AGRICULTURAL TRANSFORMATION IN MALAYSIA: THE ROLE OF SMALLHOLDERS AND AREA DEVELOPMENT

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1. INTRODUCTION

No country has transformed its economy without transforming agriculture (Timmer, 2009). Hence, successful agricultural transformations can reduce poverty. This is because agricultural transformation can create powerful engines of rural economic growth. The dynamics of an agricultural transformation start with increasing the income of rural households, higher productivity on farms, and greater demand in local markets. Larger markets can be served, when agroprocessing expands, some farmers decide to spend less time farming and take other jobs that offer better economic opportunities as the sector becomes more productive. As countries move along an economic-development path, their agriculture sector modernizes, becoming more efficient and less labour intensive. At the same time, non-agriculture sectors in the economy (e.g. manufacturing and service sectors) grow and absorb more labour. Hence, this transformation can be termed as “slow magic”.

Malaysia’s agriculture has long experienced agricultural transformation in many sectors and it is underpinned by sustained productivity growth. The annual Gross Domestic Product (GDP) in primary agricultural production averaged 2.5 percent between 1990 and 2005. By 2005, it was contributing 8.2 percent (RM21.6 billion in 1987 prices) of GDP and 13.3 percent (1.4 million) of total employment. In 2016, the share of agriculture in the country’s GDP was recorded at 8.7 percent and its contribution of the total employment stood at 11.4 percent. Of 8.7 percent contribution to the country’s GDP, 4.7 percent and 3.9 percent of the shares were backed by industry commodities and agro-food subsector respectively (MoA, 2016).

Throughout much of the developing world, a common concern centres on the economic plight of smallholders since they remain the lynch pin of the agricultural sector. In terms of poverty reduction and rural development, smallholders are integral to the international agenda. The role of smallholders especially those in palm oil
industry, have enabled it to become the world top palm oil exporter. Its success has simultaneously transformed the area in Malaysia. The success of the area transformation was mainly because of the flexible and responsive partnership between government and the industry.

This report is divided into six sections. Following the Introduction section is the brief explanation on the definition of smallholders, smallholder’s scenario in Malaysia and some justification why palm oil smallholders will be chosen as an example in explaining their role in the agricultural area transformation in Malaysia. Section 3 will discuss some national agricultural development planning. These include pre colonial era, the colonial era, post-colonial era, regional development planning, rural development planning, new land development scheme, land consolidation, rehabilitation and resettlement, regional development authorities, in-situ rural development strategy and finally orang asli development schemes. The penultimate section discusses the role of smallholders in transforming the area for development. The final section is the issues regarding smallholders concerning those in palm oil industry, some important takeaways from Malaysia’s experience in palm oil industry as well as recommendations moving forward.

2. SMALLHOLDERS IN MALAYSIA AT GLANCE

Smallholders produce up to 80 percent of food consumed in developing countries on a global scale (IFAD, 2013). They contribute significantly to the economic well-being of rural communities. In Malaysia, agriculture is generally divided into two categories; food crops and industrial crops. Food crops refer to vegetables, fruits, root crops, and grain crops associated with smallholdings managed by individual farmers. Industrial crops refer to oil palm, rubber, tea and other crops that are associated with large estates managed by corporations. In this section, the definition of smallholders will be discussed briefly, followed by the smallholder’s scenario in Malaysia where the focus is given to oil palm smallholders. Finally, there are some discussions on the success story of oil palm industry and the role played by oil palm smallholders in transforming the area development in Malaysia.

2.1 Smallholders Definition

Smallholders farming refer to small size of land holding, but the term “small” is very subjective. Traditionally and based on the norms of land division and alienation of individual holdings, smallholders are generally those people who own less than two hectares of land. In the current practices, due to limited availability of the state land, the size of land alienated to individual applicants is less than two hectares. Smallholders could alternatively be defined by their qualitative characteristics, such as their primary reliance on family labour, or at least on a small labour force that does not require bureaucratic management structures, which is the case with large holdings (Bissonnette and De Koninck, 2015).
In the Malaysian context, smallholders are associated with industrial crops, while small farmers are linked with agro-food subsectors. As both are generally small-scale farming, they are plagued with socioeconomic and institutional problems such as poverty, ageing farmers, insecurity of land tenure, inadequate access to credits, markets and extension and limited infrastructure. These problems are typically attributed by the relatively small size of land, which is not conducive to efficient and profitable farming. For instance, the average farm size for paddy is 1.06ha, fruits (0.67ha), vegetables (1.01ha), cocoa (1.07), coffee (1.07ha), coconut (0.93) oil palm (1.84ha) and rubber (1.6ha) (Ong Khun Wai, 2001).

The official definition of a “smallholder” in Malaysia was established by the Rubber Industry Smallholders Development Authority (RISDA) and Farmers Association Board. There were at least two official definitions of smallholders or farmers based on the respective acts. According to RISDA Act 172 (Act 85), Section 16 (1) (b) smallholder is defined as:
“... the owner or lawful occupier or lawful representative of the owner or lawful occupier of any land of an area of less than one hundred acres, which is included in any scheme under this Part and the aforesaid person continues so to participate for the duration of such scheme”.

On contrary Section 16 (1) (a), defined an estate as:
“... any land of a total area of not less than one hundred acres included in any scheme under this Part and the owner continues so to participate for the duration of such scheme;”

In the Farmer Organization Act 1973 (Act 109), farmer is defined as:
“... any person who is a citizen of Malaysia, has attained the age of 18 years and:
(a) is engaged in agricultural or livestock production;
(b) whose income is derived from agricultural or livestock production; or
(c) is in command of any of the factors of agricultural or livestock production, shall, subject to any regulations made hereunder, be eligible to be a member of a Farmers’ Organization.”

The official definition of smallholders according to RISDA Act 1972 implies that government program to assist the smallholders will only include those within the definition, i.e. those with legal ownership of land area of any size less than 40.5 hectares. The act does not include farmers who do not possess land and those who illegally occupying government land. The definition of farmers by Farmers Association Board is vague and open to various interpretations where someone can be considered as farmers and become members if they are engaged in farming either part-time or full-time basis.

While, according to Vermeulen & Goad (2006) defined smallholder term as:
(1) peasant farmers who have chosen to grow oil palm on their own plots;
(2) settlers and transmigrants in areas under large-scale plantation, often brought in specifically to provide labor, 
(3) indigenous people whose customary land rights have been overridden by land rights granted by the government to a plantation company, and 
(4) farmers in debt to company-established cooperatives.

2.2 Smallholders in Malaysia

In Malaysia, most of agricultural land is devoted to oil palm due to higher return enjoyed by this sub-sector. Out of 7.5 million hectares total planted areas of main crops in 2016, 76.1 percent is oil palm, 13.2 percent rubber and 9.3 percent paddy. Overall, 64.8 percent of planted area of main crop is under estate and 35 percent under independent smallholders (Table 1). However, the estate sector only concentrated on the plantation of oil palm while the other crops were dominated by smallholders.

Table 1: Planted Area of Main Crops by Type of Holdings in Malaysia, 2016

<table>
<thead>
<tr>
<th>Crops</th>
<th>Estate*</th>
<th>Independent Smallholders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Size</td>
<td>%</td>
<td>Size</td>
</tr>
<tr>
<td>Rubber</td>
<td>77.4</td>
<td>7.8</td>
<td>919.7</td>
</tr>
<tr>
<td>Oil palm</td>
<td>4,804</td>
<td>83.7</td>
<td>933.9</td>
</tr>
<tr>
<td>Coconut</td>
<td>4.6</td>
<td>5.4</td>
<td>80</td>
</tr>
<tr>
<td>Cocoa</td>
<td>0.9</td>
<td>5.2</td>
<td>16.5</td>
</tr>
<tr>
<td>Paddy</td>
<td>0</td>
<td>0.0</td>
<td>700.2</td>
</tr>
<tr>
<td>Total</td>
<td>4,886.9</td>
<td>64.8</td>
<td>2,650.3</td>
</tr>
</tbody>
</table>

Note: * including various government schemes
Source: Malaysia, 2016a.

2.3 Oil Palm Smallholders in Malaysia

Oil palm smallholders have been regarded as the most successful inclusive growth story in Malaysia. This industry forms the backbone of the Malaysian economy in general and agricultural economy in particular. It has been universally accepted as the most robust of all Malaysia’s sub-sectors. Palm oil’s industry contribution to the agricultural transformation cannot be denied. Palm oil industry’s contribution to Malaysian industry was worth RM38.57 billion in 2016. It is almost 6 percent of the national GDP, or 43.1 percent of GDP in the agriculture sector (Department of Statistics Malaysia 2017).

Productivity in palm oil industry has brought the agricultural transformation. The rising standard of living for rural communities in Malaysia through oil palm depends on productivity. The nation’s FFB yield has grown from lower than 12 ton/ha in 1960 to
17.89 ton/ha in 2015. Concurrently, the crude palm oil (CPO) yield has nearly doubled from 1.83 ton/ha to 3.53 ton/ha. This compares favourably to Indonesian yields with 16.9 ton/ha in term of FFB yield and 3.6 ton/ha palm oil yield. In general, oil palm uses less than a quarter of the land required by other crops (e.g., sunflower, soybean and rapeseed) to produce the same amount of oil (Oil World, 2016). This is the result of continuously improving planting materials and agricultural practices as well as boosting production. Eventually, the outcome is the relentless upgrading in the palm oil industry.

Within the international palm oil market, palm oil industry in Malaysia also shows the competitive advantage relative to the best worldwide competitors in terms of global oils and fats market and Malaysia accounted for 39 percent of world palm oil production and 44 percent of world exports in 2015. Malaysia also contributed 12 percent of total world production and accounted for 27 percent of world exports of oils and fats (Oil World, 2016).

Oil palm land use has grown from 54,638 ha in 1960 to 5.8 million ha in 2017. However, in opposite, the area planted of rubber trees has shrunk from 65 percent to 14 percent within the same period (MPOB, 2018). This resulted to 17.52 percent of the nation’s total land area and over 75 percent of the nation’s agricultural land. Estates comprise 60 percent of oil palm lands, and smallholders control the other 40 percent. By the end of 2017, the number of people directly employed in the palm oil industry stood at 440,262 (exclusive of 280,977 independent smallholders).

Table 2 shows that the distribution of oil palm planted area by category was topped by estate category (61%), followed by government schemes (22%) and independent smallholders (17%). The smallholders’ contribution is substantial where 40 percent of oil palm planted area is owned by organized and independent smallholders in the same year.
Table 2: The Distribution of Oil Palm Planted Area in Malaysia by Category, 1980-2017 (‘000 Hectares) and Percentage Shares (%)

<table>
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<tbody>
<tr>
<td></td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
<td>Area %</td>
</tr>
<tr>
<td>Private Estates</td>
<td>558</td>
<td>52</td>
<td>912</td>
<td>1,255</td>
<td>2,024</td>
<td>2,413</td>
<td>2,935</td>
<td>3,442</td>
<td>3,508</td>
</tr>
<tr>
<td>Government Schemes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FELDA</td>
<td>317</td>
<td>30</td>
<td>608</td>
<td>30</td>
<td>675</td>
<td>27</td>
<td>598</td>
<td>18</td>
<td>654</td>
</tr>
<tr>
<td>FELCRA</td>
<td>19</td>
<td>2</td>
<td>119</td>
<td>6</td>
<td>132</td>
<td>5</td>
<td>154</td>
<td>4</td>
<td>161</td>
</tr>
<tr>
<td>RISDA</td>
<td>21</td>
<td>2</td>
<td>33</td>
<td>2</td>
<td>42</td>
<td>2</td>
<td>37</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>State Schemes</td>
<td>86</td>
<td>8</td>
<td>175</td>
<td>9</td>
<td>194</td>
<td>8</td>
<td>224</td>
<td>7</td>
<td>318</td>
</tr>
<tr>
<td>Smallholders</td>
<td>70</td>
<td>6</td>
<td>184</td>
<td>9</td>
<td>242</td>
<td>10</td>
<td>321</td>
<td>10</td>
<td>425</td>
</tr>
<tr>
<td>Total</td>
<td>1,070</td>
<td>100</td>
<td>2,030</td>
<td>100</td>
<td>2,540</td>
<td>100</td>
<td>3,377</td>
<td>100</td>
<td>4,051</td>
</tr>
</tbody>
</table>

Source: Malaysian Palm Oil Board (MPOB), Malaysian Oil Palm Statistics, various issues

Among smallholders, there are three main categories of arrangements for palm oil production namely independent smallholders, government supported smallholder schemes and collective landowners’ scheme. The first category; independent smallholders, refer to growers without any direct assistance from the government, or private entities. They sell their crop to local mills either directly or through buyers. The second category is; organized smallholders, received support from the government or the private sector. This support may be in the form of loans, technical assistance, guaranteed markets or prices, assistance with land access or titling, legal support and/or institutional development. In Malaysia, this scheme is primarily driven by three main agencies namely Federal Land Development Authority (FELDA), Federal Land Consolidation and Rehabilitation Authority (FELCRA) and Rubber Industry Smallholder Development Authority (RISDA). Collective landowners’ scheme is another scheme that was introduced in the mid-1990s. The land-lease scheme Konsep Baru (New Concept), was introduced by the government to set up a three-way joint venture between private plantation company, local community and the government. The share of each parties was 60 per cent, 30 per cent and 10 per cent, respectively. This scheme is known as a strategy to develop rural land on land under Native Customary Rights (NCR), particularly in Sarawak. Three main agencies involved in this scheme namely Sarawak Land Development Board (SLDB), Sarawak Land Consolidation and Rehabilitation Authority (SALCRA) and the Land Custody and Development Authority (LCDA).

