

THE REPUBLIC OF THE UNION OF MYANMAR
RAPID URBAN DIAGNOSTIC REPORT

Prepared for
Department of Urban and Housing Development,
Ministry of Construction

With technical assistance from UN Habitat



UN HABITAT

RAPID URBAN DIAGNOSTIC REPORT MYANMAR

TABLE OF CONTENTS

A.	CONTEXT AND BACKGROUND OF RAPID URBAN DIAGNOSTIC REPORT MYANMAR	P. 4
A.I	EXECUTIVE SUMMARY	P. 4
A.II	GENERAL BACKGROUND	P. 5
A.III	BACKGROUND OF RAPID URBAN DIAGNOSTIC	P. 5
A.IV	PURPOSE OF RAPID URBAN DIAGNOSTIC REPORT MYANMAR	P. 6
B.	RAPID URBAN DIAGNOSTIC REPORT MYANMAR	P. 7
B.I	URBANIZATION	P. 7
B.I.1	CURRENT LEVEL OF URBANIZATION	P. 7
B.I.2	URBANIZATION IN MYANMAR IN REGIONAL PERSPECTIVE	P. 9
B.I.3	DRIVERS AND TRENDS OF URBANIZATION	P. 11
B.I.3.1	DRIVERS OF URBANIZATION	P. 11
B.I.3.2	PROJECTION OF URBANIZATION	P. 12
B.I.3.3	SPATIAL DIMENSION OF URBANIZATION IN MYANMAR	P. 13
B.II	MYANMAR'S SYSTEM OF URBAN CENTERS AND GROWTH CORRIDORS	P. 14
B.III	URBAN GOVERNANCE IN TOWNSHIPS/SECONDARY CITIES	P. 19
B.III.1	CONSTITUTIONAL FRAMEWORK	P. 19
B.III.2	ADMINISTRATIVE ORGANIZATION AT THE TOWNSHIP LEVEL	P. 20
B.III.2.1	THE TOWNSHIP ADMINISTRATOR AS CENTRAL ACTOR AT TOWNSHIP LEVEL	P. 20
B.III.2.2	THE TOWNSHIP COMMITTEES	P. 20
B.III.2.3	A SPECIAL CASE: THE TOWNSHIP MUNICIPAL AFFAIRS COMMITTEE AND THE DEPARTMENT OF MUNICIPAL AFFAIRS (DEVELOPMENT AFFAIRS ORGANIZATION)	P. 22
B.III.2.3.1	ORIGINS OF DMA	P. 22
B.III.2.3.2	DMA'S FISCAL POSITION	P. 23
B.III.2.4	DMAs AND SPATIAL PLANNING	P. 24
B.III.3	SPATIAL PLANNING IN SECONDARY CITIES	P. 25
B.III.3.1	CONCEPT PLANS	P. 25
B.III.3.2	BUILDING PERMITS AND PLOTTING	P. 25
B.III.3.2.1	BUILDING PERMITS IN RURAL AREAS OF TOWNSHIPS	P. 26
B.III.3.2.2	PLOTTING	P. 26
B.IV	URBAN DEVELOPMENT IN YANGON AND MANDALAY CITY	P. 27
B.IV.1	YANGON CITY	P. 27
B.IV.1.1	INSTITUTIONAL CONTEXT	P. 27
B.IV.1.2	FISCAL POSITION OF YCDC	P. 28
B.IV.1.3	TASKS OF YCDC	P. 29
B.IV.1.4	URBAN DEVELOPMENT AND PLANNING	P. 29
B.IV.1.4.1	BUILDING PERMITS	P. 29
B.IV.1.4.2	THE STRATEGIC URBAN DEVELOPMENT PLAN FOR THE GREATER YANGON AREA	P. 30
B.IV.1.4.3	ASSESSMENT OF SUDPGY	P. 34
B.IV.2	MANDALAY CITY	P. 36
B.IV.2.1	INSTITUTIONAL CONTEXT	P. 36
B.IV.2.2	URBAN DEVELOPMENT AND PLANNING	P. 38
B.V	STATUS OF URBAN LEGISLATION	P. 40
B.V.1	URBAN AND REGIONAL DEVELOPMENT PLANNING LAW	P. 40
B.V.II	PROVISIONAL MYANMAR NATIONAL BUILDING CODE	P. 41

B.VI.	INFRASTRUCTURE AND BASIC SERVICES	P. 42
B.VI.1	DRINKING WATER	P. 42
B.VI.2	DOMESTIC SANITATION/WASTEWATER TREATMENT	P. 44
B.VI.3	ELECTRICITY SUPPLY	P. 45
C.	DIAGNOSTIC SUMMARY	P. 48
C.I	URBANIZATION	P. 48
C.II	UNION LEVEL SPATIAL GOVERNANCE	P. 48
C.III	MUNICIPAL GOVERNANCE	P. 48
C.IV	BASIC MUNICIPAL SERVICES/INFRASTRUCTURE	P. 50
C.V.	CURRENT URBAN PLANNING PRACTICE	P. 50
C.V.1	SECONDARY CITIES	P. 50
C.V.2	YANGON AND MANDALAY	P. 50
C.VI	URBAN PLANNING LEGISLATION	P. 51
D.	ANNEXES	P. 57
D.I	ANNEX I - LIST OF ACRONYMS	P. 58
D.II	ANNEX II – REFERENCES	P. 59

A. CONTEXT AND BACKGROUND OF RAPID URBAN DIAGNOSTIC REPORT MYANMAR

A.I Executive Summary

It is expected that Myanmar's urban population will grow from 15.4 million in 2014 to about 20.4 million in 2030. This trend warrants a wide-ranging modernization of both municipal governance and legal frameworks for urban development. Besides this, basic municipal services such as supply of drinking water and wastewater treatment as well as power supply need to be improved nationwide to offset decades of underinvestment, requiring huge outlays for facilities and networks. An important piece of a Union wide spatial orientation is in place already. The draft of the National Spatial Development Framework (NSDF) provides a long term framework for nationwide spatial policy and reinforces the preponderance of the tri-polar development corridor Yangon - Nay Pyi Taw – Mandalay.

With a view on impending acceleration of urbanization, the structure of the current local administrative framework poses serious challenges to both rational integrated spatial planning and sectoral planning for local infrastructure provision. Within the Town Management Committees currently in charge of township administration and development, incentives for long-term strategic coordination seem to be weak. Combined with severe underfunding, persistent coordination issues appear to be one of the main causes of inefficiencies identifiable in the management of urban settlements. A 'unified' local decision-maker enjoying political legitimacy, such as a mayor or municipal chief executive accountable to a local assembly elected via universal franchise, is not at hand.

Spatial expansion in secondary cities as well as in Yangon and Mandalay is mostly shaped by the sectoral expansion of the road network and the cumulative effects of building permits, whose contents are based on a fusion of local standards and cultural consensus. Due to spatial demands caused by accelerating economic growth and economic transformation, these routines are approaching in-built limitations. Both Yangon and Mandalay are in the process of preparing long-term strategic urban development plans. Yet an operational legal framework to ensure subsequent implementation appears to be missing.

The current draft of the Urban and Regional Development Planning Law suggests a rather early stage of formulation. Central elements of urban planning such as rules and procedures for citizen and stakeholder participation in planning processes and the integration of strategic environmental assessments – critical with regard to the challenges posed by climate change - are not included yet. There is a vital need to embrace provisions on how to deal with conflicting objectives concerning land uses in a transparent, accountable, gender-neutral, and fair manner.

The momentum of on-going political transformation could be used to expand and revise legal frameworks for municipal and spatial governance, including establishing the constitutional foundation for a decentralized tier of municipal self-governance accompanied by an adequate devolution of responsibilities and fiscal resources.

A.II General Background

1. The Republic of the Union of Myanmar is in the early stages of a protracted process of transformation from a militarily-dominated political system, towards a parliamentary democracy and market-oriented economy. Based on the 2008 Constitution, and following 2010 general elections, a reformist government under then-President Thein Sein undertook formal steps towards **decentralization through federalization** of the Myanmar state. In the regions and states elections were held. Afterwards, the process of establishing governments in the states and regions commenced. On November 8, 2015 another general election was held, in which NLD participated. The election resulted in a sweeping land-slide victory for NLD and brought about a super-majority for the NLD led by Daw Aung Sun Suu Kyi. The new government came into office in March 2016. Under the new Government, urban development and issues arising from rapid urbanization have come to unprecedented prominence. These issues require a whole-of-government response, and UN Habitat is supporting the Government of Myanmar – through the Ministry of Construction – in preparing a National Urban Policy to respond to the challenges.

2. In October 2016, Myanmar participated in the United Nations Conference on Housing and Sustainable Urban Development, in Quito, Ecuador. The Conference, which was attended by Union Minister of Construction H.E. U Win Khaing, saw the formal adoption of the New Urban Agenda, which set out a framework for sustainable urban development. Following Habitat III, the Union Minister has announced intentions to implement the NUA in Myanmar, including the establishment of a National Habitat Committee to oversee reforms. This Diagnostic Report is a first step towards both the development of a National Urban Policy, and full implementation of the NUA in Myanmar.

A.III Background of Rapid Urban Diagnostic

3. UN-Habitat's Country Programme Document (HCPD)¹ for the Republic of Myanmar for the period 2014 to 2016 presents the operational context for the Rapid Urban Diagnostic for Myanmar.

HCPD 2014/2016 comprises four thematic focus areas:

- (1) Participatory urban planning, management and governance;
- (2) Pro-poor housing, land and tenure;
- (3) Improving human settlements and rebuilding communities;
- (4) Environment, resilience building and climate change, including the promotion of environmentally sustainable cities.

4. Thematic Focus Area No. 1 entails the adoption of new urban planning frameworks to guide urban development and urbanization on a nationwide scale in Myanmar during the next years. Hence, a National Urban Policy (NUP) – to be formally adopted by the Government of Myanmar – will establish a core output of the activities in Thematic Focus Area No. 1.

5. UN-Habitat's activities towards a NUP consist of a series of building blocks. The first step was the preparation of a **National Urban Policy Note** for the Union of Myanmar (December 2014). The **National Urban Policy Note** outlines themes and topics in a broad manner to be addressed by a **National Urban Policy** for Myanmar.² The second step is the **Rapid Urban Diagnostic**. The Rapid Urban Diagnostic is an analytical tool developed by UN-Habitat to support and streamline the formulation of National Urban Policies (NUP) in developing and rapidly urbanizing countries. The findings of the Rapid Urban Diagnostic Report Myanmar (RUDRMYA) will shape the contents of the subsequent **Framework for a National Urban Policy**, the third building block. Both documents, the **Diagnostic** and the subsequent **Framework** aim at engaging UN-Habitat Myanmar in an urban development dialogue.

A.IV Purpose of Rapid Urban Diagnostic Report Myanmar

6. The purpose of Rapid Urban Diagnostic Report Myanmar is to give a brief and concise snapshot of the fundamental conditions of the urban sector in Myanmar as observed at the end of 2015.³

Informed by UN-Habitat's generic guidelines, the Report addresses the following topics:

- 1) Urbanization drivers, trends, and projections, based on recent population data gathered through the 2014 census;
- 2) The existing system of cities, including consideration of national economic development policies, the impact of special economic zones, and broader regional plans the (particularly the GMS sub-region transport corridors);
- 3) An overview of urban legislation, including the draft of the Urban and Regional Planning Law;
- 4) Urban regulations including plotting, public space, and building codes;
- 5) Urban planning, implementation, and enforcement, including the process of urban expansion in Yangon, Mandalay, and secondary cities; and
- 6) Infrastructure and basic services (existing conditions and provision).

B. RAPID URBAN DIAGNOSTIC REPORT MYANMAR**B.I Urbanization****B.I.1 Current Level of Urbanization**

7. The Union of Myanmar consists of seven states and seven regions. The term “region” is used for the areas that have a bamar ethnic majority, whereas the term “state” is used for the territorial units predominantly populated by non-bamar ethnic groups. From the constitutional perspective, both states and regions enjoy the same status vis-à-vis the national level government. In addition, there is the special Union Territory of Nay Pyi Taw, the new capital city of Myanmar, which covers around 7,000 km² with a population of 1.16 million in 2014.⁴ States/regions as well as the Union Territory of Nay Pyi Taw consist of districts, which in turn are comprised by townships. Townships form the basic element of the municipal administrative topography of Myanmar. A central feature of townships is that they often encompass urban areas which are called (urban) wards and rural areas called village tracts. Village tracts frequently encompass several villages as spatially distinct settlements. Further spatial-administrative categories other than urban wards and village tracts do not exist. The classification of an area as urban/rural is carried out by the General Administration Department (GAD), a department of the national level Ministry of Home Affairs (MoHA). Village tracts generally are areas with low population density and a land use which is predominantly agricultural. Conversely, urban areas have an increased density of building structures and population and enjoy better infrastructural services.⁵ A township as an administrative entity can include several separate towns and, likewise, a number of distinct villages. The census of 2014 categorized the population based on residency either in an urban ward or in a village tract. There is only a very limited number of townships (in Yangon and Mandalay) that do not include any rural area. The census data deliver static snapshots and virtually do not reflect any of the functional interlockings between urban and rural areas that frequently characterize townships.

8. According to the census of 2014, about 15.2 million people - 29.6% of the entire population – was living in urban areas in 2014.⁶ This is substantially lower (about 11%) than the latest estimate of UNESCAP for 2014, which reckoned Myanmar’s urbanization rate to stand at 33.6%.⁷ The states/regions with the highest portions of urban population are Yangon Region, Kachin State, and Mandalay Region, while Ayeyawady Region, Rakhine State and Magway Region are the federal entities that have the lowest shares of urban population. Table I displays a few key features from the census.

TABLE I: URBAN POPULATION AND URBAN CENTERS BY STATE/REGION (CENSUS OF 2014)

I	II	III	IV	V	VI
STATE/REGION	URBAN POPULATION (%)	NO. OF TOWN-SHIPS / SUB-TOWNSHIPS	NO. OF TOWNSHIPS / SUB-TOWNSHIPS WITH SHARE OF URB. POP. ≥ 40%	NO. OF TOWNSHIPS / SUB-TOWNSHIPS WITH SHARE OF URB. POP. ≥ 40% AND TOTAL POP. ≥ 100,000****	NO. OF TOWNSHIPS / SUB-TOWNSHIPS WITH SHARE OF URB. POP. < 40% AND TOTAL URBAN POP. ≥ 50,000
Kachin State	36.1	29	8	2 (Myitkyina; Bhamo)	1 (Phakant)
Kayah State	25.3	8	3	1 (Loikaw)	--
Kayin State	21.9	16	3	1 (Myawady)	1 (Hpa-an)
Chin State	20.8	13	2	--	--
Sagaing Region	17.1	45	3	1 (Monywa)	3 (Kalay; Sagaing; Shwebo)
Tanintharyi Region	24.0	16	4	3 (Myeik; Dawei; Kawthoung)	--
Bago Region	22.0	20	3	3 (Bago; Toungoo; Pyay)	2 (Pyu; Nyaunglebin)
Magway Region	15.0	26	--	--	3 (Magway; Pakokku; Aunglan)
Mandalay Region	34.8	30	7*	7****	3 (Meiktila; Myingyan; Amarapura)
Mon State	27.9	11	1	1 (Mawlamyine)	2 (Thanbyuzayat; Thaton)
Rakhine State	16.9	20	1	1 (Sittway)	--
Yangon Region	70.1	46	35**	22****	1 (Thanlyin)
Shan State	24.0	83	8	3 (Taungyi; Lashio; Muse)	1 (Kalaw)
Ayeyawady Region	14.1	33	1	1 (Patheingyi)	2 (Hinthada; Myaungmya)
Nay Pyi Taw***	32.3	8	2	1 (Zabuthiri)	1 (Pynmana)

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Nay Pyi Taw, May 2015; author's compilation.

* Five townships located in Mandalay District have a share of urban population of 100%. Together with two additional townships, these make up the area under the jurisdiction of Mandalay City Development Committee (MCDC), which is colloquially called "Mandalay City".

** 28 townships located in Yangon Region have a share of urban population of 100%. Together with five additional townships, these make up the area under the jurisdiction of Yangon City Development Committee (YCDC), which is colloquially called "Yangon City".

*** Union Territory

**** Names of Townships not listed for MCDC and YCDC due to entities' highly agglomerated status.

9. To get a notion concerning the level of urbanization, in each state/region, the townships with a share of urban population of 40% and more were identified (Column IV). Column V combines the 40%-criterion with a minimum absolute size of total population of 100,000. Excluding the special cases of Mandalay Region and Yangon Region, it emerges that states and regions only contain one to three settlements which might be considered as major urban centers. In addition, Table I suggests to take a closer look at townships displaying majorities of rural inhabitants. Column VI indicates that most states/regions include at least one seemingly predominantly rural township which incorporates in absolute terms a quantity of urban dwellers that is substantial and thus might serve as a nucleus for

future urbanization processes. Any future detailed urban and regional planning work in states and regions needs to take the potential existence of such specific patterns into account.

B.I.2 Urbanization in Myanmar in Regional Perspective

10. To better understand the level of urbanization in Myanmar and to assess Myanmar's development differential, its potential "catch-up space", the country's level of urbanization was compared to levels of urbanization in neighboring countries in South-East Asia. Hence, a 'peer group' of countries was formed consisting of Bangladesh (BD), Vietnam (VN), Thailand (TH), and Malaysia (MAL). The countries in this cohort reflect different stages of aggregate economic development. Like Myanmar, Bangladesh is a low-income economy, while Vietnam moved up ranks a few years ago and joined the group of lower-middle income economies. Thailand and Malaysia belong to the group of firmly established southeast Asian upper-middle income economies.⁸

TABLE II: CORE URBANIZATION INDICATORS 1990/2014; GDP 1990/2014; RATES OF CHANGE 1990/2014

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
	MM 1990	MM 2014	MM CAGR (%)	BD 1990	BD 2012*	BD CAGR (%)*	VN 1990	VN 2012*	VN CAGR (%)	TH 1990	TH 2014	TH CAGR (%)	MAL. 1990	MAL. 2014	MAL. CAGR (%)
TOTAL POP. 1990 2014 (million); CAGR** 1990-2014 (%)	42.1	51.5	0.84	107.4	158.5	1.63	68.2	92.5	1.28	56.6	67.2	0.72	18.2	30.2	2.13
URBAN POPULATION 2014 (% OF TOT. POP.)	24.6	29.6	0.77	19.8	33.5	2.22	20.3	33.0	2.05	29.4	49.2	2.17	49.8	74	1.66
IN CITIES > 1 MILLION PEOPLE (% OF TOT. POP.)	6.9	11.3***	2.07	8.0	14.2	2.42	6.1	13.7	3.43	10.4	16.0	1.81	11.5	22	2.74
IN CITIES FROM 0.3 MILLION TO 1 MILLION PEOPLE (% OF TOT. POP.)	1.5	2.4***	1.94	1.4	2.3	2.09	1.2	3.0	3.89	0.0	4.1	na	4.7	14.8	4.90
IN CITIES < 0.3 MILLION PEOPLE (% OF TOT. POP.)	16.2	15.9***	-0.07	10.4	17.0	2.07	13.0	16.3	0.95	19.0	29.1	1.79	33.5	37.2	0.44
GDP (BILLION 2005 USD)	3.3	22.9	8.41	31.4	100.3	4.96	18.7	87.5	6.64	92.8	241.0	4.06	57.3	198.4	5.31
GDP/CAPITA (IN 2005 USD)	78	445	7.53	292	640	3.63	274	946	5.30	1640	3586	3.31	3148	6570	3.11

Sources: UNESCAP, Statistical Yearbook for Asia and the Pacific 2013, Bangkok 2013; Statistical Yearbook for Asia and the Pacific 2013, Bangkok 2014; The Republic of the Union of Myanmar, The 2014 Population and Housing Census, Census Report Volume 2, Nay Pyi Taw 2015; author's calculations.

