

THANLYIN TOWN DEVELOPMENT IN MYANMAR: INTEGRATION WITH REGIONAL GROWTH CENTRES

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Abstract

Town Development Planning is important in built environment to be a livable town and city. In Myanmar, Yangon city is the Largest City. Yangon City has grown rapidly in recent years and the population of Yangon city has been growing. The Government has been developing new settlements towns to decentralize the congested Yangon city. Some people in Yangon City migrate to other towns, more comfortable for their living. Thanlyin town once called Syriam is the Southern district of Yangon, 6 miles far from Yangon and situate as the entrance gate of sea-route to Yangon. Thanlyin is a picturesque resort and historical town and is one of the tourist attractions of Myanmar. Myanmar International Terminal Thilawa Port also exists in that area. For the economy of Thanlyin Township, agriculture and industries are the most important and dominant activities. Communication and road network have been developing. Therefore, Thanlyin has developed as the main point in education, economy and town's population. The increment of Thanlyin town's population is balancing the increment of Yangon city's population density. However Thanlyin town planning hasn't developed systematically. There are many problems, related to housing, infrastructure and industrial zone. Thanlyin town plan is needed to consider being a good environment. Physical planning must be done to be systematic development of Thanlyin town integrating with regional growth centers. This research is to carry out the facts to become a livable town by conducting the survey such as existing physical situation and socio-economic condition and analyzing of the various factors that influencing future development of the town such as social, economics, education, health, recreation, religious buildings, social infrastructure, population and land use.

Keywords: livable, regional growth centers, physical planning and socio-economic condition, land use

1. Introduction

In Myanmar, there are cities as regional growth centers such as Nay Pyi Taw, Yangon, Mandalay, Taunggyi, Lashio, Kengtung, Monywa, Shwebo, Magway, Mawlamyine, Myeik, Dawel, Hpa-an, Pathein, Sittwe, and Thandwe. Yangon is and will be one of the most important urban centers in Myanmar and it is also a centre for external trading of Myanmar. Yangon's centrality among the regions was strengthened to north direction South Okkalapa, North Okkalapa and Htaukayant before 1988, to east-west direction North Dagon, South Dagon, Hlaing Thar Yar and Shwe Pyi Thar after 1988 and to Thanlyin area after the completion of Thanlyin Bridge across Bago River after 1993. Among the newly developed satellite towns of Yangon, Hlaing Tharyar is the most developed one. Thanlyin is an old settlement near Yangon but it becomes one of the most developed suburban areas of Yangon.

Yangon is the biggest regional growth centers for Thanlyin in which Thanlyin and Yangon are integrated by physical and socio-economic conditions. Yangon Thanlyin bridge no. (1) exists in that area. Thanlyin and Yangon is divided by Bago River. To the east, Khayan Township and Thongwa Township and to the south, Kyauktan Township exists. Yangon

Thanlyin No (2) bridge is now under constructing. Therefore communication, road network and economic condition of town have been developing.

Yangon Eastern University, Technological University (Thanlyin), Yangon Cooperative Degree College, Marine Technological University, Thilawa industrial zone, Thanlyin Kyauktan industrial development zone and Myanmar International Terminal Thilawa (port) are situated. Everyday many students, teachers, staffs and workers from Yangon, Khayan, Thongwa, Kyauktan and various areas comes to Thanlyin area. If No (2) Yangon Thanlyin Bridge have been constructed, Thanlyin town would be more and more developed. Now the government has been constructing Thilawa Special Industrial zone in that area. Thanlyin becomes the main point of education and economy and town's population has been increasing. Thanlyin areas would be one of the largest residential immigration zones in the region. Therefore it is recommended that an institution with an adequate scope and responsibility for planning of Thanlyin development area should be anticipated.

Thanlyin was organized by the combination of 17 wards, 28 groups of village and 65 villages. Famous historical pagodas locate in that area. The people are crowded in the pagoda areas at Sabbath days and other famous days. Most of the residents in Thanlyin Township are general workers such as farmers, fisherman, sellers, traders and government servants. At the periphery of the town, there are many rice field areas. The main products are rice and marine products.

