

Urbanization: The Structures of Sustainable Urban Landscape of Myanmar

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Abstract

With the major economic system changes, many new developments are observed in every sector of Myanmar. Urban landscaping is an integral part of modern urban construction and also presents the development of economic conditions. One of the most important factors of urbanization is population size. Urbanization is developed rapidly, based on rural-urban migration and natural growth of cities and towns. As urban area develops changes occur in the landscape such as buildings, roads, recreational sites, etc. Although the country's population remains largely rural because of Myanmar economy is based on agriculture, urban population growth was faster than spatial growth. Yangon is Myanmar's largest urban area. However, spatially it grew between 2000 and 2010, increasing at a rate of 0.5% a year, from 370 square kilometers to 390. This paper studies many social (traffic congestion, waste disposal, water problems) and environmental issues (pollution) in urbanization and concludes that long-term solutions to these problems. Therefore this paper presents the structure of urban landscape of some significant features within Myanmar and the controlling factors to this urban landscape. If population growth and urbanization are given sufficient attention in economic policies which must seek to manage for the sustainable future urban landscape of Myanmar.

Key words: Urban landscaping, urbanization, social and environmental issues, sustainable,

Introduction

Globally, more people move to live in urban areas than in rural areas, with 54 per cent of the world's population residing in urban areas in 2014. In 1950, 30 per cent of the world's population was urban, and by 2050, 66 per cent of the world's population is projected to be urban.

The urbanization process has been associated with other important economic and social transformations. Cities are important spatial framework that drives development and poverty reduction in both urban and rural areas, as they concentrate much of the national economic activity, government, trade and transportation, and provide crucial links with rural areas, between local, and across international borders. People living in urban is more associated than rural as higher levels of literacy and education, better health, greater access to social services, and enhanced opportunities for cultural and political participation. The world urbanized population by country estimated on the urban population and average rate of change of the size of the urban population for 2011 shown in the follow figure.

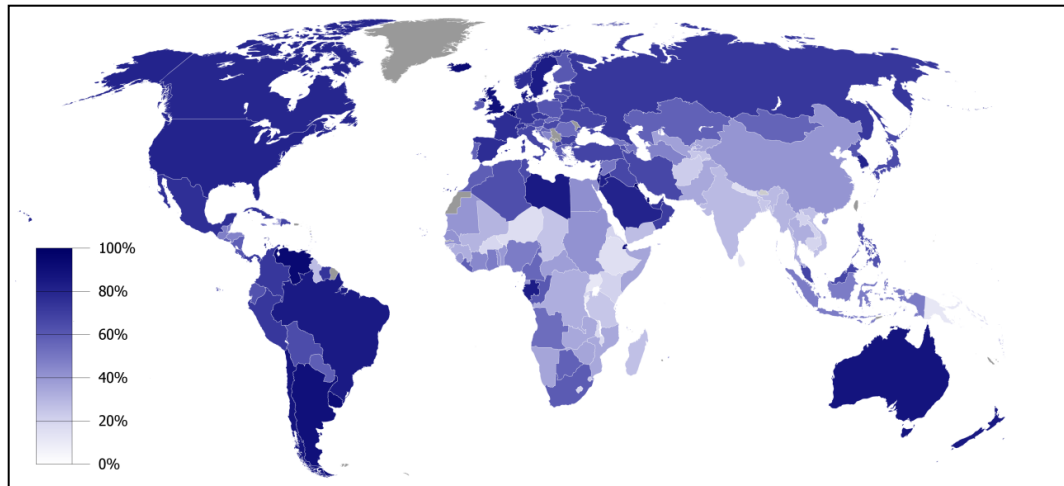


Figure1. The percentage of urbanized population by country

Source: World Urbanization Prospect, 2011

According to this figure, the level of urbanization of ASEAN countries ranks between 0% and 40% and this was the lowest level of urbanization. Thailand also has this low level of urbanization. The total population in the 10 ASEAN countries is over 590 million in 2010, 6.9 billion of world population. In Southeast Asian countries such as Thailand, Indonesia and Philippines developed after the 1950s by that time the urbanization of Myanmar also started after that the amount of FDI and GDP largely increased compared to the former period. Along with economic growth, the average annual growth rate of the urban population increased. The facts that consideration of urbanization processes include either pull factors or push factors of industrial estates of cities as labor force, migration from rural areas as cities markets demand. Then urban population increase with a large number of migrants as chain migration but the settlements pattern may vary. In Myanmar the remarkable changes to urban development in the two largest cities Yangon and Mandalay started after the market economic liberalization policies of 1988. However, like other countries, Myanmar still has a predominately rural population of around 70% (Table 2). The urbanization level of Myanmar is mostly the same to Thailand. Singapore ranks the first within the world urbanization level.