* Please note that for both BD and VN, 2012 GDP and population data from 2012 were used, as GDP data for 2014 were not available.

** CAGR: Compound Annual Average Growth Rate.

*** The figures for MM for 2014 in the three categories of city sizes established by UNESCAP were adjusted to the aggregate relative share of the entire urban population of 29.6% as measured by the census of 2014, while keeping constant their internal relative proportions as reported by UNESCAP for 2014.

11. It is vital to realize that the data presented here just reflect rough trends. There is no unified international standard for defining an area as "urban". Thus, findings derived from international comparisons can only indicate crude approximate developments. In addition, the fact that the Myanmar census of 2014 simply defines urban population as persons living in urban wards, implies a certain risk of understating the level of urbanization in Myanmar.

12. Table II comprises some core indicators. Global comparative research indicates that the level of urbanization in a country rises, when real GDP per capita increases. Hence, changes in aggregate real GDP and real GDP per capita are included. Table II shows that in Myanmar real GDP per capita and the overall share of the urban population are the lowest of all selected economies, as empirical observations would suggest. In Bangladesh and Vietnam, the countries with levels of economic development not too far ahead of Myanmar, real GDP per capita stood at 640 USD resp. at 946 USD in 2014. Approximately 33% to 34% of the entire population of those countries live in urban areas in 2014; a portion which is approx. three to four percentage points higher than in Myanmar. In Thailand with a real GDP per capita of around 3600 USD, virtually one half of the population resides in urban areas. With the urban segment rising to three quarters of the populace in Malaysia, this country, whose real GDP per capita is approx. twice as high as Thailand's, approaches a level of urbanization that can be found in developed countries as well.

13. In Myanmar the share of the urban population grew at a rate roughly as low as the growth rate of the entire population, which at 0.84% p. a. is the second lowest rate in the selected group of economies and approximately in the same range as Thailand.⁹ Yet while in Thailand and Vietnam between 1990 and 2014, the **entire population** grew at an average annual rate of 0.72% resp. 1.28%, the **relative share** of the entire urban population increased at an annual average rate roughly two to three times as high – 2.17% resp. 2.05%. For Myanmar, this indicates a low level of intensity of urbanization from 1990 to 2014, evidently caused by Myanmar's decades-long political and economic isolation from the rest of the world. Myanmar's high average annual growth rate of real GDP per capita of 7.5% p. a. can lead to a misleading impression concerning the vigor of economic development. Since the national economy of Myanmar started from an extremely low level in 1990, the high annual rate from 1990 to 2014 can be partly explained by the so-called 'basis-effect'. In addition, a real GDP per capita of about 450 USD (in constant 2005 USD) as reached in 2014 strongly suggests an economy still predominantly based on agriculture, with a low overall contribution of manufacturing to national GDP.

14. Despite the nascent state of urbanization, Myanmar shares two features with the countries in the peer group: the growth rate of the relative share of people living in cities with a population **exceeding one million** is relatively high as well – more than 2% p. a. It is interesting to note that in all countries the relative share of the population living in the largest category of cities roughly doubled between 1990 and 2014. In Myanmar it went up from 6.9% to 11.3%, in Vietnam from 6.1% to 13.7%, Thailand from 10.4% to 16%, in Malaysia from 11.5% to 22%, and in Bangladesh from 8.0% to 14.2%. In Myanmar, it can be expected that in the current context of intensified economic transformation and expansion, the trend towards strong urbanization in the two big agglomerations will continue. This poses specific challenges for the future management and governance of urban spatial expansion and densification in the metropolitan agglomerations of Yangon and Mandalay, which will both require an accentuated level of professional attention during the next decade.

15. The second feature Myanmar has in common with countries in the cohort is the comparatively weak growth of the relative population share residing in smaller cities. As in the other countries, the average annual growth rate in the category “cities with less than 300,000 residents” is significantly lower than the growth rates of the larger cities. In Myanmar, the relative share here is more or less stagnant, while in Vietnam and Malaysia average annual growth rates reached 0.95% resp. 0.44%. It needs to be noted, however, that even such a stagnant share can imply a substantial augmentation of urban residents in absolute terms.

B.I.3 Drivers and Trends of Urbanization

B.I.3.1 Drivers of Urbanization

16. The regional comparison indicates that the overall process of urbanization in Myanmar still is in an early stage. It is plausible to assume that Myanmar will embark on a trajectory of economic development similar to those observed in Vietnam or Bangladesh. Urbanization will continue to be driven by factors which at this point in time can only be assessed qualitatively. The growth of urban areas, its dynamic and its strength is generated by a mix of ‘push’ and ‘pull’ factors, **whose specific future composition is difficult to forecast**. This notwithstanding, it can be argued that urbanization will be mostly driven by components which were also at play in neighboring countries in the region.

17. The fundamental driver is general population growth. In this regard, Myanmar is in a relatively beneficial position, as its average aggregate rate of population growth stood below 1% p. a. during the last 25 years; half the rate (or even less) of Bangladesh or Malaysia (Table II). Looked at from a purely statistical angle, population pressures are still relatively low, as Myanmar’s population density at 76 persons/km² is much lower than in Vietnam at 276 persons/km² or in Bangladesh at 1,087 persons/km².¹⁰ Yet various reports indicate high levels of landlessness among rural households, with estimated rates oscillating between 30% and 50% of households¹¹, which appears to be relatively high compared to other countries with a similar level of economic development. In addition, the number of employment opportunities in the farming sector can be expected to decrease, as the sector’s productivity increases as a result of mechanization. Both factors combined – landlessness and shrinking numbers of rural employment opportunities - will continue to serve as a significant push-factor, shifting people from the rural areas to the cities.

18. One crucial factor on the ‘pull-side’ will be the quantity of investment – both domestic or foreign - in the sector of low-skilled manufacturing activities, such as food processing and textiles. The amount of investments will determine the number of industrial jobs created. If the in-coming government manages to establish a reliable and attractive legal and regulatory environment for both domestic and foreign businesses, chances are good that a lot more industrial investment will be attracted than at present. Due to relative cost advantages, most additional foreign investment will allocate in the urban growth centers already established. Here, certainly Yangon and Mandalay will take the lead for the time being.

B.I.3.2 Projection of Urbanization

19. The projection's purpose is to show how a plausible trajectory of urbanization could look like. The projections for 2025/2030 rest on following assumptions:

- The average annual rates of changes of the relative shares of the three size classes of cities as observed from 1990 to 2014 are kept constant. These rates are taken from Column III of Table II.
- The average annual growth rate of the population from 1990 to 2014 is assumed to remain constant as well (Column X in Table III).
- As an average annual rate of growth for real GDP per capita, 7% is chosen, half a percentage point less than the rate measured between 1990 and 2014 (Column III in Table II). This is, because (1) real GDP growth rates tend to decline slightly over the years; (2) in general, expectations concerning economic growth worldwide for the next years tend to be more subdued. In particular, this might hold true if a persistent downward shift of real GDP growth rates in China (PRC) materializes ("hard landing").

TABLE III: PROJECTION OF URBANIZATION 2025/2030

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
	2014: %	2014: Absolute Number (million)	PRO-JECTION 2025; %	PRO-JECTION 2025; Absolute Number (million)	Absolute Change, 2014 - 2025	PRO-JECTION 2030, %	PRO-JECTION 2030: Absolute Number (million)	Absolute Change, 2014 - 2030	Change 2014 – 2030 %	CAGR 2014 - 2030 (for Totals)	COMPARISON: URBANIZATION RATES IN VIETNAM 2014 (%)
ENTIRE POPULATION	100	51.5	100	56.5	5.0	100	58.9	7.4	14.3	0.84	100
URBAN POPULATION:	29.6	15.2	32.9	18.6	3.3	34.7	20.4	5.2	33.9	1.84	33
IN CITIES > 1 MILLION PEOPLE (% OF ENT. POP.)	11.3	5.8	14.1	8.0	2.2	15.6	9.2	3.4	58.3	2.91	13.7
IN CITIES FROM 0.3 MILLION TO 1 MILLION PEOPLE (% OF ENT. POP.)	2.4	1.2	2.9	1.7	0.4	3.2	1.9	0.7	54.1	2.74	3
IN CITIES < 0.3 MILLION PEOPLE (% OF ENT. POP.)	15.9	8.2	15.8	8.9	0.7	15.8	9.3	1.1	13.4	0.79	16.3
GDP PROJECTION:											
		2014					PRO-JECTION 2030		Change 2014 – 2030, %	CAGR 2014 - 2030, %	VIET-NAM 2012
REAL GDP PER CAPITA (IN CONSTANT 2005 USD)		445					1314		195.2	7.00	946

20. The projection yields the following results:

- By 2030, the entire urban population in Myanmar could reach 20.4 million persons, up from 15.2 million in 2014.¹²
- The number of residents living in cities with a population higher than one million persons can grow from 5.8 million to 9.2 million, an increase of about 58%. This growth will occur in just two city regions – Yangon and Mandalay, with the bulk of additional population growth most probably occurring in Yangon.
- The number of dwellers residing in medium-sized cities can grow from 1.2 to 1.9 million, thus increasing by about 54%.
- Despite just growing at an average annual rate of 0.79% and with a stagnant share of the whole urban population, the number of urban dwellers in the smallest category of urban settlements will grow by 1.1 million, from 8.2 million to 9.3 million, an augmentation of about 13%.
- The rural population will still make up roughly two thirds of Myanmar's entire population in 2030.

21. Provided trends locked-in at present in both the development of the urban population and the growth of GDP continue, a distribution of the urban/non-urban population quite similar to the one discernible in Vietnam in 2014 can be expected, when Vietnam reached a level of real GDP per capita roughly in the same range as projected for Myanmar in 2030. The share of the population living in the smallest class of cities in Vietnam in 2014 stood at 16.3%, while it is expected to reach 15.8% in Myanmar by 2030. The portion living in the medium-sized cities reached 3%, while in Myanmar it is expected to reach 3.2% by 2030; virtually the same. In the category of largest cities, 13.7% of the population of Vietnam resided in 2014, while in Myanmar 16.3% of the populace are expected to live there 15 years from now.

B.I.3.3 Spatial Dimension of Urbanization in Myanmar

22. Population growth, on-going shifts in the spatial distribution of population, and shifts in the internal composition of aggregate economic activities demand an increase of the amount of land dedicated to urban purposes. Demand for extra space invariably leads to the spatial expansion of settlements and the conversion of agricultural land and other open space into urban land for housing, for commercial purposes, and for infrastructure. In Myanmar it could be observed that urban spatial expansion was quite modest in the decade from 2000 to 2010.¹³ Per additional urban resident, on average only approx. 40 m² of new urban land were constructed. Particularly in Yangon, intensity of spatial expansion was low. Per additional resident, just 24 m² of additional built-up urban land were added. Table IV presents a comparison of spatial expansion between Myanmar's largest urban agglomerations to major urban areas located in the peer group.

TABLE IV: CHANGES IN URBAN LAND, POPULATION, AND DENSITY IN YANGON, BANGKOK, KUALA LUMPUR, HANOI, AND MANDALAY, 2000-2010

Urban Area	Urban Land 2000, km ²	Urban Land 2010, km ²	Increase in Urban Land 2000-2010, km ²	Average Annual Rate of Increase in Urban Land, %	Urban Population, 2000	Urban Population, 2010	Change in Urban Population, 2000-2010	Average Annual Rate of Change in Urban Population, %	Average Urban Population Density, 2000 (persons/km ²)	Average Urban Population Density, 2010 (persons/km ²)	Urban Expansion per Additional Urban Inhabitant (m ² /per person)
Yangon	371	390	19	0,5	2.637.028	3.416.962	779.934	2,6	7.113	8.771	24
Bangkok	1.910	2.126	216	1,1	7.825.880	9.555.372	1.729.492	2,0	4.098	4.495	125
Kuala Lumpur	1541	1739	199	1,2	3.972.896	5.750.078	1.777.182	3,8	2.579	3.306	112
Hanoi	584	851	266	3,8	3.534.648	5.642.882	2.108.234	4,8	6.049	6.634	126
Mandalay	111	130	18	1,5	821.889	1.130.511	150.729	3,2	7.375	8.709	60

Source: World Bank, East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth, Table E.1, pp. 150-157. A comparison between data on country levels was not feasible, since demarcations and definitions of urban areas applied in Myanmar's census of 2014 and in UNESCAP's statistical year-book significantly differ from demarcations and definitions of urban areas used in the World Bank's study, whose findings are predominantly based on the evaluation of satellite imagery between 2000 and 2010.

23. The synopsis shows that by regional standards, the spatial extent of urban expansion so far was quite limited. In the other capital cities, the amount of urban land added per extra urban dweller was four to five times higher than in Yangon. This probably indicates that additional inhabitants in Yangon were less accommodated through new construction than through increasing densities (occupancies) in houses (apartments). The low quantity of extra land also might indicate that urban population growth in particular in Yangon was not accompanied by sufficient supply of space for infrastructure (areas for transportation, open and green spaces, areas for wastewater treatment facilities and for water supply, etc.). It might also be the case, however, that a major segment of the added population was not accommodated in solidly built houses, but had to make do with informal settlements not accompanied by areas for infrastructure, which might be difficult to unequivocally detect through satellite imagery. Furthermore, Yangon's trajectory of development was most probably distorted by the establishment of the new capital city of Nay Pyi Taw by governmental *fiat*.¹⁴ It is reasonable to assume that the foundation of Nay Pyi Taw diverted a quantitatively relevant share of urban spatial expansion to Nay Pyi Taw, which otherwise would have materialized in Yangon.

B.II Myanmar's System of Urban Centers and Growth Corridors

24. Section B.II addresses the current planning concept for the future development of the **core national urban system and the national transportation grid, whose future trajectories of development are inextricably intertwined**.¹⁵ Under the guidance of Myanmar's Ministry of Transportation (MoT) and in cooperation with the Ministry of Construction (MoC) and the Ministry of National Planning and Economic Development, the draft of a **National Spatial Development Framework (NSDF)** was prepared, which is embedded into the National Transport Development Plan. The NSDF, whose time horizon extends to 2030, represents an indispensable component of the National Transport Development Plan and provides a **robust general orientation** for future nationwide spatial development.

25. The NSDF proposes a hierarchy of urban centers – activity hubs - based on current functions, current relative weight of urban centers, and on an evaluation of their future potential. The NSDF rests on the following methodological building blocks¹⁶:

- Synthesis of regional - i.e. international/ASEAN/Asian/Greater Mekong Sub-Region (GMS)- and national transport sector strategies including sector strategies, policies and programs including economic corridors concepts.
- Analysis of an urban center's role based on strategy statements of MoC's DUHD and on projections prepared by the Ministry of National Planning and Economic Development for the draft of the National Comprehensive Development Plan.
- Location of urban center with regard to existing or planned international, national or regional highway and railway corridors (transportation axes) and the urban center's endowment with strategic physical transport facilities such as ports, airports, rail stations and intersections.
- For smaller or currently embryonic urban centers: assessment of development potential until 2030.
- Further criteria taken into account were the designation of an urban center as capital city for a State or a Region, its endowment with an industrial zone or a special economic zone (SEZ)¹⁷; and/or serving as a hub for tourism.

26. NSDF develops a **Hierarchy of Centers Concept**¹⁸ consisting of four tiers.

- **Primary level - national strategic (growth) centers:** Yangon, Mandalay and Nay Pyi Taw.
- **Secondary level - regional cities.** These centers are strategic nodes of transportation activities endowed with interconnections of highways, railways, and/or rivers. Hence, **clusters of commercial and transportation activities** exist, mostly complemented by the presence of state/regional governments. Close to some of these cities, regional tourism and heritage sites are located.
- **Tertiary level - agro-industrial centers.** This type of settlement encompasses major concentrations of population predominantly engaged in agrarian activities and industrial activities related to farming such as food processing. District and township level administrative functions and services are provided and lower levels of health and education, and social and community services and facilities are being supplied with support from deconcentrated branch offices of national and regional government agencies.
- **Lowest level – border towns / (other) special function settlements.** This type of settlement is shaped by the functions necessarily to be performed at the borders Myanmar shares with its various neighboring countries. In the past in those places, it may have been necessary to put a certain emphasis on security or emergency functions. With the volume of physical cross-border growing, a shift towards (civilian) administrative trade-related purposes can be expected. Consequently, as economic opportunities increase, physical expansion of those settlements can be expected.

Table V below comprises the urban activity hubs as proposed by NSDF.