2. Methodology

The basic principles of livable town according to H.L Lennard such as:

- Town such as that offer activities, celebration and festivities that bring all together
- Town that is a place for learning and socializing and
- Town that prioritize beauty and aesthetics civil also be fulfilled

Moreover there are many basic principles to be a livable town such as town that does not segregate its people and town that has many functions and not special industrial zone.¹This research is carried out by conducting field survey on existing physical situation such as location, area, boundaries, topography, drainage, transportation, water supply and analysis. And then this paper will conduct field survey on existing socio-economic condition such as population, educational facilities, health facilities, development activities, communication systems, famous historical pagodas and influencing factors, industries and exports and integrate with regional growth centers to enhance Thanlyin Town to be a livable town. The research is used to know health, educational, recreational, institutional, commercial and transportation facilities in Thanlyin town are enough or not for the people living in that town. For some facilities, the number of people who passing through Thanlyin and coming in and going out Thanlyin within day time have to be included in consideration but it is for future work of this research.

¹ H.L.Lennard "Principles for the Livable City"



Figure 1. Map of Yangon City and Southern district Yangon (Thanlyin district)

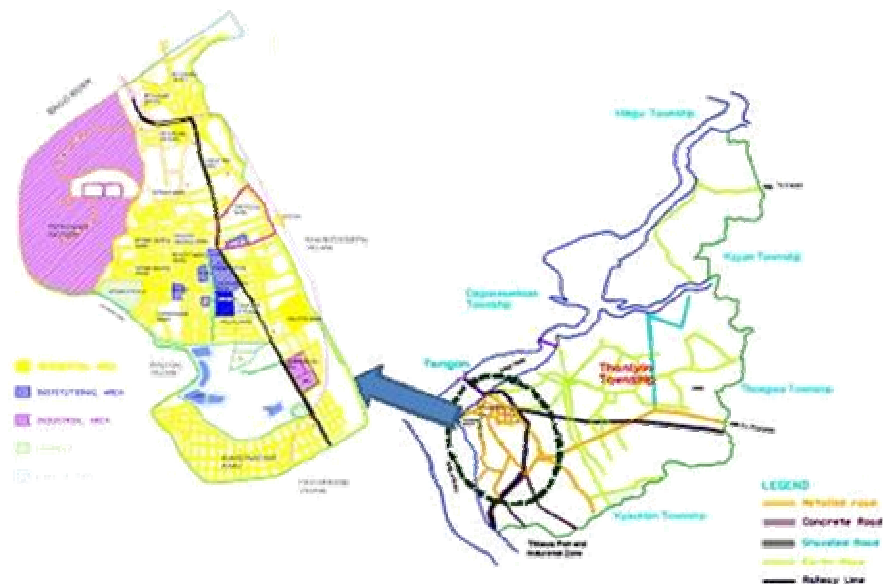


Figure 2. Map of Thanlyin town and township

2.1. Physical Condition of Thanlyin Town and Integration with Regional Growth Centers

This research study on how it is integrated with regional growth centers such as Yangon, Thilawa Port and Special Industrial Zone by location and transportation network.

Location

Thanlyin Township is one of the forty-five townships of Yangon division. It is located on the southern bank of Bago River, opposite of Yangon

City and is also in the southern part of Yangon. Southern part of Thanlyin Township is nearly 15 miles far from the sea coast of Gulf of Martaban.

Area

The total area of Thanlyin Township is estimated to be about 1145.324 square miles (43007 acres) and it covers only about 3.7 percent of the area of Yangon City. It consists of Thanlyin Town and 28 village tracts.

Transportation Network

Transportation is crucial for a township economy and social development. The better the transportation, the higher is the standard of living. There are three major transportation systems in Thanlyin Township. These are roads, railway and waterways.

Roads

There are five major roads in Thanlyin Township which are Thanlyin Kyauktan Road, Thanlyin Thongwa Road, Thanlyin Thilawa Terminal Road, Thanlyin Thilawa Lower Road and Thahtakwin Pagandaung Phagu Road. Types of roads are metal led road, concrete road, graveled road and earth road.