Table 1. World Urbanization Rate of ASEAN Countries

Rank	Country	Urban population %	Date	Urbanization rate %	Sources information of
1	Singapore	100	2011	1.2	2005-10est
45	Brunei	76.0	2011	2.6	2005-10est
58	Malaysia	72.8	2011	3	2005-10est

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116	Indonesia	50.7	2011	3.3	2005-10est
123	Philippines	48.8	2011	3	2005-10est
153	Laos	34.3	2011	5.6	2005-10est
154	Thailand	34.1	2011	1.7	2005-10est
156	Myanmar	32.6	2011	2.9	2005-10est
164	Vietnam	31	2011	3.1	2005-10est
182	Cambodia	20	2011	4.6	2005-10est

Source: World Urbanization Prospect, 2011



Figure 2. ASEAN member countries
 Source: Free maps of ASEAN countries.com



Figure 3. Myanmar Naing Ngan
 Source: Department of Geography, YU

Table 2. Population, percentage of urban population and the capitals and the second largest cities in the ASEAN countries in 2011

Country	Total population (mill.)	Urban population (mill.)	Percentage of urban	Largest cities population	Second largest cities population
Thailand	69.12	32.77	47	Bangkok	Nonthaburi
Myanmar	47.96	12.33	26	Nay Pyi Taw/Yangon	Mandalay
Philippines	93.26	40.99	44	Queson	Manila
Indonesia	239.871	119.70	50	Jakarta	Bandung
Brunei	0.40	0.30	75	Begawan	

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Singapore	5.09	5.09	100	Singapore	
Laos	6.20	1.91	31	Vientiane	Savannakhet
Cambodia	14.14	24.48	17	Phnom Penh	Batdambang
Vietnam	87.85	27.26	31	Ho Chi Min City	Hanoi
Malaysia	28.40	20.27	71	Kuala Lumpur	Ipoh
Total ASIAN	592.29	185.1	48.14		

Source: World Urbanization Prospect, 2011

Myanmar, officially, Union of Myanmar, is situated between the latitudes of 09°32' N and 28°31' N and the longitudes of 92°10' E and 101°11' E. Myanmar has an area of 677, 690 square km with a population of 51 million. The total area of Myanmar is 676,552 sq km (261,218 sq mi). From north to south, Myanmar stretches about 2,085 km (about 1,295 mi); from east to west, the distance is about 930 km (about 575 mi). Myanmar, republic in Southeast Asia, bounded on the west by Bangladesh; on the northwest by India's Assam State; on the northeast by China's Yunnan Province; on the east by Laos and Thailand; and on the southwest by the Andaman Sea and the Bay of Bengal. The longest land border is shared with China. Myanmar (pronounced myahn-mah) was known as Burma until 1989; the English version of the country's name was changed by the military government that took over in 1988. Nay Pyi Taw is the capital city of Myanmar. In many countries the Capital is the country's most important city. It is administered as the Nay Pyi Taw Union Territory, as per the 2008 Constitution. *Nay Pyi Taw* meaning "Royal Capital," is Myanmar's new capital city as administrative capital. It is Myanmar's third largest city after Yangon as commercial capital and Mandalay as cultural capital. Mawlamyine is fourth largest city in Myanmar. Myanmar has no large urban areas by East Asian standards but Yangon and Mandalay were medium-sized with populations of one to five million.

Overview Studies on Urbanization Process in Myanmar

Urbanization is the continuous process of transformation from being of rural to urban character, and the continuous change within the urban area itself as it grows by natural increase and by migration from other (usually rural) areas. The result is that an increase proportion of the population of an extensive area is concentrated in defined urban places, with resulting changes in land use, landscape, way of life, economic activity. (Longman, 1985)

Table 3. Total and urban population in States and Regions of Myanmar (2000, 2004, 2014)

No.	State & Region	2000		2014		
		Urban (mill.)	Total (mill.)	Urban (mill.)	Total (mill.)	% Urban
1	Nay Pyi Taw			.38	1.16	32.76
2	Kachin	0.32	1.31	.59	1.69	34.91
3	Kaya	0.09	0.28	.07	.29	24.14

