban development, to transform the way we construct, manage, operate and live in cities. The New Urban Agenda follows three guiding principles: (1) Ensuring urban equity and eradicating poverty, (2) achieving sustainable and inclusive prosperity and opportunities for all, (3) fostering ecological and resilient cities and human settlements. It brings together in 175 paragraphs a thematically very broad range of different fields of knowledge and action. Focus topics are, e.g., adequate housing, sustainable human settlements, equity, safety, security, risk reduction, urban resilience, global monitoring mechanism and urban heritage.

The New Urban Agenda underlines that it is important to realise that sustainable urban development can only be successful through close cooperation between many different actors. Successful urban development thus requires dialogue and cooperation between multi-stakeholders including national and local governments, the private sector, experts from social and natural sciences, societal institutions and civil society. This cooperation process includes policy-making, planning, scientific analysis, design, implementation, operation, management, maintenance, monitoring and financing and delivery of urban services. For the first time, the New Urban Agenda addresses the entire international community and not only urbanisation processes in developing countries, as was the case at previous conferences.

In an assessment, the challenges and limitations of the New Urban Agenda become clear: It lists many different topics of sustainable urban development, which, however, are not linked holistically and congruently in an overarching objective and approach (Kroll/Kraas 2017, Watson 2016). Three points in particular are seen critically: First, while the New Urban Agenda aims to build a bridge to the Sustainable Development Goals (SDGs) and the Paris Agreement and provides concrete targets for local development processes in cities (WBGU 2016), it does not provide concrete instructions on how its goals can be achieved within the framework of the global sustainability agreements agreed to date. Second, it lacks a long-term vision that goes beyond incremental improvements and overcomes the management of the current “urban status quo”. It further lacks powerful recommendations for how a comprehensive transformation of urban systems toward greater sustainability can occur, what concepts should be developed to achieve this, and what specific targets should be developed. The results of upstream science conferences have hardly been included. Third, essential topics such as integrative urban development (see, for example, Leipzig Charter 2007 and the New Leipzig Charter 2020), the avoidance of unsustainable path dependencies (e.g., in infrastructures), the strengthening of local governance, the promotion of multi-level governance, polycentric structures, or the handling of informality are not sufficiently addressed (WBGU 2016). The important contribution of cities to global environmental and climate protection, as discussed e.g. in the Paris Agreement, is also insufficiently taken into account; compliance with the planetary guard rails for the protection of natural life-support systems is hardly addressed (WBGU 2016).

Sustainable Urban Development: Implementation in the National Contexts

The results and agreements of the Habitat conferences are not binding under international law. The New Urban Agenda was negotiated with national government representatives, whereas cities themselves, their administrations, the private sector and civil society organisations, were only given observer status. Implementation is anchored solely at the national level. Thus, while municipalities and cities are recognised as key actors of sustainable development in the New Urban Agenda, the focus is on nation-state governments as key actors and it does not receive solutions for institutional upgrading, capacity enhancement and empowerment of actors at the local level, namely city governments, and collaborations between local decision makers (UN 2017). This is a shortcoming for the implementation of the New Urban Agenda guidelines. However, important developments can be observed: Through their association in regional, national and global city networks, cities are increasingly exchanging information on sustainability issues (“good practices”), forming alliances and entering into voluntary commitments (Acuto 2016). In this way, cities can take on important pioneering roles in adapting urbanisation processes to the given needs.

A specific problem is the fact that the New Urban Agenda does not contain any detailed references to the importance of the spatial scale levels and specific contexts of cities for a successful sustainability policy. Specifically, the local context (namely: neighborhoods and districts) or the socio-cultural specificities and path dependencies of urban development at the local and national level are not considered. As is well known, cities face very different problems depending on their respective geographical location, specific demographic, economic, socio-cultural and political developments. They have different social (such as: human capital), financial (such as: tax revenues) and political (such as: capacity to act) resources for addressing existing urban problems as well as creating sustainable path dependencies for the future. The New Urban Agenda hardly addresses these widely different sets of problems. It is therefore important to encourage the formation of expert panels at the nation-state and regional levels (e.g., ASEAN, national institutions or think tanks) to develop context-specific strategies for the future of cities and towns in different states or regions. A positive example is, for instance, the Leipzig Charter on Integrated Urban Development in Europe, first adopted at the European Union level in 2007 and fully updated in 2020. States and associations of states – such as the Association of Southeast Asian Nations (ASEAN) – are currently developing national and regional urban development strategies. In addition, globally active city networks – such as ICLEI, C40 or UCLG – support the transfer of knowledge on successful urban development policies.

