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BASELINE STUDY OF MODELS FOR SMALLHOLDER DEVELOPMENT WITH REGARDS TO PALM OIL CROP PRODUCTION IN MALAYSIA

Research for SHARP

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A social enterprise dedicated to promoting sustainability in Asia

www.wildasia.org

About Wild Asia

WILD ASIA operates as a not-for-profit organization and works with businesses to promote concepts of sustainability through global standards and models. Through strategic partnerships with businesses that have a direct impact on our natural environment, wildlife, people and communities, we aim to inspire and create change from within the industry. We use our knowledge to advise, train and build capacity and innovate new approaches to support this mission. Over the years, Wild Asia has built up a wide experience in dealing with the complexities and challenges of promoting sustainability in this part of the world. Wild Asia has experience in the forestry, tourism and agriculture sectors.

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About our Technical Advisory Programme

Wild Asia's professional experience is directed towards an advisory programme to assist the business community to understand, implement and support sustainability initiatives that meet International environmental and social performance standards. We work with producers, people on the ground, working on implementing environmental or social programmes. We also work with buyers, financiers, trade networks, to develop a combined assurance and support programme to be able to risk assess and support improvements in the supply. These are strategies we feel that will create incentives to improve the environmental and social performance of the supply chain, and ultimately, improve working environments on the ground. Wild Asia has developed its experience in forestry, tourism, and agriculture sectors.

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EXECUTIVE SUMMARY

A desktop-based research was conducted to form the baseline study of smallholder models in palm oil production in Malaysia. Other commodity crops like rubber and cocoa were also investigated to document successful models or components of models deemed suitable for palm oil production.

Oil palm smallholders in Malaysia are an important sector for the industry as it occupies close to 40% of production area. Independent smallholders have found oil palm cultivation to be a profitable livelihood crop, superior to the traditional crops of rubber and pepper. As such, independent smallholders have grown from a share of 9% of total production area in 1980 to 14% in 2011 at 700,000 ha. This is further projected to grow to 17% by 2015 to 940,000 ha. This is remarkable as the managed smallholders in government schemes, which occupy 25% of production area (2011), are not expected to grow in the next few years. Thus, any growth in national production volumes and yields will necessarily have to address independent smallholder productivity.

Various real-life models and components of it have been identified as being effective in raising smallholder output for the Independent models. Some key characteristics of the Independent and Supported models have been found to promote the viability of such models, which includes maintaining farmer autonomy in making diversified livelihood choices, maximizing cash incomes without entering into costly commercial estate joint ventures, self-organization to gain efficiencies and to strengthen the position as a significant stakeholder in the supply chain. At the same time, independent smallholders face considerable challenges and will likely benefit from improved and focused external assistance like transfer of organizational and technical know-how, access to capital, quality inputs and planting materials, improving land tenure security and better integration into the supply chain through closer trading relationships.

Finally, recommendations for further study into key components of smallholder models are made with the view to potentially replicate such best practices for oil palm production in Indonesia.

1. INTRODUCTION

1.1 TERMS OF REFERENCE

Wild Asia has been commissioned by SHARP to undertake a Baseline study of models for smallholder development with regard to Palm Oil commodity crop production in Malaysia. The agreed TOR for this assessment is as follows:

A baseline study on a landscape overview of the current smallholder models will be conducted by Wild Asia, predominantly on palm oil but also other commodity crops. It will involve a compilation of successful models or components of it for sustainable production. Included in the study will be major challenges to each model and recommendations for replication in Indonesia for palm oil. This study will be carried out with a desk-based review and complemented with interviews with key stakeholders.

Key Questions

- What smallholder models currently exist?
- What makes each model work and why?
- What are the major challenges in implementing each model?
- What are the recommendations to replicate successful models or components of it?

A desktop study of published academic literature, industry reports, corporate websites and related news was undertaken to triangulate and gather data for the baseline study. In addition, phone interviews with practitioners were conducted to gather more in-depth information on key case studies.