In terms of market chains for all categories of smallholders, it can be said that independent smallholders have more freedom to sell their palm oil, either to middleman or directly to mills owned by government agencies (Figure 1). As for organized smallholders, they are required to sell their products to the dedicated mills, for instance owned by FELDA or RISDA. In the case of collective landowners’ scheme, they sell to estate-owned mills. Typically, one mill will be provided near the smallholders to ensure efficient delivery of fresh fruit bunches.
3. DEVELOPMENT PLANS AT NATIONAL LEVEL

There are many development plans at the national level to transform the agriculture sector in Malaysia. This section chronicles with the pre-colonial era, colonial era, post-colonial era. Following these three eras are the regional development and rural development planning with the emphasis given to agricultural transformation. New land development schemes, land consolidation, rehabilitation and resettlement will also be discussed in this section. The three final subsections are regional development authorities, in-situ rural development strategy and *orang asli* development schemes.
3.1 Pre-colonial Era

Smallholders are related to the land that has a close connection with the socio-culture and economy of the Malay (Melayu) community. Many ancient historical books refer Malaysia as a Malay land (Tanah Melayu) in the early 17th century and the legitimacy of the Malay as Sons of the Soil (Mohamed Anwar 2011; Mohamed Anwar et al., 2013). The Malay Land is also known as the Malay Peninsula or from the early 18th century (Soda 2001). During the British colonial period, the Malay land was divided into three territories, Straits Settlement, Federated Malay States and Unfederated Malay States.

The Malays and the Orang Asli1 (aborigines) were the main ethnic groups in Malay Peninsula. The popular notion of smallholders in Malaysia is often associated with farmers in rural villages or the Kampung. In the Malay society, smallholder usually refers to petani (farmer), peladang (works the field), pekebun (works the orchard), peneroka (pioneer or plantation settlers), pesawah (rice farmers) in more formal purposes. The term Orang Kampung (villagers) also denotes a known association to a livelihood of small-scale farming and a variety of village works such as agricultural labor, collecting of forest products and animal farming. Agricultural productivity of the Orang Kampung is generally low due to less intensive traditional farming practices and the small scale of their activities.

Smallholders also related to the rural area or Kampung and again has a close connection with the socio-culture and economy of the Malay (Melayu) community. The Malays or the Orang Kampung largely engaged in subsistence agriculture such as cultivation of rice and other food crops which was restricted to personal household use among family members. Two main kinds of cultivation practised by the Malay were shifting cultivation (huma or ladang) and sedentary agriculture (sawah or bendang). Shifting cultivation involved periodic clearing of the jungle for one or a few seasons after which the land would be left fallow as the farmers moved to cultivate other sites. Sedentary cultivation mainly involved the production of food crops on a land, usually

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1 An ancient writer by P. Schebesta in 1927 entitled “The Negritos in the Malay Peninsula, Subdivisions and Name”, the Orang Asli are called by various names, depending on the characteristics of the livelihood of the Orang Asli concerned. The other name for the Orang Asli that is recorded in the literature is Kensiu. At that time, the Malays referred to the Orang Asli by many names, like Orang Utan (jungle men), Orang Tanjong (men of the river reaches), Orang Bukit, (Hill People) because they lived far away from the Malay villages, Orang Darat (Land People), meaning big forests, bush men as they live on the fringes of the Malay villages to differentiate them from the Malays who were called Village Dwellers. The Orang Asli are also called Sakai, but, the word Sakai is not favourable to them since that term carries the connection of “slave” (Means 1985). The Orang Asli are also called Pangan (eaters of raw food), wild people, Scaled-people, Orang Mawas (ape-like people), Mantra or Orang Asal (Nicholas 2002). According to Suki Mee (2009; 2), the terminology Orang Asli as an ethnic category of race only came about after 1960. During British rule, many negative adjectives were used to refer to the Orang Asli with the purpose of discriminating them. Positive words like Orang Asal and later Orang Asli were used by the British to persuade the Orang Asli to assist the British to combat communists’ threat (Suki Mee, 2009; Devamany and Asan, 2016; Tuan Pah et al., 2017).
located near the settlement (Sundaram, 1977). The latter kind of farming encouraged the peasants to settle down permanently in a place while the settlements associated with shifting agriculture were temporary and less organized. The Orang Asli, whose number was much smaller than the Malays, lived mainly in the forest. Their livelihood was simple, and they are dependent on hunting and gathering of jungle products (Andaya and Andaya, 1982).

3.2 The Colonial Legacy

Smallholder farming and regional/area development and its unequal diffusion in Malaysia were inherited from colonial times resulted in marked segregation based on ethnicity in terms of geographical location, economic activity and political participation. British colonialism began in Malacca (1785), Penang (1786), and Singapore (1824), all these states were located on the west coast. West-East coast disparities started to become more obvious after direct intervention and control of the Malay States. Starting with Perak in 1874, by late 1880, the British had extended their rule in Selangor, Negeri Sembilan and Pahang. All these states were also located in the west coast except Pahang. In 1909, Kelantan, Trengganu, Perlis and Kedah were transferred to British rule by Siam (Thailand) and lastly Johor in 1914.

In the beginning, there was interest in the tin industry due to the boom in demand in Europe. This encouraged Britain to control agricultural activities in the Malay States, starting with the Federation of Malay States. Indeed, rubber was also being planted in the Straits Settlements and because of shortage of land availability, it was extended to other western Malay States. Besides Europeans, smaller capitalist, especially Chinese merchants and peasants also participated in rubber cultivation (Ngah, 1993). The transformation of the traditional mode of production or “a natural economy” began during colonial legacy resulting in massing migration of labour from China and India (Hashim, 1982). The population increased slightly by the end of the 1890s and soon Peninsular Malaysia became made up of ethnically heterogeneous states. Thus, the population growth was more significant in the Straits Settlement and Federated Malay States especially in Perak and Selangor. At the same time, the Malay majority in those states declined. However, the Malays were still the majority in the Unfederated Malay States. But most of the Malay peasants and aborigines were in possession of their own agricultural land, and not contributed to the supply of labour to the capitalist sector (Hashim, 1982).

The integration of smallholders in the market economy accelerated with the introduction of rubber economy in Malaysia. Rubber acreage increased from 50,000 acres in 1906 to 290,000 acres in 1909 and by 1957 the total planted area was estimated 3.5 million acres; with 2.0 million acres (58%) in estates and 1.5 million acres (42%) in smallholders (Jin-Bee, 1961). The total acreage of rubber cultivated by Chinese capitalists and smallholders was comparable to the total size of European
plantations in which out of 1.8 million acres of land under rubber, 44 per cent owned by Chinese capitalists and smallholders (Ngah, 1993). As noted by Keong and Hock (1986) there was widespread of smallholders squatters (illegal occupation of state land) among Chinese and Malays rubber planters during the period of 1910 to mid-1920s and some who occupied state land under Temporary Occupation License (TOL). Even during the emergency period (1948 -1960) where many Chinese smallholders were resettled in “New Village”, but they continued to depend on rubber for their income.

Under the Colonial Legacy, Peninsular Malaysia or more specifically the Federated Malay States became the main supplier of tin and rubber to the world. Tin and rubber became the key source of economic growth of Peninsular Malaysian economy from the early 1900s. However, the unbalanced distribution of tin mines and rubber estates in the colonial period caused regional and ethnic disparities, as well as separate demographic patterns in Peninsular Malaysia because of segregation in terms of economic activities, which have a significant linkage to the regional (state) economic growth. Economic activity can be linked with the ethnic and income level. In 1931 to 1935, 85 percent of the mining workers were Chinese. In the same year, 97 percent of paddy farmers were Malays while, in 1934, 68 percent of the rubber estate workers were Indians (MacAndrews, 1977). Most of the people in Malay-majority states still worked in the traditional agricultural sectors, especially in the paddy or rubber smallholdings. Although the number of Malays who owned rubber smallholding increased to 200,000 in 1953, they were nearly all very small, averaging 3.3 acres per person, only 0.15 percent of them having more than 25 acres (Sondgrass, 1980).

Indeed, this sector faced the problems of seasonal income, poverty, low productivity, inefficiency and high unemployment. In addition, colonial policy did not do much to promote Malay economic advancement and instead preferred to keep the society traditional while the country developed (Means, 1972). According to Ross-Larson (1980), Malays had little contact with the growing of tin and rubber industries as well as the new commercial activity in towns. Only some of them nevertheless established smallholding in rubber and rice. In this scenario, it was beneficial to the Malay majority states when rapid growth of population increased the demand for rice. The colonials also took the opportunity to make the Malays continue in their profession. At the same time, “public policy was paralysed by unwillingness either to let Chinese into the Malay preserve of rice cultivation” (Snodgrass, 1980).

The colonial legacy for the period of 172 years resulted in a dualist economy in Peninsular Malaysia. From the early years of British rule, the method of production in the country was organised into two distinct and parallel types. This dualist economics was based on economic activity as well as ethnic and geographic linkages. Most of the large-scale production and commercial activity using modern technology were concentrated in the rich west coast of Peninsular Malaysia where the immigration population was the majority. The modern sector production and organisation was based on the Western system. This sector was integrated into the modern world economy and trading system and developed accordingly over time. Most of the product was exported
to the international markets, which was also on the west-coast side. In addition, the second mode of economy was the small-scale traditional method of production such as paddy farming, coconut farming, coffee farming and inshore fishing which were located on the eastern and north of Peninsular Malaysia where the Malays were majority. Most of the produce was locally consumed and not intended for sale in international markets.

At the same time, there were differentiations in the outcome of the integration of capitalist mode of production in Malaya characterised by substantial dualism between the plantation sector and the traditional subsistence (or smallholder) sector as well as differentiation between peasants (Onn, 1991; Fatimah, 1980; De Koninck, 1979). The modern management of the plantation sector enables it to sustain high productivity and quickly respond to various challenges stemming from economic growth, social and ecological changes. On the other hand, the smallholders or peasant agriculture in the pre-capitalist period were largely subsistence oriented and revolved around traditional mixed economy methods of cultivation and were often described as contented, self-sufficient, and indigenous poor.

3.3 Post-Colonial Era

Towards the end of British colonialism, the Malaysian economy (Malaya, Sabah and Sarawak) consisted of a modern sector, largely owned and controlled by foreign and Chinese capitals on one hand, and on the other, traditional sectors engaged by small scale farmers and other indigenous people. The modern sector was characterised by high capital investment, market-oriented, high technology and high productivity, which included plantation, production of timber, mining and a mercantile economy. The traditional sector, such as fishing, cultivation of rice, coconut and other food crops were characterised by low productivity, low technology, and small-scale.

By 1957, out of the 6.5 million population in Peninsular Malaysia, 73.4 per cent lived in rural areas, of which 60.2 per cent were Malays, 28 per cent Chinese and 10.5 percent Indians. It was the Malay who largely engaged in traditional subsistence agriculture such as cultivation of rice and other food crops and fishing. The Orang Asli, who were fewer in number, mainly lived in the forest, with their livelihood depending on hunting, gathering of jungle products and shifting cultivation. In the plantation sector, foreign capital largely employed Indian workers who stayed in quarters built on the estates\(^2\). There was also a substantial number of Chinese who lived in rural areas, particularly those who were forced to move into the jungle fringes during the economic recession in the 1930s to earn their living by engaging in farming (Mohd Shukri, 1992). Since their methods of farming were more productive and had better access to the

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\(^2\)Indian workers who stayed in quarters built on the estates were also involved as smallholders to earn additional sources of income from farming and animal husbandry on land around their quarters or in estate areas with the permission of the estate owned (Shri Dewi et al., 2008).
market, their standard of living was higher than that of the Malay rice grower and fisherman.

In Sarawak, just before joining Malaysia in 1963, the population was about 800,000 with more than 80 per cent living in rural areas. The rural population was sparse and scattered along coastal areas and rivers, where communication was possible. Huge areas of land were covered with jungle, inaccessible by land transportation, and many villages in remote areas were not easily reached and lacked basic infrastructure and facilities. The livelihood of rural people including the Iban, Bidayuh, Malays and Melanau was often not sufficiently remunerative, and it included swamp and wet rice farming, sago cultivation, coconut growing and fishing. Farming was commonly a small-scale, low-yielding and low value system with many farmers involved in some subsistence production and shifting cultivation of rice (King, 1992). The Orang Ulu (such as Punan, Penan, Kayan, Kelabit, Kenyah) could be found in the interior, such as upstream Baram River, Balui River and some other main rivers in Sarawak. They generally practised shifting cultivation especially hill rice and gathering of forest products. Apart from low income and low productivity, rural development in Sarawak faced another challenge related to land regulation and administration. Large portions of rural Sarawak are under “Native Customary Land”, held by the indigenous population under various forms of customary tenure without registered title. The land becomes an obstacle to development because it cannot be transferred or used as collateral.

The development of a market economy in Sabah expanded rapidly when the British Chartered Company gained control of Sabah to exploit resources and conduct trading activities. Logging activities and rubber plantations were the main modern economic activities in rural Sabah. Unlike in Peninsular Malaysia, the Company brought in Chinese and Javanese to work in the rubber plantations and timber industries. Many of the Chinese later settled down in the rural areas while the Javanese returned to their origins (Lee Yong Leng, 1982). Most of the indigenous population lived on subsistence farming, fishing and shifting cultivation.

