

Geographical Study on General Land Use of Sagaing Township, Sagaing Region, Myanmar

Pyone Pyone Khaing*

(Department of Geography, Sittway University, Rakhine State, Myanmar)*

DOI: 10.29322/IJSRP.9.06.2019.p9012

<http://dx.doi.org/10.29322/IJSRP.9.06.2019.p9012>

Abstract -The main aim of this paper is to analyze the general land use of Sagaing Township, it is found to be influenced not only by natural factor such as topography, soil, climate and natural vegetation but also by social factor. Due to the increase of population in Sagaing urban region it is necessary to set up systematic residential lands. In order to get the urban features and characteristics it is necessary to start transforming the agricultural land to the industrial land in urban area. Within the inner central part of Sagaing Township the village tracts do not have sufficient water for drinking water. That is why the underground water of these village tracts should be systematically dug or drilled in order to get sufficient amount of drinking water. Transportational land use and institutional land use are expanded within Sagaing Township. The expansion of these two land use caused the decrease of the agricultural lands. The pattern of land use of Sagaing Township at any particular time is determined by the physical, economic and institutional framework taken together. Based on the present land use pattern in order to have the development in Sagaing Township more systematic land use planning can be drawn. In 2010-2011 land use of Sagaing Township is classified according to land use.

Index Terms- Land use, Rural area, Urban area.

I. INTRODUCTION

Land use is the surface utilization of all developed and vacant land on a specific point, at a given time and space. The study of land use is of immense value for planning the regional development. The systematic utilization of land can be able to promote socio-economic development. Land is the most fundamental natural resources for human beings and without land; even the human kind could not come into existence. The intensive use of land depends upon population concentration, economic prosperity thorough better agricultural production, human establishments, industrial locations, communication and transport lines, while extensive use of land is related to sparse population, dispersed settlements, the absence of communication lines and the crude forms of transport. Thus the study of land utilization is of immense value in tracing out the past use of land and its future trend.

The eastern portion of Sagaing Township is composed of Sagaing Range. The Mu River valley in the western part and the Ayeyarwady River valley in the southern part are the low flat plains. Thus land use in Sagaing Township is conditioned by the physical factors which limits the use capabilities of land. Together with the growth of population, the land use pattern of Sagaing Township is changed with time. The changes of land use in Sagaing Township were more prominent after 1988 for the operation of regional development in almost all fields. Based on the physical and nonphysical factors, the land use patterns in Sagaing Township is attempted on the geographical point of view.

Aim and Objectives

The main aim of this research is to find out the more effective land use pattern for the regional development in Sagaing Township. The objectives are,

- to find out the problems that prevent the most effective land use in Sagaing Township
- to provide information and suggestions concerning with the effective land use in Sagaing Township.

II. MATERIALS AND METHODS

Study Area

The study area "Sagaing Township" is located on the West bank of the Ayeyarwady River in Dry Zone of Central Myanmar. It lies between the latitudes 21° 50' North and 22° 15' North and the longitude 95° 40' East and 96° 2' East. It has about 485.16 square mile (310502 acres) of area and is composed of Sagaing Town Proper and 81 village tracts with 206 villages (Fig1).

The present paper is based on primary and secondary data. The primary data for this research paper were available from field survey. The secondary data were provided from government office, such as Land Record Department. Qualitative and Quantitative methods are used in this paper. The study period lasted from January 2011 to January 2012.