Wild Asia has extensive experience and knowledge on the palm oil industry, especially from the WAGS initiatives. The field and project management insights from this have been included in the baseline study.

1.2 OIL PALM SMALLHOLDERS IN MALAYSIA

The Malaysian palm oil industry (comprising 5,000,109 ha of planted area) is primarily dominated by large plantation companies (private- and government-linked companies), which hold 60 percent of total plantation land, with a growing level of integration along the value chain. However, there is a significant share of palm oil plantation area under the ownership of smallholders, which still account for 40 percent of the total area.

Smallholders in Malaysia are generally defined as having:

- Less than 40 ha land
- Holders of Land title / customary right

Of the 40% of smallholders, approximately 14% are categorized as Independent farmers. This consists of approximately 190,000 individuals who own a collective of 700,000 hectares of land. The balance smallholders belong to some form of government or federal based schemes.

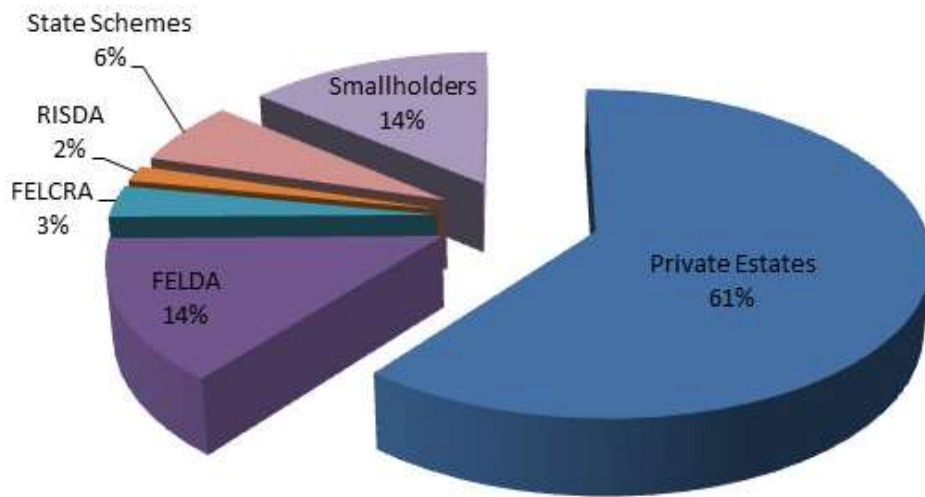


Figure 1. Distribution of oil palm planted area in Malaysia for 2012 by category (MPOB 2012a)

2. NATIONAL OVERVIEW

2.1 GENERAL

There are various key national initiatives that provide an overall view of the palm oil sector in Malaysia.

Federal rural and agricultural land development policies

Since the 1970s, the federal government has favoured oil palm cultivation for agricultural development as the main commodity crop. Through the three main land development agencies FELDA, FELCRA and RISDA, policies and substantial public expenditure support have been driving the establishment of government-managed oil palm estates, most notably targeting the inclusion of smallholders. State schemes have also followed suit. As a result of this and other supporting policies for industry-wide development, federal and state-owned plantations today account for 25% of total planted area (MPOB 2012a). Presumably due to the same support, mills have flourished and there are today 429 mills, with 244 in Peninsular Malaysia alone (where the aforementioned agencies focus). The abundance of mills have in turn enabled smallholders to cultivate oil palm as the processing of their FFB and hence inclusion in the supply chain is now viable.

Sustained investment in R&D

In addition to the heavy investments in FELDA, the government made further investments, possibly amounting to billions of Ringgit, through the IRPA (Intensification of Research in Priority Areas) programs from 1991-2006. Sustained financial support in R&D enabled innovations throughout the supply chain, most notably for this study the hybrid variety Tenera today has been bred and developed to produce as much as 4x higher yield than usual varieties.