Urbanisation Processes 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 dampening 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/early 1990s which has transformed Myanmar's urbanisation trends and its urban system substantially.

Substantial impulses, also for urbanisation in Myanmar, have been drawn from international discussions: While 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).

Research Questions

Against this background, this paper aims to investigate, first, the recent urbanisation dynamics in Myanmar and, second, general principles and strategies of urban sustainability in order to stimulate scientific discussion on sustainable development in Myanmar. Finally, it summarises recommendations for priorities of a more sustainable urbanisation in Myanmar. Thus, the guiding research questions are:

- (a) What are the key characteristics of the recent urbanisation dynamics in Myanmar?
- (b) Which main general principles and strategies of urban sustainability in Myanmar are discussed and can be applied?
- (c) Which recommendations for appropriate priorities of a more sustainable urbanisation in Myanmar can be made in order that all parts of the society can benefit?

Material and Methods

The study is based on a mixed method approach, combining a review of international and national literature and planning documents with an analysis of secondary data, from international and national sources, and more than 30 qualitative expert interviews which were conducted between 2011 and 2020, allowing for a deeper understanding of the phenomena, processes and priorities of urbanisation in Myanmar. Knowledge, perceptions and evaluations of different stakeholders and experts on the urbanisation processes were collected and recommendations drawn based on the expert interviews.

Results and Findings

Recent Urbanisation Dynamics in Myanmar

With the start of Myanmar's transition and the introduction of a market economy in 1988/90, urbanisation picked up pace, initially and most visibly in the then capital Yangon (Yin May 1962 and 1999, Seekins 2005, Zin Nwe Myint 2006a, b, Kraas et al. 2014) and in Mandalay. From the mid to late 1990s, visible signs of urban transformation could also be observed in other larger cities (Mawlamyine, Bago, Monywa, Patheingyi, Meiktila and Sittwe) and in some settlements close to borders and transportation corridors (e.g. Lashio, Muse, Myittha, Dawai or Kengtung), where transregional trade strengthened markets and transport hubs. The extent to which these trends – no longer isolated cases by then – can be described as a system or network of cities/settlements merits further discussion.

Since the introduction of a market-oriented economy in 1988, the pace of urbanisation has accelerated significantly. For example, the urbanisation rate – i.e., the urban population as a percentage of the total population – in Myanmar has increased from less than 20% (1980) to 31.9% (2007) and 29.6% (2014). The urbanisation rates in the states and regions vary considerably: Yangon Region has the highest urban proportion (70.1%), followed by Kachin State (36.1%), Mandalay Region (34.8%), Nay Pyi Taw Capital Region (32.3%), Mon State (27.9%) and Kayah State (25.3%). Less than a quarter of the population is urban in Shan State (24.0%), Tanintharyi Region (24.0%), Bago Region (22.0%), Kayin State (21.9%), Chin State (20.8%), Sagaing Region (17.1%), Rakhine State (16.9%), Magway Region (15.0%) and Ayeyarwady Region (14.1%; MoIP 2015: 5). Along emerging development corridors (e.g. the Taunggyi west-east axis, the corridor east of Mawlamyine towards Thailand or the link from Mandalay to China, first to the northeast and then switching north), the onset of increasing urbanisation is evident. The same is true of several border towns, e.g. the growing trade centres of Muse, Tachileik or Myawaddy (Kraas/Spohner/Aye Aye Myint 2017).

With its 367 cities and towns (MoC 2016a, b) and degree of equilibrium in its urban system, Myanmar still has the potential to expand its regional and small towns into drivers of relatively well-balanced national development through a policy of decentralised concentration. However, since reform policy commenced in 2010, development processes have begun to be concentrated to an ever greater extent on Yangon and Mandalay – similarly to urbanisation processes in other rapidly developing Southeast Asian countries (Kraas/Yin May/Zin Nwe Myint 2010).

