Potential of Agricultural Land Use within Dawei Township

Yi Yi Cho

Abstract

This paper intends to highlight the productive potential of agricultural land in Dawei Township. The township is located in Tanintharyi Region, southern part of Myanmar which shares the boundary with Thailand. Topographically, much of the land is hilly and mountainous except the lowland valley formed by the Dawei River. Thus the land suitable for growing field crops is relatively small, but it has a wide land area favourable for successful planting of perennial crops. Unlike most other townships, it has a large proportion of culturable waste land. Since the correlation between reclaimed land areas and the distance of each areal unit from Dawei Town has negative relationship rather than positive, the greater the distance from Dawei Town, the lesser the reclaimed land areas in each areal unit**.** The establishment of perennial crop plantation demands a substantial amount of capital investment. However, perennial tree crops are more profitable, in the long run, owing to suitability of land and high demand in both domestic and foreign markets. The gradual conversion of the reclaimed land into perennial crop land and further reclamation of waste land will eventually result in the dominance of commercial production of agriculture in the near future. Among the perennial crops, rubber is most promising in demand as well as in price and hence profit is high. The development of the agricultural sector will strengthen the economy of the township and the socio-economic status of the inhabitants.

Key wards*:* Agricultural Land, Perennial Crops, Culturable Waste Land, Reclaimed Land

Introduction

Agriculture, in any period, remains important especially for the developing countries. The economy of Myanmar is heavily based on agriculture, because it has different land types and climatic conditions suitable for growing a wide variety of crops. Likewise, the economy of Dawei Township depends largely on the agricultural sector. However, the cultivated land area at present represents only 5.3 percent of the township area and 20.8 percent remains as culturable waste land. Thus, this research work focuses on the possibility of agricultural intensification in the study area.

Research Problem

Based on the above background, this research tries to examine the following problem. Why is the proportion of agricultural area low despite the presence of a large area of culturable waste land within Dawei Township?

Aim and Objectives

The main aim of this study is to highlight the productive potential of agricultural land in Dawei Township. The objectives are:

(1) to examine the controlling factors for the development of agricultural land, and

(2) to identify the reclaimable areas for further intensification of agriculture.

Sources of Data and Methodology

The climatic data are acquired from Department of Meteorology and Hydrology, population data from Immigration and Manpower Department, Dawei, soil types and their characteristics from the Land Use Department, Yangon, socio-economic data from Dawei Township Administration Office and types of land use and the data of crops grown from Land Records Department, Dawei. Base map is taken from the quarter-inch map Nos. 95 J, 95 K, 95 O (1963).

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For the primary data and information, several field surveys and interviews with local farmers are undertaken. Patterns of agricultural land and crops as well as data concerned with labour force are acquired through questionnaires. Geographic Information System (GIS) is used in production of maps and data analysis.

To identify the extent of reclaimed land areas in different areal units reclamation index is used. The relationship between reclamation index and the distance from Dawei Town is assessed by Spearman's Rank Correlation Method.

In analyzing labour as one of the controlling factors on development of agricultural land, structured interviews with 1060 peasant families have been carried out. Data of migrant workers are acquired from field surveys and 9 to 70 peasant families were selected for random survey.

The possible agricultural intensification in the future is predicted and the areas likely to be converted to agricultural land are presented with maps based on method of Yeates (1963) used in mapping of population potential surface, here as agricultural land potential surface.

This paper, however, essentially focuses on the agricultural intensification by horizontal expansion to grow perennial crops which are in high demand in both domestic and foreign markets.

Geographical Background of the Study Area

Dawei Township which occupies the northern part of Tanintharyi Region in the southern pan-handle region of Myanmar lies between North latitudes 13˚ 17' and 14˚ 36' and between East longitudes 98˚ 12' and 99˚ 12' (Figure 1). It is bordered by Yebyu Township on the north, Thailand on the east, Tanintharyi and Palaw townships on the south and Thayetchaung and Launglon townships on the west. Kappali Sea (Andaman Sea) is about 11.26 km (7 miles) in the west. Because of its location relatively close to the equator, the area receives an annual rainfall necessary for the cultivation of crops.

Myitta Sub-township was constituted on April 1st, 2004* and the entire Dawei Township covering a total area of 6827.6 sq km (2636.14 sq miles or 674852 hectares or 1687131 acres) comprises 18 wards and 25 village tracts. It is the second largest in Tanintharyi Region, next to Tanintharyi Township (11344.59 sq km or 4380.15 sq mi). If other factors are favourable, the large size enhances the development of agriculture.