Table 1. Five major roads in Thanlyin Township

No	Symbol	Major Roads	Length	Width
1		Thanlyin-Kyauktan Road		
	1 to 1	*Kyauktan-Phayargone road	4miles	14 feet
	1 to 2	*Thanlyin-Kyaikkhauk pagoda road	4miles	14 feet
2	1 to 3	Thanlyin-Thongwa Road	13miles	14 feet
3	1 to 4	Thanlyin-Thilawa Terminal Road	6 miles	24 feet * 40feet(Ah Hmuhtam)
4	1 to 5	Thanlyin-Thilawa Lower Road	3miles	24 feet
5	6 to 7	Thahtakwin-Pagandaung-Phagu Road	10miles 4 furlongs	10 feet

1 to 1, 1 to 2 and 1 to 3 roads are connected from township to township. Their width are 14 feet and they are not suitable for two bus lanes because of traffic junction.²

Bridges

Since the construction of Yangon Thanlyin Bridge, it sends crude oil to Thanlyin Oil Refinery plant and to distribute petroleum productions to Yangon

² Field study and analysis by DHSHD by planning standard for Myanmar and Chiara, J.D et al.1995.*Time Saver Standard for Housing and Residential Development. 2nd ed.*U.S.A:Mc Graw-Hill, Inc.

effective and at low cost. It sends agricultural and industrial products from Thanlyin, Thonegwa, Khayan and Kyauktan Township cheaply and faster to Yangon via Thanlyin. It aids the construction of international sea port at Thilawa. It extends industrial landuse of Yangon to Thanlyin and it creates Thanlyin Town as part of Greater Yangon.



Figure 3. Five major roads in Thanlyin Township

This bus route serves the residents of Thanlyin to travel with ease and speed to Yangon. Commodity shipments can also be operated early and quickly between Thanlyin and Yangon serves for the development of Thanlyin as an industrial and commercial centre.

Altogether many cargo vehicles, private cars, departmental cars, buses, motorcycles passed daily through the bridge from Yangon to Thanlyin. About 1000 cars pass through Yangon Thanlyin Bridge everyday. It occur traffic junction as road's widths are not suitable for even two bus lanes.²

Railway

Railway line runs north-south alignment in the eastern part of Thanlyin Town. It connects Thanlyin with Tharkayta, one of the townships of Yangon City. There are ten up and down trips for passengers between Yangon and Thanlyin. This railway line connects to the trade of land and waterway. Thanlyin is the most developed among suburban area of Yangon because it is only 6 miles away from Yangon Central Business District (CBD) Area. By passing through Yangon CBD and Yangon Thanlyin Bridge No. (1), people can easily come to and go out from Thanlyin within 30 minutes. That is why Thanlyin's development is integrated with regional growth centre Yangon.

Industries

Oil refinery plant, Glass factory, Tin refinery and concentrating plant, paper packing plant, Saw mill, Tons 100 rice mill, Garment factories, shoe industries and private industries locate in this area. The products are distributed to local and exported for foreign investments.

The services are from various parts of field. Most of services are from Yangon, Thanlyin, Kyauktan, Khayan, Thonegwa and Dagon. Now the government has been constructing Thilawa Special Industrial Zone in southern part of Thanlyin area. It needs about 40000 services. At present, local industrial area has about 10000 services.

Myanmar International Terminal Thilawa (Port)

Myanmar International Terminals Thilawa (MITT) is Myanmar's first purpose-built, multipurpose international container port. It is established in the South of Thilawa village in Thanlyin Township which is about 30 minutes drive. MITT is close to the mouth of Yangon River. Its location is strategically important and adjacent to the special Industrial Park of Thanlyin Kyauktan. Cargo trade to Myanmar is currently provide by feeder service. Local railway line which trunked from the Yangon city is also served up to that area. MITT effects the development of Thanlyin town.

Thanlyin is on the road linking Myanmar International Terminal Thilawa Port, Thilawa Special Industrial Zone and Yangon CBD. That is why Thanlyin's future development has the highest potential and is integrated with regional growth centres Thilawa. According to the records, there are approximately 25000 people passing through Thanlyin to go to Thilawa Special Industrial Zone and Port.