With the construction of the new capital Nay Pyi Taw – Myanmar's official seat of government since 6 November 2005– key administrative functions and a substantial number of officials employed by the ministries and public authorities have relocated or are commuting regularly to Nay Pyi Taw. This shift north has moved the capital back to the traditional pre-colonial heartland of Upper Myanmar.

The numerous regional towns – each with a population of less than 200,000 and in most cases between 10,000 and 25,000 – are strung out like pearls along the country's main infrastructure corridors. Yangon and Mandalay are linked by three transport routes, with the western route passing through Pyay and the two eastern corridors – one the old highway, the other the new expressway – running to some extent in parallel through Bago, Nay Pyi Taw and Meiktila. The transport link from Bago via Mawlamyine to the south of Myanmar also passes through numerous settlements.

This has been accompanied by a gain in significance for the urban economy in the national context and by broad differentiation between the formal and the informal sectors, especially in the cities. In view of the still moderate development dynamics and relatively strong municipal administrations in Myanmar, signs of strain on the urban infrastructure – typical of other Southeast Asian countries – are since a few years being observed and include traffic congestion, infrastructural bottlenecks, energy and electricity constraints (leading to high woodfuel consumption; Zin Nwe Myint 2006a), pollution and displacement of social groups. However, urban expansion and peri-urban developments – the encroachment of the cities into surrounding green and agricultural space – is clearly taking place, along with the emergence of gated communities (self-standing newly constructed settlements for the middle class and elites, with their own security personnel) and structural change in inner cities, with a functional shift

away from housing and towards offices at the most sought-after locations, especially in downtown Yangon and Mandalay.

Since 2005, the urban system it is growingly characterised by a tripolar structure headed by the most important three cities – Yangon as international megacity (Kraas/Yin May/Zin Nwe Myint 2010), Mandalay as metropolitan hub in central Myanmar and Nay Pyi Taw as national capital – and about 400 cities and towns of regional and local importance. While Myanmar's urban system is, compared to other urban systems in Southeast Asia, still remarkably balanced it is facing recent changes: Numerous regional cities and local towns throughout the country are expanding and became drivers of regional development with economic growth and internationalization in line with the national policy of 'decentralised concentration'. Many cities and towns in border, mountain and coastal areas have expanded with growing economic activities and (inter)national investments which accelerated domestic migration.

Since the introduction of the market economy, visible processes of urbanisation have been discernible in almost all of Myanmar's cities as a consequence of the surge in private sector start-ups, especially in commerce, finance and tourism services. The pace of transformation varies, however, according to local economic conditions and is most dynamic in the seven largest cities – Yangon, Mandalay, Mawlamyine, Bago, Monywa, Meiktila and Patheingyi. The most obvious processes are catch-up tertiarisation and city-building and the emergence of real estate markets (land and property). The inner-city market and distribution systems are also evolving dynamically, with supermarkets and shopping malls springing up alongside traditional local markets. The boom in construction by private developers, especially the transition 'winners', and the construction of new tower blocks or the addition of storeys to existing buildings are resulting in social polarisation and partly resettlement. As a result of a surge in car ownership and the expansion and upgrading of much of the road network, suburbanisation is occurring in outlying areas. Although still at an early stage, some urban districts are beginning to form separate enclaves in the general cityscape; examples are international shopping malls and complexes with serviced apartments and gated communities. These new features of the urban landscape are planned, constructed, marketed and operated mainly by private developers and management companies and therefore evade strong regulation – evidence of the increasing importance of private capital-driven urban development based on international paradigms. Furthermore, the urban fringe – hitherto used for agricultural purposes – is increasingly being absorbed by new districts (such as Thanlyin to the southeast of Yangon) with conceptually integrated and coherent functionality and futuristic architecture. This shows the extent to which the demands of the transformation-induced emerging middle class are encroaching on space and having a visible impact on the urban landscape.