Being the southern continuation of the Eastern Highlands of Myanmar, the area is hilly and mountainous. The low flatland is confined to the area around the Dawei River Basin and the rest is hilly country with narrow stream-dissected valleys. The Dawei and Tanintharyi rivers are the chief drainage features of the township. The average annual temperature is 26.78° C and the average annual rainfall is above 5000 mm. The township experiences a Tropical Monsoon climate, characterized by alternate wet and dry seasons. In response to relief, drainage and climate, tropical semi-evergreen forests, tidal forests and swamp forests develop. The dominant soil types are fluvisols, gleysols, ferrasols and cambisols.

In 2008, Dawei Township had a total population of 138942 persons and the occupied area was 35650.4 hectares (89126 acres) and the man-land ratio is 1: 0.26 hectares (1: 0.65 acres). The average size of land holding per peasant family is fairly high. In 2008 there were 7075 peasant families and the average land holding size per peasant family was 5.04 hectares

* Report on the implementation of objectives of farmwork by Township Land Records Department (2008)အစီရင်ခံစာ, Settlement and Land Records Department

(12.6 acres). The employment in the agricultural sector in 2008-09 was 49639 persons or 54 percent of the township's total labour force. The agricultural density was 0.72 hectares per person. Depending on relief, size of the village tract and the number of peasant families, the average size of land holding varies.

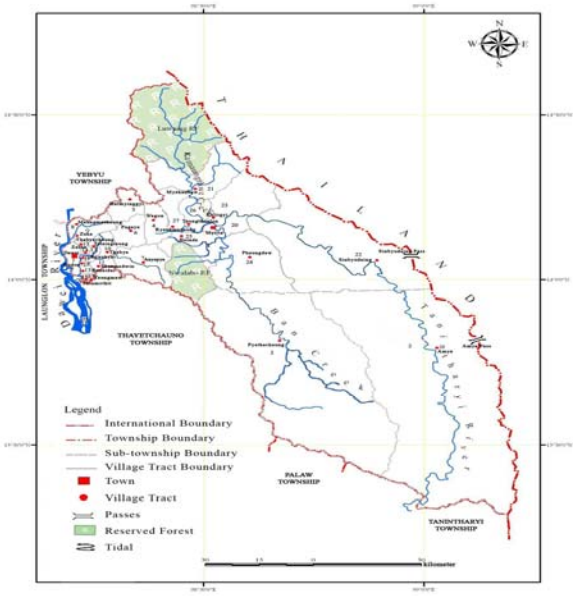

Figure (1) Location of Dawei Township
Source : Settlement and Land Records Department, Dawei

Type of Land Use

The cultivated land area has increased gradually since 2004 largely on account of the improvement in transportation after the constitution of Myitta Sub-township in 2003-04. However, the cultivated land area slightly decreased from 35990.4 hectares to 35650.4 hectares in 2008-09.This decrease is accounted for by low returns from the newly converted land and losses that incurred from high cost of production and low yield and low price of the cultivated crops. The average area of culturable waste land in the period from 1996-97 to 2008-09 was 152570.7 hectares or 381426.6 acres (22.6%) which ranks second among the different general land use types. The culturable waste land area in 1996-97 was 159063.2 hectares or 397658 acres (23.6%). As a result of land reclamation project initiated after 1992, the culturable land area decreased to 140127.6 hectares or 350319 acres (20.8%) in 2007-08, but slightly increased to 140467.6 hectares or 351169 acres (20.81%) due to the abandonment of some unprofitable reclaimed lands. The increase and decrease in cultivated land area and culturable waste land area are strongly interrelated.

During the period between 1996-97 and 2008-09, the average forest land area was 382106.8 hectares or 911902.7 acres (56.6 %), indicating the most dominant land use type of the township in response to elevated hilly relief. In 1996-97 the forest land area was 382324 hectares (955810 acres) and it slightly decreased to 381827.2 hectares (954568 acres) in 2008-09. The decrease was due to the extension of perennial crops in some accessible areas. The average area of others (uncultivable land) in the period from 1996-97 to 2008-09 was 116873.5 hectares (272006.8 acres) which represented 17.3 percent, ranking third in area among the different types of general land use (Figure 2). This land use type increased above the average since 1999-2000 because of the expansion of residential, transportational and industrial lands with the increasing population.

