

Challenges on Rural Development: Case Study of Hinthada Township

Kyaw Min Htike¹, Moh Moh Khaing², Than Htike Aung¹, Win Thanda Oo³, Myint Thida⁴

Abstract

Hinthada Township is located in the northern part of Hinthada District and lies in the northwestern part of the Ayeyarwady River. Rural development of Hinthada Township is affected by physical and social challenges. Being located on the river bank, flooding and bank erosion are the problems affecting rural development. As it is located in a low lying area, flooding occurs in the rainy season. As it is located in the Ayeyarwady Deltaic area, agriculture is major economy and high proportion of population is engaged in agriculture. Although agriculture is major economy, it gives low economic return and decreases in job opportunity in agriculture caused by mechanization which causes rural urban migration. Existing economic activities also give irregular income for local people. Emigration of young adults is the problems affecting agriculture activities in peak working period. Education status is also low due to low accessibility and insecurity in the flooding period. The objectives of the paper are to study geographical background that related challenges of rural development, to find out challenges of rural development and to explore the best ways that support rural development of Hinthada Township. To present this paper, field observation was done and primary data were collected through interview, semi-structure questionnaires and group discussions. To do the paper in detail, quantitative-qualitative method was applied.

Keywords: Geographical background, job opportunities, flooding, erosion, irregular rain, income availability, migration

Introduction

The rural development generally refers to the process of improving the quality of life and economic well-being of people living in rural area (Panda and Majumder, 2013). Rural development may be also defined as overall development of rural areas to improve the quality of life of rural people. It is an integrated process, which includes social, economic, political and spiritual development of the poorer sections of the society. Varouhakis (2000) said that rural migration is caused by decrease in agricultural working period, lack of employment opportunity outside agriculture, and more economic opportunity in urban areas. There is no universally accepted definition of rural development. Rural development may be defined as overall development of rural areas to improve the quality of life of rural people (Agriculture Extension).

Myanmar is still agricultural country and nearly 70 percent of the population lives in rural area of Myanmar. Rural people depend on agriculture for their survival but it gives low and irregular income to rural people. In Myanmar, rural areas are less developed due to many challenges. Different challenges are found in rural areas of Myanmar. These challenges affect rural development through socioeconomic conditions of the local people.

Hinthada Township is situated on the western bank of the Ayeyarwady River and suffers flooding and bank erosion because of its location. Education status is affected by flooding as well as insecurity in the rainy season. Economic opportunity is also low in that area because of rural economy including cultivation. It gives low and irregular income and job opportunity has become low due to agriculture mechanization. Young adults move to

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urban areas to get higher income and increasing labour cost and this in turn affects the local peoples' economy. Therefore, it is difficult to develop rural areas of Hinthada Township due to many challenges.

Therefore, Hinthada Township was selected to present rural development and the challenges affecting rural development in the area from the geographical point of view.

Study Area

Hinthada Township lies between north latitudes $17^{\circ} 24'$ and $17^{\circ} 51'$ and also between east longitudes $95^{\circ} 11'$ and $95^{\circ} 34'$. It has an area of 980.821 square kilometers (376.695 square miles). It is also composed of an urban area and 103 village tracts and nearly 70 percent of the population lives in rural area. Therefore, rural development plays an important role to upgrade socioeconomic condition of the people but challenges in rural development such as flooding, low income, low education, etc. affect the rural development in Hinthada Township.

Aim and Objectives

The aim of the paper is –

-to find the ways that can cope challenges of rural development in Hinthada Township

Objectives of the paper are

- to study geographical background that related challenges of rural development
- to find out challenges of rural development
- to explore the best ways that support rural development of Hinthada Township

Data and Methodology

Primary data on challenges were collected through field observation and semi-structure questionnaires. Hinthada Township is composed of 21 wards and 103 village tracts. Among the village tracts, 10 village tracts were selected as sample areas and 20 questionnaires were distributed to households. 20 interviews and 5 phone interviews were done with local people to understand effects of different challenges.

Secondary data from departments concerned were also applied and qualitative quantitative mixed method was applied.

Results and Findings

Geographical background of Hinthada Township

Location

Hinthada Township extends from North latitude $17^{\circ} 26'$ to $17^{\circ} 48'$ and East longitude from $95^{\circ} 11'$ to $95^{\circ} 33'$. It is situated on the deltaic plain of Ayeyarwady Region. It is in the northern portion of Ayeyarwady Region and southern part of the Hinthada District (Figs. 1 & 2). It is situated between Ayeyarwady River and Ngawun River. The boundary in the eastern part is Ayeyarwady River and Ngawun River flow in the northeastern part of the area. It is one of the factors causing challenges to rural development.