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4	Kayin	0.19	1.51	.33	1.57	21.02
5	Chin	0.09	0.48	.09	.48	18.75
6	Sagaing	0.97	5.42	.91	5.32	17.11
7	Taninthayi	0.40	1.39	.34	1.41	24.11
8	Bago	1.25	5.15	1.07	4.86	22.02
9	Magway	0.87	4.67	.59	3.91	15.09
10	Mandalay	2.25	6.94	2.14	6.15	34.80
11	Mon	0.87	2.55	.57	2.05	27.80
12	Rakhine	0.53	2.81	.35	3.19	10.97
13	Shan	1.14	4.90	1.40	5.82	24.05
14	Ayeyarwady	1.27	6.92	.87	6.17	14.10
15	Yangon	4.37	5.80	5.16	7.36	70.11
Total		10.24	44.32	14.86	51.42	28.89

Source: Census Department

In Myanmar, total urban population is about 28.89 % of the total in 2014. The four largest cities fall to above urbanization definition. But the urbanization process of these cities is more or less different. In this paper, Nay Pyi Taw, Yangon, Mandalay and Mawlamyine are represented as Myanmar urbanization cities as their respective role.

Nay Pyi Taw

Nay Pyi Taw, the capital city of Myanmar, its formally known as Kyetpyay. It is administered as the Nay Pyi Taw Union Territory, as per the 2008 constitution which construction starting in 2002. Officially, Yangon will become too congested and crowded as economic development that had with less opportunity for future expansion of government offices which is the creation of new capital Nay Pyi Taw. It is situated between the Bago Yoma and Shan highlands with an area of 7,054 km². Nay Pyi Taw is more centrally located than the previous capital, Yangon, approximately 320 km (200 mi) north of Yangon. The capital's official name was announced on 27 March 2006, Burma Armed Forces Day at that time almost all of its planned city are still under construction, which was set to be completed by around 2012. The 24th and 25th ASEAN Summit as well as the Ninth East Asia Summit was held in Nay Pyi Taw. It is also famous as host city for 2013 Southeast Asian Games.

Anyway, the process of urbanization in Nay Pyi Taw is totally planned that differentiate with other towns and cities within Myanmar. It constitutes many zones such as residential zones, military zones, ministry zone, hotel zone, shopping center, recreation center, international zone, administration zone etc.,. According to the 2014 census of the total population of Nay Pyi Taw were 1,158,367 or 2.3 % of Myanmar population.

In residential zone apartments are allotted according to rank and marital status. The city currently has 1,200 four-story apartment blocks. The roofs of apartment buildings are color-coded by the jobs of their

residents. High-ranking government officials live in mansions, of which there are about 50. Many of the other city's residents, however, live in their houses. 348 hotels and 442 inns were constructed in hotel zone to live the athletes and spectators of the 2013 Southeast Asian Games. The city's Ministry zone contains the headquarters of Burma's government ministries. All the ministry buildings are identical in appearance. There are 38 ministry offices in Nay Pyi Taw. High-ranking military officers and other key officials live 11 km (6.8 mi) away from regular government employees. Nay Pyi Taw Myoma Market, Thapye Chaung Market, Capital hipermarket and Junction Centre are currently the shopping centre of Nay Pyi Taw.

Ngalaik Lake Gardens, National Herbal Park, Nay Pyi Taw Water Fountain Garden, Nay Pyi Taw Zoological Gardens, Nay Pyi Taw Safari Park, Nay Pyi Taw City Golf Course and Yaypyar Golf Course, and a gem museum are played as recreational center.

The government has planned to 2 hectares (4.9 acres) of land each for foreign embassies and headquarters of United Nations.

Moreover Uppatasanti or Peace Pagoda was established in 2009 which size and shape are like to the Shwedagon Pagoda in Yangon but it is just 30 cm (12 in) shorter than the Shwedagon Pagoda.

Nay Pyi Taw Hospital opened in 2006. There is also the Defense Services Obstetric, Gynaecological and Children's Hospital, 300-bed facility which is among the teaching hospitals of the Burmese Defense Services Medical Academy.

Then, infrastructures like roads are good and junctions are adorning with very large flowers and electricity also nearly covers for city dwellers. As the power and water supplies in the area are unpredictable and sewage drains non-existent there need to provide for generators, wells and septic tanks still under the design.

Yangon

Yangon, capital city of Myanmar, is in the southern part of Myanmar in the Irrawaddy delta on the Yangon River, near the Gulf of Motamma. It is the country's largest city and principal seaport and its main commercial, manufacturing, and transportation center.