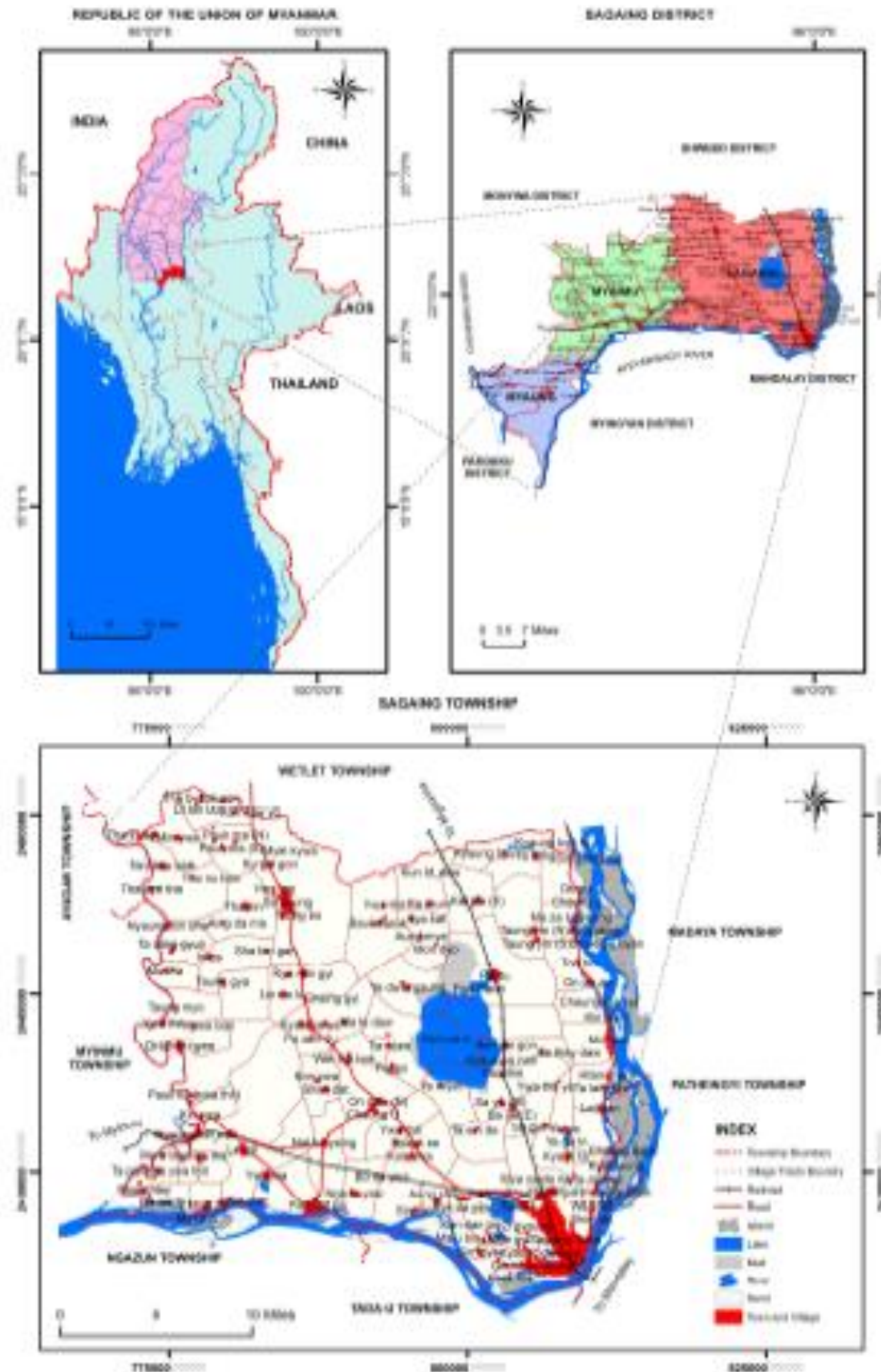


Figure1. Location of Sagaing Township

Source: UTM map No. 2195-09, 2195-13, 2196-01, 2295-12, 2296-16, 2296-04.

III. ANALYSIS OF GENERAL LANDUSE OF SAGAING TOWNSHIP

Land use classification had received great attention of geographers in different parts of the world. It is common parlance in any study to classify the land use in different categories. The land use classification depends upon the climatic and terrain conditions to the

region and the needs of the society. In Sagaing Township the types of land use vary from rural area to urban area. The land use pattern of Sagaing Township in 2011-2012 is presented in (Table1, Fig 2).

1. Pattern of Land use in Urban Area.

In the urban area of Sagaing Township, the type of land use are classified in to seven types according to use. These are

- (a) Agricultural land
- (b) Residential land
- (c) Industrial land
- (d) Transformational land
- (e) Institutional land
- (f) Water Bodies and
- (g) Other lands

(a) Agricultural land

The area of Sagaing Town proper is extended into the surrounding rural areas especially Tinteik village tract located on the west of the town. Therefore, the agricultural lands are found in the western and north western parts of the town. In 2011, there are totally 907 acres of agricultural land which forms about 19.3 percent of the town area. These agricultural lands are composed of 416 acres of "Le" land (paddy land), 105 acres of "Ya" land (dry crop land), 162 acres of "Kaing" land (riparian land) and 224 acres of garden land.