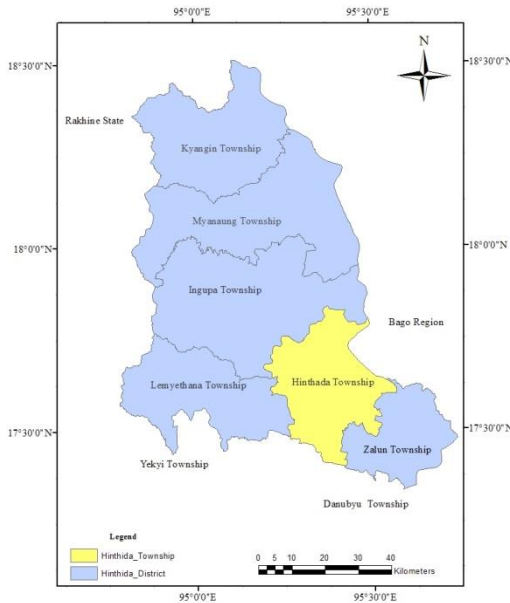


Figure (1) Hinthada Township in Hinthada District. (Source: Pann Ei Phyu, 2017)



Figure (2) Village Tracts of Hinthada Township. (Source: Pann Ei Phyu, 2017)

Relief

This township is located in a low-lying area at a mean elevation of 44.3 feet above sea level because it is near the Ayeyarwady River (Fig. 3). The low land area suffers flooding in the rainy season and it is also one of the challenges to rural development.

Soils

The soil types of Hinthada Township are Alluvial Soils, Gley and Gley Swampy Soils and Meadow and Meadow Alluvial Soils (Fig. 4). These soils are very favourable for crop cultivation. Local people practices double cropping: paddy is grown in the rainy season and Matpe (Black gram) in cool dry period or summer. Because of intensive cultivation, farmers use chemical fertilizers for the purpose of getting high yield. Then, the soils become deteriorated. Therefore, existing soils are not only advantages for crop cultivation but also one of the challenges affecting rural development.

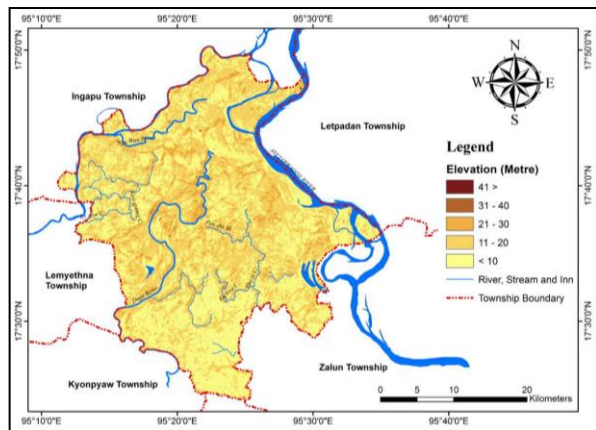


Figure (3) Relief and Drainage of Hinthada Township. (Source: Pann Ei Phyu, 2017)

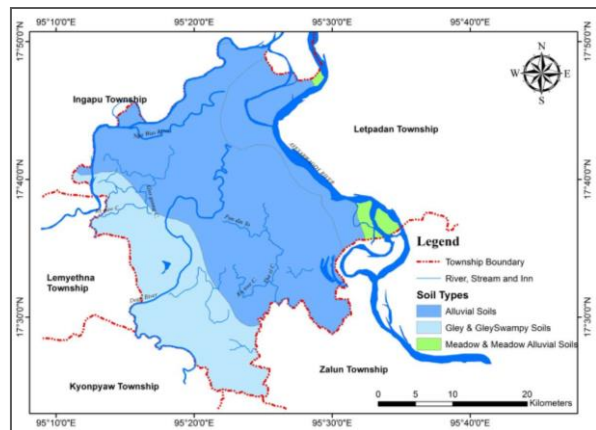


Figure (4) Soils of Hinthada Township (Source: Pann Ei Phyu, 2017)

High proportion of rural population

Agriculture is the main economy of Hinthada Township and most people engaged in agricultural activities and rural population was greater than urban population. In 2017 urban population was 27 percent of total population and rural population was 73 percent (Fig. 5).

Education level

Underdeveloped human capital severely constrains rural development. Almost 70% of the population and the majority of the poor and the rural and agricultural sectors thus require priority attention (ADB, 2017).