Yangon, The settlement first came into prominence in the mid-1750s when King Alaungpaya, or Alompra, founder of the last dynasty of Burmese kings, chose the site as the administrative capital of Lower Burma and named it Yangon, meaning "the end of strife." ("Rangoon" is an English transliteration of this name.) Yangon was captured by the British in 1824, but they relinquished control two years later. It began to develop as a modern community in the late 19th century after it had again come under British rule at the conclusion of the Second Anglo-Burmese War in 1852. During World War II (1939-

1945) the city was occupied by Japanese forces. When Myanmar achieved independence in 1948, Yangon became the capital.

After 1988, the government started to introduce the market oriented economy, many company were enter to settle their economy in Myanmar. Since this time, Yangon city has experienced major land use changes. The shape of the city limits the government start to developed New towns in the east and west. Dagon North and Dagon South on the east side of the city, then Hlaing Tharyar on the west of the Hlaing Rier and Shwepyitha north of the Insein were developed to absorb the population of around half a million. In 1990, the State Law and Order Restoration Council enacted the law which invested the Yangon City Development Committee with powers to convert Yangon into a city of international standards. JICA is also drafting a 40-year Yangon City Upgrading plan, aimed at helping boost the backward former city of Yangon to a city having modern urban characteristics.

Yangon is the country's main center for trade, industry, real estate, media, entertainment and tourism. The city alone represents about one fifth of the national economy. At least 14 light industrial zones ring Yangon, directly employing over 150,000 workers in 4,300 factories in early 2010. Much of the country's legal imports and exports go through Thilawa Port, the largest and busiest port in Myanmar. Tourism represents a major source of foreign currency for the city although by Southeast Asian standards the actual number of foreign visitors to Yangon has always been quite low.

Mandalay

Mandalay city, central Myanmar, capital of Myanmar culture, is on the Irrawaddy River.

Mandalay is one of the largest cities in the country. It has long history of urbanization process. It was established by King Mindon in 1857. In 1862, King Mindon designated at this time the area of Mandalay was 16. 27 sq mi. After King Mindon, King Thibaw was ascended the throne. Thus Mandalay was ruled by the royal capital from 1857 to 1885.

Then, in 1885 the British annexation was took over the Upper Myanmar. At the end of 1885 the British captured the entire Myanmar. From this time, Yangon became the capital of Myanmar and Mandalay became the second capital city. From this time the Mandalay was divided into four divisions as East part, West part, South part and North part and then constituted as Mandalay Municipal Committee in 1887. In 1939 the area of Mandalay increased to 25.55 square miles.

After the independence from British or after 1948, Mandalay continued to be the cultural capital of Upper Myanmar. During this period the population increased rapidly but the urban area of Mandalay was not remarkable changed. The population also increased from 185,867 in 1953 to 256,541 in 1962 (Tin Moe Lwin, 2010, p-38).

From 1962 -1988, urban expansion started the Mandalay-Yangon highway, Mandalay-Amarapura road. Urban facilities were launched with hospitals, banks, schools and other enterprises. During this period, the Mandalay urban area developed with houses in vacant places and the population became 417,938 according to 1973 census. In 1979 Mandalay was reformed in four townships as South-east (14 wards), South-west (11 wards), North-east (15 wards), and North-west (16 wards). The population of Mandalay reached to 532,948 in 1983.

After 1988, the government started to launch the market oriented economy as put into practice trade opportunity which attention to encourage international trade investment. It was followed the new economic policies which pulled many people reside to urban areas. According to this economic policy, Mandalay City Development Committee was constituted to set up systematic urban management and development and urban areas were expanded and absorbed the surrounding suburban areas. After 1990, the systematic new industrial zones were established and the reallocation of inner industries replaced to this new industrial zones. In 1992, Mandalay was reformed into five townships and 86 wards by an announcement of the Ministry of Home Affairs and the urban area became 41.35 square miles (Tin Moe Lwin, 2010, p-40).

At present the total population of Mandalay is 6,145,588 or 12.0 % of the total Myanmar or the second most populated region followed Yangon in 2014.

It is also became the major trading and communications center in northern and central and is also linked with other large cities by rail and highway. Moreover, the industrial zones of Mandalay city were established due to the government policy for a market oriented economy. Mandalay Industrial Development Committee and various governmental departments have been cooperated in the development of the industrial zones. As the local populations were employed in the industries, the job opportunities they have provided changed their living standard and economic condition. Therefore many people also migrate from rural areas for their better life and income. According to the establishment of industrial zones, the local population in the industrial zone surrounding areas are obtain infrastructure such as electricity, better education, health care system, more efficient transport and communication system. Mandalay have now changed into higher priced lands with residential buildings, commercial center, industries, service business and transportation routes with international nations due to the establishments of the new extension townships and industrial zones. Job opportunities due to industrial zones and other trade with international and local economic conditions, it is assumed that Mandalay urban development is pronounced in Myanmar.