Physical Condition of Thanlyin Town

Drainage

As a deltaic region, lowland region, the rivers, streams, creeks and brooks are drained within township area. Yangon River and its tributary Bago River are two main rivers. Since other drainages are flowing into the field, those areas are not suitable for town development planning.³

Water Supply in Urban Area

The urban area is mixture of residential areas, social services, many government and public institutions. In Thanlyin town, the residential area constitutes 18.7 % (709) acres of the total area served by the township Municipal water pumps supply system. Thanlyin Municipal's water pump supply systems have to rely on municipal's tube-well, private tube-wells, hand-dug wells and rain water collection ponds.

The water supply system of Thanlyin Town was capable of meeting maximum demands up to 1374075 gallons per day. But daily supply was about 1560 gallons per day to send the 96 housing units and 576 residents within 5 wards with municipal water pumps from tube-wells. The municipal's water supply system of Thanlyin Town is unable to provide sufficient amount of water to meet the minimum requirements.

³ Field Study

In 2005, there were altogether 7823 private tube-wells in various wards of Thanlyin Town areas. Besides 1607 private Tonkin wells and 545 private hand dug wells were also constructed within Thanlyin Town area. Most of the hand-dug wells belong to low income families. In General rain water collection ponds are totally 4 ponds. Types of soil are suitable to dig for drinking water.⁴

2.2. Study and Analysis on Socio-Economic Condition of Thanlyin Town

This research study and analysis on socio-economic condition such as population, educational facilities, health facilities, development activities, famous historical pagodas, influencing factors and exports.

Population

Population growth area is extending to the south-east direction from urban area due to the development of Thilawa port and industrial zone, Universities and Colleges. These development facts affect the Thanlyin Urban Area.

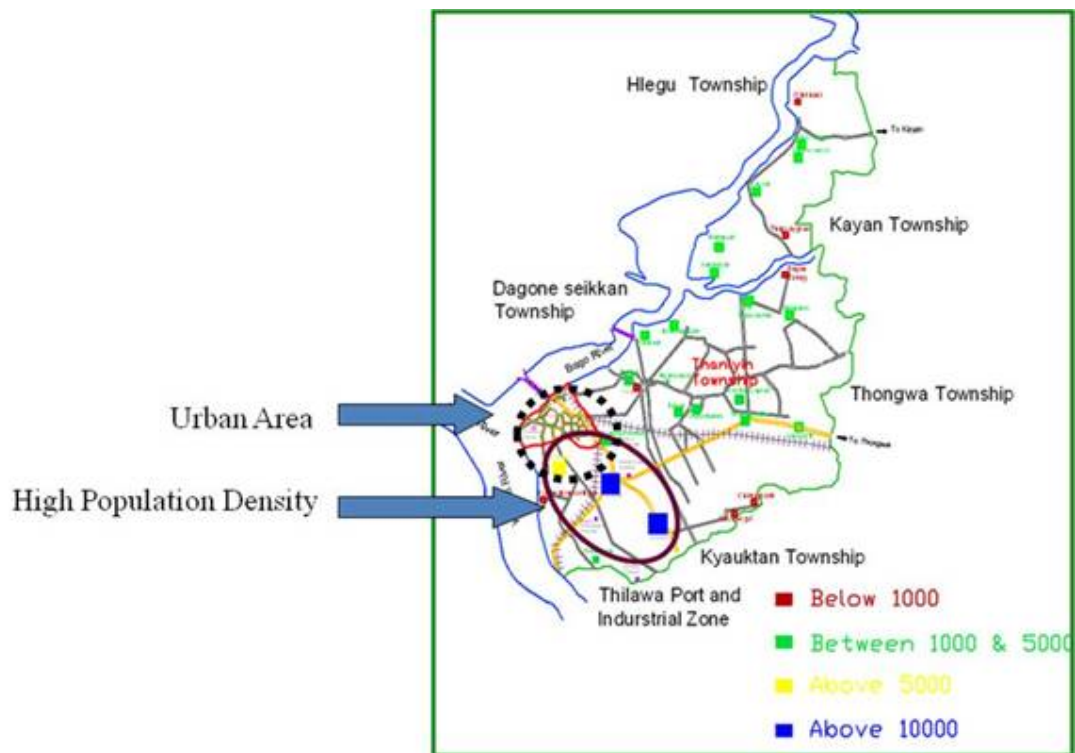


Figure 4. Population of Urban and Rural area in Thanlyin township

Scenarios approach of Population up to 10 years range

In Thanlyin Township, according to 2007 data collection, total population is 166970, urban population is 56197, and rural population is