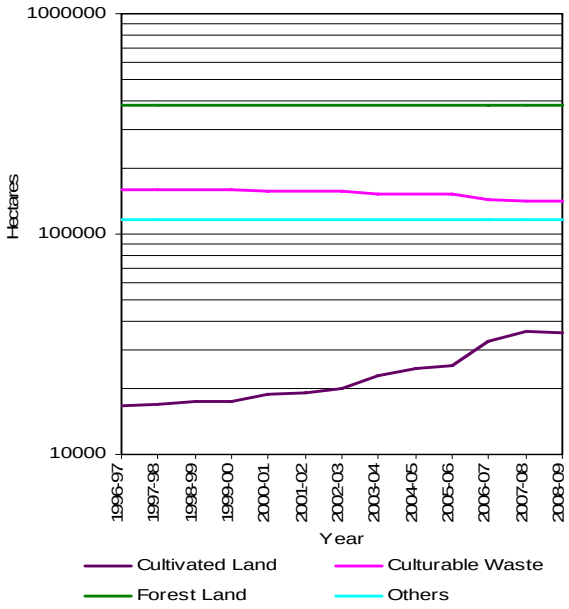

Figure (2) General Land Use of Dawei Township
(1996-97 to 2008-09)

Factors Controlling the Potential of Agricultural Land

Development of agricultural land is somehow, controlled by various physical and socio-economic constraints. Factors affecting the horizontal extension of agricultural land are reclamation of culturable waste land, topography, accessibility, market demand, government policy, labour, capital investment and reclaimable area. These factors are specifically analyzed.

Reclamation of Culturable Waste Land

As the economy of Dawei Township depends largely on agriculture, the reclamation and conversion of culturable waste land into agricultural land is one of the most significant activities for further development of the agricultural sector. Although Dawei Township covers an area of 674852.4 hectares, only 2.5 percent is used as agricultural land and 23.6 percent remained as culturable waste in 1996-97. The cultivated land area increased to 5.3 percent of the township total and the culturable land area decreased to 20.8 percent in 2008-09. Even then, the percentage occupied by culturable waste in this township is relatively much higher than that in most other parts of the country. During the last thirteen year period, the reclaimed land area accounts for only 2.8 percent of the township total. At present, the proportion of occupied land area is very small, compared with the township area. Thus, the conversion of the existing culturable waste land into agricultural land must be given first priority to improve the agricultural intensity of the township.

The reclamation index is calculated by using the following formula:

$$\text{Reclamation Index} = \frac{A - B}{A} \times 100$$

A = culturable waste land area in the beginning year (i.e., 1996-97)
B = present area of culturable waste land (i.e., 2008-09)

The use of indices is to help observe easily the extent of achievement in land reclamation in different parts of the township during the thirteen years period. Low value index indicates small reclaimed area while high value shows large area of reclaimed land. If all the existing culturable waste land can be reclaimed the value of index would be 100. For example, all the culturable waste land in Kudoe Village Tract was reclaimed. The village

tract is located close to Dawei Town on Dawei-Myeik highway. Besides, the area of waste land in 1996-97 was only 4 hectares and the reclamation work could have been completed in a short time with relatively less effort and lowest cost. This implies that reclamation index employed here does not reveal the spatial dimension of the reclaimed land area, but it expresses the proportion of reclamation work done in different parts of the township.

The village tracts with the value of index over 80 are Anyapya, Thabya, Shanmadwin, Thabyechaung, and Taungthonlon. Of these, Thabyechaung, Shanmadwin and Thabya are close to Dawei Town with high market demand. Although, Taungthonlon Village Tract is fairly distant from Dawei Town, it is easily accessible and the security condition is good.

The village tracts with low value (less than 10) of reclamation index are Amya, Pyathachaung, Sinbyudaing, Myekanbaw, Kalitgyi and Phaungdaw. Amya Village Tract has 40084.4 hectares of culturable waste land which account for 25.5 percent of the total culturable waste land. However, because of its location close to the Myanmar-Thailand border and low security conditions, no waste land could have been reclaimed in the past thirteen years. Sinbyudaing, Kalitgyi and Myekanbaw village tracts are also close to the Myanmar-Thailand border, but not far away from Myitta Town and the areas have better security. As a result, a small portion of the waste land could have been reclaimed. As such, these three village tracts still have wide areas of waste land with 14762.4 hectares (9.28 percent), 24698.4 hectares (15.52 percent) and 21164.2 hectares (13.30 percent) respectively. Thus, the culturable waste land still remaining unclaimed in the above-mentioned four village tracts accounts for 63.60 percent of the total. The small number of population, remoteness and less accessibility and low security conditions are responsible for low reclamation indices in these village tracts.