Table V: PROPOSED HIERARCHY OF URBAN CENTERS (ACTIVITY HUBS)

NAME	POPULATION (Estimate 2012 for Traffic Analysis Zones)*	ATTRIBUTES**	REACH OF CATCHMENT AREA
NATIONAL CENTERS			
Yangon	7,169,812	S, A, P, R, I, T	national/international
Nay Pyi Taw	1,446,957	NAT. CAP.; S, A, R, I	national/international
Mandalay	1,164,299	S, A, R, I, T	national/international
REGIONAL CENTERS			
Bago	2,112,954	S, R	State/Region
Sittwe	1,611,505	S, A, P	State/Region
Myitkyina	523,072	S, A, R	State/Region
Dawei	811,093	S, A, P, I, T	State/Region
Mawlamyine	1,941,904	S, A, P, R, I	State/Region
Patheingyi	1,950,863	S, A, P, R, I	State/Region
Kyaukpadaung	593,287	A, P, I	State/Region
Loikaw	308,972	S, A	State/Region
Hakha/Falam	337,841	S	State/Region
Sagaing	784,548	S	State/Region
AGRO-INDUSTRY CENTERS			
Monywa	1,780,212	S, A, I	State/Region
Magway	1,892,467	S, A	State/Region
Hpa-an	915,953	S, A, I	State/Region
Taunggyi	1,401,821	S, I	State/Region
Meiktila	1,375,698	I	District
Pyaw	1,228,977	I	District
Hinthada	1,814,695	R, I	District
Shwepyithar	1,903,318	-	District
Taungtha	1,266,025	R	District
Thabeikkyin	1,251,166	-	District
Kale	547,515	A, B, R, I	District
Lashio	633,971	A, R	District
SPECIAL FUNCTION CENTERS			
Kengtung	427,846	A	District
Myeik	622,737	A, P, I	District
Myawaddy	63,671	B, I	District
Tamu	102,050	B	District
Muse	486,384	B	District
Tachileik	105,251	A, B	District
Nyaung-U (Bagan)	369,983	A, R, T	District

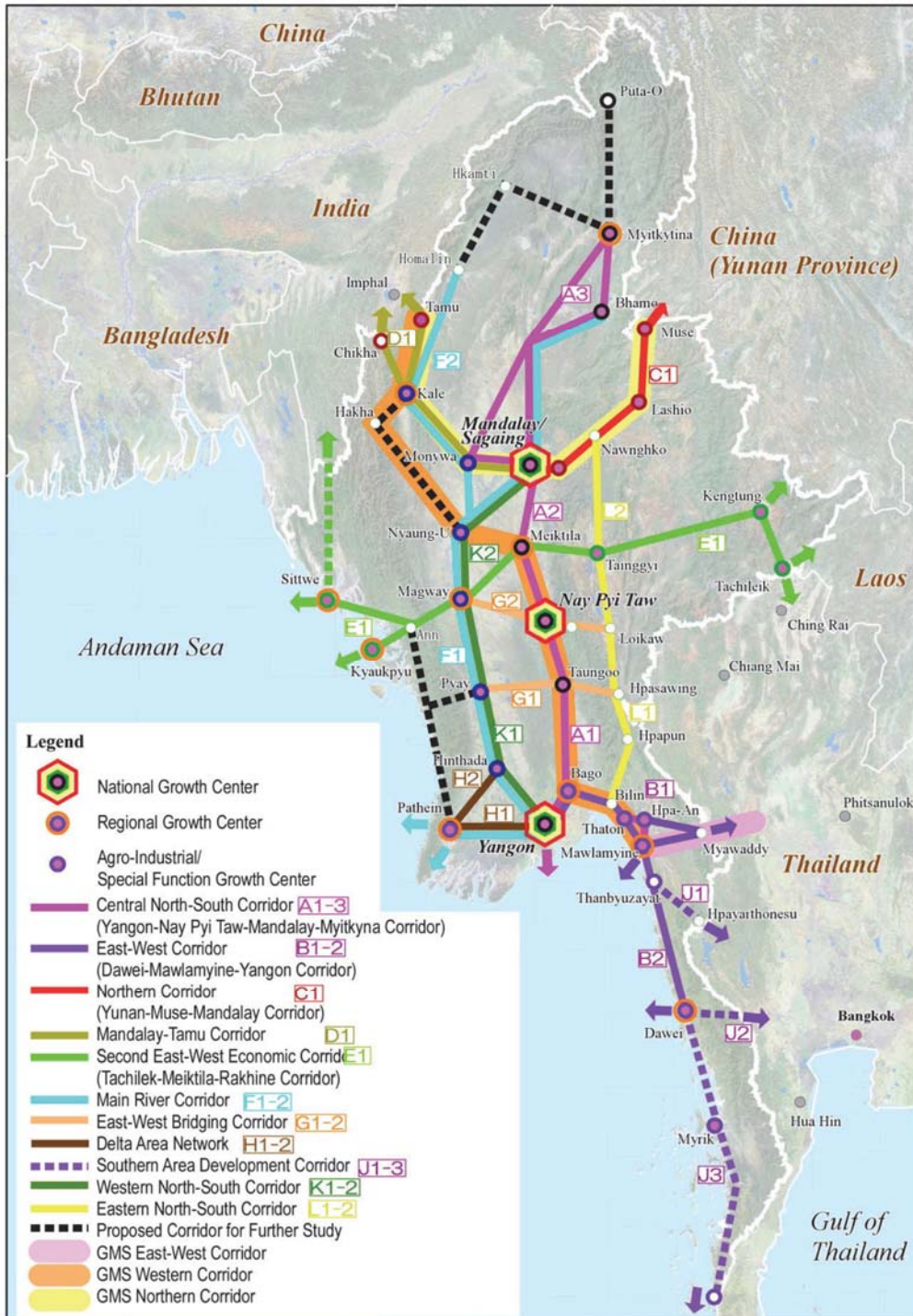
Source: The Ministry of Transport of the Republic of the Union of Myanmar, The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report (Sept. 2014), p. 4-31, Table 4.2 – “Selection of Activity Hubs”; author’s modifications and amendments. Table V above only lists locations selected by JICA research as activity hubs through a color code in original table.

*Population figures are estimates from 2012 for functionally interdependent Traffic Analysis Zones. Traffic Analysis Zones can encompass several townships or parts thereof and hence cannot not be compared with the population figures for townships as established by the Census of 2014.

**Attributes: A – Airport; B – Border Town; P – Port; R – Railway Hub; S – Capital of State or Region; I – Industrial Zone or SEZ; T – Tourism Hub

27. NSDF connects the urban centers through a system of transportation axes, which simultaneously serve as spatial corridors for economic development. The network of corridors also takes into account supra-national regional nets such as the GMS (Greater Mekong Sub-Region) Economic Corridors and the ASEAN highways. The figure below displays combination of the activity hubs with the nationwide transportation grid.

Figure 1: NSDF AND DEVELOPMENT CORRIDORS



Source: The Ministry of Transport of the Republic of the Union of Myanmar, The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report (Sept. 2014), p. 10-3.

28. Table VI serves as a legend for the map above. It contains the segments of the development axes and names of the urban centers which form each segment's starting point and ending point. In addition, the table displays the share of population and GDP each prospective corridor affects – the “sphere of influence” of each corridor.

Table VI: DEVELOPMENT CORRIDORS BY POPULATION AND GDP

Development Corridor	Section	Code in Map	% of National Population (Estimate 2012)	% of National GDP (Estimate 2012)
A. Central North-South Corr.	Yangon - Nay Pyi Taw	A 1	41	50
	Nay Pyi Taw – Mandalay	A 2		
	Mandalay – Myitkyna	A 3		
B. East – West Corridor	Yangon - Hpa-An - Myawaddy	B 1	28	35
	Mawlamyine – Dawei	B 2		
C. Northern Corridor	Mandalay – Muse	C 1	10	10
D. Mandalay – Tamu Corridor	Mandalay – Tamu	D 1	14	15
E. Second East - West Corridor*	Tachilek - Meiktila - Kyaukpyu	E 1	17	15
G East – West Bridging Corridor	Hpasawing – Pyay	G 1	12	11
	Loikaw – Magway	G 2		
H. Delta Area Network	Yangon – Pathein	H 1	21	27
	Pathein – Hinthada	H 2		
J. Southern Area Develop. Corr.	Thanbyuzayat - Hpayarthonesu	J 1	8	8
	Dawei - Thai Border	J 2		
	Dawei – Kawthaung	J 3		
K. Western North-South Corridor	Yangon - Pyay - Magway	K 1	33	42
	Magway – Mandalay	K 2		
L. Eastern North - South Corridor	Bilin – Loikaw	L 1	12	9
	Loikaw – Nawngkho	L 2		

Source: Ministry of Transportation, *ibid.*, p. 10-6.

*Please note: The Main River Corridor F1 - F2 as displayed in Figure 1 was merged with the Western North-South Corridor K and hence is not included in Table.

29. The National Transport Development Plan uses a multi-criteria analysis to generate a priority ranking for the development and upgrading of certain corridors. While not being the only criteria, the calibration of the parameters the multi-criteria analysis assigned a substantial proportional weight to the significance of the GDP related “spheres of influence” of a specific transportation corridor. As a result, the following group of “first priority corridors” emerged (shaded grey in Table V):

- A. Central North-South Corridor – A 1 and A 2 - (Yangon – Nay Pyi Taw – Mandalay)
- B. East-West Corridor – B 1 (Yangon – Hpa An- Myawaddy)
- C. Northern Corridor – C 1 (Mandalay – Muse)
- K. Western North-South Corridor - K1 (Yangon – Pyay – Magway)
- H. Delta Area Network - H 1 (Yangon – Patheingyi)

30. It is evident that the axis Yangon - Nay Pyi Taw - Mandalay will continue to be the fundamental backbone of Myanmar. Historically entrenched and strongly reinforced by the establishment of Nay Pyi Taw as new national Capital about a decade ago, this **tri-polar central corridor** will determine the future economic geography of Myanmar.

B.III Urban Governance in Townships/Secondary Cities

31. This section addresses the current state (end of 2015) of urban governance and urban planning legislation. A first sub-section discusses the municipal administrative context, which is characterized through the **remarkable absence of a single center of responsibility on the municipal level empowered to steer urban development** in a comprehensive manner. To better understand “conditions on the municipal ground”, it is necessary to outline their core determinants as they originate from the constitutional framework.

B.III.1 Constitutional Framework

32. Myanmar’s Constitution of 2008 cannot be considered as an egalitarian constitution devised along classical lines of standard western thinking on democracy. The Constitution is a power-sharing agreement between the military forces and the civilian sectors of Myanmar’s society that emerged as a compromise after decades of inter-ethnic conflict and civil strife. Two fundamental constitutional rules illustrate this: (1) the military always obtains 25% of all seats in the National Parliament; (2) three national core ministries – the Ministry of Defense, the Ministry of Home Affairs, and the Ministry of Border Affairs are always headed by military appointees selected by the top military leadership. The Constitution of 2008 provides for elected assemblies in the States/Regions and the establishment of State/Region governments, which constituted themselves after the elections of October 2010 for the first time in March 2011. Yet due to the specific circumstances of the genesis of the Constitution, the newly established governments in the 14 states/regions so far wield little real power. For example, the ministers in the government of the states/regions cannot select their own staff, but instead have to rely on administrative units belonging to and supervised by the national-level ministries in Nay Pyi Taw. The chief ministers of state/region governments need to be approved by the President of the Republic of the Union of Myanmar. Budgetary means of state/region means are severely constrained.

33. **A separate municipal tier is not mentioned in the Constitution.** A municipal governance structure democratically accountable to the local inhabitants of townships – the third tier of government

in many other countries – remains absent.¹⁹ General (local) development affairs as well as town and housing development tasks fall under the purview of states and regions.²⁰ With the structural weaknesses of governance in state and regions given, the role which the state/region governments play in municipal affairs is fairly limited at present.

34. *De jure*, the new constitutional legal framework embodies theoretical opportunities that open up for the States and Regions possible moves towards decentralization. Yet for the time being, the structure and functioning of municipal state administration in the form of districts, townships, and urban wards and village tracts remains unchanged.

B.III.2 Administrative Organization at the Township Level

B.III.2.1 The Township Administrator as Central Actor at Township Level

35. A township's administration can best be understood as a bundle of **local branch offices of Union level sectoral ministries** juxtaposed to each other, through which the central state administers its powers in a deconcentrated fashion. Among Union level agencies, the **General Administration Department (GAD)** of the military-dominated **Ministry of Home Affairs (MoHA)** plays a central role in townships. In each township a **Township Administrator (TA)** resides, who is always a senior GAD official in the rank of a GAD Assistant Director, the highest ranking civil servant in a township. **His central task is the coordination of the activities of the other local branch offices of the sectoral ministerial organizations.** The TA heads the weekly meetings of the **Town Management Committee (TMC)**, the administrative entity which oversees the township. While all heads of local branch offices are expected to report to the TA, simultaneously all heads of the local branches are accountable to their supervisors at the district level, the regional/state level, and the Union level, from which they also receive their work programs/work plans and their budgets (with the notable exception of the Department of Municipal Affairs; see below). Mandates and levels of authority and discretion of local department heads differ per ministry, but are in general limited to implementing tasks and plans that are conveyed top-down from the Union levels. The resulting structure therefore tends to be strongly hierarchical (intra-sectorally) as well as compartmentalized (inter-sectorally), implying that each local sectoral branch office is working in relative isolation focusing on its own mandate to achieve its sectoral national priorities.

B.III.2.2 The Township Committees

36. The Township Management Committee²¹ exclusively consists of public officials from other branch offices of sectoral government departments. In addition to the TA, another GAD official serves as the TMC's secretary, enhancing GAD's relative preponderance. Other members are a Police Officer, a Planning Department Officer²², a Forestry Department Officer, an Education Department Officer, a Municipal Officer, a Legal Department Officer, and an Officer from the Revenue Department.²³

37. TMC’s activities are supported by a number of other **township committees** of varying compositions, scopes of duties, and powers. A managerial committee is the Township Farmland Administration Body²⁴ (TFAB). The TFAB is chaired by a Township GAD Officer as well, yet not necessarily by the TA. Other members are Officers from the Agricultural Department, from the Planning Department, the Rural Development, Livestock and Fisheries Department, and the Settlement and Land Record Department.²⁵ TFAB chiefly deals with agricultural land use topics; in particular, with issues concerning land use rights. It has purely executive functions.

38. Presidential Notification 27/2013 of February 2013 mandated the establishment of **Township Development Support Committees (TDSCs)** in all townships of Myanmar. For the first time in decades, through TDSCs a **participatory element** was added to the topography of local governance, as Overview I below indicates:

OVERVIEW I: COMPOSITION OF TDSC

Person elected by majority by the Committee members	Chair
Person elected by majority of elders and respected persons from urban and rural areas	Member
Representative of the community (civil society organization)	Member
Representative of business association	Member
Representative of workers	Member
Representative of farmers	Member
Deputy Township Administrator (GAD)	Member
Executive Officer, Department of Municipal Affairs	Member
Person elected by the representatives of the business association, the community and elders and respected persons	Secretary

Source: UNDP, Mapping the State of Local Governance in Myanmar: Background and Methodology, (Yangon) 2015, p. 47.

39. The TDSC consists of **government members** and **non-government members**. Two government representatives, the Deputy TA (GAD) and the Executive Officer of the Department of Municipal Affairs (Development Affairs Organization) serve as members *ex officio*. The committee’s majority is formed by persons representing various segments of the local community. A non-government member heads the committee, while another representative from the local community serves as secretary of the TDSC. It is important to realize that the non-government members are not elected according to the one-person/one-vote principle, but are rather nominated through or called upon by their respective constituencies. Therefore, citizens’ representation can only be characterized as indirect and limited. TDSCs are **purely consultative/advisory bodies** without support staff or budget. They can submit suggestions and provide advice to the TA and other technical township-level branches of Union line ministries. UNDP research suggests that so far the TDSCs’ participatory outreach is rather limited, as the existence of TDSCs frequently is not known to the general population.²⁶

B.III.2.3 A Special Case: The Township Municipal Affairs Committee and the Department of Municipal Affairs (Development Affairs Organization)

40. Presidential Notification 27/2013 also instructed State and Region Governments to draft **Municipal Laws** to establish **Township Municipal Committees (TMuCs)**²⁷ across all townships in Myanmar. In all of the 14 States/Regions such Municipal Laws were drafted, which were then adopted as State and Region legislation by the State/Region Assemblies. TMuCs were created in all 14 States and Regions. Yet TMuCs operate only in those areas of townships designated by the Municipal Laws as urban areas (wards).

41. Like TMC and TFAB, TMuC is a managerial committee. Yet unlike TMC and TFAB, TMuC encompasses a substantial **participatory element** similar to TDSC, as the majority of its members are selected and nominated by their respective constituency groups in the local community (Overview II).

OVERVIEW II: COMPOSITION OF TMuC (TDAC)

A person elected by town's elders	Chairperson	Elected
Executive Officer of Department of Municipal Affairs (DMA)	Secretary	Appointed
Deputy Administrator of GAD	Member	Appointed
Deputy Staff Officer of the Department of Rural Development (DRD)	Member	Appointed
A person elected by the community-based organizations (civil society organization)	Member	Elected
An experienced person elected by the town's elders	Member	Elected
A town elder elected by the town's elders	Member	Elected

Source: UNDP, Mapping the State of Local Governance in Myanmar: Background and Methodology, (Yangon) 2015, p. 52.

Yet unlike TDSC, the TMuC commands its own administrative apparatus, staff, and a budget. This administrative entity is termed **Department of Municipal Affairs (DMA)** or, alternatively, **Development Affairs Organization (DAO)**.²⁸

B.III.2.3.1 Origins of DMA

42. In 1997, the responsibility for (some) municipal tasks was transferred from the Ministry of Home Affairs' (MoHA) GAD to the then newly founded Ministry of Border Affairs (MoBA). To MoBA, a Department of Development Affairs (alternatively translated as "Department of Municipal Affairs") was added, with wide ranging responsibilities for **both urban and rural development**. Based on the distribution of tasks between the Union level and States/Regions in the Constitution of 2008, the subject area Municipal Affairs (Development Affairs) was assigned in its entirety to the States/Regions. Consequently, after the establishment of State/Region governments in 2011/2012, deconcentrated township and district branches of the (formerly) Union level Department of Development Affairs came under the complete authority of the State/Region Governments. State/Region Governments established Ministries for Development/Municipal Affairs, which the township (and district) DMAs are

accountable to. In 2012 at MoBA the Department of Development Affairs was abolished and has been defunct since.

43. During this process of devolution of powers from the Union level to States/Regions due to constitutional rules, the DMAs lost their responsibilities for the rural areas of townships, the village tracts. **This substantial alteration originates from the transfer of responsibilities for the development of the village tracts from MoBA's former Department of Development Affairs to the Department of Rural Development at the Union Ministry of Livestock, Fisheries, and Rural Development.** As a result of this division of tasks, township DMA Offices, which used to cover townships in their spatial entirety, now solely focus on **urban areas (wards)**, while the newly established township **Department of Rural Development (DRD)** offices (functional spin-offs) are concerned with the local implementation of their Union Ministry's policies and programs for the **rural areas**.

44. The new DMAs are under the complete authority of the State/Region Minister of Development Affairs. Below the level of political leadership, a director-level civil servant supervises the DMA offices in all townships. At the township level, the DMA offices form a unique **joint operational complex** with TMuC. TMuCs oversee and coordinate the Township DMA Offices comprised of professional civil servants. Within Myanmar's township-level governance system, DMAs stand out as the only fully decentralized government agency, and operate with an institutionalized element of proto-democratic input and supervision from the local public in a complex environment otherwise dominated by the local branches of Union ministries with limited accountabilities vis-à-vis local residents.