Mawlamyine

Mawlamyine city, the capital of Mon State lies near the Gulf of Mottama and the mouth of Thanlwin River. Before 1826, Mawlamyine stand like a small village with sparse population and settle along a single road which was about two and half miles long (Aye Aye Lwin and etal, 2008). Mawlamyine was

the chief town of British Burma from 1827 to 1852. During this time the population increased rapidly and the name was spelled Maulmein.

In 1826-1949, the area of Mawlamyine City was composed of 13 wards, in 1950-1959 to 16 wards and 17 wards to 1960-1988 then to 21 wards in 1990 and 22 wards in 2006 as follow.

Table 4. Urban expansion in Mawlamyine City (1826-2006)

1826	1950	1959-60	1989-90	2006
Kyaikpane	Thirimyine	Shwemyinethiri	Zayarthiri	Zayarmyine
Aukkyin	Hlaing		Thirimingalar	
Mandalay	Myenigone		Myinetharyar	
Hpettan			Tharyaraye	
Shwedaung				
Siikegone				
Mayangone				
Pobedan				
Bogone				
Maungngan				
Kwinyat				
Zegyo				
Mutpun				

Source: Mawlamyine Gazetteer (1994)
 Land Records Department, Mawlamyine.

According to its position, Mawlamyine City has actually not significant economic resources only natural resources such as agricultural products and fisheries products. It lies on the junction of the Myeik-Kawthaung and Myawaddy routes, so it plays as a distributor. Before 2005, Mawlamyine City stood as the break-of-bulk transit to both overland and water transports and its important hinterland areas were Ye, Dawai and Myeik. After opening the Thanlwin Bridge (Mawlamyine), the break-of-bulk function of Mawlamyine has been changed.

Moreover, before Thanlwin Bridge (Pha-an), most of the businesses from Pha-an were totally relied on Mawlamyine. After the Pha-an Bridge, the commodity flow pattern from Myawaddy to Yangon has been changed and it is not necessary to pass Mawlamyine but via Pha-an which is a shortest path and also convenient way. At present, there is link to Yangon in every sector as social and economic. Therefore, the role of the Mawlamyine upon its hinterland areas was significantly decreased due to the transportation development.

During the period 1960s and 1970s, Mawlamyine reached a golden age once from smuggling goods since it lies on the Yangon-Myawaddy border trade route.

After 1988, the role of the trade significantly reduced due to labour migration pattern because it is located near Thai which can offer many job opportunities with high salaries and wages than the local job. Thus, most of the young people are migrate to work in Thai as casual workers than in the local farm work which creates the traditional economy of agriculture is dramatically decreased due to labour shortage.



Figure 9: Thanlwin Bridge (Mawlamyine)

Source: http://en.wikipedia.org/wiki/Urbanization_by_country



Figure 10: ASEAN Highway Route Map in Myanmar
Source: DHSHD

Then, there is a new direct flight link between Thai (Meisaouk) and Myanmar (Mawlamyine). It is assumed to be efficiently and effectively operated the economic condition particularly in tourist industry because of Mawlamyine possesses a beautiful scenic view that attracts people from all over the country. Famous pagodas, other religious sites and the Setse beach in Thanbyuzayat Township are sets as the attraction sites to the visitors. Therefore the population in Mawlamyine is increased annually as the follow table.

Urban Landscape Changes

Among the distinct changes in urban structure are major developments in the housing sector, the construction of commercial and shopping centers, new bridges spanning the neighboring creeks and river in downtown and new expansion area. The modern commercial complex and shopping center, playgrounds, recreational centers which did not repair and construct before 1988, have become new features in the landscape of Myanmar largest cities.