Sustainable Palm Oil Cluster (SPOC)

The initiative since 2009 by MPOB (Malaysian Palm Oil Board) aims to address farming practices that improve productivity, sustainability and farmer incomes. In 2011, 42,000 independent smallholder farmers were included in 23 clusters all over the country, covering an area of 170,000 ha (Omar et al 2012). Organization of farmers into cooperatives, technology transfer, extensive services and replanting funding assistance are the key components of the initiative. Certification of clusters, whether MPOB's own standards for good agricultural practice for oil palm or RSPO, is listed as one of the goals of the initiative.

National Key Economic Areas (NKEA) under the Economic Transformation Programme (ETP)

On September 21, 2010, the Government of Malaysia launched The Economic Transformation Programme (ETP), a comprehensive programme to assist Malaysia in achieving its goal of achieving high-income status by 2020. The palm oil industry is one of those NKEAs under the ETP. A key deliverable of the NKEA is the need to close yield gaps between smallholders and plantation companies; the latter have greater financial resources to manage their estates better and attain higher yields. Under the oil palm sector NKEA, independent smallholders will be clustered around their nearest mills into cooperatives to promote, mandate, and implement best management practices so that the national CPO yield can be improved significantly by 2020 to 6 MT/ha/yr.

Launch of MSPO (Malaysian Sustainable Palm Oil) standards

The Government is expected to launch the Malaysian Sustainable Palm Oil (MSPO) standard by 2014, exactly three years after Indonesia launched its national palm oil standard in 2011. The MSPO standard will initially be on a voluntary basis for local oil palm planters. However, the Government wants to see all planters adopting it in the long term. The MSPO has come about as Malaysia feels that the RSPO had many disadvantages, especially to the medium and small oil palm planters who are non-RSPO compliant.”

B10 Malaysian Biodiesel Programme

The Malaysian government is planning to introduce a B10 biodiesel program requiring the introduction of 10 per cent blended palm oil or B10 in petroleum diesel as part of initiatives to increase palm oil usage in the domestic market. The current B5 biodiesel program utilizes 5 per cent blended palm oil. This move is expected to increase the biodiesel demand

2.2 AGRICULTURE – COMMODITY CROPS

Agriculture has been an important sector in Malaysia’s rapid economic development since independence in 1963. Prior to the 1980s, rubber was the main commodity crop, grown mostly in Peninsular Malaysia. Today, oil palm has grown to become the nation’s most important commodity crop for export (90% of production is exported), both in terms of area and revenues. Other major commodity crops for export include pepper, coconut, cocoa, pineapple and tobacco.

Large estate and smallholder models have been supported by government policies. Federal and state level schemes combining estate operations and smallholder participation have been pursued to varying degrees of success. These are usually heavily subsidized to achieve poverty eradication and rural development goals. As such, commodity crops like oil palm, rubber and cocoa is highly to moderately modernised in terms of organization, infrastructure, know-how and policy and fiscal support.

Sub-sectors	Share of Agriculture (%)	
	2011	2012
Agriculture	100.0	100.0
Oil palm	37.0	35.7
Other agriculture	17.2	18.3
Fisheries	14.4	14.2
Livestock	10.8	11.7
Forestry and logging	8.8	11.5
Rubber	8.8	8.7

Figure 2. Agricultural GDP breakdown (MPC 2013).

3. PALM OIL

3.1 BACKGROUND

Palm oil is the most important commodity crop for export in Malaysia. The palm oil industry provides employment to 610,000 people, including over 179,000 smallholders (May et al 2012). The crop today occupies 5.1 mil hectares or 16% of total land area and contributes MYR53 billion (USD17 bil, about 6%) to the nation's GNI (Gross National Income) (World Bank 2013).