B.III.2.3.2 DMA's Fiscal Position

45. The functional decentralization of DMA is accompanied by a substantial level of fiscal decentralization, which further enhances the unit's uniqueness. DMAs receive no funding from the Union Government, because all ties between Union level and state/regional resp. local DMAs have been severed. Thus, DMAs must fund themselves. It is even the case that the local DMAs have to fund the State/Region DMA Offices through a vertical annual transfer of 5% to 10% of their local revenues.

46. Revenues for DMAs come from three main sources:

- (1) User fees from households and businesses;
- (2) Regular license fees - local businesses are the mainstay for DMA's revenue generation; and
- (3) Tender license fees for certain businesses – DMAs hold public auctions for the licenses to operate slaughterhouses and ferries and charge for these. In all townships, DMAs have by-laws that set local rates, taxes, and fees, define procedures how to issue licenses and tenders. These rules are revised periodically.

47. DMA revenues are spent on staff costs and public works, mostly roads and bridges within the urban wards, as infrastructural facilities in the village tracts fall under the remit of DRD. The staff costs at a township's DMA office are capped at no more than 30% of the respective township's annual revenue. Together with TMuC, priorities for expenditures are locally defined. In terms of capital expenditures, emphasis is generally placed on roads and bridges, drainage, and trash collection. Township DMA offices have their own bank accounts where they keep their revenues. Surpluses remaining at the end of a fiscal year must be turned over to the State/Region government's budget department, and ultimately to the Union fund. In theory, DMAs are permitted to borrow from State/Region Governments as well as from non-government entities, including foreign ones. So far, any experiences with regard to borrowing funds are not available.

48. The core purposes of DMAs are threefold: (1) to provide a wide range of infrastructural services to urban areas of townships (wards), (2) to execute governance functions concerning private and public building and construction projects, and (3) to execute economic governance for local businesses.²⁹ DMAs have a wide range of tasks and duties, powers and authorities.³⁰ They supervise and carry out a range of central "hard" urban infrastructure projects, in particular in the areas of sanitation and drainage. They are also responsible for trash collection within urban wards. In addition, DMAs are responsible for drinking water supply and the construction and maintenance of roads and bridges within the urban wards. They also own municipal buildings. Furthermore, DMAs can be responsible for the constructing and maintaining bus terminals, parks, sport grounds, swimming pools, bathing beaches, and recreation centers. DMAs can also be responsible for environmental conservation and can carry out greening tasks, such as landscaping as well as tree planting and cutting.

B.III.2.4 DMAs and Spatial Planning

49. Through Schedule II of the Constitution, DMAs have a clear mandate to execute comprehensive spatial planning for the urban wards of a township, which they are not carrying out presently. So far, operational units for spatial planning for urban development at either the state/region or township levels have neither been established nor are there any concrete plans known to do so.³¹ A frequently cited reason for this is the **lack of skilled urban planners**, resulting in serious deficiencies regarding operational capacity. With the exceptions of Yangon City and Mandalay City (see below), there is no integrated urban planning in Myanmar, including medium term planning for infrastructure provision. Instead, in urban areas projects are undertaken by an uncoordinated group of government agencies responding to immediate needs and with budgeting periods no longer than one year. A separate section below addresses instruments and tools currently used to influence urban development and spatial expansion.

B.III.3 Spatial Planning in Secondary Cities

B.III.3.1 Concept Plans

50. As a response to increasing urbanization and with DMAs' not being able to take on spatial planning, in 2014 the Ministry of Construction (MoC) decided to swiftly prepare **concept plans** for about 80 townships considered to be **secondary cities**. The box below explicates function and contents of concept plans. Simultaneously, the box **contrasts concept plans** with **township plans** to clarify their widely differing topics and approaches.

BOX: CONCEPT PLAN AND TOWNSHIP PLAN

Concept Plan

At the national level, the Department of Urban and Housing Development (DUHD)³² under the Ministry of Construction has the task of preparing concept plans for about 80 secondary cities. This task is executed by DUHD's Urban and Regional Development Division (URDD). Based on a quantitative target, URDD has to prepare approx. 30 concept plans each year. Concept plans are very basic master plans. They are prepared within a few weeks. Their core purpose is the demarcation of (new) **settlement growth boundaries** to prepare the spatial expansion of a township's urban land. Hence, the concept plans designate agricultural land, forest land, and/or other open space which is to be converted to land for settlement purposes, both residential and commercial. Concept plans are of an indicative nature. The contents and designations of the concept plans are **not legally binding** vis-à-vis land or property owners. The latter notwithstanding, concept plans apparently can play a role, when land owners apply for a conversion of agricultural land or other open space into urban land for residential and commercial purposes. The conversion of agricultural land into urban land is a tightly regulated administrative procedure. Land conversion needs approval from GAD and DRD at the local level and subsequently from the State and Region Government. In some cases, Union level agencies may be involved as well. Sometimes, land conversions occur without any formal consent.³³ Within those formal procedures, the designations in concept plans apparently serve as arguments to support applications for land conversions. It is certainly reasonable to assume that concept plans influence expectations concerning land prices among all actors in the local real estate markets. Thus even informal concept plans may have substantial impacts. All procedures during the preparation of the concept plans are just based on practical informal agreements and do not enjoy **any legal codification**. It is intended to make concept plans legally binding through the envisaged urban planning law, of which a very preliminary draft status exists. During concept plan preparation, the planning teams of URDD predominantly work with TMC, TDSC, DMA, and also the Township Planning Office (TPO) or (alternatively) Department of Planning (DoP), a deconcentrated department under the Union Ministry of Planning and Finance, responsible preparation of the **township plans**.³⁴

Township Plan

Township plans originate from Myanmar's socialist period. A township plan is a **non-spatial** sectoral plan describing **sector-wise production or delivery targets on an annual basis**. There is no recognition of the township as a geographical area with specific advantages or challenges that impact the plan. Neither is there an overview of the total budget allocation for the township. The plan only describes targets for various sectors e.g. crops in the agricultural section, animal and animal products in another section and electricity targets in a third. It thus remains far away from an integrated or area-based planning process. Yet for the urban planning purposes, the township DoP serves as an important **source for statistical data**. It needs to be noted that at present in the wake of the Union level instigated move towards "people-centered development", the local DoP play a significant role in collecting **bottom-up project proposals** for further transfer to the state/region level.³⁵

B.III.3.2 Building Permits and Plotting

51. Despite their not being active in the area of spatial planning, DMAs play a significant role in urban development, as DMAs are responsible for the issuing building permits in the urban wards. Hence DMAs are directly involved in shaping the urban environment and its spatial extension, as the materialized form of urban expansion results from the accumulated outcome of a stream of decisions on applications for building/construction permits. Since a codified nationwide legal framework for

urban planning does not exist, administrative procedures based on local by-laws or statutes and informal practices play a significant role in shaping urban development.

52. To obtain a building permit, at present an applicant has to go through the following steps.³⁶ First, the applicant needs to obtain recommendations from the township fire department, the health department, the police, and ward administrator. Then, the applicant has to take these recommendations, as well as proof of land ownership to the GAD's TA. The TA inspects the land records of the applicant. Only if the TA approves the documents, the TA forwards them to DMA. The DMA approves the permit with the payment of a one-time fee. Buildings above a certain height (in Monywa, 4-5 stories) require approval from the regional government. The same holds true for certain buildings serving commercial purposes such as hotels. Above certain thresholds of size and height, hotel buildings have to be approved by the Union level Ministry of Tourism.³⁷

B.III.3.2.1 Building Permits in Rural Areas of Townships (Village Tracts)

53. In obtaining a construction permit, applicants in rural areas do not follow the same process as applicants in urban areas. Since there are no DMA/DAOs in rural areas, rural applicants do not need to obtain a construction permit. Instead, the land owner must get the approval of adjacent landowners, a recommendation from the village administrator and provide evidence of land ownership. When these requirements have been met, the owner can start construction. From a regulatory point of view, applicants for building/construction permits in the village tracts seem to be favored in comparison to applicants located in the urban wards.

B.III.3.2.2 Plotting

54. Plotting is rather conventional. Plot sizes usually are 40 ft. by 60 ft. (approx. 220 m²) or 60 ft. by 80 ft. (approx. 445 m²). Minimum width of right-of-way is 40 ft. (approx. 13 m).³⁸ Plot sizes are relatively large as are the blocks, with plot sizes segregated by block. The amount of (public) green space provided is relatively low. Yet this might be explained by the fact that the plots are prepared for detached family houses surrounded by private gardens. The design expresses strong cultural preferences for low-density development even in urban areas. The grid pattern in the figure below from a concept plan for the township of Kalay indicates those preferences.³⁹

FIGURE 1: PLOTTING AND GRID PATTERNS IN SETTLEMENT EXTENSION AREAS IN KALAY



55. The strength of traditional predilections might also be the reason, why conventional heights and densities already prevailing in existing built-up areas are still widely respected when new residential units are constructed. Thus so far, there is little conflict originating from construction issues between neighbors in the secondary cities.

B.IV Urban Development in Yangon and Mandalay City

B.IV.1 Yangon City

B.IV.1.1 Institutional Context

56. Yangon was seat of the British colonial administration until independence in 1948 and subsequently the seat of Myanmar's government until 2005, when Union level ministries were moved to the newly erected capital city of Nay Pyi Taw, located about 340 km to the north of Yangon. Yangon is by far the largest city in Myanmar and its commercial and industrial center as well as its trade hub, with several industrial zones located at its outskirts focusing on textile production. Yangon is the seat of the Government of Yangon Region, one of the 14 states/regions forming the Union. The entire area of the Region of Yangon covers approx. 9,800 km², hence making it the smallest Region/State in the Union. The regional government exerts a strong influence on municipal governance in the City of Yangon. While the areas outside of Yangon City are still predominantly rural, together with the urban core they form a functionally mutually intertwined area. With economic development intensifying, multifaceted intra-regional interactions can be expected to increase. Estimates suggest that 20% of Myanmar's entire GDP are generated in Yangon City and its immediate surroundings.⁴⁰

57. Yangon City consists of 33 townships, of which 28 have an urban population of 100%. The census of 2014 tallied a population of approx. 5.2 million for the 33 townships, of which 4.7 million fell into the category urban population, while 0.5 million considered as rural population.⁴¹ The area of

Yangon City comprises 971 km², resulting in an average population density of approx. 5,355 persons/km². Between townships, population density greatly varies.

58. Compared to other urban settlements in Myanmar, the local governance situation in Yangon City is rather unique. Thirty-three contiguous townships are subject to a specific form of municipal governance, which is executed through the Yangon City Development Committee – YCDC. YCDC has its origins in the colonial era. Following the establishment of the ‘Office of the Mayor’ in the late 19th century, the British established the ‘Municipal Corporation of Rangoon’ in 1922. The corporation was headed by a mayor, who was elected from a council serving as supreme governance body with respect to most municipal affairs, predominantly municipal service provision. The councilors, in turn, were elected by certain strata of the urban population.

59. With minor modifications YCDC kept its core tasks until the present. The current format of YCDC is based on the ‘Municipal Law for Yangon Region’ from 2013. The committee itself consists of eight members plus the committee’s chair, its chief executive (‘mayor’). Four members are elected representatives from the four districts of Yangon, each of which comprises a certain number of the 33 townships. The other four members are appointed by the Government of the Region. The Chief Executive is nominated by the Chief Minister of Yangon Region. **Simultaneously, the Committee’s Chief Executive also serves as Region Minister for Development Affairs, who is accountable to the Chief Minister and the Region Assembly (Hluttaw).** This implies that both *de jure* and *de-facto* the complete administrative machinery supervised and steered by YCDC is an organizational executive entity of the Region’s Government. In addition, it is the case that the Mayor of Yangon/Region Minister for Development Affairs also needs to be approved by the Union’s President. Hence, the level of genuine municipal self-determination is limited in Yangon as well. The democratic quality of local self-governance is further compromised by the fact that in the municipal elections of October 2014 (elections were also held for people’s representatives in district and township committees) for each household only a single vote was permitted; a restriction undoubtedly at variance with fundamental principles of universal franchise. Residents obviously realized this, as voter turnout was low, with only 25% of households which registered for the municipal elections eventually casting their vote (just about 100,000 households/votes).

B.IV.1.2 Fiscal Situation of YCDC⁴²

60. YCDC’s budget is integrated into the Yangon Region budget, and is administered under the Region Minister for Development Affairs, who simultaneously serves as chair and chief executive of the YCDC. YCDC’s budget, at Kyats 238 billion (roughly equivalent to 238 million USD) for fiscal year 2014/15 comprises about 70 percent of the Region’s total expenditure. In terms of income, YCDC is more or less self-sufficient. The YCDC raises its own revenues through tax collection, licenses and property development. A substantial share of YCDC’s income comes from fees which households and businesses pay for water supply, solid waste collection, and similar services. To carry out its tasks, the YCDC has been provided with considerable financial autonomy. In contrast to “standard”

townships, where TMuCs administer the property of a single township's municipal area, both assets and functions are pooled at the level of YCDC. As a legal entity, it can acquire and hold moveable and immovable property or any interest therein, whether within or without the limits of the City, and borrow. In FY 2014/15, budgeted revenue was expected to cover 90 percent of the planned expenditure. YCDC has to transfer 10 percent of its revenues to the Region Government. YCDC unmistakably constitutes the core of the activities of the region's administration.

B.IV.1.3 Tasks of YCDC

61. Based on mandates obtained during the last decades under rather diverse types of national-level rule, the YCDC is empowered to "lay down the policy, give guidance, [and] supervise or implement" a number of functions and responsibilities.⁴³ Core areas of responsibility are:

- Urban planning, which comprises zoning, issuing of building (construction) permits, as well as long term planning for urban development;
- Engineering and all operation and maintenance (O&M) of urban infrastructure such as roads, bridges, drainage and flood control systems;
- (Drinking) water supply and sanitation (operation of sewer systems);
- Solid waste management;
- Management of public spaces such as parks, playgrounds, green areas, but also cemeteries;
- Street cleaning;
- Street lighting; and
- Public health tasks mostly related to food supervision (food and meat inspection, licensing and inspection of restaurants, slaughterhouses, etc.).⁴⁴

62. To administer operations and implement fundamental powers acquired, the Committee (the eight members plus CEO/Region Minister for Municipal (Development) Affairs) can issue rules, orders, directives and procedures. **Governing through local by-laws** (as they only apply within the spatial jurisdiction of YCDC) is a defining feature of urban governance in Yangon.

B.IV.1.4 Urban Development and Planning

B.IV.1.4.1 Construction Permits

63. YCDC's administrative organization consists of 20 Departments, one of which is the Department of City Planning and Land Administration. Thus until December 2015, when in Mandalay an urban planning department was established,⁴⁵ Yangon City used to be the only municipal entity in Myanmar with a specialized administrative unit dedicated to urban planning.

64. At present, any legally binding spatial masterplan covering Yangon City (YCDC area) does not exist. Operational day-to-day activities of YCDC regarding urban development control are mostly regulated through two municipal by-laws that originated about 15 years ago. The "By-Law on Town Planning and Land Use" dates from 2001. The by-law puts an emphasis on land management topics, covering sub-topics such as general land management, assessment and collection of land taxes and

other assorted issues related to land taxation, land confiscation, buying and selling of land, execution of land surveys, maintenance of land records, as well as removal of squatters and trespassers from (state-owned/state-controlled) land. In addition, the by-law entails rules concerning the formulation of city development plans and the monitoring of whether land uses comply with development plans and projects.⁴⁶

65. The “By-Law on Building and Construction” of 1999 comprises rules for issuing building permits. In addition, it addresses the handling of buildings whose safety for residential purposes is not secured anymore. Furthermore, the by-law deals with operational and maintenance issues of buildings owned by YCDC. It is augmented by additional **written regulations**, e.g. on setbacks of edifices from streets or on admissible heights of buildings. It is unknown, however, to which degree these regulations are actually considered when building permits are issued. It also seems to be the case that the sub-by-law regulations are not widely known to the public. The “By-Law on Building and Construction” is crucial, since so far urban expansion and city form obviously result from the cumulated effects of the contents of construction permits implemented by private and public investors. YCDC examines the application documents for construction permits and issues the certificate of permission. Its authority is limited, however, since applications for high-rise buildings have to be processed and approved by the regional government or even the Union level. Policy research indicates that “[...] The permit system in building construction is the only system of the current spatial control in the Yangon City area.”^{47,48}

In this context, it is important to realize that construction permits are not issued by the Department of City Planning and Land Administration, but by the Department of Engineering (Buildings)⁴⁹. To an extent, the Department of Engineering consults with the Department of City Planning, but the impact of professional appraisals provided by the Department of City Planning on administrative decisions made at the Department of Engineering is not known.

B.IV.1.4.2 The Strategic Urban Development Plan for the Greater Yangon Area ¹

66. In 2013/2014, YCDC in close cooperation with JICA (and with the Ministry of Construction’s then DHSHD continuously involved) developed the draft of an “Urban Strategic Development Plan for the Greater Yangon (Area)” (SUDPGY). On June 19, 2015, the Parliament (Hluttaw) of Yangon Region approved the plan, albeit after controversial discussions regarding transparency issues and conflicts of interest.⁵⁰ It is unclear, however, which legal effects concerning the plan’s binding powers vis-à-vis both private real estate investors as well as the issuing public agency the parliamentary approval implies. Reports on real estate activities in areas designated as “new towns” indicate that real estate investors evidently **expect a direct link** between the Strategic Urban Development Plan and the **future authorization of construction via building permits** issued by YCDC.⁵¹ The Plan is being comprehensively reviewed by JICA as of late 2016.

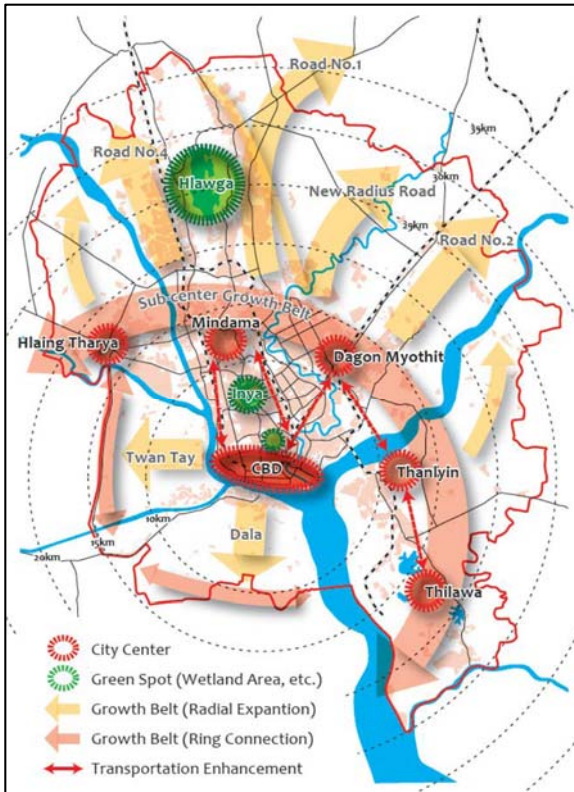
¹ This section is current at time of finalisation, November 2016. However JICA is currently revising the Greater Yangon Region Masterplan at the request of the Yangon Region Government, and it is anticipated that the new Masterplan will differ in some significant ways from the current Plan.