Figure 4. Junction Centre, Nay Pyi Taw

Source: https://www.academia.edu/10968648/Myanmar_s_New_Capital_City_of_Naypyidaw



Figure 5. Nay Pyi Taw, Water Fountain Garden



Figure 6. Nay Pyi Taw Urban landscape.
(Source: Modified from Google Earth)



Figure 7. Uppatasanti Pagoda,
Source: https://www.New_Capital_City_of_Naypyidaw



Figure 8. Kan Daw Gyi (Yangon)

Source: Photo taken on 1st 2015



Figure 9. Before 1910 Sule Pagoda (Yangon)



Figure 10. Present Sule Pagoda (Yangon)

Source: http://en.wikipedia.org/wiki/Urbanization_by_country



Figure 11. Mandalay Hotel



Figure 12. Palace of Mandalay

Source: <http://www.google.com.mm/search?q=Mandalay+images>



Figure 13. Mawlamyine urban ward

Source: Photo taken on 1st May 2015



Figure 14. Modern house style

Source: Photo taken on 1st May 2015

Population as Measurement of Urbanization

Population is the main consideration factor of urbanization. The urban population in 2014 accounted for 54% of the total global population, up from 34% in 1960, and continues to grow. The urban population growth, in absolute numbers, is concentrated in the less developed regions of the world. It is estimated that by 2017, even in less developed countries, a majority of people will be living in urban areas. The global urban population is expected to grow approximately 1.84% per year between 2015 and 2020, 1.63% per year between 2020 and 2025, and 1.44% per year between 2025 and 2030.

The total population in the 10 ASEAN countries is over 590 million in 2010, 6.9 billion of world population. South-East Asia is less advanced in its urbanization with its urban population having increased from 32% to 42% between 1990 and 2010. Malaysia's urban population rose from 50% to

72%, while that of Indonesia increased from 31% to 44%. South Asia is further behind, with its urban population only increasing from 28% to 33%.

In Myanmar, the total population increased from 44.32 million in 2000 to 51.42 million in 2014. Rapid population growth and urbanization will have a dramatic effect on the increased demand for jobs, housing, energy, clean water, food, transportation infrastructure, and social services. As in Yangon population increased from 1,302,000 in 1950 to 7,355,075 in 2014, Mandalay increased from 90000 in 1957 to 6145588 in 2014 and 102777 in 1953 to 2054393 in 2014 and in Nay Pyi Taw increased to 1,158,367, 2014 from 92500 in 2005 receptively. These changes in the population's growth and spatial distribution will present a policy challenge as it will be necessary to plan adequate services for this growing urban population.

Table 4 Total population and annual growth rate of Yangon City

Year	Number of People	Number of Increase	Growth Rate%
1824	10,000		
1856	46,000	36,000	4.68
1872	100,000	54,000	4.76
1881	165,000	65,000	5.66
1891	181,000	16,000	0.96
1901	248,000	67,000	3.19
1911	295,000	47,000	1.75
1921	340,000	45,000	1.41
1931	400,000	60,000	1.67
1941	500,000	100,000	2.26
1950	1,302,000	802,000	10.05
1960	1,592,000	290,000	2.01
1970	1,946,000	354,000	2.01
1980	2,378,000	432,000	2.01
1990	2,907,000	529,000	2.01
2000	3,553,000	646,000	2.01
2010	4,348,000	795,000	2.01
2014	7,355,075	3,007,075	14.02

Source: Census Department.

Table 3. Total population and annual growth rate of Mandalay City

Year	Number of People	Growth Rate %
1857	90000	
1891	188815	2.2
1901	183816	-0.3
1911	138299	-2.8
1921	148917	0.3
1931	147932	-0.1
1941	163243	1
1953	185867	1.1
1963	232571	2.3
1973	417938	6
1983	532949	2.5
1993	710027	2.9
2007	921741	1.9
2014	6145588	30.43

Source: Census Department

Table 5. Population Growth of Mawlamyine City

Year	Number of People	Number of increase	Growth Rate %
1832	15700		
1855	23683	798	33.71
1872	46472	22789	49.04
1881	53107	6635	12.49
1891	55785	2678	4.80
1901	58446	2661	4.55
1911	57582	-864	-1.50
1921	61303	3721	6.07
1931	65506	4203	6.42
1941	68024	2518	3.70
1943	88024	20000	22.72
1953	102777	14753	14.35
1963	164125	61348	37.38
1973	171470	7345	4.28
1983	185572	14102	7.60
1993	217048	31476	14.50
2003	315969	48921	15.48

2006	326388	10419	3.19
2014	2054393	1728005	20.19

Source: Than Mya, Mi (1972): Land Utilization of Mawlamyine District, M.A Thesis

Push and Pull Factors for Urbanization in Myanmar

Although Myanmar economy is primarily based on agriculture, in urbanized area more people are concentrated who are working non-agriculture activities. Therefore the process of urbanization caused the transformation of major economic styles and life styles of the country. Urbanization is caused by the urban population growth as people migrate from rural areas to towns in search the urban social structures or better life. Rapid urbanization processes and policies favoring urban sites and industrialization also one of the consequences of migration which take changes in urban landscape.