In 1961 the population of Sabah was about 455,000 consisting of 67.5 per cent Bumiputera, 23 per cent Chinese and 9.5 per cent others. Among the Bumiputera the majority were Dusun, followed by Bajau, Murut and others. About 81 per cent of the total population lived and worked in rural areas. The 1977 agriculture census revealed that 58.5 percent of total rural households operated agricultural land and 45.4 per cent of agricultural households operated land less than 5 acres. The greatest incidence of poverty was in the rural traditional sector where 65.7 percent were earning below the poverty income level. Traditional small-scale farmers were further beset with inherent and complex socio-economic limitations including uneconomic size holdings, low return crops, traditional methods of production, inadequate access to assistance and support services and the lack of credit and marketing facilities. The interplay of these constraints resulted in low productivity and low income and thus the high incidence of poverty among small-scale farmers. The incidence of poverty is similarly felt among shifting cultivators, the landless and subsistence fisherman.
The economic dualism inherited from colonialism continued after Malayan independence in 1957. This dualist phenomenon can be divided into three categories, based on location, urban-rural; economy activity, modern-traditional; ethnic, non-Malay-Malay as well as productivity differences between the modern and traditional sectors. The residential and occupational stereotypes show that most Malays lived in rural areas and engaged in smallholder agriculture and fishing (Ross-Larson, 1980). The existing economic imbalances can be identified in terms of the following five sectors as below (Malaysia, 1971:36-37).

1. The Traditional Rural Sector which comprises uneconomic rubber smallholders, single-cropped paddy, traditional livestock and other agricultural activities, gathering of jungle produce, inshore fishing, and “dulang washing”\(^3\) and small gravel-pump mining for tin.
2. The Modern Rural Sector which comprises estate agriculture (i.e., rubber, oil palm, coconut, tea and cocoa), land development schemes and double cropped paddy, commercial forestry, modern fishing and modern tin mining. Medium income states.
3. The Traditional Urban Sector which comprises those parts of manufacturing, construction, commerce, transport and services, in which work is done with little benefit from modern equipment or techniques; included are small artisans, petty traders, hawkers, stall holders, household servants, trishaw-riders, and other persons pursuing a multitude of activities requiring little or no initial skill or training.
4. The Modern Urban Sector, which comprises technically advanced manufacturing, construction, commerce, utilities, transport, communications and modern services including the professions and the tourist trade.
5. The Government Sector which comprises Federal, State and Local Government administration and Public Authorities as well as the Police and Armed Forces.

3.4 Regional Development

Since Fourth Malaysia Plan (1981-1985), states in Malaysia have been aggregated into six regions. Each region consists of a contiguous landmass, which is in a uniform stage of development and may encompass an entire state or group of states. These regions have been dominated by single metropolitan area Northern region - Perlis, Kedah, Pulau Pinang, Perak; Central region - Selangor, Federal Territory of Kuala Lumpur, Negeri Sembilan, Melaka; Eastern region - Kelantan, Terengganu, Pahang; Southern region - Johor; Sabah region and finally Sarawak region.

\(^3\)Large wooden platter or tray – pan for ore.
Since Eighth Malaysia Plan (2001-2005) the composite development index has been used and states in Malaysia also have been divided into two categories based on level of development (Malaysia 2001a). The composite development index comprises ten indicators; GDP per capita, unemployment rate, urbanisation rate, registration of car and motorcycle per 1,000 of population, poverty rate, population provided with piped water, population provided with electricity, infant mortality rate and number of doctors per 10,000 of population. Based on these indicators, states in Malaysia have been divided into More developed states comprise of Johor, Melaka, Negeri Sembilan, Perak, Pulau Pinang, Selangor and Federal Territory of Kuala Lumpur and Less developed states comprise of Kedah, Kelantan, Pahang, Perlis, Sabah, Sarawak and Terengganu.

Figure 2: Regional Malaysian Context
Source: Asan, 2018

3.5 Rural Development Planning

The five-year development plan began in 1950, The Draft Development Plan of the Federation of Malaya 1950-1955. This plan was mainly to assist the Colonial financial grants to centrally administer schemes for Colonial development. The New Economic Policy (NEP) was introduced under the first long-term development plan and was also known as The First Outline Perspective Plan (OPP1) 1971-1990. Spatial development plans such as physical plans, structure plans and local plans were integrated into the national plan in the Outline Perspective Plan and every five years development plan.
According to Higgins and Savoie (1997), from The Third Malaysia Plan onwards, Malaysia may have the most completely integrated regional and national plans in the world. In Malaysia, regional and urban plans as building blocks for construction of national economic development plans (Table 3).

Table 3: Economic Development Plans, 1950-2020

<table>
<thead>
<tr>
<th>Long-term Development Plan/ National Policy</th>
<th>Years</th>
<th>Five-year Development Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1950-1955</td>
<td>Draft Development Plan, Malaya</td>
</tr>
<tr>
<td></td>
<td>1956-1960</td>
<td>First Malaya Plan</td>
</tr>
<tr>
<td></td>
<td>1961-1965</td>
<td>Second Malaysia Plan</td>
</tr>
<tr>
<td></td>
<td>1966-1970</td>
<td>First Malaysia Plan</td>
</tr>
<tr>
<td>First Outline Perspective Plan</td>
<td>1971-1976</td>
<td>Second Malaysia Plan</td>
</tr>
<tr>
<td>New Economic Policy</td>
<td>1977-1980</td>
<td>Third Malaysia Plan</td>
</tr>
<tr>
<td></td>
<td>1986-1990</td>
<td>Fifth Malaysia Plan</td>
</tr>
<tr>
<td>Second Outline Perspective Plan</td>
<td>1991-1995</td>
<td>Sixth Malaysia Plan</td>
</tr>
<tr>
<td>National Development Policy</td>
<td>1996-2000</td>
<td>Seventh Malaysia Plan</td>
</tr>
<tr>
<td>Third Outline Perspective Plan</td>
<td>2001-2005</td>
<td>Eighth Malaysia Plan</td>
</tr>
<tr>
<td>National Vision Policy</td>
<td>2006-2010</td>
<td>Ninth Malaysian Plan</td>
</tr>
<tr>
<td>(2001-2010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Economic Model</td>
<td>2011-2015</td>
<td>Tenth Malaysian Plan</td>
</tr>
<tr>
<td>(2011-2020)</td>
<td>2016-2020</td>
<td>Eleventh Malaysia Plan</td>
</tr>
</tbody>
</table>

After the racial riots in 1969, the government introduced in 1971 the first long-term development plan, called The First Outline Perspective Plan (OPPI). OPP1 (1991-1990) has been implemented within the framework of the New Economic Policy (NEP). The application of NEP started under the Second Malaysia Plan (1971-1975). The NEP was an exercise in social engineering designed to reduce the socio-economic imbalances among ethnic groups and across regions with the major targets with respect to “growth with equal distribution”. It has been recognized that there was a close correlation between “location and disparities indicators”. Improving the regional imbalances in development will simultaneously facilitate the attainment of greater ethnic income equality in the country.

The objectives of the NEP were to achieve national integration and unity, and these were formulated within the context of a two-pronged objective (Malaysia 1971):

1. to reduce and eventually eradicate poverty by raising income levels and increasing employment opportunities for all Malaysians, irrespective of race; and
2. to accelerate the process of restructuring Malaysian society to correct economic imbalances to reduce and eventually eliminate the identification of race with economic function.

These objectives were to be achieved through rapid growth with equal distribution. It aimed to strike an optimum balance between the goals of economic growth. Ultimately to eliminate the social and economic inequalities and imbalances in the country and promote and strengthen national integration by reducing the wide disparities in economic development between states and between the urban and rural areas in the country.

The New Approach to Village and Rural Development (NAVRD) NAVRD is another programme of rural development launched in October 1984, a modern land and agrarian reform. The aim is to increase income of small farmers by improving efficiency and productivity through economies of scale in production and utilisation of modern methods of production and management and improve the standard of living of traditional village people by provision of infrastructure and facilities. The new move aimed to address the persistent and increasing socio-economic gap between traditional rural dwellers and the urban and modern sector. An alarming increase in idle alienated land, a continued productivity gap between traditional agriculture sectors and modern estate sectors and the limited access of traditional villages to basic modern services, were signs of the inability of the conventional approach to cope with the needs of contemporary socio-economic change.

The three main components of NAVRD were:

- A voluntary consolidation of individually owned private land into large holdings called estates. The estates were to be owned by the participating land-owners, who were receiving shares in ratio to the land they had contributed. The new estates were to be managed as cooperatives by professional managers with the objective of profit maximisation.

- The development of agricultural and non-agricultural based industry within the project area to provide additional employment opportunities and income, and to accelerate further the process of rural transformation.

- Resettlement of scattered villages to a centralised village with modern basic facilities such as schools, clinics, piped water, electricity and recreation.

The implementation of NAVRD would utilise the existing government set-up and machinery, without introducing new enabling legislation. The programme relied on the reallocation of existing financial and other resources from existing government organisations dealing with rural development. NAVRD also shared a common feature with other agrarian reforms which treated peasants as passive subjects of change to be moulded and modified at the will of central planners rather than as agents of change.
Although the NEP ended in 1990, regional imbalance development remains an important goal of national development. The Second Outline Perspective Plan (OPP2, 1991-2000) was implemented within the framework of the New Development Policy (NDP). The NDP was to build upon the achievements of the OPPI in accelerating the process of eradicating poverty and restructuring society to correct social and economic imbalances within the context of a rapidly expanding economy. Enforcing development of the poorer states to improve their income and standards of living continues to be the main goal of rural development.

The main goals under NDP toward “growth and equal distribution” were to promote a fair and more equitable sharing of the benefits of economic growth by all Malaysians and promoting and strengthening national integration by reducing the wide disparities in economic development between states and between the urban and rural areas in the country (Malaysia 1991). This period was covered under The Second Outline Perspective Plan (OPP2) and the 6th and 7th Malaysia Plan. The NDP with its philosophy of growth with equity emphasised the eradication of hard-core poverty, meaningful participation of Bumiputera\(^4\) in the modern sector of the economy, and the active role of private sector in restructuring objectives and human resource development.

In the Third Outline Perspective Plan, 2001-2010, which was implemented within the framework of the National Vision Policy (NVP), the goal towards minimising regional disparities is one of the important key thrusts under this policy; promoting an equitable society by eradicating poverty and reducing imbalances among and within ethnic groups as well as regions. While under Eighth Malaysia Plan (2001-2005), the main thrust for regional development will focus on diversifying the economic structure of the less developed states; improving the quality of urban services; accelerating development in rural areas (Malaysia, 2001b).

The National Mission in the 9th Malaysia Plan was a framework to achieve Wawasan 2020. The National Mission emphasized increasing the nation’s ability to compete at the intra ethnic inequality global level, strengthening national unity, and better distribution of income and quality of life. The five pillars of the Mission were:

a. Increasing value-added in the economy,

b. Raising knowledge, creativity and innovation of citizens and fostering first class mind,

c. Handling the problem of socioeconomic inequality productively, (4) increasing the quality of life, and

d. Strengthening the nation’s institutions.

The third Outline Perspective Plan or the National Vision Policy set up a framework for development covering the 2001-2010 period in which the Eighth and Ninth Malaysia Plan will be executed. The plan, with national unity as its overriding goal,

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\(^4\) Refer to Malays and other indigenous peoples in Malaysia.
outlined general strategies to move forward in a balanced and sustainable way economic growth will be promoted alongside efforts to eradicate poverty, restructuring of society, narrowing the social, economic and regional imbalances, inculcating positive social and spiritual values as well as concern for the environment.

The National Agriculture Policy III (NAP 3) 1998-2010 launched in 1998 provided a framework for agricultural development during this period. It contained an overriding goal of income maximisation through optimal utilisation of the sector’s resources with the objectives of enhancing food security; increasing productivity and competitiveness; strengthening linkages with other sectors particularly the agro-based industry; exploring and developing new sources of growth; conservation and utilisation of natural resources on a sustainable basis. With new emphasis and priority given to the development of agriculture sector and good prices of main commodities, the progress was quite encouraging. New ideas and techniques were also introduced such as Good Agriculture Practice, marketing services such as FAMAXchange, Agribazaa, and Malaysia Best; new production zone (high tech) for fruits, vegetable, aquaculture and animal husbandry and organic farming.

During this period, rural development focused on creating a conducive environment to attract investment and maintain tranquility of countryside living. The strategies included the provision of the full range of basic and quality infrastructure and social services, expanding infrastructure and facilities to remote rural areas and estates, expanding coverage of water and electricity in Sabah and Sarawak and improvement of development programmes of RDAs. Rural development programmes among others focused on providing good housing, encouraging rural tourism, increasing training and opportunities for raising incomes for youth and settlers in rural areas, development of small scale industries such as craft and resource based, integrated programmes of human and physical development for the Orang Asli.

The programme for human development under Gerakan Daya Wawasan was changed to Gerakan Daya Wawasan (Visionary Capability Movement) to give more focus to the development of three types of human capabilities i.e. human capital, financial capital and marketing capability. The Visionary Capability Movement is a movement to inculcate awareness, changes in mind and attitudes and empowering rural people including their minds and skills, utilising efforts, capabilities and participation in planning and implementing village programmes towards achieving a developed, attractive and profitable village.