67. The plan document closes a gap whose filling was widely desired. Yangon (YCDC area plus adjacent townships) urgently needs a comprehensive plan to set out where new development should be located and how it will be serviced. It needs to have a precise understanding how to develop its public mass transit system, preferably based on the already existing circular railroad, which not only in intra-Asian urban comparison, but also when compared to other global metropolises, represents a **tremendously undervalued strategic development asset** of the highest order. Additional central topics are how to achieve a compact conurbation to reduce aggregate demand for car and motorbike transportation (to reduce greenhouse gas emissions), while preserving quality of life. Other central themes are the preservation of Yangon's outstanding architectural heritage from both the colonial period and the royal era before, the protection of wetlands, lakes and green spaces, and establishing resilience with regard to the challenges posed by climate change.

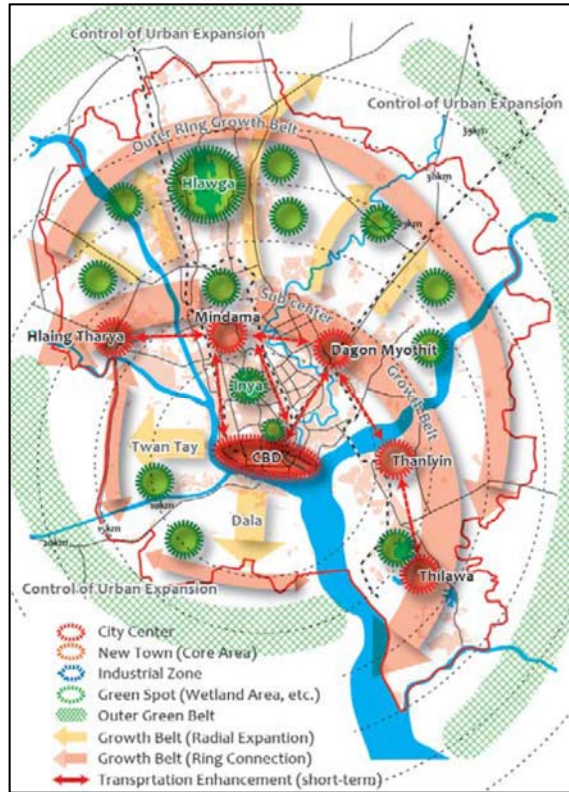
68. The strategic plan devises a structural concept for a population roughly doubling from 5.2 million in 2014 to 10 million in 2040. The project team proposed three alternative spatial concepts for steering future spatial expansion as presented below.

FIGURE 2: ALTERNATIVES FOR THE URBAN STRUCTURE OF GREATER YANGON⁵²

Sub-Center System (I)

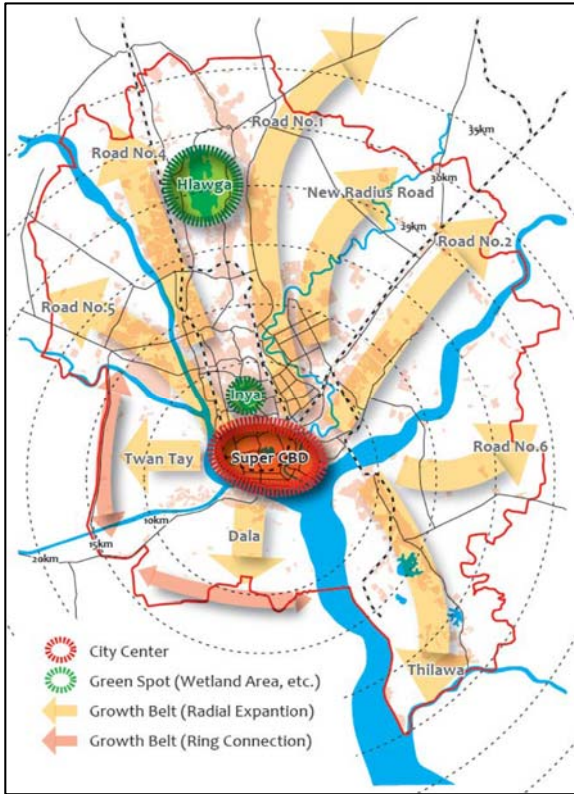


Sub-Center System with Green Isles (II)



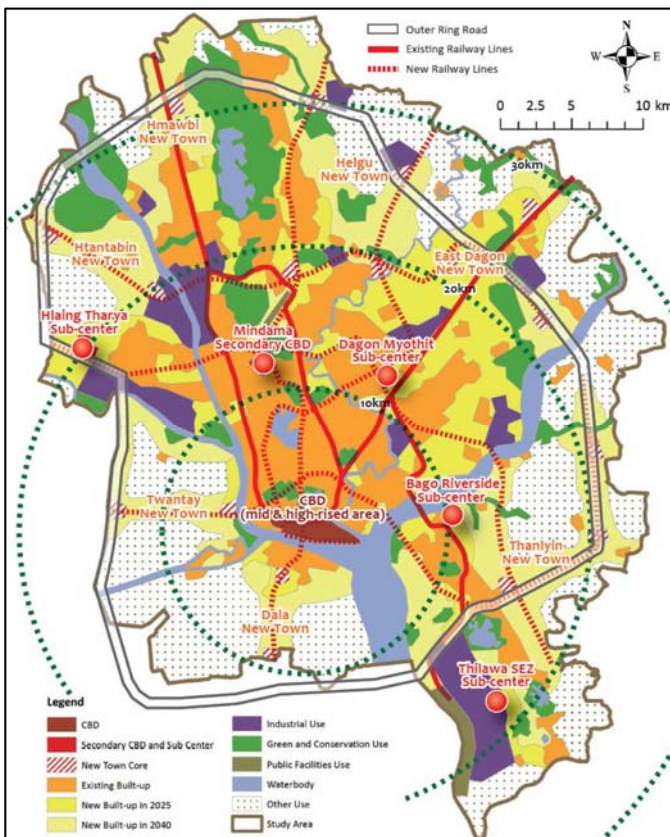
Central feature of Concepts I and II is the future establishment of **five major sub-centers** (counterclockwise from southeast to northwest: Thilawa; Thanlyin, Dagon Myothit, Mindama, Hlaing Tharya), at which future additional settlements both residential and commercial shall be concentrated along a semicircle termed ‘Sub-Center Growth Belt’, whose radius extends about 15 km from the center of current CBD. In addition, Concept II encompasses an ‘Outer Ring Growth Belt’, which roughly parallels the inner ‘Sub-Center Growth Belt’ and runs approx. 25 km to 30 km from CBD. Concept II also includes an outer green belt, whose purpose is to contain and limit outward urban expansion. Furthermore, it displays more interspersed extended green areas. The purpose of the circular growth belts is to absorb expected additional growth, which would otherwise locate in the existing CBD or along linear shaped growth belts accompanying principal transportation axes leading northward, eastward, and westward. As Concept II features two circular growth belts, linear belts are narrower to denote less additional expansion. According to the logic behind Concept II, due to the circular growth belts, it becomes easier to protect larger contiguous areas of open space, the ‘green isles’.

Super CBD - Single Core System (III)



69. In Concept III, additional expansion occurs mostly in the CBD area resp. in its immediate proximity. As a result, the CBD more than doubles in size and expands to the north, traversing the southern section of the circular railroad. Due to the absence of semi-circular belts, other portions of additional growth are thought to materialize along the linear major roads. Consequently, Concept III includes linear belts as broad as in Concept I.

FIGURE 3: FUTURE URBAN STRUCTURE AND LAND USE OF GREATER YANGON⁵³



70. YCDC decided that Concept II should be pursued further. The project team then inserted into the structural concept an outer ring-road and added seven new towns along this peripheral circular ring. Counterclockwise the new towns are Dala(t), Thanlyin, East Dagon, Helgu, Hwambi, Htantabin, and Twantain. Merging Concept II and transportation planning with projections on future urban land use generated the spatial land use plan on the left. The orange colored areas were areas already built-up in 2012. The yellow shaded areas are supposed to be built-up by 2025, while the lemon colored areas are expected to be built-up by 2040

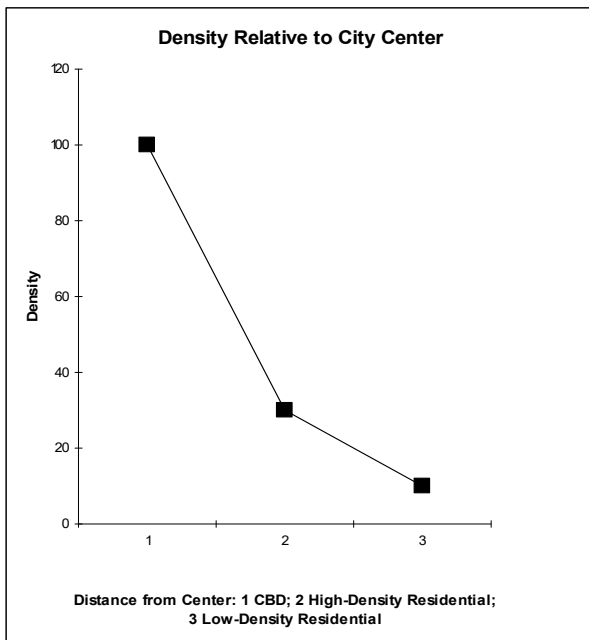
B.IV.1.4.3 Assessment of SUDPGY

71. With the exception of preliminary drafts of plans prepared by YCDC and the Ministry of Construction's then DHSHD, both dating from 2011, a spatial framework for Yangon's urban development did not exist until 2014. So far, the spatial expansion of Yangon is apparently mostly steered through building permits for single buildings or projects and, on a larger scale, through decisions on extensions and modifications of the road network, and – last but not least - the successive providing of access to the power grid in peri-urban areas. Hence, the drafting of the “Strategic Urban Development Plan of the Greater Yangon” is a major step forward.

72. Yet the spatial concept selected is highly ambitious and will require a lot of administrative and political skills for successful implementation as well as huge fiscal funds for infrastructure investments. In weak regulatory contexts and under conditions of limited fiscal leeway for public investments, the implementation of sophisticated spatial master plans is particularly challenging. Specifically, this refers to sub-center concepts, new town concepts as well as complementing green belt concepts. Hence, a review of the “Strategic Urban Development Plan of the Greater Yangon” suggests some major caveats.

73. The selected alternative does not pay sufficient attention to **economic forces shaping urban form**, albeit the project team recognizes their existence.⁵⁴ Global comparisons of city form in metropolitan areas show that densities measured in terms of floor/area ratio fall from a metropolitan region's center when moving towards the outskirts. The density gradient usually displays a negative slope. Figure 4 below shows a stylized version of the model.

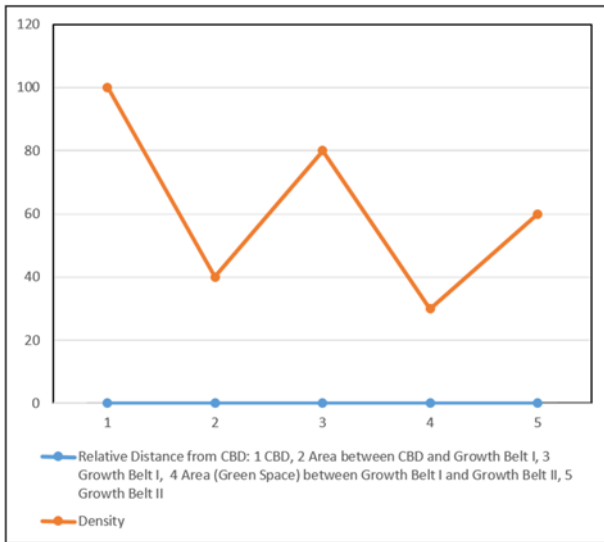
FIGURE 4: STYLIZED DENSITY GRADIENT RELATIVE TO CITY CENTER



74. In cities located in market economies, density patterns are shaped by differentials in land price. The land prices reflect the willingness to pay for central locations, and are primarily driven by savings in transportation costs. **Real estate developers invest capital per unit of land according to the locations' proximity to the center.** Hence, developers build the tallest units with the highest floor/area ratios in the city center, thus generating a CBD, followed by mixed-use commercial and high-density residential units and eventually low-density single family units, as distance from center increases. **Thus, the demand driven price gradient generates the density gradient.**

75. A defining feature of the selected variant for SUDPGY are two arc-shaped growth belts, and major green areas dispersed in between. The circular growth belts represent vigorous large-scale peaks of density reversing the downward slope of the gradient, in fact turning it upward. Figure 5 shows the **density pattern** envisioned by **Concept II** in a stylized fashion.

FIGURE 5: STYLIZED DENSITY GRADIENTS AS INTENDED BY CONCEPT II



76. The spatial pattern sketched in Figure 4 above reflects very powerful economic forces. Since land value depends on proximity to Yangon’s historically entrenched CBD, market actors will assign a much higher relative value to land located in the intermediate Area 2 than in the area designated as **sub-center growth belt (Growth Belt I)** further afar. Thus, permanent and upward pressures on land prices at least in Area 2 (and probably also in in Area 4) can be expected. High land prices will attract commercial uses such as offices and high-density upscale residential uses. In particular, with regard to the sub-centers, this trend will divert high value uses from the planned sub-centers in Area 3 to Area 2, moving them closer to the original CBD. This impetus will be supported by the fact that for the time being the quality of the circular road network is not very high, relative to the established linear outward/inward bound roads. Both, current lay-out and quality of the existing road grid strongly work to augment the relative value of all land located close to the core CBD.

77. Even powerful economic ‘laws’ are no immutable laws of physics, though. Rigorous and persistent regulatory efforts would make it possible to implement the planning concept of circular growth belts. Yet only a fully effective regime of spatial regulation supported by unwavering long-term political commitment will be able to keep in check persistent pressures to densify Area 2 and Area 4 and hence be able to channel additional growth to the circular belts as desired. **Unless both legal regulatory instruments and, concomitantly and inextricably intertwined, the implementing public administrations** have gained the degree of strength such as in Japan, Korea and some Northwestern European countries, the implementation of Concept’s II key features is exposed to serious and enduring risks.

78. The amount of urban research undertaken – in particular the most comprehensive stock-taking exercise - makes SUDPGY a highly valuable contribution to the discourse on urban development in Myanmar. Yet against the backdrop of global evidence from urban land economics, it is advisable to re-think the selection of alternatives in SUDPGY. It will take several years to establish a working regulatory legal framework for urban development and development control. It will take also take years to have public administrations in place with the capacity to enforce compliance with the designations of official plans and legal regulations on development control. Moreover, it will take also take years until the fiscal space for constructing the outer ring-road will be mobilized. Without a credible construction perspective for both the inner and the outer circular road, the implementation of the corresponding structural topography for future settlements will persistently remain challenged. In particular, there is a cogent need to preserve all right-of ways of the de-facto circular freight railway line servicing the water front of the CBD for a future light-rail circle tramway, connecting the Yangon's southern section of the circular railroad directly with the CBD.

B.IV.2 Mandalay City

B.IV.2.1 Institutional Context

79. The former royal capital of Mandalay City is the second largest city of Myanmar with a total population of 1.73 million according to the census of 2014.⁵⁵ Consisting of seven townships, it is considered to be Myanmar's cultural capital and is one of its main economic and transportation hubs. In Mandalay, Asian Highway No. 14 from Kunming (PRC) connects with the GMS Western Economic Corridor, stretching from Yangon to the Indian Border (via Asian Highway No. 1). Thus, Mandalay is situated at a potentially **significant land transportation link between India and China**.

Simultaneously, Mandalay forms the ending point of Myanmar's backbone axis Yangon – Nay Pyi Taw – Mandalay. This promising location could generate a substantial amount of long-term positive economic external effects for the city. Like Yangon, Mandalay is governed by a special Mandalay City Development Committee (MCDC), which supervises and directs the administrative machinery of the city.

80. MCDC has similar functions and structural features as YCDC. As is the case in Yangon, Mandalay is governed on the basis of municipal laws that partly date back to the colonial period. A 'Mandalay City Development Law' (1992) and the general 'Development Committee Law' (1993) served as the main legal basis until recently. These laws established the present form of the MCDC, delegating wide responsibilities to this body, in particular land administration, tax collection, and urban development. However, MCDC is also responsible for duties stipulated in older Municipal Acts. Like YCDC, MCDC raises its own revenues through tax collection, fees, licenses, and property development. The committee's chair is also its chief executive officer (quasi-'mayor'). **Like in Yangon, this position is simultaneously held by the Minister for Municipal Affairs in the Government of Mandalay Region.**⁵⁶ Hence, MCDC can be considered as a *de facto* unit of the Regional Government. Since the municipal laws in the states/regions are very similar, it can be

assumed that the composition of the committee’s membership (elected/non-elected; chair) is the same as in Yangon’s committee.

81. Tasks assigned to MCDC are the same as the ones YCDC is entrusted with. The organizational chart reflects the sectoral tasks of MCDC as of December 2015. As in Yangon, the provision of infrastructural and technical municipal services lies at the heart of MCDC’s *raison d’être*.