The most obvious change has taken place in the old quarters whose design and architecture date back to colonial times – in Yangon, this is the old city between Merchant and Anawrahta Road near the Sule Pagoda (Hlaing Maw Oo 2006, Kraas/Hlaing Maw Oo/Spohner 2014). Here, large swathes of the old city – urban heritage of importance to the city's identity and citizens' identification with it (Hlaing Maw Oo 2006, Roberts 2016) – are being demolished to make way for new development (shopping malls, office blocks and apartment buildings, often financed with foreign capital). With selective upgrading and gentrification, it may still be possible to save the substantial urban heritage in Yangon and many other regional cities, even in the peripheries (Zin Nwe Myint 2016, Zin Nwe Myint et al. 2016). However, the fact that these

downtown neighbourhoods are characterised by colonial-era architecture and stylistic elements can pose problems, as some decision-makers regard their upgrading as undesirable. In addition, there is a risk that some modernisation projects lack sensitivity, with displacement of lower-income groups and much of the informal sector, with the threat that the vibrant and organic life of these downtown communities will give way to sterile urban development.

Principles and Strategies of Urban Sustainability

The guiding principles of urban development, seeking to integrate social and environmental systems, can only be achieved through sustainable resource use. For more than three decades, engineers, economists, and natural and social scientists have been working on technologies and strategies to make a transition from a resource-intensive to a resource-light and more environmentally compatible economy possible. These efforts follow the principles of efficiency (improved resource productivity), consistency (use of renewable resources), and sufficiency (reduced consumption) (Kraas/Kroll 2017).

The *efficiency strategy*, as a technical solution, focuses on the minimization of material and energy use per production unit. The ratio between input of capital, labour, resources, or prefabricated goods and the production output, can be improved through the increase of resource productivity and the improvement of organisational structures (Grunwald/Kopfmüller 2006: 76). Ideally, economic growth can be decoupled from increasing resource use through the dematerialisation of economic activity, in order to enable long-term economic growth within the limits of ecological carrying capacities. More efficient resource use also implies that resources can only be used up to a level where they still are able to regenerate. In urban areas this can refer to the use of groundwater within its capacity to regenerate or balanced land use systems. Central to the efficiency strategy are approaches that (further) develop resource-efficient technologies for production and product use, which include production strategies that utilize repurposed waste or increase product lifetimes.

Furthermore, concepts to quantify the material intensity of products and services, and consumption patterns of different population groups have been developed (e.g. approaches of the “ecological backpack” (Stengel 2011) and the “ecological footprint” (Rees 1997)).

The *consistency strategy*, also a technological solution, focuses on renewable resources by aiming towards improved compatibility of nature and technology, qualitative aspects of environmental consumption. Based on this strategy, the flows of energy and materials produced by human economic activity need to be organised in a more environmentally compatible manner and adapted to resemble processes of a natural metabolism (Grunwald/Kopfmüller 2006: 77), in recent times further developed in the direction of so-called nature-based solutions (Lechner et al. 2020). Accordingly, industrial processes should not disturb the natural metabolism, but the two should complement or augment one another. When this is not possible, environmentally hazardous materials should be directed into fail-safe, independent technological cycles or should be phased out. The design of environmentally compatible cycles should avoid waste production, ideally using residuals of one production step as raw material for the next (Stengel 2011: 131). Furthermore, the consistency strategy reflects a holistic perspective, considering the different subsystems as part of an entire system. For the urban metabolism concept, this implies an interference-free coexistence of different subsystems, such as water cycle, transportation,

industry, and recreation. Thus, the main focus of the consistency strategy is on the more environmentally compatible use of materials and energy, less on the reduction of material flows.

The sufficiency strategy views consumer behavior from a social perspective focusing on “frugality” or “moderation” with an orientation of consumption along criteria of environmental, social and economic sustainability (e.g. purchasing reusable instead of disposable products, durable energy-efficient products, or travelling shorter distances for recreation. Thus it is on changes in consumption structure, with substantial effects on resource consumption, even without technological changes in the production process (Stengel 2011: 140).

All in all, it becomes apparent that sustainable development can only be achieved through the interaction of all three strategies, as each of them has its own significance and limitations: Efficiency targets the rational use of resources, sufficiency their economical use and consistency aims at nature-oriented economic activities. Cities, because of their compact form, spatial organization, dense infrastructure and concentrated economic and social activities offer large potential for a more efficient resource use, the establishment of more sustainable and integrated cycles. More sustainability-focused awareness, institutional management and social behaviour can be realized in many fields, from water, energy and resource saving to waste separation.