According to questionnaire results, more than 10 percent of the household have graduates (Fig. 6). It is directly related to socioeconomic conditions. Because of low family income, young adults who are above 14 years can help in farming activities and they leave for school. Therefore, dropout rate is high after finishing middle school level.

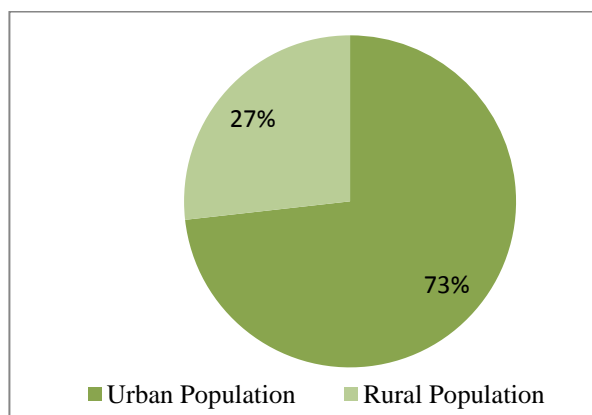


Figure (5) Rural Urban Population of Hinthada Township. (Source: Questionnaires’ answers)

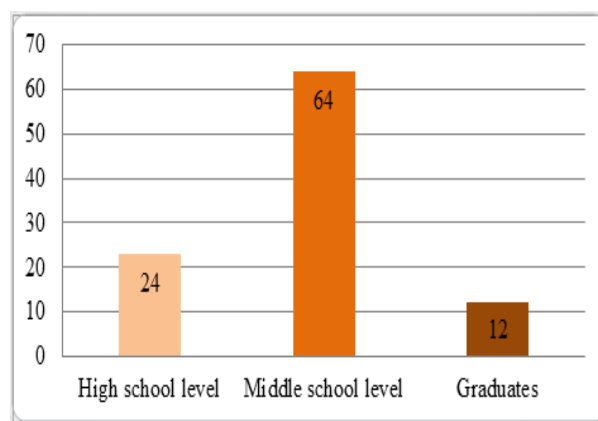


Figure (6) Education Level of Hinthada Township. (Source: Questionnaires’ answers)

Challenges of Rural Development

Physical Challenges include flooding, bank erosion and irregular rain.

Flooding and Bank erosion

Hinthada Township has been affected by massive floods almost every year.

Flooding became severe due to change in amount and distribution of rainfall caused by climate change and shallow river channel of Ayeyarwady caused by deposition. The village tracts located in the northeastern part of the township suffers flooding and bank erosion every year (Fig. 7).

Flooding is an annual problem in the northeastern part of Hinthada Township because of nearness to Ayeyarwady and Ngewun rivers. Flooding is found 2 or more times per year and it lasts more than 10 days and schools are closed because of severe flooding, poor accessibility, etc. in that period. It also affects rural development through education (Figs. 8 & 9).

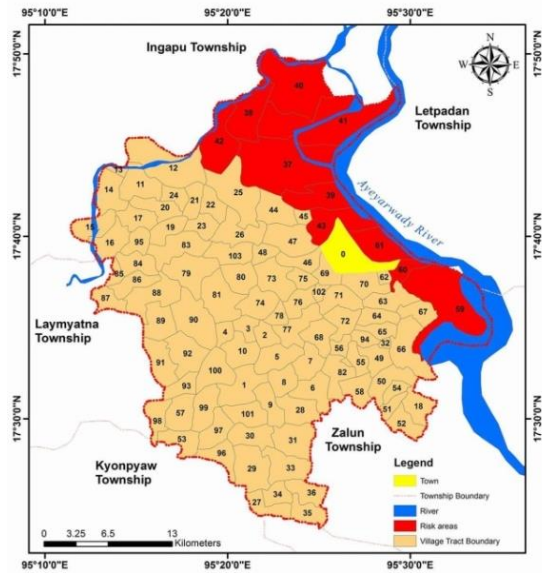


Figure (7) Village Tracts affected by flood and river bank erosion.
(Source: Field survey, June, 2017)



Figure (8) Flooding of Hinthada Township.
(Source: Field Observation)



Figure (9) Flooding of in Hinthada Township.
(Monastery). (Source: Field Observation)

Pegyikyun, Letpanhla, Kywetkyun, Theyoe, Kyaukye, Tarngote, Phaunghteik, Tharyaraye, and Shweguikyun villages located in the western part of Ngawun and Ayeyarwady Rivers suffer severe floods and bank erosion (Figs. 10 & 11). In these villages, the erosion rates vary from 1.8 meter (6 ft) to 77 meter (264 ft) per year (Ye Kaung Htun, 2014). Cultivated area loss was due to bank erosion and decrease in cultivated area affects income of the local people and socioeconomic conditions of the area.