Depending on types of land, reclamation of culturable waste land can be classified into three types: reclamation for *lè* land, reclamation for garden land, and reclamation for *taungya* land.

The reclaimed land in Dawei Township during the period from 1996-97 to 2008-09 included 749.4 hectares of *lè* land, 7985.8 hectares of garden land and 9856 hectares of *taungya* land representing 4.03 percent, 42.94 percent and 53 percent respectively of the total reclaimed area during that period. The small share of *lè* land reclamation is owing to limited flat, lowland left to be reclaimed as *lè* land. The high shares of reclaimed garden land and *taungya* land areas are attributable to the presence of large culturable waste land area in the upland region.

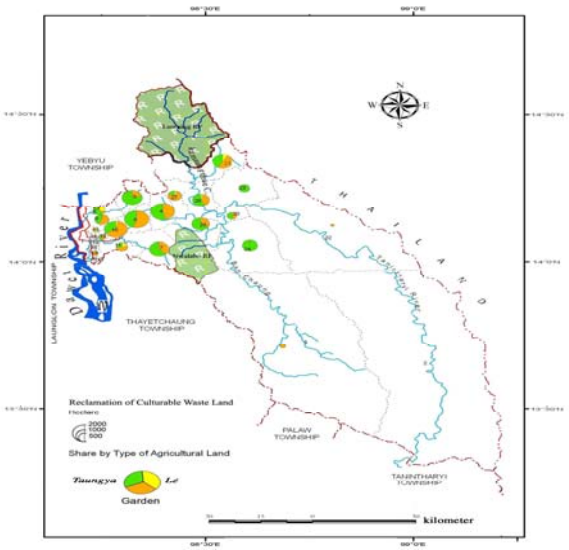

Figure (3) Share by Type of Agricultural Land in Reclamation of Culturable Waste Land within Dawei Township (1996-97 to 2008-09)

Topography

Topography is one of the basic factors that influence the development of agriculture. Even in this age of highly advanced technology and machinery that can level off massive irregular land surfaces, extremely marshy land and rugged terrain are not suitable and profitable for use as agricultural land. The study area has very limited low flatland suitable for cultivation of field crops. About 90 percent of the land is hilly and mountainous (Figure 4). In 2008-09, according to data available, the cultivated land area was only 5.3 percent of the township area and there still remains much culturable waste land that represents 20.8 percent of the township's total area. Even if all the reclaimable culturable waste lands were to be reclaimed in the near future, the total arable area would represent only a little more than a quarter of the total area of the township and 73.9 percent would remain as uncultivable land.

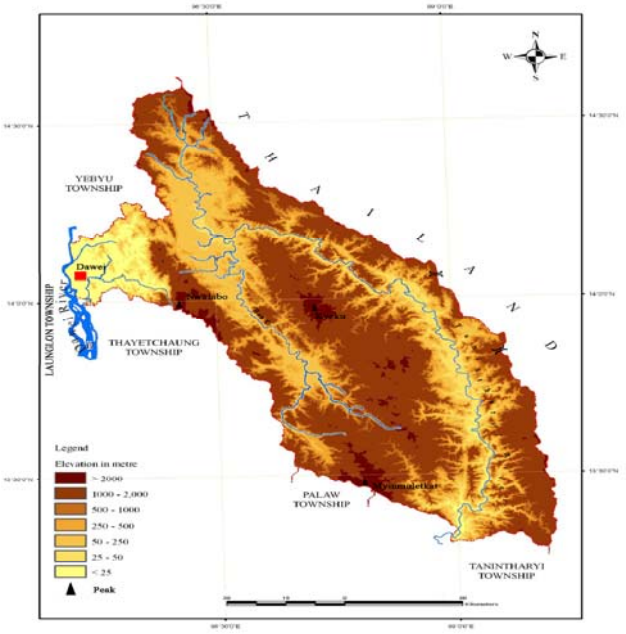

Figure (4) Topography of Dawei Township
(Source : Digital Elevation Model, SRTM – 90)

Owing to the existing topography, the culturable waste lands mostly occupy the upland region. That is why the reclaimed *taungya* land is highest among the different types of reclaimed land. The reclaimed area of *taungya* land is relatively higher in Wagon, Hermyinggyi and Pagaye village tracts located in the hilly region. Wagon, Pagaye and Thabya could have reclaimed larger area of garden land. For both *taungya* land and garden land, the reclaimed area is largest in Wagon and Pagaye. Topographically, Thabya occupies an area with lower and gentler relief relative to areas occupied by Wagon and Pagaye. It could have been able to reclaim a small area of *le* land (65.6 hectares).