Nevertheless, it needs to be taken into consideration that the implementation of these strategies will only achieve somewhat limited results, as resources are still required for the development of efficient technologies. The consistency strategy is so far only applicable in limited areas, and both approaches are ineffective for certain environmental problems. Especially through a growing population and increasing consumption needs, worldwide resource exploitation will rise more than their use can be curbed through efficiency or consistency strategies (Stengel 2011: 133).

Discussion, Suggestions and Recommendations

Recommendations for Priorities of a More Sustainable Urbanisation in Myanmar

The task of politics is to regulate the process of urban development such that a balance between different dimensions and aims can be achieved. City governments usually have three important instruments for urban planning and design at their disposal: infrastructure policy, finance policy (taxes and subsidies), and land use policy (Hall/Pfeiffer 2000: 434). Against this background, opportunities and risks for sustainable urban development are directly related to the risks and opportunities of urbanisation. The considerations around the theoretical approximation of urban sustainability has shown that several recommendations can be drawn from the international discussion.

Holistic perspective: Different approaches have to treat the different sustainability dimensions in a holistic and integrated manner. Thus, a more holistic understanding of research and planning and a change in perspective including a more comprehensive consideration of the multitude of actors and their motives implies a deeper understanding of the multi-level driving forces of urbanization and their interconnections.

Urban governance: The implementation of sustainable development in cities requires adequate regulatory mechanisms, i.e. good urban governance, in a political multi-level system with the involvement of different groups of actors.

Urban systems: A spatial focus on urban systems puts in the focus the interdependency and interconnectedness of cities within the nation state. Viewing urban systems as metabolic entities with their own input-output relationships offers an appropriate starting point for sustainability research in urban settings. Decentralisation policies and the development of a polycentric urban system supports creating balanced development and helps limiting regional inequalities.

Guiding principles: In order to make the abstract concept of sustainable development tangible for the public, sustainability goals, developed for respective local contexts, need to be made more concrete through the establishment of guiding principles, such as the guiding principle of the “liveable”, “walkable” or “compact city”.

Approaches: For long-term success with the reconciliation of often incompatible priorities between environment and economic and societal development, three approaches appear to be appropriate: the efficiency, consistency and sufficiency strategy.

Transformative action fields: Most promising are leverage effects in pioneering transformative fields of action, focusing, e.g., on decarbonisation, energy and climate protection, urban health, mobility and transport, the structural-spatial design of cities, adaptation to climate change, poverty reduction and socio-economic disparities.

Alliances: In view of evolving globalisation processes and effects, urban groups of actors will have to cooperate in strategic alliances and networks, in order to enhance synergies, to avoid double-investing through a division of responsibilities, and, in the context of urban development policies, be able to react to increasing global-urban competition. Conversely, the specific contribution of cities to shaping global development processes in a more sustainable manner should not be underestimated.

Knowledge transfer: Effective components of a (more) sustainable globalisation are knowledge transfer, in the sense of exchanging successful strategies and best practices, capacity building for necessary problem-solving skills, and intercultural convergence.

Dialogue: Cities and urban societies concentrate experience and expertise, which are valuable resources that can be applied to the development of flexible, innovative and reliable approaches to problem solving. They open up opportunities for mutual learning and “city to city” dialogues.

Social coherence: The strengthening of social coherence and local identity, with a concurrent growth in public responsibility and ownership of civil society networks and institutions, can only be achieved through a change in public awareness and an expansion of public participation and dialogue.

Conclusion

Differences in urban development can be partly explained by differences in the regulatory circumstances of institutions and administrative settings in different cities. As government and administrative operations have become increasingly more complex in recent decades, especially in fast growing cities, urban governments face significant challenges. In the past, the political and economic coordination of development projects were of primary concern. However, since the introduction of the concept of sustainable development, the social and environmental dimensions have been added and have gained prominence. Modern urban systems are characterised by

complex interdependencies and interactions of different institutions, actors, functions, and spatial levels, and therefore require connected institutions and new forms of interaction between government and urban society.