⁴ Field Study

110791. The following population projection is calculated for scenarios approach of population up to 10 years range according to growth rate (2.3) that is based on the national pattern of demography.

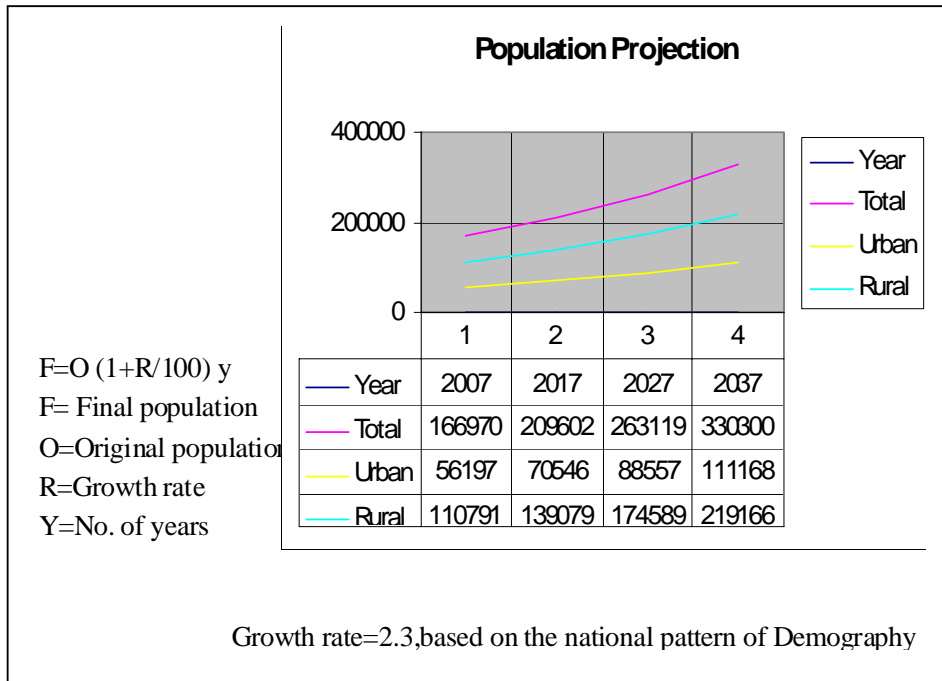


Figure 5. Scenarios approach of Population up to 10 years range

It requires 40000 populations for Thilawa Special Industrial Zone. At present it has 10000 populations for local industrial zone. In coming 2017 year, if Special Industrial Zone has been constructed; Thanlyin Township population would be about 259602.

Thanlyin Town's population was estimated as 166970 at February 2007. There are (81527) male and (85443) female. The 2007 demographic structure shows that the manageable age group (25 age to 59 age) is 45.04% and school going age group (5 age to 24 age) is 36.21% and efficient working age group (under 5 age and over 59) is 18.27% of total population. Above 70 ages are 7302 Nos.

When there are increased employment opportunities, it is interesting to look into migration rate to Thanlyin because it is very close to Yangon.



Figure 6. Population density of Thanlyin Town

Table 2 Educational Facilities (Universities and Colleges)

Name of University	No. of Students	No. of services	Total Population
Yangon Eastern University	66814	838	67652
Technological University	4327	243	4570
Marine Technological University	1739	298	2037
Cooperative Degree College	598	139	737
Total Population	73478	1518	74996

Most of the students and services are coming from Yangon. 70 % of total students and service personnel are from Yangon. Others are from Thanlyin, Kyauktan, Khayan and Thonegwa. Therefore, Thanlyin Township is the main point of education. These facts effect the planning of Thanlyin town. Thanlyin Township area has 9 high schools, 6 middle schools 18 past primary schools, 44 primary schools, 2 pre schools and 6 monasteries. Therefore Thanlyin township area is sufficient for educational facilities.