The growth of the palm industry in Malaysia has been phenomenal. From a mere 400 hectares planted in 1920, the hectareage increased to 54 000 hectares in 1960. Since then many more areas have been opened up for oil palm cultivation, either from virgin jungles, or from the conversion of plantations that originally supported rubber or other crops. This increase in hectareage is a direct consequence of the government's policy on crop diversification. By 1996, the hectareage under oil palm stood at a staggering 2.6 million hectares. By 2005 and 2010 the percentage change in the areas under oil palm was around 20% for each five-year period. This rapid growth in oil palm planting has been seen in five-year period 1965 – 1970; 1970 – 1975, and even in 1975 – 1980. It also saw a corresponding growth in the milling and refining sectors (MPOB 2012).

Encouraged further by the government's incentive to exploit the country's rich agro-based resources, oleochemical processing from palm oil and palm kernel oil began to gain prominence in 1980's.

3.2 PRODUCTION TRENDS

Production of palm oil has been growing in terms of area planted. It is projected to increase to 5.61 mil ha in 2015, a 10% increase from 2012 (May et al 2012). Replanting efforts are also underway to speed up productivity improvements to raise average yields.

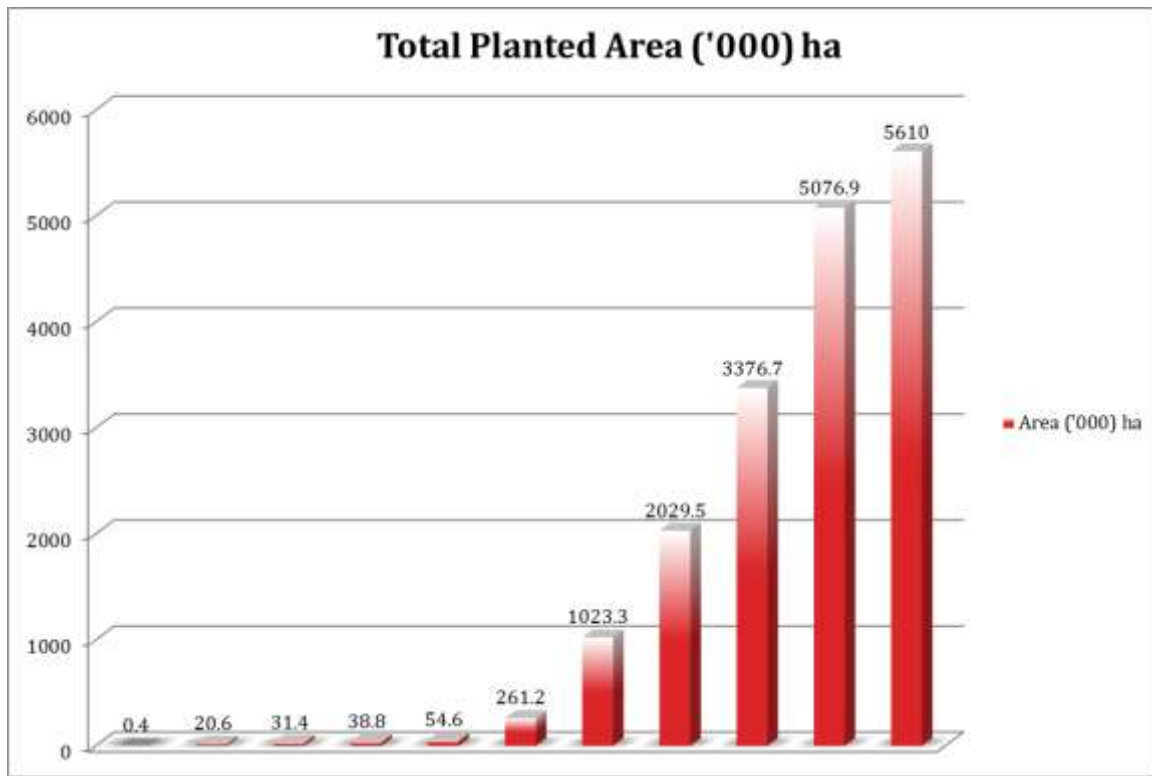


Figure 3.1. Production area growth and projections for 2012 and 2015 (Basiron & Chan 2004; May et al 2012).