The reclamation of *lè* land is directly influenced by the low, flat relief. As Maungmeshaung and Shanmadwin village tracts occupy part of the Dawei River Valley, they could reclaim the largest area of *lè* land. Although, Myekanbaw Villge Tract is located in the eastern hilly region, it is drained by Khamaunghla Creek, and the narrow plain formed by the creek can be used as *lè* land.

Plate 1. Rubber plantation on reclaimed culturable waste land at Thabya Village Tract. This village tract has the largest area (1290.4 hectares) reclaimed for garden land from culturable waste in 2008-09. Source : Field Survey, (27-7-2009)

Plate 2. Rubber plantation on reclaimed culturable waste land at Pagaye Village Tract. This village tract has the second largest area (1276.4 hectares) reclaimed for garden land from culturable waste in 2008-09. Source : Field Survey, (29-7-2009)

Accessibility

Dawei is located on Yangon-Dawei-Myeik Road and it is about 547 kilometers from Yangon City. Dawei is accessible by road, rail, water and air transport from Yangon City. Among these modes of transportation, agricultural commodities such as rubber, betel-nut, cashew, and etc. are mostly transported by road using trucks.

In reclaiming the culturable waste land to extend the cultivated land, accessibility plays an important role. For the inhabitants of Dawei Township, Dawei-Yangon Road, Dawei-Myeik Road and Dawei-Myitta Road are mostly used for passenger transport and shipment of commodities.

In addition to low accessibility and rugged land surface, the security is weak being located in the Myanmar-Thailand border area. Likewise, Sinbyudaing and Kalitgyi village tracts are also located near the border with low security conditions (Figure 5). Generally, the village tracts located away from Dawei Town are accessible only by low quality branch roads and these village tracts are Heinda, Paungdaw, Myekanbaw, Kalitgyi, Sinbyudaing, Amya and Pyathachaung of which Amya is furthest away from Dawei Town with low accessibility owing to high rugged terrain, in addition to weak security conditions. As a result, no culturable waste land could have been reclaimed. Other village tracts of this group, have low reclamation index values.

In order to know whether there is a relationship between the distance from Dawei Town and achievement of reclamation work, Spearman's Rank Correlation method is employed.

Since the resultant value is (- 0.56), there is negative relationship rather than positive. This means that the village tracts fairly close to Dawei Town could reclaim more culturable waste land than the distant village tracts. Reclamation Index value decreases with increasing distance from Dawei Town. This indicates the importance of major market, high accessibility, less steep hill slopes and security in the reclamation of culturable waste land. The calculation shows as significant at 1 percent level, checked by Student t-test.

Market Demand

The relief, climate and soil types in Dawei Township are favourable for the successful planting of perennial crops like rubber, betel-nut, cashew and other fruit trees. Rubber is the most promising tree crop, since the demand for rubber both in domestic and foreign markets is high and increasing. To be able to export more rubber and to earn more foreign currency, the State has been taking concerted efforts to extend the area of rubber plantations. Owing to the suitability of physical conditions to rubber, Tanintharyi Region and Mon State have been the leading rubber producing areas in Myanmar since the colonial days.

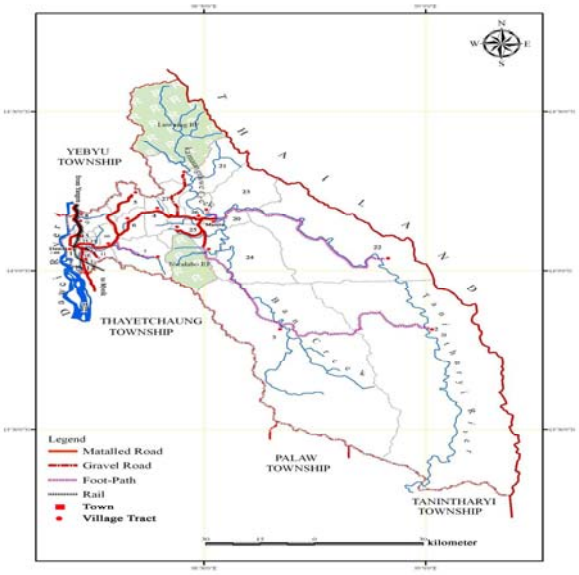

Figure (5) Accessibility to Town/Village Tract within Dawei Township

With the introduction of the market-oriented economy, it is allowed to buy and sell rubber freely within the country. Rubber produced in Dawei Township is not used within the township, but sent to Yangon for domestic uses and for export, mostly to Asian countries.