FIGURE 6: CHART OF MCDC



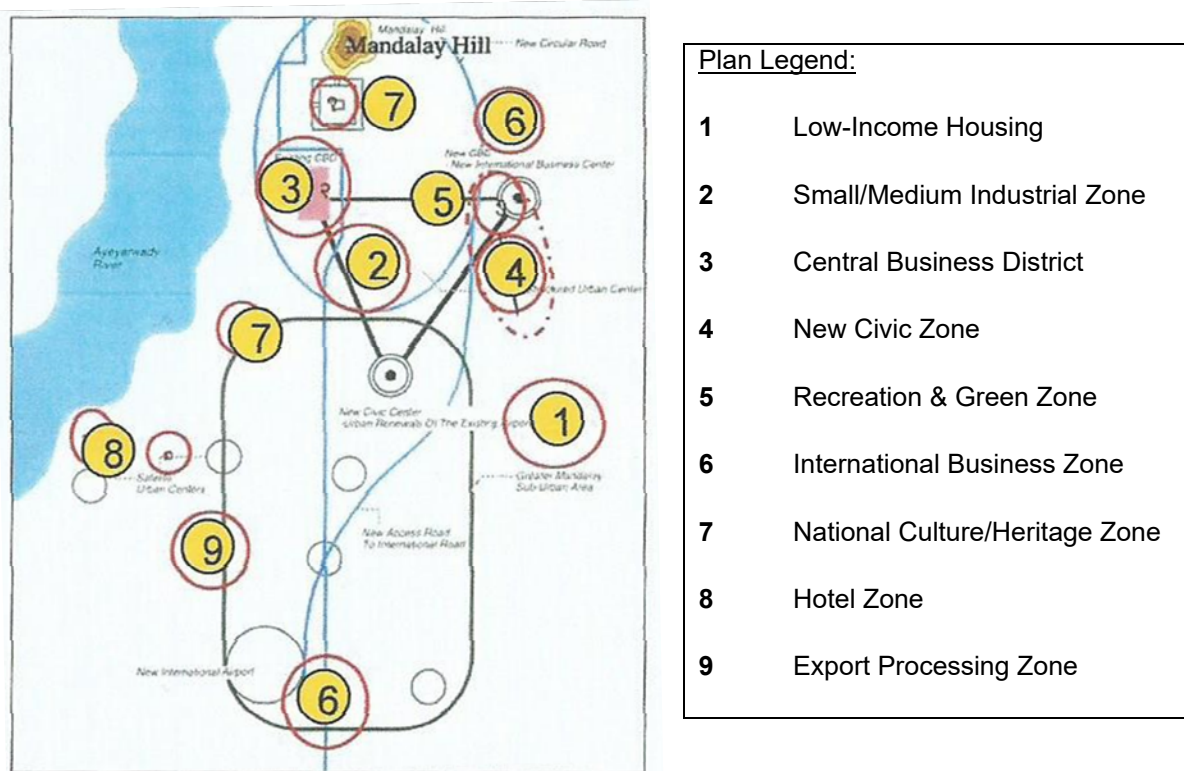
Source: MCDC.

At MCDC, a single-standing city planning department separated from the other departments was formed only recently in November 2015.⁵⁷ At that time, detailed assignments of future tasks, responsibilities, and powers had not been decided upon.⁵⁸

B.IV.2.2 Urban Development and Planning

82. In 2012 MCDC prepared a Conceptual Master Plan for steering Mandalay’s urban development until 2014.⁵⁹

FIGURE 7: MCDC CONCEPTUAL MASTER PLAN 2040

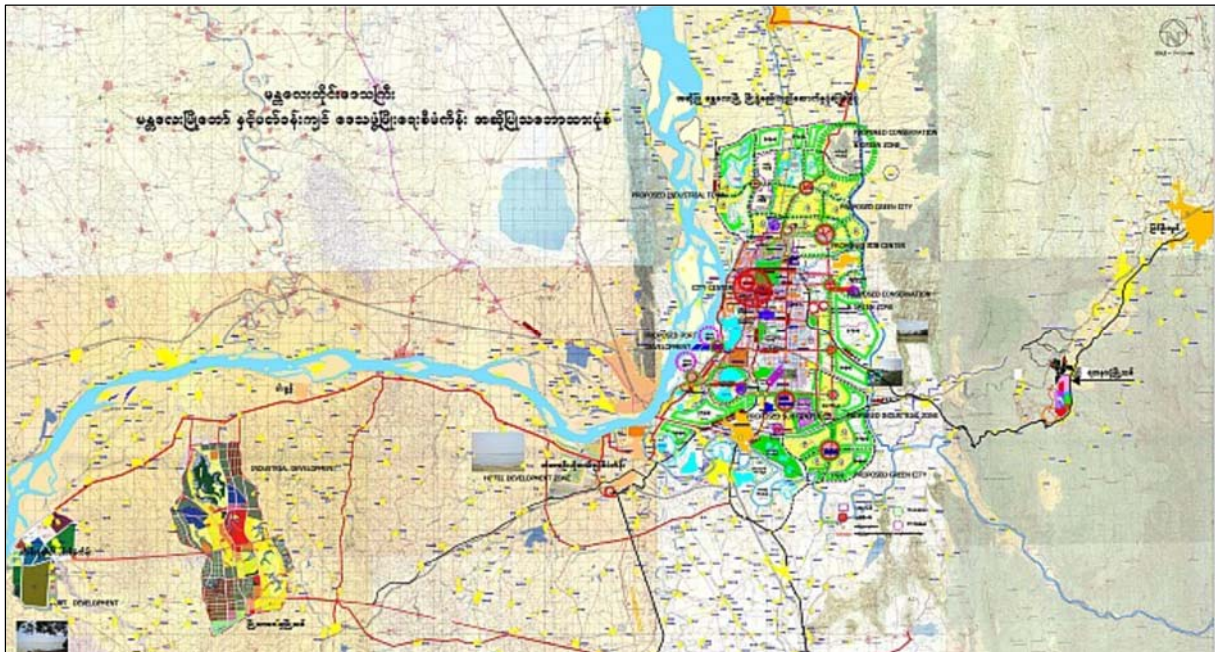


Source: PM Group/Safege/MMIC, *ibid.*, p. 69.

The Concept Plan was based on the assumption that MCDC’s area would expand by incorporating three adjacent townships until 2040, one of which (Patheingyi) has been incorporated in the meantime. According to census results of 2014, the MCDC area plus the townships of Tadar U and Madaya (to be included until 2040) had a population of 2,123,507 (both urban and rural). For the expanded MCDC area, the Concept Plan forecasts a population of 4 million in 2040,⁶⁰ which translates into an annual average growth rate of about 2.47%⁶¹. From 1990 until 2014, in cities with a population of one million people or more population grew at an annual rate of approx. 2.1% (Table II, Column III). This was an ‘endogenous’ growth rate, meaning this rate reflects a long-term growth trend that occurred during the period of Myanmar’s economic and political isolation. Under the emerging circumstances of economic liberalization and trade expansion, the increased rate of growth projected for MCDC’s area of approx. 2.5% appears to be within a probable range.

83. As a notion of a spatial structure for the future distribution of core urban land uses, the ‘Concept Plan’ initiated the current planning discussion in Mandalay. Based on the rather abstract Concept Plan, (then) DHSHD at MoC prepared the ‘Mandalay City Development Concept Plan Vision 2040’.

FIGURE VIII: MANDALAY CITY DEVELOPMENT CONCEPT PLAN VISION 2040



Source: PM Group/Safege/MMIC, *ibid.*, p. 70.

The plan concretizes the abstract Concept Plan and takes it a step further. Through a multi-nodal city structure with several new major sub centers, pressure on the intra-urban street grid system shall be reduced. In addition, the construction of an inner and an outer ring road are intended to reduce cross-town traffic, which creates major issues at present. The DHSHD’s plan presents an informative image of the possible future spatial extension of Mandalay.

84. Yet the ‘Mandalay City Development Concept Plan’ remains on the level of an elaborated structure plan, whose design, however, may have some weaknesses. The sub-centers appear to be situated too close to the established city center to be able to attract adequate interest for real estate investment. In addition, the plan obviously does not reflect any functional interrelations with directly adjacent Sagaing District on the western bank of the Ayeaywaddy River, which is not unimportant, since in Sagaing the government of Sagaing Region is located. Due to its level of generalization, the plan is far removed from the contents which a spatial master plan needs to have to serve as a framework for issuing construction permits (provided legal preconditions for such a binding link were established).

85. Besides this, even as an informal benchmark for appraising development proposals the plan can hardly be used, as it is not specific enough. As in the secondary cities and in Yangon, an effective mechanism for proactively steering urban development through MDCDC’s administration does not exist. Thus, the City Development Concept Plan can only be regarded as a useful groundwork for a comprehensive spatial master plan still to come. For the time being, the urban form is shaped - as it is in secondary cities - through the successive stream of building permits determined by informal practice and cultural consensus on permitted densities. In Mandalay the situation is eased somewhat through the established street grid, which is an efficient way of guiding spatial expansion, if more sophisticated

spatial planning tools are not at hand. Yet with stronger economic growth, urban land values in particular in areas located close to the existing CBD will rise, rendering existing informal agreements increasingly obsolete. Research performed in the context of ADB's up-coming urban services project indicate that mechanisms for improved urban development control such as zoning are increasingly required.⁶² Unlike Yangon, a major lack of local land use ordinances was identified.⁶³

B.V Status of Urban Legislation

86. As in developed countries, in Myanmar **national policy** is crucial for setting the framework of legal rules within which urban development is to occur. At the national level, strategic decisions are made which create nationwide directives for all public and private sector actors as well as for all municipalities and citizens. Consequently, the Union Government needs to determine standardized legislation and regulations for spatial planning and urban development to ensure level playing fields for public administrations, citizens, and real estate investors across the Union. Yet at present, with the exception of the areas governed by Mandalay CDC and Yangon CDC, spatial planning widely takes place in a legal vacuum. To remedy this, MoC's DHUD prepared the draft of an Urban and 'Regional Development Planning Law'. In addition, this section briefly addresses the provisional Myanmar National Building Code (MNBC).

B.V.1 Urban and Regional Development Planning Law

87. The draft of an "Urban and Regional Development Planning Law" represents the work status as of mid 2016.⁶⁴ The draft is in accordance with the provision of the Constitution of 2008, which does not mention a separate municipal tier of self-governance. Consequently, the draft law assigns the bulk of plan related activities to the Union and state/region levels and addresses the municipal level - in particular the DMAs – in a fairly limited manner. The draft law devises comprehensive work programs for various types of spatial plans and allocates administrative and political responsibilities for preparation and approval.

88. The draft law defines the contents and basic tasks of six plan types:

- National Urban System Plan;
- State/Region Urban System Plan;
- Conceptual (Concept) Plan for a city or town;
- Detailed Plans with specified land uses for specific (limited) areas;
- Technical Urban Infrastructure Plans;
- Plans for Special Development Areas.

89. The **National Urban System Plan** represents the network of major cities and the transportation axes that connect them – the principal spatial structure of Myanmar. This structure is augmented by the designation of (major) agricultural and forest areas to be protected long-term. The National Spatial

Development Framework (NSDF) encompasses a basic version of a National Urban System Plan (Section B.II).

90. **State/Region Urban System Plans** cover the entire area of a state or a region. Their contents are supposed to further detail the basic designations of the National Urban System Plan.

State/Region Urban System Plans refine national spatial objectives by adapting them to the specific conditions of the respective state/region.

91. The draft law consigns to **Concept Plans** the functions which in most other countries are assigned to spatial master plans (scale 1:50,000 to 1:10,000, depending on town size). Concept Plans are supposed to chart the physical development path for the entire area of a city or town for the next 50 years. Core tasks are:

- To identify area utilizations and their mutual functional relationships including sites for key infrastructure facilities;
- To integrate the infrastructural networks including transportation based on technical urban infrastructure plans;
- To pre-determine main contents of subsequent tiers of urban plans such as detailed plans.

92. Situated at the lower end of spatial extent, **Detailed Plans** convey the designations of concept plans to a larger scale (1:500 to 1:5,000). By determining contents of construction permits, detailed plans incorporate the central function of legal regulatory systems for spatial planning worldwide. Subsequent construction permits shall replicate the detailed plans' designations. For the plan type 'detailed plan' in most other countries the term 'zoning plan' is in use.

93. In addition, the draft law lists **Technical Urban Infrastructure Plans** and **Plans for Special Development Areas**. The term 'Technical Urban Infrastructure Plans' refers to 'classical' sectoral plans covering topics such as transportation, sanitation, water supply, and solid waste management. Plans for Special Development Areas serve to prepare the re-development of existing urban patterns e.g. to improve socio-economic development and ecological conditions.

B.V.II Provisional Myanmar National Building Code

94. The Provisional Myanmar National Building Code is the outcome of a joint endeavor of the Myanmar Engineering Society and UN-Habitat, which yielded a highly comprehensive and exhaustive manuscript. The document, whose draft was already finalized in 2012 and revised in 2016, is in the final stages before implementation.⁶⁵ Up to now, the Code has not obtained any formal status, as several sections apparently still are under review. With regard to technical norms and technical requirements for buildings, the document reflects global standards. Despite not having been legally codified, it can be assumed that the Building Code is applied at least for major building projects. The Building Code comprises seven sections:

- 1) Planning, Environment, Administration and Legislation;

- 2) Architecture and Urban Design;
- 3) Structural Design;
- 4) Soil and Foundation;
- 5) Building Services;
- 6) Building Materials;
- 7) Construction Practices and Safety.

95. A few of the Building Code's provisions are relevant for spatial planning and urban development as well. In Section 1 the Building Code includes a system of 'use classes' or 'classified use zones', as they are employed in many countries both developed and emerging. The system comprises eight primary uses: (1) residential, (2) commercial, (3) industrial, (4) public and social, (5) educational, (6) public and semi-public (government), (7) agricultural, and (8) special area/old built-up areas (heritage areas).⁶⁶ The primary uses are sub-divided into sub-sections which list further permitted uses in detail. The Building Code directly links the use classes to zoning plans, whose case-specific purposes determine the choice of use classes. The Building Code suggests to define the legal scope of zoning plans in a future Urban and Regional Planning Act.⁶⁷

B.VI Infrastructure and Basic Services

96. For the first time in decades, basic facts concerning infrastructural facilities and services on the level of individual households are available as a result of the census of 2014. The diagnostic document concludes with a snapshot of the situation of three fundamental infrastructural services determining both urban and rural households' quality of life: (1) drinking water, (2) domestic sanitation, and (3) power supply of households.

B.VI.1 Drinking Water

97. The census listed a number of sources of drinking water, which were grouped from a public health angle under the categories (I) "relatively safe" or (II) "relatively unsafe" and compiled in Table VII below.⁶⁸

TABLE VII: SOURCES OF DRINKING WATER FOR HOUSEHOLDS (URBAN/RURAL)

State/Region; Urban/Rural	Total Number of Households	(I) Relatively Safe (%)	(II) Relatively Unsafe (%)	State/Region; Urban/Rural	Total Number of Households	(I) Relatively Safe (%)	(II) Relatively Unsafe (%)
UNION	10,877,832	22.7	77.3	MAGWAY	919,777	10.8	89.2
- Urban	3,049,433	49.3	50.7	- Urban	131,251	39.0	61.0
- Rural	7,828,399	12.4	87.6	- Rural	788,526	6.1	93.9
KACHIN	269,365	18.2	81.8	MANDALAY	1,323,191	22.5	77.5
- Urban	95,859	20.5	79.5	- Urban	415,634	53.9	46.1
- Rural	173,506	16.9	83.1	- Rural	907,557	8.2	91.8
KAYAH	57,274	37.4	62.6	MON	422,612	20.6	79.4
- Urban	14,668	45.6	54.4	- Urban	114,187	47.2	52.8
- Rural	42,606	34.5	65.5	- Rural	308,425	10.8	89.2
KAYIN	308,041	21.3	78.7	RAKHINE	459,772	7.6	92.4
- Urban	67,167	54.5	45.5	- Urban	72,624	22.6	77.4
- Rural	240,874	12.0	88.0	- Rural	387,148	4.8	95.2
CHIN	91,121	73.3	26.7	YANGON	1,582,944	48.3	51.7
- Urban	19,770	84.1	15.9	- Urban	1,069,056	66.2	33.8
- Rural	71,351	70.2	29.8	- Rural	513,888	11.1	88.9
SAGAING	1,096,857	11.8	88.2	SHAN	1,169,569	49.7	50.3
- Urban	183,772	31.6	68.4	- Urban	279,918	54.3	45.7
- Rural	913,085	7.8	92.2	- Rural	889,651	48.2	51.8
TANINTHARYI	283,099	29.0	71.0	AYEYAWADY	1,488,983	3.6	96.4
- Urban	66,807	53.9	46.1	- Urban	200,962	15.1	84.9
- Rural	216,292	21.3	78.7	- Rural	1,288,021	1.9	98.1
BAGO	1,142,974	6.3	93.7	NAY PYI TAW	262,253	26.4	73.6
- Urban	239,014	19.5	80.5	- Urban	78,744	62.5	37.5
- Rural	903,960	2.9	97.1	- Rural	183,509	10.9	89.1

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Table J-2, Conventional Households by Source of Water for Drinking and Urban/Rural, pp. 243-244; author's compilation.

Category (I) encompasses following sources from the census: tap water/piped water, bottled (purified) water, water from water tanker/water trucks, as well as water harvested from rainfall. Category (II) comprises tube wells/boreholes, protected well/spring, unprotected well/spring, pool/pond/lake, river/stream/canal, plus other sources not further specified.⁶⁹

98. From the aggregate data, it emerges that across all states/regions in urban areas the share of relatively safe sources is higher than in the rural areas. Urban areas usually enjoy a higher share of tap water/piped water and a higher share of bottled water, with the latter arguably reflecting higher aggregate purchase power in urban areas. As could be expected, urban areas in Yangon Region, Nay Pyi Taw (Union Territory), and Mandalay Region have the highest level of relatively safe supply, while urban areas in Ayewaddy Region and Bago Region rank at the lower end.⁷⁰ Even in Mandalay CDC area (and arguably in Yangon CDC area as well), piped water is not available on a stable 24/7 level.⁷¹ In YCDC area water losses and non-revenue water are estimated to stand at 50% of total drinking water produced.⁷² Geographical service coverage through the network is limited as well. In

Yangon, only 42% of the entire population were connected to the piped network in 2010.⁷³ In the MCDC area, only four out of seven townships are connected to the piped network.⁷⁴ Data indicate a significant need to upgrade the quality of drinking water supply nationwide.

B.VI.2 Domestic Sanitation/Wastewater Treatment

99. A similar exercise was carried out with regard to census data concerning domestic sanitation and displayed in Table VIII below. The census identified flush toilets as well as water-sealed (improved) pit latrines as “safe sanitation” (category I).⁷⁵ Hence, traditional pit latrines (pits), surface latrines (buckets), and the classification “other” were grouped together, constituting category (II) ‘less safe’. As with potable water, the level of (relatively) safe domestic sanitation is much higher in urban areas than in rural areas. The category “none” comprises a significant share of 14.4% of all households nationwide, pointing towards high levels of poverty, especially in rural areas.