Thus, urban governance comprises similar components as governance, with a focus on urban space as a geographic entity. Good urban governance can be succinctly defined as desired standards of practice which explicitly includes the safeguarding of basic needs such as safe shelter, food, drinking water, and sanitary facilities for the population, as well as access to basic social services such as education and health facilities. These aspects correspond with those of the social dimension of sustainable development. Hall and Pfeiffer therefore link good urban governance with the concept of sustainable development: Good urban governance is the “(...) driving political force that keeps individual aspects of sustainable development in balance and integrates them in the different areas of policy” (2000: 217).

In order to realize positive urban development outcomes, individual actors and institutions in a city have to reliably take on responsibility: “Sustainability as a principle, good governance as its implementation – these are the two inseparable aspects of a positive urban development” (Hall/Pfeiffer 2000: 217). In addition, they identify several guidelines to be followed in order to reach the goal of positive urban development based on the principle of subsidiarity in a way that decisions need to be made or services to be provided at the lowest level of government that can perform functions efficiently and effectively. This principle is closely linked to decentralisation, a functioning feedback system, good coordination of decision-making processes and consultation between the different levels of government.

Acknowledgement

This research was possible because of the strong support of many institutions, experts and citizens. The project is part of the long-standing joint Myanmar German research fieldwork of the Department of Geography and the Center of Excellence (CoE) for Urban and Regional Development at the University of Yangon and the Institute of Geography, University of Cologne/Germany.

References

- Acuto, M. (2016): Give cities a seat at the top table. *Nature* 537: 611-13.
- Hall, P., Pfeiffer, U. (2000): *Urban 21. Der Expertenbericht zur Zukunft der Städte*, Stuttgart.
- Hla Tun Aung (2003): *Myanmar. The Study of Processes and Patterns*. Yangon: National Centre for Human Resource Development, Publishing Committee, Ministry of Education.
- Hlaing Maw Oo (2006): Heritage Conservation in Transforming Yangon into a Sustainable Megacity. In: Kraas, F., Gaese, H., Mi Mi Kyi (Eds.): *Megacity Yangon: Transformation processes and modern developments. Southeast Asian Modernities 7*. Berlin: 199-215.
- Grunwald, A., Kopfmüller, J. (2006): *Nachhaltigkeit*. Frankfurt am Main.
- Kraas, F., Hlaing Maw Oo, R. Spohner (2014): *Yangon Urban Heritage: 189 Listed Heritage Buildings. An annotated thematic map*. Cologne, 2nd edition.
- Kraas, F., M. Kroll (2017): Urban Sustainability: Priorities for International Cooperation. In: Hauff, M. v., C. Kuhnke (eds.): *Sustainable Development Policy: A European Perspective. Routledge Studies in Sustainable Development*. Abingdon (Routledge): 206-227.