According to the estimate of International Rubber Study Group, the demand for natural rubber would be around 7.76 million tons in the year 2020. Annual rubber consumption is increasing by 3.8 percent. There are area limitations in major rubber growers of Thailand and Malaysia. There is a potential area for rubber plantation in Myanmar. So, a long-term plan of development in rubber production has been drawn up to extend rubber area to 0.6 million hectares (1.5 million acres) in 2030, (Tin Htut Oo & Toshihiro Kudo, 2003).

The study area still has ample land suitable for planting rubber and the planters have been interested in the extension or establishment of new rubber plantations in response to the growing demand both in domestic and abroad and to the rising price of rubber.

Another crop is cashew that has high demand in foreign market and to some extent, in the domestic market, as cashew nut is increasingly used in high quality food. Betel-nut is primarily planted to satisfy the local demand. More and more betel-nut trees are grown as perennial mixed crop to earn extra income. The beneficial effect of intercropping forms an important component of tree-crop-based- farming system to improve income and living standard of farmers' (Tin Htut Oo & Toshihiro Kudo,2003).

Policy

Many governments have adopted agricultural development policies related to crop types, land use pattern and market for agricultural products to achieve agro-based economic development. After the adoption of Open Market Economic Policy, the government laid down four economic objectives:

Thus, all-round development is primarily based on the development of agriculture. To achieve the objectives, private entrepreneurs and growers are encouraged to take more interest in growing annual and perennial corps on a commercial scale. To further enhance agricultural development, the following five strategies have been adopted:

The development of new agricultural land is one of the five strategies to meet the targets. Central Management Committee has been established since 1991 to effectively manage the vacant, virgin and waste lands. The growers are allowed to operate 2000 hectares (5000 acres) for perennial crop, 1200 hectares (3000 acres) for garden crops and 400 hectares (1000 acres) for annual crops. For the study area it still has wide tracts land that can be profitably used for growing perennial crops.

Labour

As farm mechanization level is still low, manual labour is an important factor in any type of economic activity. Farm labourers are indispensable for the development of agriculture. Although the cultivated land area represents only 5.3 percent of the township area, agriculture is one of the most significant activities of the township. According to available data, 54 percent of the labour force are engaged in agriculture. However, owing to limited farmland area, the low rent return from land and close proximity to Thailand, where labour wage is relatively much higher, some members of peasant families migrate to the neighbouring countries, mostly to Thailand to get better job opportunities and earn more money. In order to know the extent of migrant workers, 1060 peasant families in town and village tracts are selected for structured interviews. The total number of working age-group in the peasant families of each areal unit is considered as 100 percent and the percentages of workers that migrated to other countries from each areal unit are figured out. The calculated percentages of migrant workers are classified into three groups: more than 25 percent, between 20 and 25 percent and less than 20 percent

The village tracts with considerably high migrant workers (more than 25 %) are Pyathachaung, Shanmadwin, Kanaidar, Zalun, Shinmothti, Yaungmaw, Kudoe, Kyaukyat, Sinbyudaing and Kalitgyi of which Shanmadwin, Kanaidar , Zalun, Shinmothti, Yaungmaw, Kudoe and Kyaukyat are located in the Dawei River Valley and others in the eastern hilly region close to Thailand.

The village tracts with 20-25 percent of migrant workers are Wagon, Hermyinggyi, Anyapya, Talaingtaung, Thabyechaung, Phaungdaw, Taungthonlon and Kyaukmetaung of which Wagon, Hermyinggyi, Anyapya, Phaungdaw, Taungthonlon, and Kyaukmetaung village tracts are located in the eastern hilly region while others occupy the Dawei River Valley. The areas with low migrant workers (under 20 %) include Dawei Town, Pagaye, Maungmaeshaung, Zahar, Thabya, Myitta Town and Heinda. Dawei Town, Pagaye,

Maungmeshaung, Zahar and Thabya are located in the Dawei River Valley and the remainder in the eastern hilly region.

Apart from the factors that stimulate workers to migrate, the size of land holding is also an important factor. The small farm size that belongs to peasant families, results in under employment, and this in turn, leads to migration. The peasant families included in high migration group are owned less than 5 hectares of farmland each. In the other two groups, each peasant family own more than 5 hectares of farmland. If more land can be reclaimed for further extension of agriculture, more farm workers will be needed and the percentage of migrant workers may be somewhat reduced.