However, average yields have been stagnating at 20t/ha, presumably due to aging trees and low-yielding stock. Aging trees (age 25 years and above) account for an average of between 5-8% of total planted area.

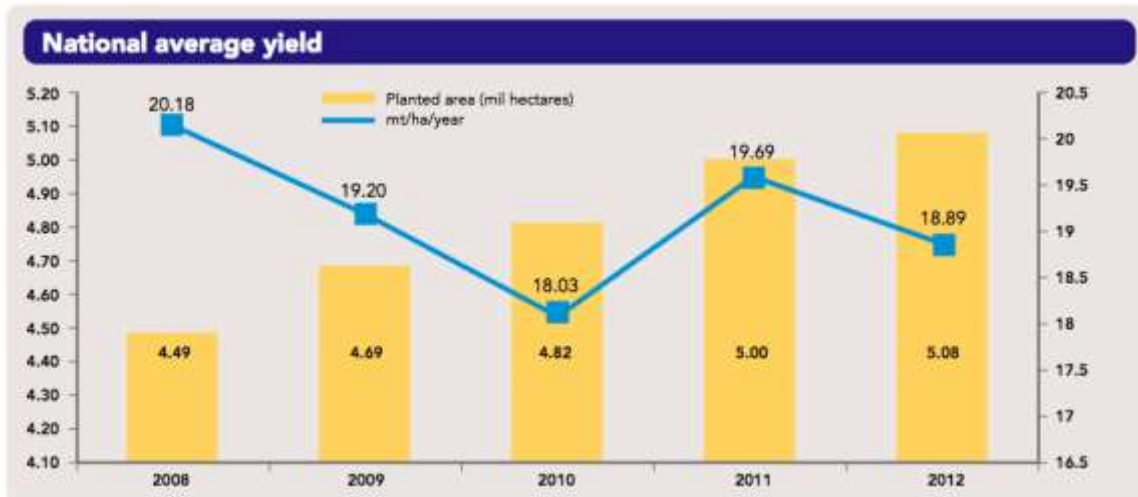


Figure 3.2. National average yield (ETP 2012).

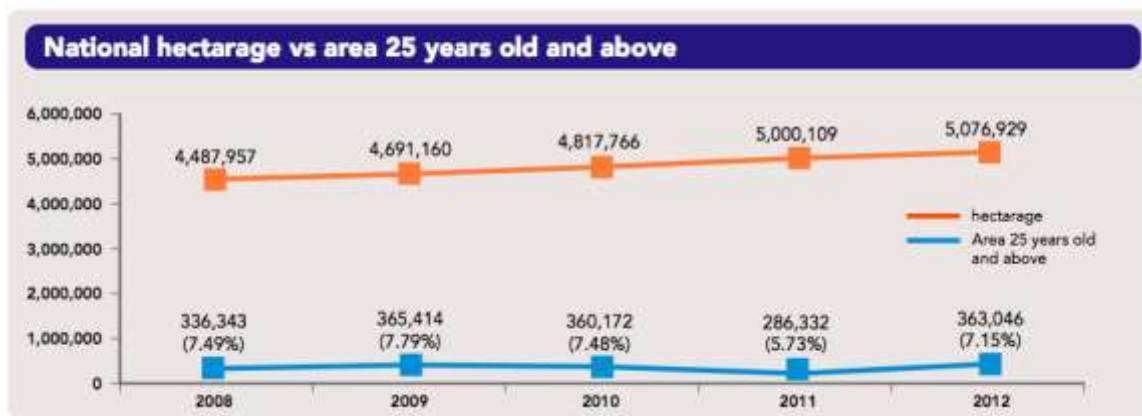


Figure 3.3. National hectareage and area with old trees after replanting (ETP 2012).

Since the 1980s, Malaysia has been at the forefront of world palm oil production. Today, Malaysia produces 37.7% of world palm oil output, and contributes 13.7% (mil tonnes) to global production of vegetable oils in 2011 (Oil World 2011). This represents a 40% increase from 2005 production (May et al 2012).