TABLE VIII: TYPES OF DOMESTIC SANITATION IN HOUSEHOLDS (URBAN/RURAL)

State/Region; Urban/Rural	Total Number of Households	(I) Safe Sanitation (%)	(II) Less Safe Sanitation (%)	None (%)	State/Region; Urban/Rural	Total Number of Households	(I) Safe Sanitation (%)	(II) Less Safe Sanitation (%)	None (%)
UNION	10,877,832	74.32	11.31	14.37	MAGWAY	919,777	68.42	14.04	17.54
- Urban	3,049,433	92.31	5.13	2.56	- Urban	131,251	83.59	12.12	4.29
- Rural	7,828,399	67.31	13.72	18.97	- Rural	788,526	65.90	14.36	19.75
KACHIN	269,365	85.49	12.48	2.03	MANDALAY	1,323,191	79.77	4.54	15.68
- Urban	95,859	91.63	7.79	0.58	- Urban	415,634	92.61	3.99	3.40
- Rural	173,506	82.09	15.08	2.83	- Rural	907,557	73.90	4.80	21.31
KAYAH	57,274	88.59	4.62	6.79	MON	422,612	78.72	5.01	16.26
- Urban	14,668	94.64	4.18	1.18	- Urban	114,187	92.73	3.02	4.25
- Rural	42,606	86.50	4.77	8.73	- Rural	308,425	73.54	5.75	20.71
KAYIN	308,041	68.91	6.61	24.48	RAKHINE	459,772	31.84	5.29	62.87
- Urban	67,167	94.52	2.25	3.23	- Urban	72,624	75.94	5.35	18.71
- Rural	240,874	61.77	7.82	30.40	- Rural	387,148	23.57	5.28	71.16
CHIN	91,121	74.54	9.64	15.81	YANGON	1,582,944	91.11	5.62	3.27
- Urban	19,770	93.02	3.94	3.04	- Urban	1,069,056	95.41	3.53	1.06
- Rural	71,351	69.42	11.23	19.35	- Rural	513,888	82.17	9.97	7.86
SAGAING	1,096,857	71.56	12.24	16.20	SHAN	1,169,569	63.81	25.05	11.15
- Urban	183,772	90.46	6.09	3.45	- Urban	279,918	92.25	6.83	0.92
- Rural	913,085	67.76	13.48	18.76	- Rural	889,651	54.86	30.78	14.36
TANINTHARYI	283,099	66.63	17.79	15.58	AYEYAWADY	1,488,983	74.87	12.29	12.84
- Urban	66,807	89.75	7.93	2.32	- Urban	200,962	90.58	6.01	3.41
- Rural	216,292	59.49	20.83	19.68	- Rural	1,288,021	72.42	13.27	14.31
BAGO	1,142,974	74.67	14.63	10.71	NAY PYI TAW	262,253	87.18	5.19	7.63
- Urban	239,014	89.83	7.48	2.69	- Urban	78,744	94.76	3.57	1.67
- Rural	903,960	70.66	16.52	12.83	- Rural	183,509	83.93	5.89	10.19

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Table I-3, Conventional Households by Type of Toilet and Urban/Rural, pp. 232-233; author's compilation.

100. Households' wastewater in most cases is discharged into septic tanks directly adjacent to the dwelling unit. The overwhelming majority of both household and industrial wastewater remains untreated when eventually discharged into the rivers or into the sea. Only the CBD area of Yangon has a sewerage network, whose origins date back to the colonial period. A new wastewater treatment plant was opened in 2005. Before that, Yangon's wastewater was discharged untreated into Yangon River.⁷⁶ Mandalay does not have any centralized wastewater system, and only a limited number of households have septic tanks of varying quality. Consequently, a significant quantity of wastewater ends up in the open drainage canals paralleling roads, from where the wastewater is further discharged into lakes and into the Ayeyawady River.⁷⁷ A core objective of ADB's Project in Mandalay is designing and constructing a piped wastewater network and a wastewater treatment plant, from which the treated water will be discharged into the Ayeyawady River.

B.VI.3 Electricity Supply

101. Reliable and steady electricity supply is an absolute precondition for strong and sustained economic - and thus urban - development. Many infrastructural assets currently planned such as treatment plants for drinking water, wastewater treatment plants and concomitant pumping and distribution centers require uninterrupted supplies of power for proper functioning. In particular, the development of a manufacturing economy requires a safe and reliable flow of electrical energy. But a substantial augmentation of power output also strongly contributes to the quality of life in both cities and villages and hence has become an important driver of urban development. Once a suburban area is connected to the grid, land values rise, and building as well as population densities tend to increase, subsequently expanding demand for other urban services.

TABLE VIII: MAIN SOURCE OF ENERGY FOR HOUSEHOLD LIGHTING (URBAN/RURAL)

State/Region; Urban/Rural	Total Number of Households	Electricity (%)	Candle (%)	Battery (%)	Other Sources (%)	State/Region; Urban/Rural	Total Number of Households	Electricity (%)	Candle (%)	Battery (%)	Other Sources (%)
UNION	10,877,832	32.4	20.7	16.9	29.9	MAGWAY	919,777	22.7	22.5	26.8	28.0
- Urban	3,049,433	77.5	7.2	6.3	9.1	- Urban	131,251	88.6	4.6	3.1	3.7
- Rural	7,828,399	14.9	26.0	21.1	38.0	- Rural	788,526	11.7	25.5	30.7	32.1
KACHIN	269,365	30.3	30.6	4.1	35.0	MANDALAY	1,323,191	39.4	14.0	22.4	24.3
- Urban	95,859	58.4	15.9	3.5	22.2	- Urban	415,634	86.2	3.8	4.2	5.8
- Rural	173,506	14.8	38.7	4.5	42.1	- Rural	907,557	17.9	18.7	30.7	32.7
KAYAH	57,274	48.6	19.9	3.6	28.0	MON	422,612	35.7	31.9	4.3	28.1
- Urban	14,668	90.2	6.9	0.5	2.3	- Urban	114,187	67.3	15.1	5.7	11.9
- Rural	42,606	34.3	24.3	4.6	36.8	- Rural	308,425	24.0	38.1	3.8	34.0
KAYIN	308,041	26.9	45.2	1.9	26.0	RAKHINE	459,772	12.8	59.0	3.8	24.4
- Urban	67,167	72.2	13.4	2.7	11.7	- Urban	72,624	46.2	29.6	5.5	18.7
- Rural	240,874	14.2	54.1	1.7	29.9	- Rural	387,148	6.6	64.5	3.5	25.4
CHIN	91,121	15.4	29.4	9.1	46.1	YANGON	1,582,944	69.3	7.2	11.8	11.7
- Urban	19,770	41.3	35.7	2.6	20.4	- Urban	1,069,056	87.4	3.0	5.8	3.7
- Rural	71,351	8.3	27.6	10.9	53.2	- Rural	513,888	31.7	15.8	24.2	28.2
SAGAING	1,096,857	24.2	15.7	24.7	35.4	SHAN	1,169,569	33.4	17.3	3.8	45.5
- Urban	183,772	66.4	5.8	7.6	20.2	- Urban	279,918	78.0	8.0	1.5	12.5
- Rural	913,085	15.7	17.7	28.1	38.5	- Rural	889,651	19.3	20.3	4.5	55.9
TANINTHARYI	283,099	8.0	21.9	0.8	69.3	AYEYAWADY	1,488,983	12.0	15.5	30.7	41.8
- Urban	66,807	10.6	10.9	0.5	78.0	- Urban	200,962	62.0	10.8	20.1	7.1
- Rural	216,292	7.3	25.3	0.9	66.6	- Rural	1,288,021	4.2	16.2	32.4	47.2
BAGO	1,142,974	27.7	28.9	22.5	21.0	NAY PYI TAW	262,253	42.6	31.2	7.4	18.9
- Urban	239,014	74.2	10.3	12.7	2.7	- Urban	78,744	87.0	7.7	3.0	2.3
- Rural	903,960	15.3	33.8	25.1	25.8	- Rural	183,509	23.5	41.2	9.3	26.0

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Table J-1, Conventional Households by Main Source of Lighting and Urban/Rural, pp. 241-242; author's compilation.

102. Yet unlike other developing countries in South East Asia such as e.g. Vietnam, Myanmar is suffering from a severe shortage of power supply. While Vietnam has achieved an electrification rate of virtually 99%, census data reveal that in Myanmar just 32% of all households have access to the power grid in such a way that electricity from the grid is the main source for lighting in dwelling units; a figure that certainly can be used as a **proxy** for measuring the level of grid connectivity. Nearly 21% of all households have to rely on candles, while approx. 17% make use of batteries. Additional sources are private generators (mostly running on diesel fuel), kerosene (lamp oil), solar energy, private water mills, and some sources not further specified. All those together provide the main energy for lighting in about 30% of all households. Private generators, kerosene, and solar energy each roughly make up slightly less than one third of other sources combined.

103. With regard to power grid access, the gaps between urban areas and rural areas are exceptionally wide. Nationwide, 77.5% of all households located in urban wards have access to the power grid, whereas this is the case for only about 15% of all households inhabiting village tracts.

About 87% of all households located in the urban areas of Mandalay Region, Yangon Region, Magway Region, and Nay Pyi Taw (Union Territory) are connected to the power grid. The small State of Kayah is somewhat of an outlier with 90% of urban households and 34% of rural households linked up to the power system. In four states/regions, electrification of rural households is less than 10%. The census recorded a peak level of undersupply in Ayeyawady Region, where only 4.2% of all rural households (out of 1.3 million) are connected to the grid, as Table IX shows.

C. DIAGNOSTIC SUMMARY

C.I Urbanization

104. As a result of political and economic isolation during the last decades, the intensity of urbanization in Myanmar was modest, when compared to dynamics observed in other countries in South-East Asia. On multiple fronts, Myanmar's economy has a significant potential to catch up with neighboring countries. Provided political and economic liberalization take root and continue, the economic forces driving urbanization will likely amplify. Within the macro-level composition of Myanmar's economy, a long-term shift from agricultural production to city-located manufacturing will rearrange the spatial distribution of the population. The pace of urbanization will arguably exceed growth rates as observed hitherto. It can be expected that the urban population will grow from 15.4 million in 2014 to about 20.4 million in 2030. A proportional distribution of the urban population across city classes (defined by population size) like the one observable in Vietnam at present is likely to emerge. This trend warrants a wide-ranging modernization of both municipal governance and legal frameworks for urban development.

C.II Union Level Spatial Governance

105. An important piece of a Union wide spatial orientation is in place already: The draft of the National Spatial Development Framework (NSDF) provides a long term framework for nationwide spatial development policy and comprises the spatial outline for Myanmar's urban and economic development. NSDF's core transportation grid incorporates the supra-regional Greater Mekong Sub-Region (GMS) network as well as the alignments of the Pan-Asian Highways. By reinforcing the preponderance of the **tri-polar central corridor** Yangon - Nay Pyi Taw – Mandalay, NSDF employs a high degree of economic rationality. The NSDF grid and its designations of urban activity hubs also serve as effective points of departure for future regional planning initiatives in states/regions. It is imperative, however, that both NSDF and the National Transport Development Plan be reviewed based on the results of the census of 2014, which were only published in May 2015.⁷⁸ After this revision, it NSDF could be given the status of a legally binding for state/region governments by Union level law or decree.

C.III Municipal Governance

106. With a view on the impending acceleration of urbanization, the structure of the current local administrative framework poses serious challenges to both rational integrated spatial planning and sectoral planning for local infrastructure provision. Municipal administration is executed through a patchwork of deconcentrated branches of Union level sectoral ministries. The municipal administrative landscape is highly segmented. The current setting is prone to local silo-building and functional fragmentation.⁷⁹ Notwithstanding GAD's notional seniority, which as a result of current national-level political changes may wane, a vast need for permanent cooperation and coordination exists, which is difficult to achieve, since no single local actor has a real final decision-making power. Incentives for long-term strategic horizontal coordination seem to be weak, impeding the Town Management

Committees' overall quality of management. Compounded through severe underfunding, these dynamics appear to be one of the main causes of critical inefficiencies identifiable in the management of urban settlements and the delivery of urban services such as supply of safe drinking water, sanitation, and trash collection.

107. Despite encouraging beginnings, involvement of stakeholders and residents is low. There is no 'Township Assembly' like the National Assembly or the elected assemblies of states/regions. Since there is no universal franchise when selecting the non-governmental members of local committees, levels of accountability vis-à-vis residents remain limited. A unified local decision-maker enjoying political legitimacy - such as a mayor accountable to an assembly elected via universal franchise or directly accountable to the local citizenry – is not at hand. Consequently, residents do not have a 'city hall' to turn to. Furthermore, the approach of setting up committees with mixed composition of both appointed government staff and indirectly elected representatives responsible for public sector decision-making risks to blur accountability relations between governmental providers of public sector services and the general population.

108. Administrative responsibilities for the spatial and infrastructural development of urban land (wards) and rural land (village tracts) were recently divided through the spin-off of DRDs from DMAs, generating additional bureaucratic complexity. From a comprehensive urban development perspective, the separation of DRDs from DMAs is rather disadvantageous. Both wards and village tracts are joined through a web of mutual interactions on the economic and environmental level. Hence, for fundamental functional reasons, the urban wards and the village tracts need to be looked at simultaneously in a holistic fashion. The intensity of interactions will grow as urbanization accelerates. Under the conditions of rapid urbanization, agricultural land located next to urban land is hotly contested, leading to severe conflicts between diverging interests. The conflict zone is the shifting demarcation between urban land and agricultural land. Long-term global growth trends indicate that the growth rate of built-up land is more than twice as high than the growth rate of population.⁸⁰ Hence, agricultural land and other open space in peri-urban areas are going to be exposed to persistent conversion pressure. The fundamental conflict between higher value urban land uses and agricultural land as source of farmers' livelihoods needs to be addressed through a functionally integrated spatial planning entity, whose remit has to cover the entire area of a township. The fragmented and disjointed administrative topography currently prevailing in Myanmar's townships precludes this.

109. There is an imperative need for political and administrative and fiscal reform on the municipal level. The momentum of on-going political change could be used to amend the Constitution of 2008 through incorporating the groundwork for a decentralized municipal tier of governance accompanied by an adequate devolution of responsibilities and fiscal resources. The Departments of Municipal Affairs with their accumulated practical experience could become the operational nuclei of future municipal administrations accountable to a local assembly based on universal suffrage.

C.IV Basic Municipal Services/Infrastructure

110. Data from the census of 2014 indicate that the closely interconnected water/wastewater sectors are substantially challenged. Due to the absence of wastewater collection networks, households use septic tanks, which frequently leak contaminated seepage into the ground water. From the same ground water, however, many households abstract their drinking water through tube wells. Hence, as urbanization increases densities in townships, public health risks grow in tandem. A major nationwide investment program to upgrade drinking water supply and wastewater treatment is warranted. Operationally reliable infrastructure facilities require constant power supply as an indispensable precondition. Thus in Myanmar, power grid extensions may have much greater impacts on core aspects of urban development than in other developing countries with much higher levels of electrification.

C.V Current Urban Planning Practice

C.V.1 Secondary Cities

111. In the secondary cities the intensity of formal urban planning is limited. Urban spatial expansion widely occurs in a regulatory vacuum, without procedures that could be considered to be formalized or standardized on a nationwide scale. The amount of institutionalized stakeholder participation at the local level so far appears to be not very pronounced. Traditional consensus on appropriate spatial densities and architectural form together with semi-formal routines seem to guide spatial expansion, which occurs along the established street grids. Yet it is palpable that the functionality of current practice will reach its limits as a consequence of intensifying urbanization.

C.V.2 Yangon and Mandalay

112. Unlike secondary cities, the two largest cities possess unified administrative bodies for providing urban services, urban planning, and executing municipal legal acts - the City Development Committees (CDCs). Stretching back decades, the CDCs command a significant amount of operational capacity and administrative practice. At intervals authorized by Union level legislation, both CDCs command established rights to devise by-laws and regulations subordinated to those by-laws to govern central aspects of urban service provision and to raise revenues. Operative capabilities include established practices of intra-agency cooperation. YCDC has had a department dedicated to urban planning and development for several years, while in Mandalay the formation of such a department was only initiated in November 2015 and hence still is in an early stage. Yangon and Mandalay entertain 'classical' municipal administrations, which, however, have to act under strict supervision through the respective regions' government. Under the current political and legal regime, municipal leaderships in Mandalay City and Yangon only enjoy a limited degree of proto-democratic legitimation.

113. As in the secondary cities, spatial expansion in both Yangon and Mandalay is mostly driven by the sectoral expansion of the road network and shaped by the accumulated effects of building permits,

whose contents are based on a fusion of local standards and traditional habits based on cultural consensus. Due to the spatial demands caused by accelerating economic growth and economic transformation, this practice has approached in-built limits. Both Yangon and Mandalay are in the process of preparing long-term strategic spatial development plans. With technical support from JICA, YCDC devised a comprehensive strategic urban development plan covering the period from 2014 until 2040, which is being revised as of late-2016. In 2012/2013 in Mandalay, MDCD and MoC's DHSDD prepared a 'City Development Concept Plan Vision 2040', which provides an elaborate effort to devise a spatial structure for Mandalay based on the assumptions of both robust economic growth and concurrent strong in-migration. While based on comprehensive research, the successful implementation of both plans would rest on the existence of four preconditions: Firstly, the presence of functionally adequate legal planning instruments, secondly, an experienced and skilled administrative organization supervising spatial expansion, and, thirdly, an enduring commitment to the plan from both the cities' political leaderships and residents based on democratic citizen and stakeholder participation during the planning processes. In addition, it would be necessary to accept and anticipate the effects of fundamental principles of urban land economics under market conditions. Since virtually all of these conditions are not met, implementation perspectives of current urban master plans remain challenged.

C.VI Urban Planning Legislation

114. Planning practice in municipalities of all sizes urgently need a unified nationwide legal framework, which virtually does not exist. The current draft of the Urban and Regional Development Planning Law suggests a rather early stage of formulation. This opens up opportunities to augment the draft by major components concerning all plan types to be codified in the future. Central elements of urban planning such as rules and procedures for citizen and stakeholder participation in planning processes are not incorporated. Associated with the issue of formal citizen/stakeholder involvement is the need to embrace provisions in the law on how to deal with conflicting objectives concerning urban development in a transparent, accountable, gender-neutral, and fair manner. This concerns diverse constellations of conflicts such as, for instance, conflicts between planning ideas of the Town Management Committee/Department of Municipal Affairs and concepts brought forward by citizens, between competing interests of different groups of citizens, etc. The draft's references with regard to integrating environmental issues and social issues into spatial planning deserve merit. Tackling environmental topics in the planning processes is essential to prepare for urban and settlement development resilient to climate change and its associated risks. Social impact assessments are crucial to mitigate effects of inevitable urban/settlement expansion on the livelihoods of farmers. Yet the draft law does not contain procedures for integrating results of environmental impact assessments or social impact assessments into the planning processes. In addition, the system of use classes now contained in the Provisional Myanmar Building Code needs to be incorporated into the urban planning law. It is recommended to revise the draft and augment it by necessary components, including topics such as urban re-development, urban renewal, and urban heritage management. The current political transformation may open up ample opportunities to launch such a Union level legal structure.

115. Myanmar is in the midst of a historical political transformation. The current political transformation may open up ample opportunities to launch a much needed modernization of Union legislation including the constitutional level. In addition, the end of political sanctions opens up new financial opportunities of borrowing for physical infrastructure construction and urban development from multilateral and bilateral development banks, which the incoming government could make use of.