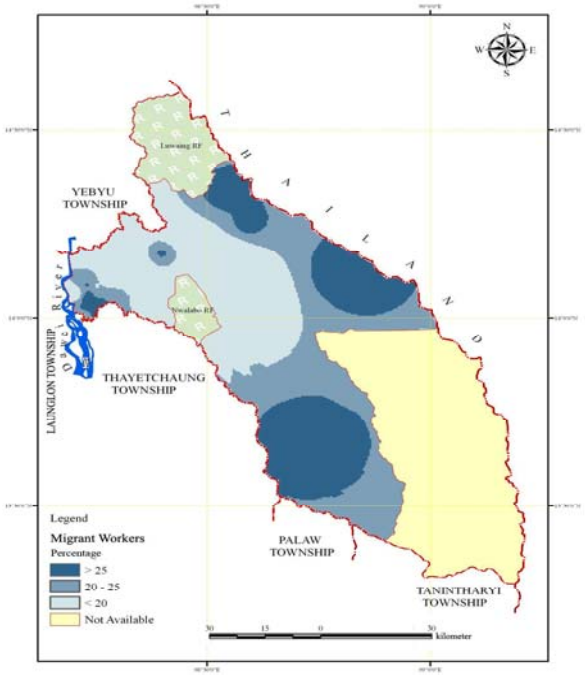

Figure (6) Situation of Migrant Workers on Dawei Township
Source : Based on Table. 2

Capital Investment

A substantial amount of capital investment is needed to establish a rubber plantation of about 20 hectares (50 acres). Also, the investor has to wait 6 to 8 years to start harvesting rubber. Therefore, only the rich can undertake this work. This is the chief reason as to why suitable land for rubber plantation remains vacant. Moreover, half the rubber area belonging to the small holders is occupied by low yield variety that cannot afford to replace it with the high-cost, high-yield variety.

According to the long-term-plan, it is projected to have 0.6 million hectares (1.5 million acres) of rubber area by the year 2030 in the whole country. Tanintharyi Region, including Dawei Township, in fact, has the most suitable climatic conditions and soils for rubber. The extension plan could not only be successful but also highly accelerated if appropriate measures, such as rendering financial assistance to the planters, in the form of providing low interest loans or establishing Rubber Planting Aid Fund. Implementation of Small Farmers Rubber Plantation Scheme is being successfully exercised by the governments of neighbouring Malaysia and Thailand. Myanmar should also consider to undertake similar schemes (Tin Htut Oo and Tashihiro Kudo, 2003).The investment costs for one hectare of rubber in the seven-year period from the planting year are presented in Table 1.

Table (1) Yearly Investment Cost in Rubber Plantation within Dawei Township (kyat/ hectare)

Planting Year	Labour	Material	Total
1	320000	125000	445000
2	225000	75000	300000
3	200000	75000	275000
4	200000	75000	275000
5	200000	75000	275000
6	200000	75000	275000
7	200000	75000	275000
Total	1545000	575000	2120000

Source : Field Survey and Interviews (2009)

Potential Areas for Agricultural Land Use

Dawei Township now has a considerably large area of culturable waste land which accounts for 20.8 percent of the township area. The village tracts that have more than 10000 hectares (25000 acres) are Amya, Myekanbaw, Sinbyudaing, Kalitgyi and Paungdaw. Some of these village tracts are located away from the main road accessible only through low quality branch road and some are in the border areas where security is low (agricultural land potential of less than 30 percent in Figure 4). As such, Amya Village Tract had not been able to reclaim any culturable waste in the past thirteen years.

The village tracts that still have over 1000 hectares (2500 acres) of culturable waste land are Pyathachaung, Wagon, Pagaye, Maungmeshaung and Zaha. Pyathachaung, is located in the mountainous area of the east with low accessibility and security and the reclamation work is rather difficult and cost-intensive (agricultural land potential of less than 50 percent in Figure 4). The reclamation of the remaining waste land in Wagon and Pagaye is more likely to be accomplished, since they are located along Dawei-Myitta Road (agricultural land potential of more than 70 percent in Figure 4). Likewise, Maungmeshaung and Zaha village tracts are located on Dawei-Yangon Road and the remaining culturable waste land are likely to be reclaimed in the near future(between agricultural land potential of 70 and 90 percent in Figure 4). The village tracts with little culturable waste land (less than 100 hectares) are Shanmadwin, Talaingtaung, Zalun, Thabyechaung and Yaungmaw. These village tracts are close to Dawei Town and there is possibility of reclaiming all the remaining culturable waste land.