- Kraas, F., Spohner, R., Aye Aye Myint (2017): *Socio-Economic Atlas of Myanmar*. Stuttgart.
- Kraas, F., Yin May, R. Spohner, Zin Nwe Myint (2014): Yangon: Phases of Urban Development and Expansion. *Journal of the Myanmar Academy of Arts and Science (MAAS)*, Vol. XII (6) (Geology and Geography): 125-137.
- Kraas, F., Yin May, Zin Nwe Myint (2010): Yangon/Myanmar: Transformation Processes and Mega-Urban Developments. In: *Geographische Rundschau International* 6 (2): 26-37.
- Kraas, F., Zin Nwe Myint, Khin Khin Soe (2016): Urban Developments in Hakha and Falam, Chin State/Myanmar. *Journal of the Myanmar Academy of Arts and Science (MAAS) (Geology and Geography)* XIV (5): 301-318.
- Kroll, M., F. Kraas (2017): Globale urbane Transformation zur Nachhaltigkeit: Der Beitrag der New Urban Agenda. *Informationen zur Raumentwicklung* 44 (3): 64-73.
- Lechner, A.M. et al. (2020): Challenges and considerations of applying nature-based solutions in low- and middle-income countries in Southeast and East Asia. *Blue-Green Systems* 2 (1): 331-351.
- Leipzig-Charta (2007): Leipzig-Charta zur nachhaltigen europäischen Stadt. Leipzig. https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Nationale_Stadtentwicklung/leipzig_charta_de_bf.pdf
- MoC (Ministry of Construction) (2016a): The 367 towns of Myanmar, 2014. Unpublished document.
- MoC (Ministry of Construction) (2016b): List of towns of Myanmar with Urban Population 1973, 1983 and 2014; Classification of towns. Unpublished document.
- MoIP (Ministry of Immigration and Population) (2015): The 2014 Myanmar Population and Housing Census. States and Region Reports. Census Report Volume 3 (A-N). Nay Pyi Taw.
- Rees, W. (1999): Achieving Sustainability: Reform or Transformation? In: Satterthwaite, D.: *The Earthscan reader in sustainable cities*. London: 22-52.
- Roberts, J.L. (2018): Urban. In: Simpson, A., Farrelly, N., I. Holliday (eds.): *Routledge Handbook of Contemporary Myanmar*. London: 64-71.
- Seekins, D. M. (2005): The State and the City: 1988 and the Transformation of Rangoon. *Pacific Affairs* 78 (2): 257-275.
- Stengel, O. (2011): Suffizienz. Die Konsumgesellschaft in der ökologischen Krise. *Wuppertaler Schriften zur Forschung für nachhaltige Entwicklung* 1. Wuppertal.
- The New Leipzig Charter (2020): The transformative power of cities for the common good. https://www.bmi.bund.de/SharedDocs/downloads/EN/eu-presidency/gemeinsame-erklarungen/new-leipzig-charta-2020.pdf?__blob=publicationFile&v=8
- UN DESA – United Nations Department of Economic and Social Affairs (2019): *World Urbanization Prospects. The 2018 Revision. Final Report (ST/ESA/SER.A/366)*. New York.
- UN-Habitat (United Nations Human Settlements Programme) (2013): *Draft Strategic Plan 2014-2019. HSP/GC/24/5/Add.2*. Nairobi.
- UN-Habitat (United Nations Human Settlements Programme) (2016): *Policy Papers*. <https://habitat3.org/documents-and-archive/preparatory-documents/policy-papers/> (access: 25 Aug 2022).
- UN (United Nations, Habitat III) (2017): *New Urban Agenda*. New York.
- Watson, V. (2016): Locating planning in the New Urban Agenda of the urban sustainable development goal. *Planning Theory* 15 (4): 435-448.
- WBGU (German Advisory Council on Global Change) (2016): *Humanity on the move: Unlocking the transformative power of cities*. Berlin.
- Yin May (1962): *Greater Rangoon: A Study in Urban Geography*. Unpublished Master Thesis, Department of Geography, University of Rangoon.

- Yin May (1999): Urbanization in Myanmar. Unpublished working paper. Department of Geography, University of Yangon.
- Yin May (2006): Strategies for Improved Quality of Life in Yangon City. In: Kraas, F., Gaese, H., Mi Mi Kyi (Eds.): Megacity Yangon: Transformation processes and modern developments. Southeast Asian Modernities 7. Berlin: 141-153.
- Zin Nwe Myint (2006a): Woodfuel Uses: A Distinct Phenomenon in Megacity Yangon, Myanmar. In: Kraas, F., Gaese, H., Mi Mi Kyi (Eds.) Megacity Yangon: Transformation processes and modern developments, Southeast Asian Modernities 7. Berlin: 261-284.
- Zin Nwe Myint (2006b): Environmental Problems of Yangon City: Establishment of Industrial Zones. In: Kraas, F., Gaese, H., Mi Mi Kyi (Eds.) Megacity Yangon: Transformation processes and modern developments, Southeast Asian Modernities 7. Berlin: 217-236.
- Zin Nwe Myint (2016): Drivers of Cultural Tourism in Mrauk-U, Myanmar. In: Kraas, F., Mi Mi Kyi, Win Maung (Eds.) (2016): Sustainability in Myanmar. Southeast Asian Modernities 15. Wien: 319-345.
- Zin Nwe Myint, Saw Yu May, Zin May Oo, F. Kraas (2016): Economic Development Potential of Mrauk-U, Rakhine State. Journal of the Myanmar Academy of Arts and Science (MAAS) (Geology and Geography) XIV (5): 331-347.