Figure (10) Allocation of Home in Hinthada Township. (Source: Field Observation)



Figure (11) Allocation of monastery in Hinthada Township. (Source: Field Observation)

Irregular rain

Like other areas, Hinthada Township suffers the effects of climate change. In the study area, rainfall pattern change affecting crop cultivation is found.

In 2010, heavy rain occurred in June, July and August. In 2017, double maximum rain is found in the area. The first maximum is in July and second maximum in October (Figs. 12 & 13). The rain fallen in October reduced crop production especially paddy because paddy is about to be harvested at that time. It is also a challenge affecting socioeconomic condition and rural development.

Socio-economic challenges include job opportunities, income availability, and weakness in infrastructure, migration and environmental problems.

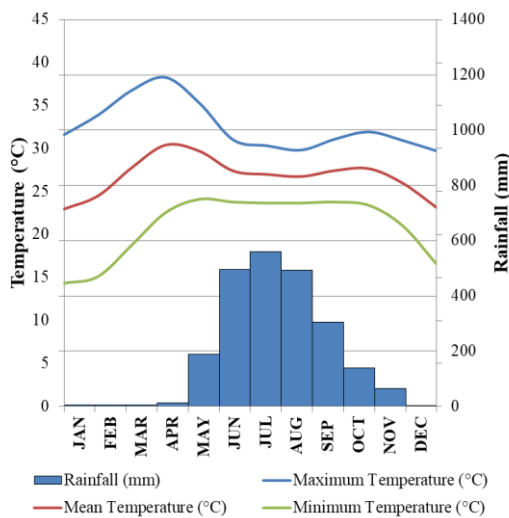


Figure (12) Temperature and Rainfall of Hinthada Township (2010). (Source: Meteorology and Hydrology Department, Hinthada)

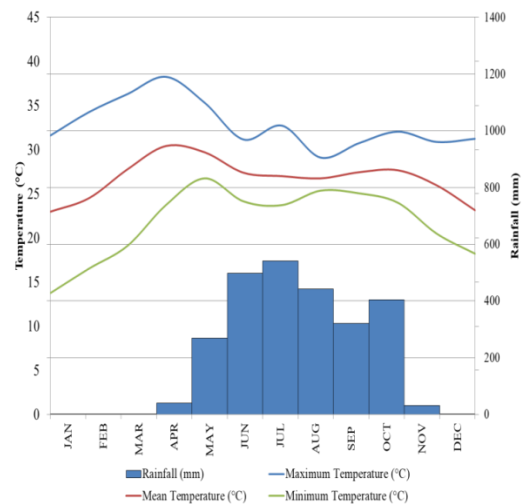


Figure (13) Temperature and Rainfall of Hinthada Township (2017). (Source: Meteorology and Hydrology Department, Hinthada)

Job Opportunities

In the area, job opportunity is low. Agriculture and brick making are major economic activities in the area. Agriculture is a seasonal work and it gives return twice per year. After using agriculture machineries in land preparation and harvesting, job opportunities for local people including casual labour decreased (Figs. 14 & 15). Brick making is also a seasonal work and it can be done in the dry period only. Therefore, decrease in job opportunities affects socioeconomic condition of the people as well as rural development.



Figure (14) Machinery used in land preparation of Hinthada Township. (Source: Field Observation)



Figure (15) Machinery used in Paddy harvesting of Hinthada Township. (Source: Field Observation)

Income availability

Most of the farmers are small land holders they possess less than 2 ha (5 acres). Farmers in the northern and eastern part cultivated “kaing” crops such as chili, vegetables and pulses on Kaing land. In the southern part, most farmers practiced double cropping; monsoon paddy is cultivated in the rainy season and summer paddy and pulses in the dry period. Farmers in the north eastern part get income through crop cultivation during the period from November to February. In the southern part, income is derived from monsoon paddy in November and December and income from summer paddy and pulses in April (Table 1). Income obtained from agriculture is irregular and it is insufficient for their survival.

As non-farm economic activities, brick making is done in the dry period and income of the workers is 5000 ks per day. It also gives irregular income for the local people.

Therefore, existing economic activities do not give sufficient income for most local people.

Weakness in Infrastructure

Myanmar’s inadequate infrastructure hinders access to markets and social services and the poor quality infrastructure is mainly found in rural areas (ADB, 2017). In Hinthada Township, infrastructure especially road infrastructure transporting people and goods is poor in condition. It is difficult to carry agricultural produces from one area to another and it is getting worse in the rainy season. It also affects rural development of the area (Figs. 16 & 17).