New Economic Model (NEM) (2011-2020) was presented in 2011 as an overall framework for transforming Malaysia from a middle income to an advanced nation by 2020. It consists of the Tenth Malaysian Plan (2011-2015) and Eleventh Malaysia Plan (2016-2020). NEM will force Malaysia to be an advanced nation with inclusiveness and sustainability in line with the goals set forth in Vision 2020. Under NEM, the initiatives by the Government under palm oil sector aim to help smallholders chiefly by timely replanting of old, low yielding palms with better yielding stock as well as
generate higher yields and income. This is because more than one third of palm oil production comes from smallholders, however have lower yields than commercial estates (Malaysia, 2009).

Since the First Malaya Plan (1956) important regional development strategies with immediate effect of smallholders are new land and resource development strategy, in-situ rural development strategy and the Orang Asli development schemes. Others regional development strategies are rural urbanization and creation of new growth centres strategy, industrial dispersal strategy, sub-region cooperation and corridors development.

The official goals regarding regional inequality in Malaysia can be identified as the following:

1. to increase economic opportunity as well as monthly income, decrease poverty and unemployment in the less developed areas through diversifying the economic base of the less-developed states to generate higher economic growth;
2. to move towards scattered new development and growth especially to less developed regions;
3. to exploit the natural resources, resettle and rehabilitate selected frontier areas;
4. to revive and strengthen agricultural and industrial development in the less developed regions as well as urbanize and industrialize rural and agricultural areas;
5. to emphasise new growth centres in the less developed states (or at the agricultural development scheme) which will be integrated into the overall national regional development and urban network system, and at the same time reduce excessive rural-to-urban migration, especially movement from depressed peripheral areas to the already congested core region.

3.6 New Land Development Scheme

In Malaysia, one important and most successful example of an institution that helped smallholders in poverty eradication was the new land and resource development strategy under Federal Land Development Authority (FELDA). This strategy was proposed by the World Bank in 1954 and was also implemented in the First Malaya Plan (1956-1960). It was an instrument designed to develop idle land, to provide the landless and the under-employed with better income and make those in the villages in the backward areas feel a part of the centre. This new land development strategy was seen to be more important than the in-situ rural development strategy because it encouraged the movement of large numbers of the rural poor and landless population to the areas in which the land development schemes operated.

The new land development strategy was mainly involved in the commodity products for export (rubber and oil palm). FELDA not only played a major role as a main contributor to the production of Malaysian export commodities (rubber and palm oil)
but also successfully raised the average net monthly income of its beneficiaries to a level above the poverty line. This institution is the most significant and largest agency in steering smallholders in Malaysian palm oil industry. In fact, its establishment is seen as the chief instrument of rural development policies through land development and settlement (Mehmet, 1982). The Malaysian way of organizing poor and landless people in commercial agricultural production was recognised internationally as an ideal model to deal with rural poverty.

FELDA is geared towards the utilisation of available land in the less-developed areas and at the same time increasing the rural population income, eradicating poverty and achieving greater equity in the distribution of income by mobilising large numbers of the rural poor population to the more productive land-development schemes.

The main aim for the establishment of FELDA was to develop the rural areas into potentially successful agricultural areas. At the same time, it also functioned as the resettlement area for the poor who did not own land in the rural areas and provided basic amenities. Besides, the scheme had the capacity to overcome the problem of ‘sleeping land owners’ and the problem of small-sized farms. Between 1957 and 1970 the rural population grew at the same rate as the urban population, about 2.6 percent per year. About 8 per cent of all inter-state migration was a direct consequence of FELDA resettlement, and the additional amount was undoubtedly a result of the spin-off economic effect induced by the institution (Simmons, 1979). Two-thirds of the FELDA settlers had moved from elsewhere within the state (Baydar et al., 1990).

The authority plans and carries out land development and settlement projects in new areas with the aim of producing, at the end of the development period (normally six years), prosperous farming communities with economically viable farms (Tengku, 1988). Settlers who are accepted in this scheme will be provided with a house and ten hectares of land with palm oil or rubber trees and expected to own their house and land after 15 years after having paid their debts to FELDA.

Much of the transformation that had taken place over the rural landscape in Malay concentration areas represented change either from derelict rubber to private replanting’s of highly improved stock on hitherto occupied group, or from scrub and scrub jungle to new private plantings around already settled lands, or the replacement of largely virgin or near climax high forest by massive acreages of rubber with brand new government-supervised settlement centres.

The size of the farm lots varies according to when the scheme was started and according to the type of crop recommended. In the pre-1960 rubber schemes, each settler was given 6 acres of rubber land, an additional 2 acres of rice land, and 2 acres

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5 “The rate of development of the resettlement program has been impressive and the FELDA program is considered as one of the most successful example of settlement schemes in developing countries in terms of economics viability and political stability. The Malaysian way of organizing poor and landless people in commercial agricultural production has been stressed by many observers as an ideal model to deal with rural poverty”… Fold, N. 2000: 473.
for orchards. In 1960 the size of the rubber land increase to 7 acres and in 1961 increase to 8 acres. In the 1970s each settler was given 10 acres. This was because under normal conditions, an 8-acre farm planted with rubber was considered economically viable (Tengku, 1971). Although each settler receives a specific piece of land, most of the farming is done collectively, as part of a corporate enterprise (Simmons, 1979).

Figure 4: Location of FELDA Scheme  

The pre-eminence of FELDA as the agency responsible for settlement grew over time. From 4,000 ha of land in 1961, the accumulated settlement areas grew to 48,000 ha in 1965 (Fold and Whitfield, 2012). Under the First Malaysia Plan (1966-1970), a total of 72,474 ha was developed by FELDA. Over the same period, other settlement schemes, run mainly by the states, registered a decline in the growth rate of acreage settled. In fringe areas close to villages, support was limited to land clearance and the provision of planting materials and other inputs (Fold and Whitfield 2012). This approach resulted in limited success and more substantial support in a stricter institutional setup was required. Therefore, a second phase in the 1970s was introduced, called a ‘block’ system with the aims of increasing the settlers’ collective responsibility and facilitating links between different settlements, while maintaining estate-like efficiency, productivity and product quality (Fold, 2000).
Under this system, settlers were organized into groups of 20 for cooperative work, each cooperative operating a block of roughly 80 ha oil palm, and each settler was responsible for approximately 4 ha of land. A house, infrastructure and agricultural inputs were provided to the settlers, and each block had 1.5 ha for subsistence farming. Individual farmers were responsible for the transport of the oil palm fruit bunches from their own field to the road, but the communal block pays for the transport to FELDA-oriented processing facilities. Profit from block sales of fruit bunches is divided equally between members.

The settlers have to repay the government for all that has been given to them together with an interest at the rate of 6.25 percent per annum. They are expected to obtain ownership of the land (and house) after a period of 10 years for those in the palm oil schemes and 15 years for those in the and rubber schemes, depending on the prices of the crops (Tengku, 1971). The cost of opening land to settle one family was high. The average development cost to settle one family in the FELDA scheme increased from RM27,750 in 1974/75 to almost RM50,000 in the early 1980’s. The FELDA authorities paid for all the infrastructure costs as well as the management and administrative costs which included clearing the land, constructing of houses, providing fertilizers and tools, and family maintenance in the initial period (Simmons, 1979). The developer had only to repay the actual cost of the land, the planting, house lot and the house (Mohd Shukri, 1992).

FELDA also provided extension services, management inputs, milling, processing, marketing, transport, shipping, and related engineering services within the schemes (Fold, 2000). In particular, the milling facilities, which were in proximity to the primary production areas, were necessary to extract palm oil at the highest possible rate. These important facilities, at the time, eliminated the potential exploitation of middlemen. A class of organized smallholders, provided with planted oil palm plots of four hectares in a vertically integrated structure of primary production and processing, started to emerge Bissonnette and Koinick, 2015). On that basis, FELDA schemes were considered as highly production centric and organized along similar lines those of the prevailing plantation companies (Sutton, 1989; Pletcher, 1991).

Most of the FELDA schemes were in the less developed states where substantial land resources for new land development are in abundance. Rural-to-rural migration involved more Malays than other ethnic groups. Although the Malay ethnic group was the major participant, FELDA also gave the opportunity to all ethnic groups (except in Malay reserve lands where 100% of the settlers were Malay) to participate. Less than 30 per cent of the non-Malays lived in the rural areas. Most of the non-Malays already had a sustained monthly income, which was not under the poverty line. The percentage of non-Malays in the new land development scheme was less than 10 per cent. For reasons of both population distribution and policy, most of the beneficiaries of these projects are Malays (Baydar et al., 1990).
Table 4: Distribution of Settler by Race, Peninsular Malaysia (1997)

<table>
<thead>
<tr>
<th>State</th>
<th>Malays</th>
<th>Chinese</th>
<th>Indians</th>
<th>Others races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johor</td>
<td>27,721</td>
<td>100</td>
<td>87</td>
<td>1 (Iban)</td>
</tr>
<tr>
<td>Kedah</td>
<td>3,069</td>
<td>0</td>
<td>0</td>
<td>24 (Siam)</td>
</tr>
<tr>
<td>Kelantan</td>
<td>3,206</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Melaka</td>
<td>1,684</td>
<td>295</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>N.Sembilan</td>
<td>16,037</td>
<td>435</td>
<td>693</td>
<td>0</td>
</tr>
<tr>
<td>Pahang</td>
<td>41,943</td>
<td>276</td>
<td>691</td>
<td>24 (aboriginal)</td>
</tr>
<tr>
<td>Perak</td>
<td>5,824</td>
<td>38</td>
<td>66</td>
<td>0</td>
</tr>
<tr>
<td>Perlis</td>
<td>608</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Selangor</td>
<td>2,447</td>
<td>10</td>
<td>115</td>
<td>0</td>
</tr>
<tr>
<td>Terengganu</td>
<td>7,424</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>109,963</td>
<td>1,154</td>
<td>1,673</td>
<td>49</td>
</tr>
</tbody>
</table>

Note: calculated by the author based on information from all schemes from the book FELDA (1995), pgs. 7-401. Number of settlers in each state may be different with the latest information caused settlers who had died, retired from FELDA schemes or settlers land status has been changed for other development.

As the price of palm oil and other agricultural commodities fell to low levels in the mid-1980s and remained so for a few years, the development of new land for agriculture was largely privatised. FELDA, which had been successful in developing land schemes for Malay small holders, was not allocating any more land by the Sixth Malaysia Plan and subsequent period, except in Sabah. This is not only because land suitable for agriculture had become scarce, but also due to the rising cost of resettling families in FELDA schemes. According to the Sixth Malaysia Plan, the average cost of resettling a family under FELDA schemes had increased from RM49,700 in 1986 to RM55,000 in 1990 compared to RM26,500 in 1976 (Malaysia, 1991). Given the present level of commodity prices and the present system of settler loan repayment, new FELDA schemes will not provide favourable net income for the settlers. More importantly, with the current pace of rapid industrialisation in Malaysia demanding cheap labour, the development of FELDA schemes will increase competition for labour. The large plantations were also hit badly by a shortage of labour since they were unable to offer higher wages than the industrial sector.

Until 2000, there were 275 FELDA land schemes with about 102,750 settlers. More than 48,800 settlers had already been given their individual land titles (FELDA 2001). Compared to other land schemes, FELDA was the most successful scheme. The FELDA schemes are very comprehensive and have not only attained their objectives of creating employment, providing ownership of optimal-sized holdings and a capacity to earn higher incomes, but they have also developed technology and group organization through management inputs to raise efficiency and productivity. FELDA has resettled 79,900 families and developed more than 480,000 hectares of land for the cultivation of commercial crops such as rubber and oil palm. The cultivated acreage forms 41 percent of the total land development under the various schemes. Nowadays, FELDA concentrates on oil palm and is a major producer of oil palm in the country. Since
1991, the rehabilitation of existing land has been emphasized rather than develop new land due to the constraint of land for industrial and residential development.

Until 2016, FELDA developed a land area of 479,765.87 hectares comprising 317 land development schemes, which could accommodate 112,636 settlers (Table 4).

Table 5: Number of Settlers by state and crop

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Schemes</th>
<th>Number of Settlers</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Oil palm</td>
<td>Rubber</td>
<td></td>
</tr>
<tr>
<td>Pahang</td>
<td>115</td>
<td>40,500</td>
<td>2,623</td>
<td>43,123</td>
</tr>
<tr>
<td>Johor</td>
<td>73</td>
<td>24,483</td>
<td>3,158</td>
<td>27,641</td>
</tr>
<tr>
<td>N.Sembilan</td>
<td>49</td>
<td>6,846</td>
<td>9,583</td>
<td>16,429</td>
</tr>
<tr>
<td>Terengganu</td>
<td>21</td>
<td>7,133</td>
<td>330</td>
<td>7,463</td>
</tr>
<tr>
<td>Perak</td>
<td>17</td>
<td>4,154</td>
<td>1,760</td>
<td>5,914</td>
</tr>
<tr>
<td>Kedah</td>
<td>10</td>
<td>108</td>
<td>3,077</td>
<td>3,185</td>
</tr>
<tr>
<td>Kelantan</td>
<td>11</td>
<td>3,115</td>
<td>0</td>
<td>3,115</td>
</tr>
<tr>
<td>Sabah</td>
<td>9</td>
<td>1,649</td>
<td>0</td>
<td>1,649</td>
</tr>
<tr>
<td>Melaka</td>
<td>5</td>
<td>801</td>
<td>529</td>
<td>1,330</td>
</tr>
<tr>
<td>Perlis</td>
<td>3</td>
<td>0</td>
<td>857</td>
<td>857</td>
</tr>
<tr>
<td>Selangor</td>
<td>4</td>
<td>1,722</td>
<td>207</td>
<td>1,929</td>
</tr>
<tr>
<td>Total</td>
<td>317</td>
<td>90,511</td>
<td>22,124</td>
<td>112,635</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>80.36</td>
<td>19.64</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Felda, 2016.