Endnotes

- ¹ Annex I lists all major documents and publications processed for RUDRMYA.
- ² According to the Policy Note, the future National Urban Policy Document should contain five core components: (i) a vision statement, (ii) a component addressing national urban planning legislation, (iii) a national spatial plan and an outline of a national system of cities, (iv) a section on strategic key projects and pilot projects, and (v) a section on the integration of sectoral policies into the NUP, reflecting the cross-cutting nature of urban development and planning.
- ³ The findings for RUDRMYA are based on missions to Yangon, Pyay, Mandalay, and Monywa, which the author carried out from Nov. 15, 2015 until Dec. 5, 2015. A series of semi-structured interviews were conducted with officials at the municipal level, the region/state level, and the national level. International urban experts working in Myanmar were interviewed as well. Extensive desk research both in Yangon and at home station supplement the mission's findings. See Annex *** for details of mission schedule and list of interlocutors.
- ⁴ Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Nay Pyi Taw, May 2015, p. 68.
- ⁵ Detailed indicators for classifying an area either as "urban" or as "rural" may exist, yet apparently are not available in the public realm.
- ⁶ Ministry of Immigration and Population, *ibid.*, p. 49.
- ⁷ UNESCAP, Statistical Yearbook for Asia and the Pacific 2014, Bangkok 2014, p. 151.
- ⁸ UNESCAP, Statistical Yearbook for Asia and the Pacific 2014, Bangkok 2014. For categorization as low-income, lower-middle income, and upper-middle income the World Bank's definitions were used. Since the World Bank uses statistical methods different from UNESCAP for categorization, GDP figures published by UNESCAP in its Statistical Yearbook can deviate from World Bank data. Please note that term 'national income per capita' is a statistical macro-economic metric not to be confused with monthly or annual incomes of individual households.
- ⁹ It needs to be realized that data for Myanmar for 1990 might be not be very accurate, as 1990 figures used by UNESCAP do not reflect a comprehensive census, but result from surveys and estimates based on samples of limited size.
- ¹⁰ Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Nay Pyi Taw, May 2015, p. 14 (Table 2).
- ¹¹ USAID Country Profile: Property Rights and Resource Governance, Burma (2013), p. 2.
- ¹² McKinsey Global Institute's (MGI) study "Myanmar's Moment: Unique Opportunities, Major Challenges" projects an urban population of between 16.5 million and 18 million for 2030. MGI, "Myanmar's Moment: Unique Opportunities, Major Challenges", (Seoul/San Francisco) 2013, pp. 123-124. Unlike projections in RUDRMYA, MGI's projections exclude urban population in cities smaller than 200,000. Hence, it can be assumed that RUDRMYA figures reflect a realistic (ballpark) estimate.
- ¹³ This section is based on research sponsored by Australian Aid and the World Bank Group: World Bank Group, East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth, Washington D.C., 2015.
- ¹⁴ *Ibid.*, p. 105.
- ¹⁵ The Ministry of Transport of the Republic of the Union of Myanmar, The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report (Sept. 2014). The Report was prepared by a consortium of consultancies for JICA under the lead guidance of Myanmar's Ministry of Transport in cooperation with the Ministry of Construction and the Ministry of National Planning and Economic Development.
- ¹⁶ *Ibid.*, p. 4-29 f.
- ¹⁷ So far, three Special Economic Zones are being planned or implemented in Myanmar: Thilawa, situated about 25 km to the south of Yangon, Dawei SEZ, and a third SEZ in Kyaukpyu. Thilawa SEZ focuses on light

manufacturing and is expected to be operational by the end of 2015. Kyaukpyu will serve as a link between South Asia and the People's Republic of China, centering on gas and petroleum-related industries. Dawei SEZ is planned to be a center of heavy manufacturing serviced by a deep water port. According to ADB, all of Myanmar's SEZs require substantial infrastructure investments to spur economic activity and facilitate growth. Probably due to micro-locational weaknesses, the SEZs have so far found few occupants. Cf. ADB, Myanmar: Unlocking the Potential, Country Diagnostic Study, Mandaluyong City, (Philippines), 2014, p. 93. Projected connectivity needs of the SEZ are factored into the concept of NSDF.

¹⁸ The 'prototype' of the concept of establishing urban hierarchies based on urban functionality and urban 'catchment areas' – spatially expressing the extent of a city's excess of importance for the surrounding region - was first developed in full by the German urban geographer Walter Christaller in the early 1930s.

¹⁹ Yangon and Mandalay have their own distinctive systems of local governance, which are dealt with in a separate section below.

²⁰ Schedule II of the Constitution assigns tasks and responsibilities to the States/Regions.

²¹ Section informed by UNDP Myanmar's seminal report, Mapping the State of Local Governance in Myanmar: Background and Methodology, (Yangon) 2015, pp. 51-59; and M. Arnold/Ye Thu Aung/S. Kempel/K. Pyar Chit Saw, Municipal Governance in Myanmar – An Overview of Development Affairs Organizations, (Yangon) July 2015 (Discussion Paper No. 7 in: MDRI/CESD & Asia Foundation: Subnational Governance in Myanmar Discussion Paper Series). Findings derived from author's interviews in November/December 2015 largely affirmed research results referred to.

²² The local Department of Planning (DoP) is a deconcentrated department under the Union Ministry of Planning and Economic Development. It needs not to be confused with any agencies on the local level that may engage in comprehensive spatial (physical) planning. See Section 3.3 below for brief explication of township plans prepared by DoP.

²³ Cf. Kyi Pyar Chit Saw and Matthew Arnold, Administering the State in Myanmar – An Overview of the General Administration Department, (Yangon) Oct. 2014, p. 44 (=Discussion Paper No. 6 in: MDRI/CESD & Asia Foundation: Subnational Governance in Myanmar Discussion Paper Series).

²⁴ The 'Township Farmland Administration Body' is also called 'Township Farmland Management Body' occasionally.

²⁵ Cf. Kyi Pyar Chit Saw and Matthew Arnold, *ibid.*, p. 47.

²⁶ UNDP, *ibid.*, p. 46. It needs to be taken into account, however, that TDSCs were only established in March 2013 amidst other major political and administrative changes. Hence, outside observers should allow some time for the new institutions to take root.

²⁷ Due to varying translations, alternatively the term 'Township Development Affairs Committee' (TDAC) is in use. Both terms, 'Township Municipal Committee' and 'Township Development Affairs Committee' refer to the same local entity.

²⁸ Translation issues are at work here as well. Both terms, 'Department of Municipal Affairs' (DMA) or, alternatively, 'Development Affairs Organization' (DAO) refer to the same entity. In RUDRMYA the term 'Department of Municipal Affairs' (DMA) is preferred, since this term and its connotations are considered to be better indications for the local infrastructural services DMA (and TMuC) are supposed to provide to the general public.

²⁹ A detailed discussion of DMA's manifold operations in the area of local economic governance would be beyond the scope of this report. For more information, cf. M. Arnold/Ye Thu Aung/S. Kempel/K. Pyar Chit Saw, *ibid.*, p. viii; pp. 24-27.

³⁰ Cf. UNDP, *ibid.*, p. 52-53.

³¹ Interviews with municipal officials in Pyay and Monywa.

- ³² The Ministry of Construction's Department of Urban and Housing Development (DUHD) was renamed in 2015. Previously, it was known as DHSHD - Department of Human Settlements and Housing Development.
- ³³ Interviews with several senior officials at DUHD.
- ³⁴ There also exists a Township Planning and Implementation Committee (TPIC). Yet UNDP research suggests that in most townships the TPIC is not very active. Cf. UNDP, *ibid.*, p. 41.
- ³⁵ Interview with senior official at Yangon Region's Department of Planning.
- ³⁶ Cf. Jared Bissinger and Linn Maung, *Subnational Governments and Business in Myanmar*, (Yangon) 2014, p. 21 (=Discussion Paper No. 2 in: MDRI/CESD & Asia Foundation, *Subnational Governance in Myanmar Discussion Paper Series*).
- ³⁷ Interview with officials from DMA in Monywa.
- ³⁸ Interview with senior architect and urban planner.
- ³⁹ UN Habitat (Lab), *Guidelines for Urban Planning* (Prepared for the Union of Myanmar), Nairobi 2015, p. 25.
- ⁴⁰ Cf. UNDP Myanmar, *The State of Local Governance: Trends in Yangon*, (Yangon) 2015, p. 7.
- ⁴¹ Ministry of Immigration and Population, *The 2014 Population and Housing Census*, *ibid.*, pp. 60-62 (Table A-3).
- ⁴² Cf. UNDP Myanmar, *The State of Local Governance: Trends in Yangon*, *ibid.*, pp.1-2.
- ⁴³ UNDP Myanmar, *Mapping the State of Local Governance in Myanmar*, *ibid.*, p. 55-56.
- ⁴⁴ Cf. UNDP Myanmar, *The State of Local Governance: Trends in Yangon*, p. 20.
- ⁴⁵ Information received from officials Mandalay's CDC Road and Bridges Department, Mandalay, Nov. 2015.
- ⁴⁶ Cf. Japan International Cooperation Agency (JICA), *The Project for the Strategic Urban Development Plan of the Greater Yangon*, Final Report I, (Yangon) 2013, p. 2-129.
- ⁴⁷ Japan International Cooperation Agency (JICA), *ibid.*, p. 6-11.
- ⁴⁸ JICA research also identified a few zonal regulations which mostly determine admissible building heights and safeguard vistas in the spatial proximity of highly significant religious buildings such as the Shwe Dagon Pagoda.
- ⁴⁹ According to YCDC's organigram, three Departments of Engineering with differing areas of responsibility exist: Building, Roads and Bridges, and Water and Sanitation. Cf. UNDP Myanmar, *The State of Local Governance: Trends in Yangon*, *ibid.*, p. 21.
- ⁵⁰ Cf. The Irrawaddy (on-line edition) of June 22, 2015, "Rangoon Parliament Endorses Plan for 7 New Satellite Towns", <http://www.irrawaddy.com/burma/rangoon-parliament-endorses-plan-for-7-new-satellite-towns.html> (accessed January 31, 2016). According to the report, Members of Region's Hluttaw criticized transparency issues concerning the planning process and raised issues of conflicts of interest, in which allegedly high-level members of Yangon Government were involved.
- ⁵¹ Cf. Myanmar Times, *A Tale of Two New Cities as Satellite Towns Grow on Outskirts*, 19.03.2015, <http://www.mmtimes.com/index.php/business/property-news/13616-a-tale-of-two-new-cities-as-satellite-towns-grow-on-outskirts.html> (accessed February 1, 2016).
- ⁵² JICA, *ibid.*, p. 3-41.
- ⁵³ JICA, *ibid.*, p. 4-78.
- ⁵⁴ Japan International Cooperation Agency (JICA), *ibid.*, p. 3-42.
- ⁵⁵ Ministry of Immigration and Population, *The 2014 Population and Housing Census*, Mandalay Region (Census Report Volume 3-I), Table A-3, p. 20.
- ⁵⁶ Cf. UNDP Myanmar, *The State of Local Governance: Trends in Mandalay*, (Yangon) 2015, p. 29.
- ⁵⁷ Cf. footnote 48. Arguably, this laudable move co-originated from recommendations made by ADB in the context of the 'Preparing Urban Services Improvement Project' (TA-8472).
- ⁵⁸ Cf. footnote 48.
- ⁵⁹ PM Group/Safege/MMIC for ADB/AfD/MCDC, *Inception Report - Preparing Urban Services Improvement Project* (ADB TA-8472 MYA), (Manila), May 2014, p. 69.
- ⁶⁰ *Ibid.*

- ⁶¹ Compound average annual growth rate (CAGR).
- ⁶² PM Group/Safege/MMIC, *ibid.*, p. 73 (Figure 15, SWOT Analysis of Urban Planning).
- ⁶³ PM Group/Safege/MMIC, *ibid.*, pp. 190-191.
- ⁶⁴ Information as well as English translation of draft received in November 2015 from senior officials of DHUD.
- ⁶⁵ Provisional Myanmar National Building Code, Foreword by MES and UN-Habitat, n. p., n. y. (Yangon, 2012), p. 4.
- ⁶⁶ Cf. Provisional Myanmar National Building Code, *ibid.*, Section 1, pp. 23-27.
- ⁶⁷ *Ibid.*, p. 23.
- ⁶⁸ The term “relatively safe” was selected because research indicates that even in drinking water piped through networks bacteria may be found, as central water supply is not necessarily disinfected. Cf. PM Group/Safege/MMIC for ADB/AfD/MCDC, *ibid.*, p. 51. In Yangon CDC area in all samples of drinking water taken from the piped system bacteria were detected. Cf. Japan International Cooperation Agency (JICA), *ibid.*, p. 2-305.
- ⁶⁹ Ministry of Immigration and Population, *ibid.*, pp. 243-244.
- ⁷⁰ Data for Chin State appear to slightly implausible and arguably warrant a closer look.
- ⁷¹ Cf. PM Group/Safege/MMIC for ADB/AfD/MCDC, *ibid.*, p. 192.
- ⁷² Cf. Japan International Cooperation Agency (JICA), *ibid.*, p. 2-305.
- ⁷³ *Ibid.*, p. 2-298.
- ⁷⁴ Cf. PM Group/Safege/MMIC for ADB/AfD/MCDC, *ibid.*
- ⁷⁵ Ministry of Immigration and Population, *ibid.*, pp. 232-233.
- ⁷⁶ Cf. Japan International Cooperation Agency (JICA), *ibid.*, p. 2-306.
- ⁷⁷ Cf. PM Group/Safege/MMIC for ADB/AfD/MCDC, *ibid.*, p. 194.
- ⁷⁸ The Ministry of Transport’s document is based on a population estimate of 59.1 million inhabitants in 2012 (*ibid.*, p. 2-2). The population as measured by the census of 2014 is 51.5 million, approx. 13% lower than estimated.
- ⁷⁹ Information received from officials of various local branch offices during interviews conducted in Pyay/Mandalay/Monywa, Nov./Dec. 2015.
- ⁸⁰ Cf. Shlomo Angel, *Planet of Cities*, Cambridge MA, 2012, p. 169.

D. ANNEXES

D.I Annex I: List of Acronyms

ADB	Asian Development Bank
AFD	Agence France Développement
CBD	Central Business District
DAO	Development Affairs Organization (DMA)
DMA	Department of Municipal Affairs (DAO)
DoP	Department of Planning
DRD	Department of Rural Development
DHSHD	Department of Human Settlements and Housing Development
DUHD	Department of Housing and Urban Development
GAD	General Administration Department
GMS	Greater Mekong Sub-Region
JICA	Japanese International Cooperation Agency
MCDC	Mandalay City Development Committee
MNBC	(Provisional) Myanmar National Building Code
MoBA	Ministry of Border Affairs
MoC	Ministry of Construction
MoHA	Ministry of Home Affairs
MoNPED	Ministry of National Planning and Economic Development
MoT	Ministry of Transport
NLD	National League for Democracy
NSDF	National Spatial Development Framework
NUP	National Urban Policy
SUDPGY	Strategic Urban Development Plan for the Greater Yangon (Area)
TA	Township Administrator
TDAC	Township Development Affairs Committee (TMuC)
TDSC	Township Development Support Committee
TFAB	Township Farmland Administration Body
TMC	Township Management Committee
TMuC	Township Municipal Committee (TDAC)
TPIC	Township Planning and Implementation Committee
TPO	Township Planning Office
YCDC	Yangon City Development Committee

D.II Annex II - References

ADB, Myanmar: Unlocking the Potential, Country Diagnostic Study, Mandaluyong City, (Philippines), 2014.

Angel, S., Planet of Cities, Cambridge MA, 2012.

M. Arnold/Ye Thu Aung/S. Kempel/K. Pyar Chit Saw, Municipal Governance in Myanmar – An Overview of Development Affairs Organizations, (Yangon) July 2015 (=Discussion Paper No. 7 in: MDRI/CESD & Asia Foundation: Subnational Governance in Myanmar Discussion Paper Series).

Jared Bissinger and Linn Maung, Subnational Governments and Business in Myanmar, (Yangon) 2014, (=Discussion Paper No. 2 in: MDRI/CESD & Asia Foundation, Subnational Governance in Myanmar Discussion Paper Series).

The Irrawaddy (on-line edition) of June 22, 2015, "Rangoon Parliament Endorses Plan for 7 New Satellite Towns" (<http://www.irrawaddy.com/burma/rangoon-parliament-endorses-plan-for-7-new-satellite-towns.html>).

Japan International Cooperation Agency (JICA), The Project for the Strategic Urban Development Plan of the Greater Yangon, Final Report I, (Yangon) 2013.

McKinsey Global Institute (MGI), Myanmar's Moment: Unique Opportunities, Major Challenges, Seoul/San Francisco, 2013.

The Ministry of Immigration and Population of the Republic of the Union of Myanmar, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Nay Pyi Taw, (May) 2015

The Ministry of Transport of the Republic of the Union of Myanmar, The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report, Nay Pye Taw, Sept. 2014.

Myanmar Engineering Society/UN-Habitat Myanmar; Provisional Myanmar National Building Code, n. p., n. y. (Yangon, 2012).

Myanmar Times (on-line edition) March 19, 2015, A Tale of Two New Cities as Satellite Towns Grow on Outskirts, <http://www.mmtimes.com/index.php/business/property-news/13616-a-tale-of-two-new-cities-as-satellite-towns-grow-on-outskirts.html>.

PM Group/Safege/MMIC for ADB/AfD/MCDC, Inception Report - Preparing Urban Services Improvement Project (ADB TA-8472 MYA), (Manila), May 2014.

Kyi Pyar Chit Saw and Matthew Arnold, Administering the State in Myanmar – An Overview of the General Administration Department, (Yangon) Oct. 2014 (=Discussion Paper No. 6 in: MDRI/CESD & Asia Foundation: Subnational Governance in Myanmar Discussion Paper Series).

UNDP Myanmar, Mapping the State of Local Governance in Myanmar: Background and Methodology, (Yangon) 2015.

UNDP Myanmar, The State of Local Governance: Trends in Mandalay, (Yangon) 2015.

UNDP Myanmar, The State of Local Governance: Trends in Yangon, (Yangon) 2015.

UNESCAP, Statistical Yearbook for Asia and the Pacific 2014, Bangkok, 2014.

UN-Habitat, National Urban Policy Note for the Union of Myanmar, Nairobi (December) 2014, (unpublished mimeo).

UN Habitat (Lab), Guidelines for Urban Planning (Prepared for the Union of Myanmar), Nairobi 2015.

USAID Country Profile: Property Rights and Resource Governance, Burma, 2013.

World Bank Group: World Bank Group, East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth, Washington D.C., 2015.

PREPARED AND PUBLISHED WITH SUPPORT FROM
THE NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