Table (1) Existing economic working calendar of paddy cultivation and brick making.

	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monsoon Paddy Cultivation	Yellow	Yellow	Green	Green	Green	Green	Orange					
Summer Paddy Cultivation							Yellow	Green	Green	Green	Green	Orange
Pulses Cultivation							Green	Green	Green	Green	Orange	
Brick making	Orange								Orange	Orange	Orange	Orange



Figure (16) Poor road in rural area of Hinthada Township. (Source: Field Observation)



Figure (17) Road in Urban area of Hinthada Township. (Source: Field Observation)

Migration

Varoufakis (2000) said that rural emigration is caused by decrease in agricultural working period, lack of employment opportunity outside agriculture, and more economic opportunity in urban areas. Migration is also one of the factors hindering rural development of the area. According to questionnaires’ survey, 82 percent of the household have one or more migrants because young adults move to urban areas due to low job opportunity of the rural area. Due to emigration of the rural area, labour shortage problem becomes distinct and labour cost is becoming higher. It again affects the net return of the crop cultivation because of high labour cost. It somehow affects the major economic activities especially agriculture of Hinthada Township.

Environmental problems

Many livelihoods in Myanmar, especially in rural areas, depend on natural resources and the environment. However, the environment and the natural resource base are under

stress from increased population, commercial exploitation, climate change, and natural disasters (ADB, 2017).

Pesticides are widely used in crop cultivation and farmers ignore the risks, safety instructions, and protective directives when using pesticides. The improper usage of pesticides and the incorrect disposal of pesticide wastes contributed to the pollution of groundwater, surface water, and soil, and induced health problems in local communities.

Conclusion

In Hinthada Township, rural development is affected by many challenges including physical challenges and socio-economic challenges. Flooding and bank erosion are annual problems affecting socioeconomic condition of the local people. Cultivated area loss is found due to bank erosion and schools are closed in the flooding period. Irregular and untimely rain reduces crop productivity that gives major income to the local people.

Job opportunities, income availability, weakness in infrastructure, migration and environmental problems are also challenges affecting rural development. Because of low job opportunity, migration became distinct in the area and income availability especially irregular low income affects migration as well as rural development. Environmental problems are related to local people's attitude and awareness on health care (Fig. 18).

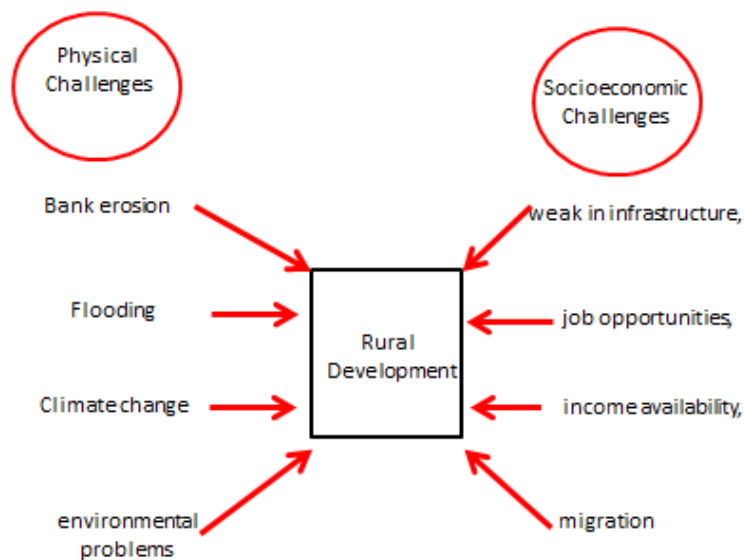


Figure (18) Flow Chart of Rural Development and its challenges.

Therefore, on the one hand, it is necessary to support and educate the people for the purpose of getting rural development of Hinthada Township. On the other hand, it is needed to fulfill the infrastructure that is one of the major pillars for rural development. To be socioeconomically developed rural area, it is necessary for local people and authorities concerned to cooperate in solving the problems encountered by the local people. It is also necessary to do further research on soils and problems on agriculture, etc. that mainly affect economy of the farmers as well as the local area.

Acknowledgement

Firstly, we would like to express our thanks to Dr Tin Htwe, Rector, and Dr Mar Lar Pro-Rector, Hinthada University for giving the chance to write the research paper and their encouragement. We would like to extend my thanks to Professor Dr Kyi Kyi Mya, for her advice and helps in doing this research. Last but not the least, we want to express our sincere thanks to friends of our department, famers who we interviewed on cropping systems and the staff of Agricultural Land Management and Statistics for their helping hands.

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