According to one evaluation, after remaining seven or eight years in a FELDA oil palm development area, a poor family will enjoy an income twice that obtained in their former village. In original areas, at least 89.4 percent of the settlers obtained a monthly income of less than RM200 a month. After participating in the FELDA scheme, this decreased by 25 per cent. Generally, almost all settlers received nearly thrice the income obtained in their original place. The highest income group in the scheme was those who received at least ten times the income compared to what they obtained prior to participating in the scheme (Tengku and Kow, 1986).

Government has set up a minimum income guarantee policy with the aim of ensuring settlers do not earn below the poverty level. In 1979, the government set this income level at RM350 a month and from the year 2000, this amount has been increased to RM600 monthly and finally to RM1,000 monthly in 2009. This means that if settlers receive an income below this minimum level, no deductions will be made on their income. The government has also decided that if the income of the settlers is below the minimum level because of a drop-in commodity prices, FELDA will bear the differential through the provision of price subsidies (Mohamad, 2007). The income of the settlers is stable and at a high level. In year 2016, the gross average income is RM3,174 for oil palm and RM1,500 for rubber (FELDA, 2016).
As emphasis was given to commercial success and financial independence, by 1990s, although FELDA management of settler schemes remains, new land has also been developed into ‘non-settler’ plantations, owned by FELDA subsidiaries. This non-settler’ plantations utilized typically foreign laborers who earn wages and bonuses at similar rates to private plantations. Presently, about 40 per cent of FELDA’s total plantation area is now managed under non-settler arrangements. Meanwhile, the FELDA management was supportive of settlers who wished to sharpen their skills and interest especially in the business and industrial sectors. Every FELDA land scheme had reserve land for the settlers and their children to carry out various activities like agriculture, breeding, SMI industries etc. The settlers had many opportunities to indulge in side jobs as they had short working days. Many settlers involved themselves in agriculture, business, small industry, construction, etc. These projects helped to diversify income, fill in free time and created job opportunities for the younger generation (Rokiah, 1992).

Some of the industrial activities launched include the One Region One Industry Project (SAWARI) and AGRO-SMI. These programmes are carried out through the following initiatives: FELDA Entrepreneur Incentive Scheme, Rural Farming Activities Assistance Scheme and Pioneer Home Expansion Scheme. At the same time, through the establishment of the Malaysian FELDA Youth Council, FELDA continues to conduct programmes to enhance youth prosperity through training and courses. Settlers’ leadership is spearheaded through the establishment of the Development Planning Committee and the Women’s Association Movement. These institutions undergo a democratic selection process which is conducted in an affable and conducive manner.

The development objectives of the FELDAJAYA project are to expand the potential of the FELDA plans which have been developed on-mass towards the creation of a town centre. It is estimated that through the opening of new towns, the settlers and the second generation will have the opportunity to be involved in business and become resilient entrepreneurs with the capacity to succeed. This will also alleviate the migration of the second generation to the urban areas and encourage them to contribute towards developmental planning. Opportunities to purchase homes as well as business and industrial opportunities can be availed to the capable settlers and the second generation in FELDAJAYA new townships throughout the country.
3.7 Land Consolidation, Rehabilitation and Resettlement

Besides FELDA, two more authorities at the federal level which are primarily engaged in increasing rural income are the Federal Land Consolidation and Rehabilitation Authority (FELCRA) and the Rubber Industry Smallholders Development Authority (RISDA). FELCRA was established in 1966 and focuses on the consolidation and rehabilitation of land in existing agricultural areas, involving the improvement of agricultural holdings through the adoption of modern agricultural practices and the provision of basic infrastructure facilities and support services. Since September 1997, FELCRA has been corporatized and named as FELCRA Berhad and its status has changed from a Statutory Body to a Government-owned Company. The conversion of this corporate entity allows it to venture into business activities.

Rubber Industry Smallholders Development Authority (RISDA) was established in 1973 and aims more towards increasing productivity and income among rubber smallholders through the provision of subsidies, the replanting of rubber trees, and the improvement of processing facilities and marketing. Both FELCRA and RISDA focus on redeveloping and increasing the productivity of the already existing agricultural areas. FELCRA focuses on the consolidation and rehabilitation of land for rubber, oil palm and paddy crops while RISDA only focus on replanting of rubber trees or reinvesting rubber tree to other plants (oil palm). Until 2014 FELCRA had developed 128,870.43 hectares of land concerning 100,146 participants. Meanwhile, until 2018 RISDA has settled 24,481.25 hectares of land involving 15,559 participants. As well as FELDA scheme, FELCRA and RISDA also provided financial assistance to encourage smallholders and their families to engage with entrepreneurship programme in various SMI activities. By March 2018 there were 1,279 small and medium-sized entrepreneurs in the FELCRA development area and 15,036 in the RISDA area (Table 5 and 6).

---

6Resettlement to the new development areas/schemes by federal and state government in Malaysia are a form voluntary planned migration or government-sponsored migrants. The relocation of people to the new areas is sponsored by the government including help with the land, house and basic amenities (Devamany and Asan 2016). In many studies, the resettlement programme for shifting voluntarily is more successful when compared with the resettlement programme which is by force (Gebre, 2002).
Table 6: FELCRA, Participants by state, 2014

<table>
<thead>
<tr>
<th>Negeri</th>
<th>Oil palm</th>
<th></th>
<th>Rubber</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hectare</td>
<td>Number of participants</td>
<td>Hectare</td>
<td>Number of participants</td>
</tr>
<tr>
<td>Johor</td>
<td>17,997.20</td>
<td>9,829</td>
<td>2,326.20</td>
<td>660</td>
</tr>
<tr>
<td>Kedah</td>
<td>659.39</td>
<td>664</td>
<td>2,079.32</td>
<td>3,990</td>
</tr>
<tr>
<td>Kelantan</td>
<td>1,886.16</td>
<td>1,903</td>
<td>1,443.30</td>
<td>733</td>
</tr>
<tr>
<td>Melaka</td>
<td>2,325.99</td>
<td>5,505</td>
<td>270.25</td>
<td>136</td>
</tr>
<tr>
<td>N. Sembilan</td>
<td>6,474.28</td>
<td>11,216</td>
<td>3,474.45</td>
<td>1,518</td>
</tr>
<tr>
<td>Pahang</td>
<td>17,835.32</td>
<td>18,042</td>
<td>3,453.11</td>
<td>3,175</td>
</tr>
<tr>
<td>Perak</td>
<td>20,513.22</td>
<td>17,868</td>
<td>1,472.18</td>
<td>2,059</td>
</tr>
<tr>
<td>Perlis</td>
<td>122.38</td>
<td>82</td>
<td>1,774.36</td>
<td>379</td>
</tr>
<tr>
<td>Pulau Pinang</td>
<td>249.84</td>
<td>770</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sabah</td>
<td>6,106.91</td>
<td>1,680</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sarawak</td>
<td>19,029.44</td>
<td>9,271</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Selangor</td>
<td>2,770.14</td>
<td>3,474</td>
<td>965.9</td>
<td>629</td>
</tr>
<tr>
<td>Terengganu</td>
<td>14,493.24</td>
<td>6,124</td>
<td>696.89</td>
<td>439</td>
</tr>
<tr>
<td>Jumlah</td>
<td>110,466.52</td>
<td>86,428</td>
<td>17,955.96</td>
<td>13,718</td>
</tr>
</tbody>
</table>

Source: FELCRA office

Table 7: RISDA, Participants by state, 2018

<table>
<thead>
<tr>
<th></th>
<th>Tanam Semula Getah Ke Getah</th>
<th>Reinvesting Rubber To Other Plants</th>
<th>Jumlah</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bilangan Pekebun Kecil</td>
<td>Keluasan (Hektar)</td>
<td>Bilangan Pekebun Kecil</td>
</tr>
<tr>
<td>Johor</td>
<td>712</td>
<td>946.62</td>
<td>92</td>
</tr>
<tr>
<td>Kedah</td>
<td>1,772</td>
<td>2,621.47</td>
<td>83</td>
</tr>
<tr>
<td>Kelantan</td>
<td>2,002</td>
<td>2,685.55</td>
<td>52</td>
</tr>
<tr>
<td>Melaka</td>
<td>640</td>
<td>691.48</td>
<td>96</td>
</tr>
<tr>
<td>N. Sembilan</td>
<td>1,744</td>
<td>2,312.83</td>
<td>55</td>
</tr>
<tr>
<td>Pahang</td>
<td>4,012</td>
<td>6,962.54</td>
<td>173</td>
</tr>
<tr>
<td>Perak</td>
<td>868</td>
<td>1,393.31</td>
<td>72</td>
</tr>
<tr>
<td>Perlis</td>
<td>116</td>
<td>135.34</td>
<td>6</td>
</tr>
<tr>
<td>P. Pinang</td>
<td>30</td>
<td>27.59</td>
<td>17</td>
</tr>
<tr>
<td>Selangor</td>
<td>135</td>
<td>139.17</td>
<td>17</td>
</tr>
</tbody>
</table>
While the resettlement models were evolving in Peninsular Malaysia, Sabah Land Development Board (SBLDB), which was established in 1969, adopted the FELDA model and instituted large-scale multi-scheme ventures. A slight point of difference was that SBLDB had jurisdiction over major settlement schemes while smaller schemes fell within the jurisdiction of the Extension Branch of the Sabah Department of Agriculture. Formed to implement rural development, SBLDB aimed to develop state land, mainly via land development and resettlement schemes. There were rural (farming) training centres in Tamu Darat (near Kota Belud) and Damai (in the Kota Marudu of Kudat). There was also the Ulu Dusun Oil Palm Research Station providing specialized extension and training services on oil palm cultivation.

In 1974, under the National Extension Project, a total of 2,391 families cultivating 20,431 ha were settled under the major settlement schemes and 9,105 families cultivating 13,390 ha under the minor settlement schemes (World Bank 1977). Another 54,227 ha were cultivated by estates. The remaining 1,141 ha of oil palm land was owned by some 400-smallholding families.

The main ethnic groups (Iban, Malays and Chinese) were the target settlers. They could obtain the land title after repaying development costs. In particular, it was intended as an incentive to relocate Hakka Chinese and Iban who were subject to influence from the then-active Communist Organization in the border areas of southern Sarawak (Fold 2000). However, the targeted Malay and Chinese communities resisted, and their political representatives lobbied to have the resettlement policy overturned.

To avoid the scheme becoming an exclusively Iban affair, settler recruitment and the issuing of titles was frozen in 1974. The schemes reverted to a conventional estate model, with would-be Iban settlers working as hired laborers. By 1980, SRLDB had developed over 15,500 ha of oil palm and cocoa (Zain 1986).

However, towards the late 1970s, SBLDB was facing with challenges in both recruiting and retaining settlers. Ethnic groups within the scheme were more diverse than the relatively homogenous Malay participants in the FELDA schemes on

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7Besides SLDB and FELDA, other agencies involved are Sabah Forestry Development Authority (SAFODA), the Sabah Rubber Fund Board (SRFB), the State Ministry of Culture, Youth and Sport (MCYS). By the end of 1980s, about 94,000 hectares of land had been developed and mainly planted with oil palm, to benefit about 7,000 settlers (Yap et al, 1988).
Peninsular Malaysia (Zainal and Hoh 1989). Productivity varied significantly, and absenteeism and the abandonment of holdings were prevalent (Sutton 1989). Sabahans were unused to and reluctant to adapt to regimented production systems. Moreover, leadership in terms of hierarchical management was poor. Consequently, SBLDB schemes began switching to more of a plantation approach, hiring estate workers rather than settlers (Sutton 1977).

Intended to replicate the vertically integrated model of FELDA, the Sarawak Department of Agriculture implemented the first land resettlement schemes from 1968 to 1972 (Colchester et al. 2007). This involved clearing of new land and the relocation of peasants into the schemes growing cash crops, mainly oil palms.

Sarawak Land Development Board (SRLDB) was established in 1972 to develop new lands for resettlement schemes, replicating FELDA’s initial approach in Peninsular Malaysia (Fold 2000). Differing from the unsuccessful attempt of the first land resettlement schemes, SRLDB was designed to open up new land and develop primarily forest reserves in the densely populated northern and central parts of Sarawak for oil palm (Zain, 1986).

Having failed twice previously, the government of Sarawak established Sarawak Land Consolidation and Rehabilitation Authority (SALCRA) in 1976 (Colchester et al. 2007). This scheme pursued a model of in-situ development, aiming to develop croplands directly within target communities’ lands (McCarthy and Cramb 2009). The inclusion of land within a development area managed by SALCRA would help confirm existing customary rights (Cramb 2013a). On completion of the land development and the repayment of the associated costs, the landholders could get permanent land title. SALCRA schemes were conceived, therefore, as targeting poorer areas, where rural development was much needed.