The extent of success in the reclamation of culturable waste land depends largely on substantial amount of capital for investment and partly on accessibility, security and labour.

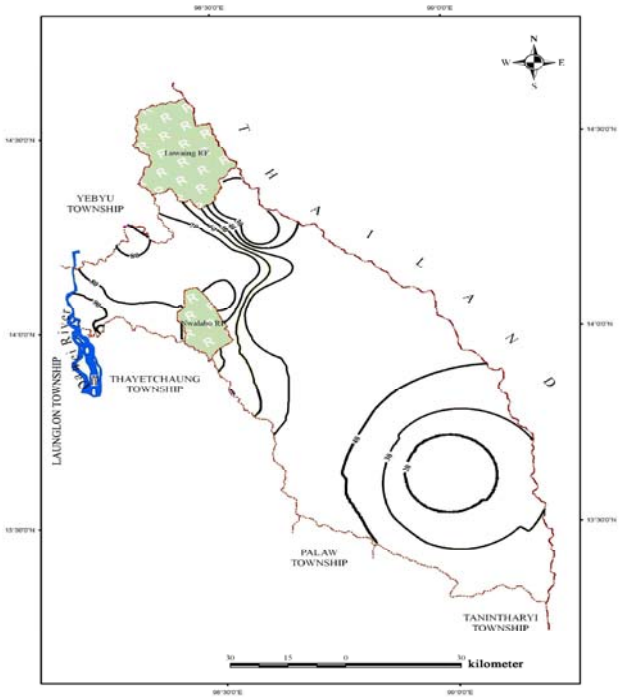

Figure (7) Agricultural Land Potential Surface Map of Dawei Township (2008-09)
Source: Based on Calculation of Data from Settlement and Land Records Department, Dawei

Conclusion and Suggestions

The most obvious disadvantage of the study area for the development of agriculture is the dominant relief. About 90 percent of the area is hilly region suitable for using as forest land or garden land over which such perennial crops as rubber, betel-nut and cashew can be profitably grown. Only about 10 percent of the total area is low, level land. As such, there is a relatively small proportion of cultivated land which represented only 2.5 percent of the township area in 1996-97 and 5.3 percent in 2008-09.

The total cultivated land area has notably increased after the constitution of Myitta Sub-township in the eastern hilly region. The improvement in security enhances the reclamation of land in the eastern hilly region, where much of the culturable waste land exists. The village tracts fairly close to Dawei Town could reclaim more culturable waste land than the distant village tracts. The reclamation of land is influenced by relief, accessibility, market demand, policy, capital and labour force.

The location of Dawei Township which is close to Thailand is one of the factors responsible for the slow pace of agriculture development. The young adults of working age take little interest in the local land reclamation work to enhance the agricultural development. Instead, they are tempted to seek jobs with relatively higher salary or wage in the nearby countries. Now, over twenty percent of the working age-group of the peasant families are working in other countries. The reduction in the number of migrant workers and the improvement of socio-economic status of the residents depend largely on the success of agricultural intensification.

The establishment of Myitta Sub-township in 2003-04 has proved successful in the horizontal extension of farmland owing to improved accessibility and security. Therefore, the authorities concerned should construct more roads for inter-village transportation and necessary measures should be taken to improve security condition in the remote hilly region

of the east. Based on the existing relief, climatic conditions and market demand, the extension of rubber plantation is the best means of agricultural intensification in Dawei Township. Loans are disbursed by the Rural Agriculture Bank for the cultivation of paddy, but not for growing perennial crops. To be able to extend the rubber growing area, financial support should be given to the growers. Most cultivators take interest in establishing rubber plantation in response to market demand.

There are many culturable waste lands in the eastern areas. Depending upon the availability of capital for investment in the establishment of perennial crop plantation, these areas are likely to become agriculturally highly productive in the near future. The culturable waste lands are also large in Amya, Kalitgyi, Myekanbaw, Sinbyudaing, Phaungdaw and Pyathachaung village tracts, but security condition is low in Amya, Kalitgyi, Myekanbaw and Sinbyudaing, in addition to low accessibility. Thus land reclamation in these village tracts is less possible unless the overall situations are improved. A slight improvement in Phaungdaw can result in the possibility of land reclamation. The other village tracts are fairly close to Dawei Town with high accessibility. A few remaining culturable waste lands can be fully reclaimed in the near future. When all the remaining culturable waste lands have been reclaimed and converted into rubber plantation, the socio-economic status of the local inhabitants will be notably improved.

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