The factor that creates urbanization in Myanmar is varying one city to another. In Nay Pyi Taw the urban process is totally relying on government planning that differentiate other cities. There are many functions in Yangon and Mandalay because of its location seaports and international air line local jog opportunities as industrial zone. In Mawlamyine, there are many processes to urbanize in which transportation is the vital role. There are international trade functions are more significant.

People are move to the city because they are pushed by poverty from rural societies or they may be pulled by the attractions of city lives. Combination of these push and pull factors can also be on reason for moving to cities. In Myanmar rural population growth and rural economic conditions are the major problems. These circumstances make migration the only opportunity to rural people.

Push factors

The normal push factors to rural people are the circumstances that make their earning of living impossible, unindustrialized farming system, lack of adequate land, unequal land distribution, droughts, storms, floods, and clean water shortages. These serious disadvantages make farming, the livelihood of rural people, hard and sometimes hopeless. Lack of modern resources, firewood shortages, religious conflicts, local economic declines, are also major reasons for moving to the urban areas.

Pull factors

High industrial wages in urban areas are one of the biggest attractions for rural people. People will continue to migrate to cities as long as they expect urban wages to exceed their current rural wages. Employment opportunities, higher incomes, access to better health care and education, are the pull factors for rural people. One of the main reasons for people to move to the urban areas is that the situation in the rural areas is very difficult. With the income level they have it is not possible to survive. In this case even the low salaries in the rural areas are more attractive than non-existing salaries in the rural areas.

Impact of Urban Landscape in Myanmar

There are many positive and negative environmental impacts face the city inhabitants. As an area is urbanized the style and pattern of landscape vary from the older design. The housing style and the buildings are promoted to modern style. The urban development planner creates the facilities such as recreational centre, playground, and super markets. In which traffic jam, water shortage, scarcity of electricity, noisy, air pollution, congestion, insufficient waste water disposal system, area shortage for solid waste disposal sites. Slums and squatters settlements are replace within medium and high living standard settlements.

The Land Use Change

Nowadays, the rapid changes occurring in Myanmar urbanized areas especially Yangon, Mandalay and Mawlamyine results in the increase of living density. Landscape has been changed for commercial and residential purposes more. The growth of Yangon and Mandalay Cities cause more demand of land using especially in urban area. The land has been transferred to businessman or entrepreneurs who have come to the area with enormous funds. In addition, due to the land price which is expensive, it causes the use of land for a maximum return such as the reclamation of the building that blocks the natural flow of water, and then result in problem of water drainage and pollution.

In the past, the above largest cities of Myanmar are not a big city. The area surrounded by agricultural communities. However, these largest cities like Nay Pyi Taw, Yangon and Mandalay later has grown with greater integration. The construction of residences, roads, and other infrastructure occurred continuously, and pushed the land price was higher than the past especially in urban area. Most of the land was sold and transferred from the local to local or international traders. In addition, the study found that the loss of agricultural lands has affected the food security for local people. Farmers who had sold their lands to the capitalist would not have their own land to do agricultural activity anymore, and it resulted in the loss of resources or sources of subsistence. The effect would not only occur to farmers, but also affected to other stakeholders such as local food buyers, local labours, and etc. By the way, the food security of people living in urban area may not depend on the agricultural land around the city only. They have more chance to access to food source in other areas. So, they do not depend much on local agricultural products. Therefore, the food insecurity of people in urban area needs to be considered by ecosystem and context in each area.

In Yangon city, environmental problems related to industrial zones are primarily linked with the dramatic change of paddy fields to industrial land plots without prior detailed investigation, later to be followed by drainage and waste disposal problems. With insufficient infrastructure provision, especially electricity and difficulties of transportation and communication, many other problems developed as well. At present traffic jam is the important problem of Yangon.

In Mandalay, there are many social problems concerned with urbanization. The most important negative impact is cultural impact. There are many people migrates from northern Myanmar and neighboring country due to market liberalization policy. Their cultural influenced to the local people especially young people. Some of their cultural is very different to Myanmar traditional cultural.

In Mawlamyine, as the urban population tends to increase, more and more environmental problems will occur like other cities such as solid wastes, air pollution, insufficient water supply, etc. The most important impact in Mawlamyine is agro-economy is significantly reduced due to labour shortage particularly young people. To reduce this impact, it is therefore necessary to establish the effective industries in Mawlamyine. It has a lot of natural resources such as agriculture products and fisheries products. By using these natural resources, there should be established the industries concerned.