The primary functions of SALCRA were to consolidate and rehabilitate land and provide advice and training in farming and land management. At the initial stage, SALCRA was responsible for the establishment, maintenance and harvesting of estates in addition to downstream roles in processing and marketing. Scheme participants were hired to work (practice) on the plantations at comparatively low wages, and they received the net proceeds (after the deduction of development costs) from the harvest sold to a SALCRA mill (McCarthy and Cramb 2009).

Through capacity building, scheme participants were to acquire enough know-how, and, upon “graduation”, the estate was to be divided and permanent land title would be given to the participating households. Not only did this scheme turn out to be a land redistribution programme, capacity building was not also carried through. Controversy surrounded land disputes within SALCRA schemes.

In 1980, oil palm was planted on 22,750 ha of land in Sarawak, constituted by 79 per cent in state land schemes (primarily SRLDB and SALCRA), 17 per cent in private
estates, and 4 per cent in smallholdings (McCarthy and Cramb, 2009). Private estates formed an integral part of the massive land expansion in tandem with large-scale land development of resettlement schemes. These entailed large-scale public land conversion and the establishment of infrastructures (roads, input supply and mills). This allowed smallholders located near mills to get involved in oil palm cultivation (Bissonnette and De Koninck, 2015).

In Sarawak the development of new land was not that significant compared to the *in-situ* kind, probably because of problems related to land regulations. Resettlement schemes were developed mainly for security reasons (such as Rajang Security Command Schemes (RASCOM) to resettle Iban communities in the Kanowit and Sibu areas in an attempt to combat communist terrorists) and the construction of dams such as Wong Irup dam near Lubok Antu and lately (in 1999) the resettlement scheme at Sungai Asap for Orang Ulu (Kenyah, Kayan, Ukit, Kajang, and Punan) affected by the construction of Bakun Dam. The resettlement scheme such as Sungai Asap may have promised a better future for the young generation but it posed adaptation problems for old people, whose skills and livelihood were based on hunting and gathering of jungle products and shifting cultivation, which the new area cannot provide.

Sarawak has plenty of land bank to be developed in the future. The state has already targeted to turn about one million hectares of land into oil palm plantation by 2010, largely through private-public sector initiatives. The Lembaga Pembangunan dan Lindungan Tanah (PELITA) was then established to expedite the development of rural land under “Native Customary Right”. Through joint-venture arrangement with private sector, PELITA had already managed to arrange about 247,000 hectares for development, out of which about 27,000 hectares had been planted (Abdullah, 2005). However, the success of the schemes depended on the economic return for the developers and the participation of the natives in the job created. In oil palm plantation, productivity very much depends on the management and working discipline of the workforce, which might not be the culture of the natives who are used to living by hunting, gathering of jungle products and shifting cultivation with a lot of time flexibility.

### 3.8.8 Regional Development Authorities

At the state level, since 1971, the government has introduced several Regional Development Authorities (RDA) in the resource frontier regions. They started with the Pahang Tenggara Development Authority (DARA) in 1972 and was followed by the Johor Tenggara Development Authority (KEJORA), the Terengganu Tengah Development Authority (KESENGAH) in 1973, the Kelantan Selatan Development Authority (KESEDAR) in 1978, and by the Kedah Development Authority (KEDA) in 1981. DARA, KETENGGAH and KEJORA stress more on the development of new land areas, while KESEDAR and KEDA aim to redevelop and increase the productivity of already existing agricultural areas.
On a broader scale and in a comprehensive strategy of development in rural regions, several statutory regional development authorities were established to implement the development strategy in resource frontier areas, mainly virgin forest situated in the less-developed parts of Peninsular Malaysia such as in the southeast of Pahang, southeast of Johor, the south of Kelantan and the middle parts of Terengganu. Most RDAs, particularly those related to the development of new towns, were established in the 1970s not long after the NEP was launched.

Apart from the main goals of poverty eradication and the restructuring of society, the RDAs were given the following mandates: to redress economic and structural imbalances between regions; to utilise resource strengths/endowments of less developed states towards national economic development; to strengthen agricultural and industrial development in lagging regions, to redirect new development and growth to less developed regions and finally, to urbanise rural agricultural regions by development of towns in the rural areas (Quazi, 1987).

Three decades after RDAs were established, more than 40 new towns had been developed. Twenty-three new towns were in the Pahang Tenggara Development Authority (DARA) region, twelve in the Johor Tenggara Development Authority (KEJORA) region, five in the Terengganu Tengah Regional Development Authority (KETENGAH) region and one each in the Jengka Regional Development Authority (JENGKA) and the South Kelantan Development Authority (KESEDAR) region. These towns were mainly developed by the RDAs and FELDA. Two RDAs, the Penang Regional Development Authority (PERDA) and the Kedah Regional Development Authority (KEDA) are not involve in new townships development and their main programs are in-situ rural development projects such as improvement of the physical conditions of existing settlements and rural industrialisation.

Among the reasons for the failure in the development of urban-based economic activities are competition with existing towns, locational disadvantages, lack of infrastructure and facilities, failure of the growth centre concept, and the nature of leakages of capital or trickle up mechanism which favour large urban centres and large capitalists (Ibrahim, 1993; Norizan, 1992, Ghani, 1991; Wong, 1989; Muda, 1989).

Wong (1989), who evaluated the resource frontier strategy of DARA and KESEDAR, revealed that the economy of the frontier regions, which depended on rubber and palm oil production, created relatively little value added within the regions. These commodities are strongly tied to the world market and served the interest of national metropolitan centres. The development of DARA and KESEDAR has not boosted Malay urbanisation nor reduced regional inequality. He also observed that most FELDA settlers have improved their standard of living since moving. However, the benefit has been restricted to first generation settlers since few non-agricultural jobs had been created in the region. An overview of the performance of new townships in several frontier regions generally indicates the failure of the new towns to generate economic growth. The development of new towns has not boosted Malay urbanisation.
nor reduced regional disparity to any significant extent. The development of agriculture and resource-based activities in the new towns has not created the ‘propulsive force’ to boost the economic base of the towns. These activities have not generated a “trickle-down” effect because they did not purchase inputs from local small businesses and their products were not for domestic use but primarily for export. The new towns are also locationally disadvantaged and lack the necessary infrastructure to attract industrial activities.

In 1992, the government undertook a study reviewing the role and position of RDAs. The existence of RDAs has to a certain extent succeeded in reducing development disparity between regions such as in agriculture development, communication networks and social services. On the other hand, less successful is the development of services, private investments and new growth centres.

With the changing development paradigm in the 1990s, and emphasis on private sector led growth, was a government decision to dissolve RDAs by stages. In April 1999, the Cabinet approved privatisation of DARA to Teras Dara Konsortium and Jengka Regional Development Authority to Warisan Jengka Holdings Sdn Bhd. The other RDAs continue their operation, having less scope for new land development than the development of existing settlements and community. Several statutory regional development authorities were established to implement the development strategy in the resource frontier areas, mainly virgin forest situated in the less-developed parts of Peninsular Malaysia, such as in the Southeast of Pahang, Southeast of Johor, the South of Kelantan and the middle parts of Terengganu.

The last objective of urbanization of the rural areas is conceptually intertwined with the industrialization and commercialization of rural areas. This involves the creation of new townships in rural areas with the following underlying purposes (Quazi, 1987):

a. To introduce an urban type of environment, facilities and services into agricultural and rural areas;

b. To foster the development of commercial and industrial activities in rural areas particularly in designated ‘new growth centres’;

c. To induce active participation of Malays in commercial and industrial activities.

Two decades after RDAs were established, more than 40 new towns have been developed. Twenty-three new towns are in the Pahang Tenggara Development Authority (DARA) region, twelve in the Johor Tenggara Development Authority (KETENGAH) region and one each in Jengka Regional Development Authority (JENGKA) and the South Kelantan Development Authority (KESEDAR) region. These towns were mainly developed by RDAs and FELDA. Two RDAs, the Penang Regional development Authority (PERDA) and the Kedah Regional Development Authority...
Authority (KEDA) do not involve new township development and their main programmes are in-situ rural development projects such as improvement of the physical conditions of existing settlements and rural industrialization.

3.9 In-Situ Rural Development Strategy

The In-situ development approach was introduced under the Third Malaysia Plan (1977-1980) aimed at increasing productivity in existing depressed rural areas with a focus on the lower income groups in the less-developed states (Kedah, Kelantan, Terengganu and Perlis). In-situ development programmes are mainly in the form of specific project plans, referred to as the Integrated Agricultural Development Projects (IADP).

IADP planning involves the provision of the necessary infrastructure, inputs and service support, institutional development, extension and training facilities, involving all the related agencies at the federal and state levels which are integrated into a package focusing on the development of specific potential areas. The in-situ development programme was primarily involved in the modernization of the paddy plantation sector particularly in the northern and eastern regions of Peninsular Malaysia, namely the Muda Agricultural Development Authority (MUDA), and Kemubu, Besut.

Besides focusing on the paddy plantation sector, in-situ development programmes also carried out drainage and irrigation schemes, replanting and rehabilitation programmes, fishery, livestock and forestry development programmes. The responsible authority was the Muda Agricultural Development Authority (MUDA) - covering the state of Kedah and Perlis- KEMUBU and North Kelantan, in the state of Kelantan, and Besut in the state of Terengganu. In the late 1980s, a total of 15 IADPs were implemented, covering an area of 847,500 hectares and 480,100 farm families benefited. In the same period, income grew from 23.6 to 197 percent per household and productivity increase ranged from 23 to 103 per cent (Wah and Ee, 1988).

Rural development activities in existing rural areas carried out by agencies created in 1960s to provide various assistance to traditional sectors were not comprehensive enough and lacked coordination in implementation. Each agency, including Federal Land Consolidation and Rehabilitation Authority (FELCRA), Agricultural Bank of Malaysia (BPM), Farmers Organisation Authority and Department of Agriculture Development, served the rural and agricultural sector in their own capacity. Although coordination of the implementation was carried out at district level by the District Development Committee, the impact was not substantial due to its small scale and other administrative problems such as lack of manpower, qualified staff and focus of development. The funding and manpower of each agency had to be dispersed to all state and district branch offices and it was quite impossible to give focus to certain priorities and areas under such a set-up.
Thus, a more integrated approach to the rural development programme was introduced to give focus to a comprehensive programme for combating poverty in traditional village regions where poverty was concentrated. Among large-scale Integrated Agricultural Development Projects (IADP) under the Ministry of Agriculture were Kemubu Agricultural Development Authority (KADA), Muda Agricultural Development Authority (MADA), Kemubu and Besut Irrigation Schemes, North West Selangor and the West Johor Schemes implemented largely in the 1970. The IADP is an integrated package programme providing capital intensive measures such as providing irrigation, farm machinery and high yielding crop varieties and the provision of infrastructure and services. The objectives were to increase agricultural productivity and farmers’ income, modernising agriculture, improving extension services, uplifting the standard of living of the rural population and encouraging farmers to work in groups or organisations.

There were some positive outcomes of the IADP programmes such as an increase in paddy production and farmers’ income, employment opportunities both on and off-farm. Also recorded was the reduction of poverty levels in IADP areas (Bahaman, 1992). Although the projects were successful to some extent in improving rural productivity, they tended to favour big land-owner or rich farmers. A large number of peasants who had no land or owned small plots benefited little from the schemes and still remained in poverty. Farmer participation also tended to be passive, confined to acceptance of new technology and receipt of government subsidies (Chamhuri and Nik Hashim, 1988; Mohd Shukri, 1992). Courtenay (1988) also noted the reduction of padi cultivated area due to farmer withdrawal from growing and a phenomenon of massive migration away from the padi growing districts, reflecting the shortfall of IADP.

In Sabah, the implementation of in-situ development programmes was carried out by several agencies such as the Department of Agriculture, the Rural Development Corporation (KPD), the Sabah Rubber Fund Board (SRFB), the Department of Veterinary Services and Animal Industry (DOVSAI), the Department of Fisheries (DOF) and Drainage and Irrigation (DID). The KPD as a leading agency in rural development initiated many programmes ranging from crop diversification, aquaculture, livestock development, socio-economic programmes, mini irrigation projects, commercial farming, processing and marketing of agricultural and related products. Overall performance was encouraging in terms of production and land area under crops, livestock and fisheries development, but as pointed out by Zulkifli (1992), human development aspects were not given sufficient attention, such as skills on operation and management. This resulted in the failure of some projects related to non-traditional crops. In rural areas, socio-cultural factors such as traditional beliefs and customs, institutions, values and needs had to be addressed not only to minimise conflict in development objectives but also to ensure that the programs introduced were received and widely participated in by the communities.
*In-situ* development in Sarawak involved measures for agricultural improvement carried out by the Department of Agriculture, and Drainage and Irrigation Department and Sarawak Land Consolidation and Rehabilitation Authority (SALCRA). The Department of Agriculture was responsible for several schemes for small farmers including Rubber Planting Schemes, Coconut Planting Schemes, the Pepper Subsidy Scheme, Agricultural Diversification Scheme, Assistance to Padi Planters Schemes, Livestock Development Subsidy Scheme and Inland Fisheries and Aquaculture Development Programme. The Rural Growth Centre (RGC) programme was also pursued under the Sarawak Ministry of Rural and Land Development, consisting of an infrastructure component, economy, service centre and human development. Implementation of the RGC was executed by existing agencies such as the Drainage and Irrigation Department (DID), Sarawak Land Development Board (SLDB) and Sarawak Land Custody and Development Authority (LCDA). Generally, the subsidy schemes have been instrumental in raising the standard of living of many farmers and reduced the area used for swidden agriculture, intensifying farming practices and usage of subsidised fertiliser, pesticides and weed killers on smaller rice plots. They also diversified into cash crops such as pepper, cocoa, fruit and vegetable growing, and some had fish ponds (King, V.T, 1992). Like other *in-situ* development elsewhere the programmes cannot create jobs for the new labour force. The migration of youth after completing secondary education was prominent. Many of the young generation migrated to towns in Sarawak, Peninsular Malaysia and even Singapore in search of jobs.