(b) Residential Land

At present, Sagaing Town Proper has an area of Residential land about 1,763 acres which accounted for 37.4 percent of the town area.

(c) Industrial Land

In 1997 an Industrial Zone was established in Padamyar and Nilar Ward of Sagaing Town Proper. However, many cottage industries are still remained in other wards. Thus in 2011 there are totally 563 acres of industrial area which accounted for 12.00 percent of the total of Sagaing.

(d) Transformational Land

Transportation system of Sagaing Town is composed of road, rail road and water transportation. According to 2011 data, there is about 456 acres of transformational lands including 212 acres of rail roads and 244 acres of roads which forms about 9.7 percent of the total of Sagaing.

(e) Institutional Land

The institutional lands are those lands which are used for governmental offices, schools, hospitals, various public organization and religious buildings. In 2011, there are 622 acres of institutional land which forms about 13.2 percent of the town area.

(f) Water Bodies

As Sagaing Town proper is located on the right bank of Ayeyarwady River, there are totally 72 acres of water bodies which form about 1.5 percent of the town area in 2011.

(g) Other Lands

Other lands include recreational lands and unused or unclassed lands. In 2011, the area of other land is about 327 acres which accounted for 6.9 percent of the town area.

2. Pattern of Land use in Rural Area.

In the rural area of Sagaing Township, the types of land use are classified into eight types according to use. These are

- (a) Agricultural land
- (b) Grazing land
- (c) Residential land
- (d) Industrial land
- (e) Transportational land
- (f) Institutional land
- (g) Water bodies and
- (h) Other lands.

(a) Agricultural Land

As the agriculture is the main economic activity, the agricultural land use is the most dominant type of land use in rural area of Sagaing Township. In the agricultural land use in rural area of Sagaing Township, as there are diversified variations in the conditions of physical factors and conditions of social factors, there are differences in agricultural land types. The types of agricultural level within Sagaing Township can be classified in to three land types as "Le" land (paddy land), "Ya" land (Dry crop land) and "Kaing-

Kyun" land (Riparian Land). In 2011 data, in rural area of Sagaing Township, there are 215,769 acres of agricultural lands forming about 70.6 percent of rural area.

(b) Grazing Land

As the areas with poor soils and steep slopes are not suitable for agricultural land use they are used for grazing land in Sagaing Township. In rural area of Sagaing Township a total area of grazing land is about 13,024 acres which accounted for 4.26 percent of the rural area.

(c) Residential Land

In 2011-2012 Sagaing Township has the residential land with 6,830 acres which constitutes about 2.23 percent of the rural area.

(d) Industrial Land

The industrial works are performed in residential compounds especially in the villages located along the major roads. In 2011, there are 2,217 acres of industrial land in rural area which accounted for about 0.73 percent of rural area of Sagaing Township.

(e) Transportational Land

Transportational land includes 696 acres of rail road and 5,055 acres of roads. In 2011-2012 transportational land is 5,751 acres which accounted for 1.88 percent of rural area of Township. The major rail roads and roads connect Mandalay with Monywa and Shwebo. It is found that most of the roads the rural area are earthen roads.

(f) Institutional Land

In 2011-2012 institutional land use of rural area was 5,962 acres which forms about 1.95 percent of the rural area of township.

(g) Water Bodies

The water bodies composed of rivers, streams, underground water, lakes and canal in Sagaing Township. In 2011, there are 32,690 acres of such lands which accounted for about 10.69 percent of rural land area.

(h) Other Lands

In 2011, there are 23,549 acres of other lands which constitutes about 7.7 percent of the rural land area.

Table 1. Pattern of Land use in Sagaing Township (2011-2012) .