Economic and Social Change

Myanmar's economy has expanded continuously since the government set up market- oriented economy after 1988. It is the transportation hub of the ASEAN region which easily linked to Thai region to neighboring countries such as India and China. The economic growth of Myanmar currently is displayed by the expansion of the trade, more commercial buildings such as department store or big retail store, more labour employment. In addition, the policy from both central and local government is also a factor which pushes Yangon and Mandalay to be a center of the logistics and air transportation hub in this region.

Societal issue, economic growth in Myanmar especially Yangon and Mandalay has attracted workers from rural come to work and live in the city. They mostly have worked in private company service sector such as in the restaurant, construction site, and business site including supermarket. By the way, most of them enter the city by rural-urban migration process. The study found there is lifestyle or cultural changes. Another issue is health problem the entry of foreign workers or local people to go out for higher income may bring some unknown diseases, some diseases which spread from neighboring countries through labor migration.

Road and traffic problems

Traffic condition in Yangon and Mandalay is problematic especially in the morning and evening which are the time that many people who live outside municipality area are traveling to work and study in urban area. It causes many vehicles on the road, and then causes the traffic jam. Traffic jam problem is not only happening in the downtown area, but it also happens in the suburbs area especially industrial zones where is full of a suburban residential area. However, the relevant authorities have tried to solve the problem such as constructing more roads or abutments to resolve traffic problems in the bypass road.

Waste disposal problem

The study found that there were complaints about the garbage truck from those who live along the road. In addition, people who live in nearby area have to endure with the smell of garbage. The study also concern about the waste disposal system in the business sector especially in the major-size entrepreneurs. Currently the study found that waste disposal system has been installed in some businesses only. Most of businesses still use the services from the local municipality to remove the waste and do the waste disposal. Big business is groups produced lots of garbage each day, but the agencies that manage the waste disposal still limit, and affect the smell pollution to urban area. The industry as well, each day the waste is numerous produced, and the waste in the factory mostly were electronic waste or waste from industrial activity which is very dangerous to environment. These wastes are currently being forwarded to large industrial waste disposal systems in other province. However, electronics waste was produced a lot, so the plant is unable to load and forward the waste to disposal area. It would be necessary to find out a place for store the waste to await the waste transportation to the disposal area.

Sustainable Urban Landscape in Myanmar

Sustainable development is often presented as having three dimensions: economic, social and environmental. Urbanization provides opportunities for achieving progress along all these dimensions, but the opportunities need to be seized. Preventing people from coming to cities tends to be economically, socially and environmentally damaging, but successful urbanization is achieved and not simply allowed.

Urbanization in Myanmar during the first decade of the 2000s lagged behind that of its neighbors, likely as a result of Myanmar's economic isolation, which continued until about 2010. Myanmar urban population in 2014 is 28.89% of total population and rate of urbanization is 2.49% annual rate of change (2010-15 est.)

Yangon is Myanmar's largest urban area. However, spatially it barely grew during this period, expanding at a rate of 0.5% a year between 2000 and 2010, from 370 square kilometers to 390. Urbanization has always raised environmental concerns. Large parts of cities consist of resettlement areas, reflecting the relocation and housing programs for government staff in the 1960s and early 1990s in Mandalay. These areas have urban services much below acceptable levels. Inadequate water, drainage, and sanitation services, combined with insufficient preventive health care, have resulted in severe health threats at many levels. As in Nay Pyi Taw drainage system is required for local people to safety living.

If maintains its rapid development, this will continue to have a positive effect on urban infrastructure insufficient and slums. Long term solutions is effective action by governments especially at the local level, is necessary to implement the necessary urban planning, and to provide infrastructure and services.

Conclusion and Discussion

These fast growing social, economic and ecological problems are very challenging for stakeholders, who involve in the urban development, in developing country as Myanmar. Systematic cities do not occur by chance, but are achieved associated with clearly development guidelines which are generated by cooperation between government agencies, local people and urban planner. The ways to accomplish creation of sustainable city including the need of local people, the need which is based on resource allocation, reviewing existing development guidelines, development of integrated infrastructure. In addition, encouragement of private sector participation (PSP) is essential to develop the city. The planning process should focus on requirements of people in developing the city in the next 10 to 15 years. Both private and public sectors should have the cooperation to develop the city. In addition, resource allocation should be focused on to construct the rapid growth city sustainably, or enable the private sector to address other infrastructure challenges. Collaboration between the government and private sector is also necessary to advise the city to keep on track in the planning.

This will affect to various aspects including economics, socials and environments, and also effected to other ASEAN countries. This is very essential to study all big impacts and changes in urban landscape in Myanmar.

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