Table 3. Health Facilities

Kinds of Health Facilities	Number (Urban)	Number (Rural)
Township Hospital (150 beds)	1	
Station Hospital (16 Beds)		1
Rural Health Centre		3
Sub Rural Health Centre		16
School Health team	1	
Maternal and Child Health Centre	2	
Diseases Control -Leprosy Team -(Vector Borne Disease Control) Team TB control Team HIV/ AIDS	1	1 1 1
Private Clinic	41	
Indigenous Medicine Clinic	1	

According to Planning Standard of DHSHD and Time Saver Standard, there has needed Public parking, Institutional facilities; eg. 5 nos Fire station and a Town hall, Recreational facilities; eg. a regional park, Commercial facilities; eg. 7 nos. bank offices, Health facilities; eg. 5 nos. 100 bedded

hospital, Employment facilities; eg. recreation area for industrial zone etc. Walking distances from dwelling units to schools, shopping and markets are suitable. Public transportation from dwelling units is also suitable.⁵

Development activities

Development activities of DHSHD are Thanlyin Yandanan Housing Project, Thirihantha housing project; Thanlyin Golf Club Project, Myatyadanar Housing Project and Thilawa Special Industrial Zone. These projects are to supply Thanlyin town development planning and to decrease density of population of Yangon city.

Therefore, Thanlyin is one of the important townships of Yangon in the decentralization process of Yangon CBD and inner city area.

Famous Historical Pagodas

Thanlyin is famous for its historical sites such as Kyaik-Khauk Pagoda (one of the famous land marks of Myanmar and the pride of Thanlyin Township), Kyauktan Ye Lai Pagoda (one of the interesting places of Myanmar) and Padagyi Pagoda.

There are many people coming from Yangon especially on weekends because of existence of those religious facilities.

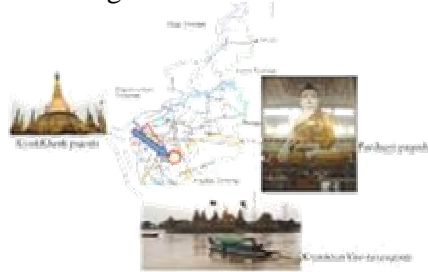


Figure 7. Religious area in Thanlyin Township area



Figure 8. Influencing Factors for Thanlyin Town Development planning

Influencing Factors

Yangon-Thailay Bridge 1 and 2, special Industrial Zone and Port are influencing factors for Thanlyin town development planning.

⁵ Field study and analysis by DHSHD by planning standard for Myanmar and Chiara, J.D et al. 1995. *Time Saver Standard for Housing and Residential Development*. 2nd ed. U.S.A: Mc Graw-Hill, Inc.

Exports

The town has many rice fields' areas. Most of townsmen are farmers. sufficient percentage is 181.54% according to 2006 data collection. So main exports are rice and rice products. It is 80% of the value of domestic exports from Thanlyin. Timber and industrial products are 10% and 5% respectively. Other domestic exports are Pedes, forest products, animals and marine products.

3. Conclusion

Although there has enough educational facilities, industries and Myanmar International Terminal Thilawa Port in the whole township area, Thanlyin town doesn't as develop as it should be. People from Thanlyin, Kyauktan, Khayan, Thonegwa have to go to Yangon via Thanlyin town because there has not enough facilities sufficiently such as, institutional facilities, recreation facilities, commercial facilities, Health facilities and transportation facilities are not sufficient in those areas.

In future work, the above facilities should be considered according to population projection up to 5 years range or 10 years range and people from other cities that coming in by day and going back by night.

The main thing is to find out what are the main boosters for Thanlyin town economics and physical developments and they may be economics and physical developments and they may be providing commercial and recreational facilities at the strategic areas of the town and on the roads linking Yangon CBD and Thilawa.

If the required facilities fulfill in Thanlyin town, its plan would become a more systematic and it would also become a more livable town.

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