Source: Land Records Department, Sagaing Township, 2011

Sr. No.	Categories	Urban		Rural		The Whole Township	
		Area in acres	Percentage	Area in acres	Percentage	Area in acres	Percentage
1.	Agricultural land	907	19.3	215,769	70.6	216,676	69.78
2.	Grazing land	-	-	13,024	4.26	13,024	4.19
3.	Residential land	1,763	37.4	6,830	2.23	8,593	2.77
4.	Industrial land	563	12.00	2,217	0.73	2,780	0.9
5.	Transportational land	456	9.7	5,751	1.88	6,207	2.0
6.	Institutional land	622	13.2	5,962	1.95	6,584	2.12
7.	Water Bodies	72	1.5	32,690	10.69	32,762	10.55
8.	Other land	327	6.9	23,549	7.7	23,876	7.69
	Total	4,710	100%	305,792	100%	310,502	100%

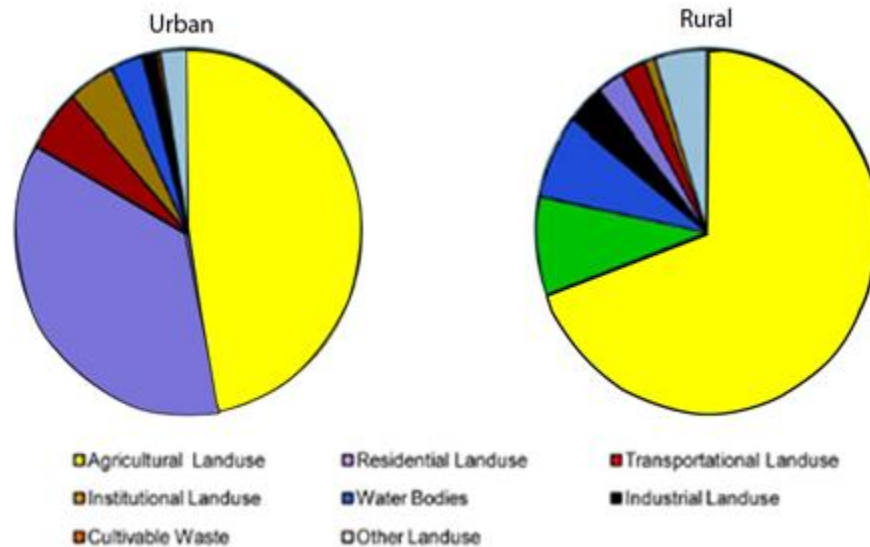


Fig 2. Pattern of Land use in Sagaing Township (2011-2012)

IV. DISCUSSION

General land use in Sagaing Township at any particular time is determined by the physical, economic and institutional framework taken together. The present pattern of land use can be considered increase sort of static harmony and adjustment with other main characteristic of the economy of township. The socio-economic conditions in the urban areas are good with job opportunities, the rural people especially the cultivators and labors shifted to the urban region. This is why in Sagaing urban region in order to establish and set up systematic residential lands to appear for the increased population, it is necessary to draw up systematic urban planning projects. In making the proposal for setting up residential lands for the growing population, the planners should include the requirement of lands for the housing of growing population. Moreover, the need of the residents for clean, healthy, environment with good sanitation should be considered also.

V. CONCLUSION

In the urban wards within Sagaing Township, as there is an increase in population, the land uses are being carried on according to the characteristics of urban qualities. At present, roads in Sagaing Twonship have been connected and upgraded, especially village to village roads more assessable. After these roads are completed the transportation land use of Sagaing Township will became much changed and better in future.

ACKNOWLEDGMENT

First and foremost we wish to express our sincere indebtedness to Dr. Maung Maung Naing, Rector of Yadanabon University, Profound thanks are also due to Dr, Khin Thein Oo, Professor and Head, Department of Geography, Yadanabon University.

REFERENCES

- [1] Berry, B.J.L and Marble. Special Analysis A Reader in Statistical Geography, Prentice- Hall Newjersey.
- [2] Chhibber, H.L (1939). Geology of Burma, London.
- [3] Heiling, G K (1994) (4),(831-859). Neglected dimensions of globalland use change: Reflection and data, Population and Development Review, 1994.
- [4] Pyone Pyone Khaing (2015). A Geographical Assessment on Land use Pattern in Sagaing Township. Ph.D thesis Mandalay University.
- [5] Rhind D. and Hudsun, R (1980). Land use, Methuen, London.

AUTHOR

First Author- Pyone Pyone Khaing, Associate Professor, Department of Geography, Sittway University, Rakhine State, Myanmar
Corresponding email: pyonepyonekhaing135@gmail.com