![Figure 5: The Regional Development Authorities (RDAs) in Malaysia](image)

3.10 Orang Asli Development Schemes

The Orang Asli are the original peoples of Peninsula Malaysia and are classified as the bumiputeras. The Orang Asli are a minority race and represent only 0.63 per cent of the total population of Malaysians. According to the records of the Department of Orang Asli Affairs, up until 2010, there were 178,197 Orang Asli comprising 36,658 families. The Orang Asli are heterogenous and are divided into three main races, that is the Senois, the Negritos and the Proto-Malays. Each race is further divided into six ethnic groups who differ from each other in terms of socio-cultural and pysio-cognitive. The largest Orang Asli race are the Senois (55%), followed by the Proto-Malays (42%) and the Negritos (3%) (JAKOA 2011).

Until 2010, there were 852 Orang Asli villages in Peninsular Malaysia. These villages can be categorised into three, based on their location, level of economic development and the basic amenities that are made available to them. Around 61 per cent of the Orang Asli live on the fringes of the towns, 38 per cent in the interiors and only one per cent live in the towns (JAKOA 2011).

After independence in 1957, especially in the era of the New Economic Policy (1971-1990), commencing from the Second Malaysia Plan (1971-1980) till the Fifth Malaysia Plan (1986-1990), the economic development plans of the Orang Asli were focused on strengthening the national integration spirit, raise the standard of education, establish structured resettlement programmes, opening of new land for agriculture and husbandry, increase basic facilities, medical and health for the Orang Asli community.

Table 8: Category of the Orang Asli Village

<table>
<thead>
<tr>
<th>Category of the Village</th>
<th>Number</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>327 (38%)</td>
<td>Can be contacted via laterite roads, jungle pathway or waterways</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not have clean water supply, 24 hours electricity supply and other basic facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No fixed source of income</td>
</tr>
<tr>
<td>Bordering the towns</td>
<td>519 (61%)</td>
<td>Close to Malay villages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Can be contacted through premix roads</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Have basic facilities, clean water supply, 24 hours electricity supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Have land development projects and fixed source of income</td>
</tr>
<tr>
<td>Town</td>
<td>6 (1%)</td>
<td>Have complete facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No land development projects</td>
</tr>
</tbody>
</table>

Source: JAKOA. 2011a.
During the era of the National Development Policy (1991-2000), that covers the Sixth Malaysian Plan (1991-1995) and Seventh Malaysian Plan (1996-2000) the focus of the Orang Asli development was through commercial land development programmes, increased education development and skills training. Having counselling for entrepreneurs was also implemented besides increasing the quality of services and public facilities to enhance the quality of life of the Orang Asli community.

In the era of Eighth Malaysian Plan (2001-2005) and Ninth Malaysian Plan (2006-2010) the development of the Orang Asli was continued through the human and community development programmes. Amongst them were increased poverty eradication programmes, education programmes through the Education Action Plan for the Orang Asli, access to technology information and communication in the Orang Asli villages. Besides that, Village Information Centre, eco-tourism initiatives, and increased individual land ownership amongst the Orang Asli community was also introduction at the relevant village.

The poverty rate in Malaysia has decreased significantly since 1970. However, there still are poor people, especially those who live far away from mainstream national development. In view of this in the Tenth Malaysian Plan, the focus of distribution was to increase the income level by 40 percent, especially amongst the Orang Asli community in Peninsula Malaysia. The objective of Tenth Malaysian Plan was to reduce the incidence of poverty amongst the Orang Asli community from 50 percent in 2009 to 25 percent in 2015. Three main strategies to raise the standard of living of the lowest 40 percent were to increase the potential income level through education and entrepreneurship, increase access to basic facilities and undertake special programmes especially for groups that had specific needs (Malaysia, 2011).

Table 9: Orang Asli Development Programme

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>• protection and security from community threats and teachings</td>
<td>• commercial development of land</td>
<td>• human development and community programme</td>
<td>• special programmes for those earning 40 percent and below</td>
</tr>
<tr>
<td>• instil the spirit of integration</td>
<td>• knowledge sharing</td>
<td>• poverty eradication</td>
<td>• programmes providing house, better infras and social amenities</td>
</tr>
<tr>
<td>• education opportunities</td>
<td>• development of education and skilled training</td>
<td>• Orang Asli education action plan</td>
<td></td>
</tr>
</tbody>
</table>

37
Duration of the Tenth Malaysia Plan will see the implementation of even more development and land ownership programmes designed specifically for the Orang Asli community. The programmes will no doubt reduce the dependence of the Orang Asli on forest revenue from forest products. Through this programme, the Orang Asli will be given land ownership rights which they may utilise to become productive farmers. The government, by working hand in hand with the relevant agencies (such as FELCRA and RISDA), will also develop the Orang Asli Land Reserves for commercial farming. Through this programme, each member of an Orang Asli household which is chosen will be able to work on land measuring between two to six acres in addition to a further 0.5 acres of land allocated for the building of a house. The Orang Asli will be given ownership rights over the land once it has matured (from creating produce) (Malaysia 2011).

Under the Structured Resettlement Programme the community and village of the Orang Asli become more organized, complete with basic infrastructure and modern economic sources. Under this programme, government undertakes the survey to identify the boundaries of resettlements and land ownership of the Orang Asli, for gazetting the settlements of the Orang Asli community. This programme involves various infra-social components such as water and electricity supply, village roads, economic projects. The Structured Resettlement Programme can be divided into three; Resettlement Programme, Village Rearrangement Programme and New Villages Programme.

The evolution of the administration and planning of the Orang Asli community, resettlement policies for the Orang Asli was undertaken since the emergency (1946-1960) for security purposes to protect the Orang Asli from communist’s influence.
After the end of communists’ insurgency, in the 1980’s, the resettlement of the Orang Asli policy was more focused on raising their socio-economy profile and quality of their life (Mustaffa, 2008).

This programme was undertaken since 1979 in the Fourth Malaysian Plan and later reinforced in the Fifth Malaysian Plan and Sixth Malaysian Plan as the main strategy to raise further the socio-economic status of the Orang Asli community. Through the Resettlement Programme, the Orang Asli villages which were dispersed far in the interiors were gathered together in one area that was provided with basic amenities and economic commercial agricultural activities (rubber and palm oil). The families that were involved were transferred to resettlement areas.

Through this planned programme, amenities were easily made available and effective. This was able to prevent the communist elements from influencing the Orang Asli in the interior areas. Besides raising the quality of life of the Orang Asli, this programme also gave them a chance to be involved in the modern economic activities. Through the rubber and palm oil planting programmes, the Orang Asli community received dividends from the crops, besides being given a chance to be plantation workers. Until today, there are about 17 Resettlement Programme, that is, 6 in Perak, 7 in Pahang, 3 in Kelantan and 1 in Johor. Around 14 percent of the Orang Asli live in Resettlement Programme areas (Mustaffa, 2009).

Besides the Resettlement Programme the Government also implemented the Village Rearrangement Programme. This programme was implemented since the Seventh Malaysian Plan (1996-2000) that involved around 217 Orang Asli villages (12,264 families). The objective of this programme was to raise the standard of living of the Orang Asli community in the already existing villages through the Structured Resettlement Programme social infrasocial components like that undertaken by the Resettlement Programme.

The third Structured Resettlement Programme is the New Villages Programme. This resettlement programme is specially designed for the Orang Asli villages which border Thailand and are in KESBAN areas. The participants are equipped with Structured Resettlement Programme infra-social amenities like that which is done for Resettlement Programme and Village Rearrangement Programme (JAKOA, 2010). The approach taken by KESBAN is – “Security and Development”, to provide security and economic stability in the boundary areas around a radius of 25 kilometre (km) from the international Malaysia – Thailand border.

KESBAN was undertaken in 1979 with basic housing facilities in place together with economic programmes like agriculture, husbandry and village industries. Example, like the Brooke Post, that is 90 km from Gua Musang with a population of around 300 people.
Economic Development Programme focuses more on increasing the income (decreasing the poverty level) and diversifying the economic source of the Orang Asli community. Four main projects under the Economic Development Programme are:

i) Vegetables planting projects
ii) Husbandry project (goats, cows, sheep and fish);
iii) Rubber and palm oil planting projects;
iv) Development of businesses for the Orang Asli community

Besides Economic Development Programme, Social Development Programme was implemented mainly to raise the quality of life of the Orang Asli community who live far in the interiors and on the fringes. This programme will also assist the physical transformation and the mind-set of the Orang Asli to prepare and accept the changes to their daily life. Social Development Programme covers the following components:

i) Education Assistance;
ii) Housing for the poor;
iii) Infrastructure and Social amenities;
iv) Change in the mind-set;
v) Family Development;
vi) Health Development

4. ISSUES IN OIL PALM INDUSTRY AND WAY FORWARD

Malaysia was once the largest producer of CPO followed by its neighbour Indonesia. However, starting from 2005 Indonesia’s CPO production has surpassed Malaysia. In terms of the CPO production pattern, Malaysia’s exhibit a stagnant growth as compared to vibrant growth of Indonesia’s. Malaysia has since left behind Indonesia and yet to recover due to several issues. In the long term, this could jeopardize Malaysia’s position in the world palm oil market. Vigorous CPO production is needed for Malaysia to secure its export revenue and also fulfilling increasing demand of palm oil both locally and globally in the future. There is range of factors, such as labour shortage, scarcity of plantation land, low youth labour participation, economic transformation to the other sector, limited awareness of new technologies and best practices and lack of financial resources make it difficult for these smallholders to increase their production tremendously.

4.1 Labour Shortage

Labour shortage in oil palm plantation is a pertinent issue that need to be focussed. In 2012, palm oil industry experienced a shortage of 26,375 workers. Peninsular Malaysia recorded the largest labour shortage of 12,495 workers followed by Sarawak 7,800 workers while Sabah 6,080 workers. Based on the statistics from the Immigration Department of Malaysia as of April 2014, workers in the oil palm plantation amounted to 414,546 workers (Azman, 2014). However, it is estimated that the oil palm
plantation sector requires 564,000 workers based on the ratio of a labour force equivalent to 10 hectares (Ramli, Azman & Ayatollah, 2011). This means that the oil palm plantation sector still has a labour shortage of 26.50% based on the existing palm oil capacity. Skilled labour shortages have plagued some regions, reducing harvest activity by 50 percent and leaving ripe but un-harvested fruit rotting on the plantation (Amatzin, 2006). As a highly labour-intensive industry, shortage of labours will significantly affect the performance of the industry.

In order to meet the rapid demand and development of the palm oil industry, this sector has to fill up the shortage by largely depending on foreign labour force. Palm oil estates currently rely on immigrant Indonesian workers. At the same time, the large-scale of opening new land for oil palm in Kalimantan Indonesia has result the decrease in the number of Indonesian workers. This is because the Indonesian government has introduced a "Plasma Scheme" which is equivalent to the long-established scheme in Malaysia such as the FELDA and FELCRA schemes that cause Indonesian workers less interested to work in Malaysia. There was a decrease from 448,461 workers in 2014 to 429,351 workers in 2016. The oil palm plantation workers showed a reduction despite the increase in oil palm plantations by 4.6 per cent (MPOB, 2016).

Wage pressure is reportedly hitting oil palm plantations in Malaysia as they compete for needed manpower. Given future growth prospects in the palm oil industry in Indonesia, this problem will continue for Malaysian producers. Indirectly, the plantation sector in Malaysia has suffered losses in terms of investment costs providing training to Indonesian workers. The losses were estimated around RM2.808 billion a year with an estimated labour shortage of 12,000 workers, with the crude palm oil price reached RM2,500 per tonne (Azman, 2014).

Hence, it is important to train local youths to join the labour market in the plantation sector. The smallholders have to identify the local youths who are interested in the plantation. At the same time, to retain them in this sector for a longer period the plantation pulling factors need to be identified. Whereas, if we still wanted to retain the foreign workers, wage and benefits rise has to be amended in the Malaysian immigration law.

Besides training local youths and retaining the foreign workers, small farms with family members involved are the best premise to raise the young children. The skills of plantation can be passed on from one generation to another under family ownership structures. When this family failed to train their children, then the farm children do not continue to farm. Eventually their farming knowledge, skills, and experience are lost.
4.2 Scarcity of Plantation Land

History has recorded that in 1960, total oil palm plantation area was only 55,000 hectares (MPOB, 2016). Then, under the government’s agricultural diversification programs, there were rapid expansion of the oil palm plantation area where it has been recorded of approximately 1 million hectares of oil palm plantation land in 1980. However, the palm oil plantation has been growing at slower rate, plummeting in year 2000 which indicates that the industry has started to face land constraint ever since. The plantation area is expected to remain stagnant in the future with low expansion rate due to low land bank available for oil palm plantation. Another reason for the low plantation area growth rate is due to the competition faced by oil palm with other crops for the balance of agriculture land in Malaysia, and also due to the industrial or residential areas where land converted to these purposes (Abdullah & Wahid, 2011). Sufficient plantation area is critical to establish a production capable of coping with the growing demand in the future.

There lies the option for land expansion abroad but these involve substantial monetary cost and conscientious geo-political issues. Malaysian government may reserve the land allocation for agriculture. This means, strictly there is no conversion of land from agriculture to residential, industry or other purposes.

4.3 Ageing Labour and Low Youth Labour Participation

Ageing labour in the agriculture sector has been an unresolved issue. A study conducted by Norsida (2007) found that the youth involved in the agricultural sector were 26% and majority of the workers involved in the agricultural sector in Malaysia aged 55 years and above. Another study by Hassan and Azril (2009) revealed that majority of the farmers in Malaysia are at the age of 46 and above. This situation has created awareness of the growing number of aging farmers in the agricultural community.

In terms of youth labour participation in the agricultural sector, it is still low. According to Kees (2010), youth involvement in the agricultural sector in Malaysia is lower (13.8-22.7%) compared to other Southeast Asian countries (22.7-35.1%) such as Indonesia, the Philippines and Thailand which still maintain the agricultural sector as the main sector. Youth participation in the agricultural sector is influenced by the transformation of the agricultural sector into the industrial sector. Despite the economic transformation, the labour productivity in the agricultural sector in Thailand, the Philippines and Indonesia has no gap in the other sectors. This has resulted in a lack of migration to the city except migration to nearby neighbouring countries that offer higher incomes than in the home country (Johnathan, 2012).
Youth in Malaysia have a negative response to agriculture and they labelled agriculture as a tiring and less productive industry (Man, 2008). The agriculture, forestry and fishery sectors maintained as the third option after the manufacturing sector and retail, wholesale and motoring sectors (Department of Statistics Malaysia, 2016). Local youths also make jobs in the plantation sector as an alternative option or second option before getting permanent jobs in the public sector or a more comfortable job in the urban areas. They are more interested in finding less burdensome work and conducive environment in urban areas, especially in the public and manufacturing sectors. Young generation are willing to receive low income in the manufacturing and service sectors compared to the salaries offered in the plantation sector despite higher income in the plantation sector (Leong, 2010). The impact of farm labour shortages is not only on farm labourers but also has been detected in posts involving management. This contributes to the negative impact as this post should have been fulfilled by university graduates from the agricultural programs. Agriculture is actually a profitable industry if accompanied by intense efforts and ongoing efforts.

4.4 Economics Transformation into others Sectors

After the independence, Malaysian government began to focus on industrialization to replace the rubber and tin-based commodity. The five years Development Plans has been set up to achieve the objectives. The First Malaysia Plan was launched in 1965-1970, up to now in 2016 the 11th Malaysia Plan was drafted and implemented to develop the plantation sector. In the Second Malaysia Plan, the New Economic Policy (NEP) led to industrialization in the country has been given priority.

After this policy was introduced, the manufacturing, palm and petroleum industries have replaced rubber and tin as a new economic resource. As the development of this multi-sectoral activity took place, Malaysia began to face labour shortage problems in contributing to the industrial industry as well as the palm oil industry. The situation has been worse as local communities began to be picky in terms of jobs. There is reduction in the local labour rates in agriculture especially in plantation due to factors such as improving living standards, education levels, industrial opportunities and migration of youth to urban areas.
4.5 Climate Change

Like any other cash crop, oil palm has its highs and lows, and is subject to challenges and obstacles. Climate change is considered an external factor that caused palm oil production to fall. Climate change factors like the haze and the El Nino effect caused palm oil production to fall, resulting in price increase.

4.6 Lack of Education and Awareness among Smallholders

Another major problem faced by most of oil palm smallholders in Malaysia is lack of education and awareness. There are a lot of researches done on oil palm industry, however, the fruits of their research are not well practised by the majority of the smallholders. To date, smallholders are just producers of raw material with small plots of land and have only been involved in the upstream sector. They have never been involved in the downstream sector where more income can be generated. These factors forced the smallholders in placing them at a considerable disadvantage compared to other large-scale producers.

If we are to talking about “high income” and “inclusiveness”, smallholders we must involved in the downstream activities so that they can reap more rewards offered by the industry. We hope that one day, these smallholders could also be involved in the refinery, processing and export sectors, among others. One way of doing this is through cooperatives, as this would give them vital access to land ownership, factories, professional support, government assistance and so on.

4.6 Smallholders with Lack of Access to Credit Facilities

Majority of the smallholders are lack with credit facilities. A lack of access to credit facilities might also hinder smallholders from investing in palm oil production activities. This situation will also limits their intention to spend on Roundtable on Sustainable Palm Oil (RSPO). As the global demand for Certified Sustainable Palm Oil (CSPO) increases, these smallholders could find themselves excluded from the global CSPO supply chain. They may require support to undertake certification and avoid exclusion from sustainable supply chains. This certification can bring a range of benefits for smallholders in terms of wider market access and premium prices. Achieving certification requires skills in management, administration, quality control, marketing and service delivery that are difficult for smallholders to develop without support (Molenaar et al., 2011). Furthermore the high costs associated with RSPO membership, training and certification assessments are beyond the means of most of the smallholders, and may prevent their participation in RSPO.
Our Government has also developed a local equivalent, the Malaysian Sustainable Palm Oil (MSPO) standard, which has a similar concept and standard criteria with RSPO. Under the MSPO scheme, there is a process of group certification, which enables smallholders’ participation in the scheme. National Association of Smallholders Malaysia (NASH) is now striving to register its smallholder members together through a cooperative, grouping their lands for easier classification. We hope that this effort will greatly boost this process for future national oil palm cultivation.

Lenders, instead of imposing certification as a requirement for credit, could offer discounts in exchange of commitment to certified production. Certification costs may be included into replanting loans as they only represent a small percentage of total loan. Another option can be suggested to government, such as giving subsidies to smallholders as a group. Cooperative can be considered as a vehicle for rural development. Through them, oil palm smallholders will be able to enjoy economies of scale in their business.

Big businesses also can help smallholders to adopt sustainable cultivation methods if they want the palm oil sector to be environmentally and socially responsible. By offering smallholders the training, resources, and administrative support they need to improve their agricultural practices and obtain RSPO’s certification for sustainable palm oil, companies can help reduce environmental impact across the industry and improve farmers’ lives in the process. This can be considered as corporate social responsibility (CSR) project to the big companies.

4.7 Ageing trees and Poor Planning among Smallholders

As compared to the government agencies and private sectors, independent smallholders face difficulties in planning their planting strategies due to their lack of resources in planning system. Their impact on the overall palm oil production is rather substantial given the 16 percent of plantation area owned. Further, the influence of external uncertainties like the price of crude palm oil (CPO), government policies, and climate changes added the complexity in the sector. Due to these difficulties, their planting decision always based on trial-and-error basis as well as past experience. This has led to low than average fresh fruit bunch (FFB) yield which directly affect their income.

The plantation area consists of three phases: (i) immature tree; (ii) mature tree; and (iii) ageing tree. Immature tree refers to the young tree aged 1 to 3 years old and is in non-productive phase. After three years, the trees enter the mature state, which can last until 25 years before becoming ageing trees (MPOC, 2015). In the mature phase, the trees are capable of producing maximum yield. On the other hand, ageing trees, though still productive, produce significantly less yield but difficult to manage due to its height as
compared to mature trees (Wahid & Simeh, 2010; Zulkifli et al., 2010). The existence of different phases has led to the decrease of income for plantation with old trees. The ageing trees can be replaced with new trees through replanting works. However, replanting requires additional cost of cutting and planting new trees. Further, the planters will face a period of low income for at least three years before new trees can become productive again.

This dilemma has put the difficulties in the planning of plantation activities. Not only replanting, the expansion of new planting also impose the same level of difficulties on planters in utilizing their limited resources especially on the cost of agronomics of plantation. Agronomic plantation cost include of the use of fertilizer cost, weedicide cost, labour wages, seedling’s prices, and possibly the incorporation of Roundtable Sustainable Palm Oil (RSPO) certification. The cost of these elements are frequently changing thus planning of future planting works is quite challenging without proper planning system.

A decision support system for smallholders known as Malaysia Oil Palm Plantation Investment Decision Support System (MyOPPIDeX) can be proposed. By using this system, different kind of planting strategies in various economic scenarios can be experimented hence will be a great help for planters in maximizing their expected profit while lowering the cost in their future plantation activities. The proposed decision support system is based on System Dynamics (SD) modeling which cater to help planters especially smallholders in evaluating and experimenting their future planting strategies in various economic scenarios. The planter will act as a player in a game environment with ability to set their planting strategies and control variables like CPO prices as well as agronomic costs incur in planting activities. Interestingly, the change of control variables can be done in every year interval which renders flexibility in experiment various economic scenarios while implementing different planting strategies. The system is expected to be beneficial not only to planters but also to other stakeholders in the palm oil industry in terms of evaluating the impact of planting strategies to the oil palm plantation sector (Applanaidu et al., 2017).

Not only oil palm smallholders face a challenge with regard to public perception but also the palm oil industry as a whole in Malaysia. The discriminatory act by the European Union (EU) to ban palm oil from entering its market, have a hidden agenda against palm oil. Misinformation about oil palm cultivation has accused the industry of ruining the natural habitats by destroying forests even when Malaysia have massive replanting budget. This perception has given a big impact on the Malaysian palm oil export. The export figures went down and this eventually lowered the price of palm oil. Since the income of smallholders is heavily dependent on significant contribution by oil palm cultivation from planting to selling palm fruits, the false perception on Malaysia’s palm oil will effect the smallholders’ income, thus creating a big social impact on palm oil smallholders.
5. CONCLUSIONS

Malaysia started its agriculture rolling through estates’ involvement in industrial crop plantations, particularly rubber and palm oil. Big farms or estates were proven to be the “right” business model for these industrial crops. Malaysia was once the world’s largest producer of these commodities in the 1960s and 1970s; now, that’s history. The structural change that took place in the economy, particularly industrialization, has increased the returns to factors in the non-agricultural sectors. Hence, the outflow of resources (i.e., land, labor, and capital) out of agriculture to manufacturing, construction, and the services sector. Even the estates have diversified their investments into properties and non-agricultural services such as health, education, recreation, and manufacturing. The share of estates in palm oil, rubber, and cocoa has reduced significantly. Land resource constraints have limited further area extension.

As of 2014, smallholders accounted for 94 percent of the rubber area, 96 percent of the cocoa area, and 40 percent of the oil palm area. They also operate most of the commodity and food crops as well as 97 percent of fruit and vegetable farms (i.e., less than 1 ha). A similar pattern applies in the aquaculture and livestock sectors. Unlike big farms, small farms are labor intensive, hence, they can absorb more people into economic activity and reverse out-migration from rural areas. Mechanization in big farms means that fewer people are employed. Small farms are also sustainable in other ways they often use non-purchased inputs like manure and compost, while large farms buy agro-chemicals. Observation also shows that larger farms and land owners usually leave much of their land idle, while small farmers maximize their areas.

Diversification of crops not only makes small farmers flexible under uncertainties but also ensure food and nutrition security of their families.

In a dynamic small farm community, the income is circulated among local business establishments, generating jobs and community prosperity. Whereas for corporate farms, the income earned is invested elsewhere.
Although the above arguments need further empirical support, it is apparent that small farms, unlike the plantation estates, practice multiple-cropping, utilize a broad array of resources, and value its sustainability. Their multifunctional activities help preserve biodiversity, reduce land degradation, and maintain other valuable ecosystem services for the society.

These multiple benefits warrant full support from the government to strengthen these small farms through better farmer organizations such as integrated cooperatives that venture into high value-added activities leading to higher income. A comprehensive and full-scale support is needed to empower smallholders with sustainable practices, knowledge and technology, ease of business, and exchanges that enhance their existence ecologically and economically.

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has its merits but the gaps that exist between large and small farms signify that limited technologies are invented for small farmers and incorrect policy strategies are taken. Under such a dichotomous situation, Schumpeter’s idea of “smallness within bigness” deserves full attention. That entails a comprehensive “pro-smallholder development” policy framework.

**Potential of Small Farms**

In the long term, the advantages and potential of small farms may outweigh its perceived “inefficiency”. For example, small farms embody a diversity of ownership of cropping systems, of landscapes, of biological organizations, cultures, and traditions. A variety of farm structures contributes to biodiversity, diverse landscape, and open space.

Second, with the right government support, a small community is relatively efficient in managing its natural resources through a number of empowerment strategies such as co-management of river and fishery resources. The community’s close contact with nature and its surroundings, makes it a better custodian of these natural resources.

Third, family farms are the best premise to raise children. The skills of farming are passed on from one generation to another under family ownership structures. When farm children do not continue to farm, farming knowledge, skills, and experience are lost.

Small farms are the bridge connecting consumers to the food that they eat. This brings the consumers closer to the origin of the commodity, which may encourage them to appreciate farming. Imported food does not relate the consumers to the production process of goods, hence, less appreciation of agriculture and natural resources.

There are evidences to show that small farms produce more output than big farms. Monocropping is easier to manage with mechanization. Small farmers, on the other hand, are more likely to practice multiple-cropping or intercropping. They may also combine or rotate crops and livestock with manure to replenish soil fertility. Hence, integrated farming systems produce far more per unit area than monocultures. Though the yield per unit area of one crop may be lower on small farms than on large monoculture farms, the total output per unit area is higher. Small farmers tend to utilize space and time intensively, applying far more labor per unit area than larger farms, which explains the relatively high.
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