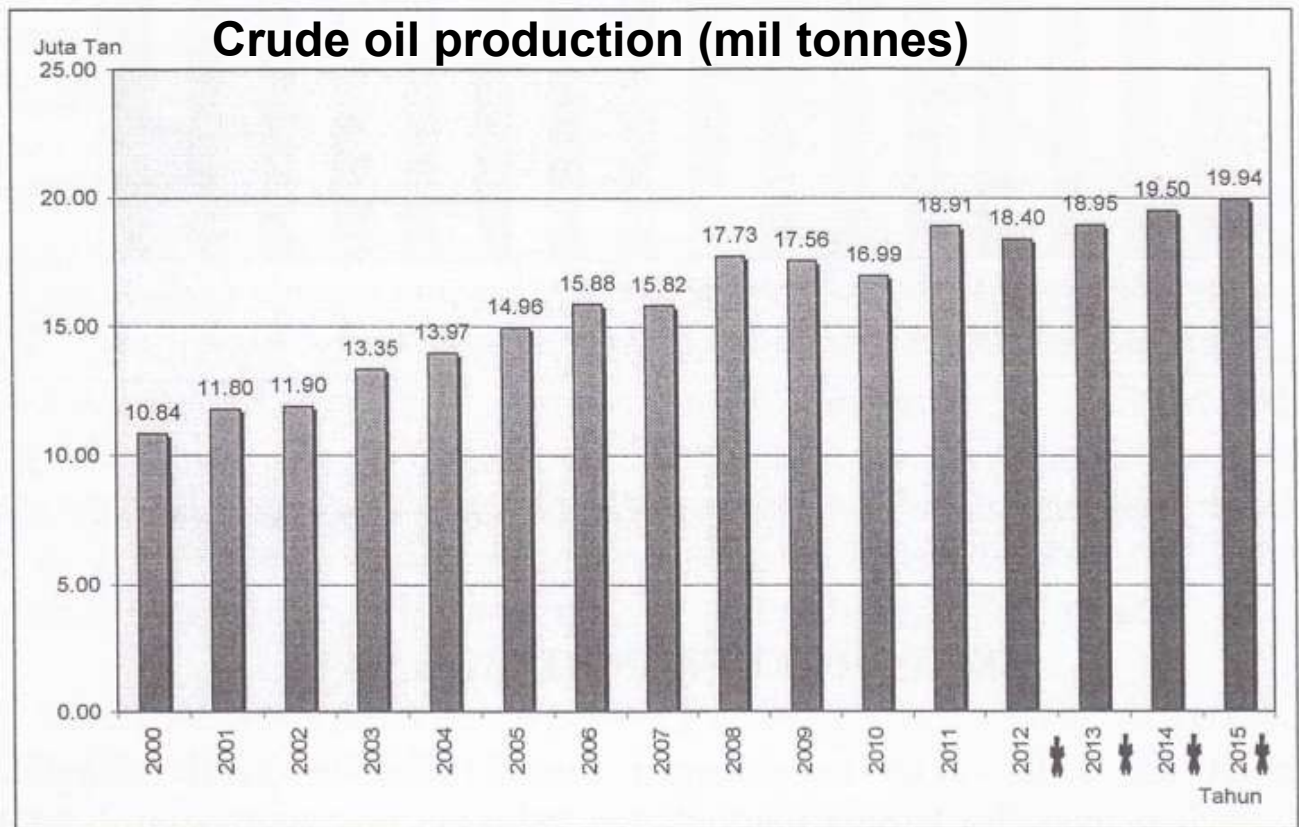


Figure 3.4. National crude oil production trend (May et al 2012). Data for 2012-2015 are projections.

Malaysia and Indonesia remain the 2 largest producers of oil palm as well as CSPO (Certified Sustainable Palm Kernel) & CSPK (Certified Sustainable Palm Oil) in the world.

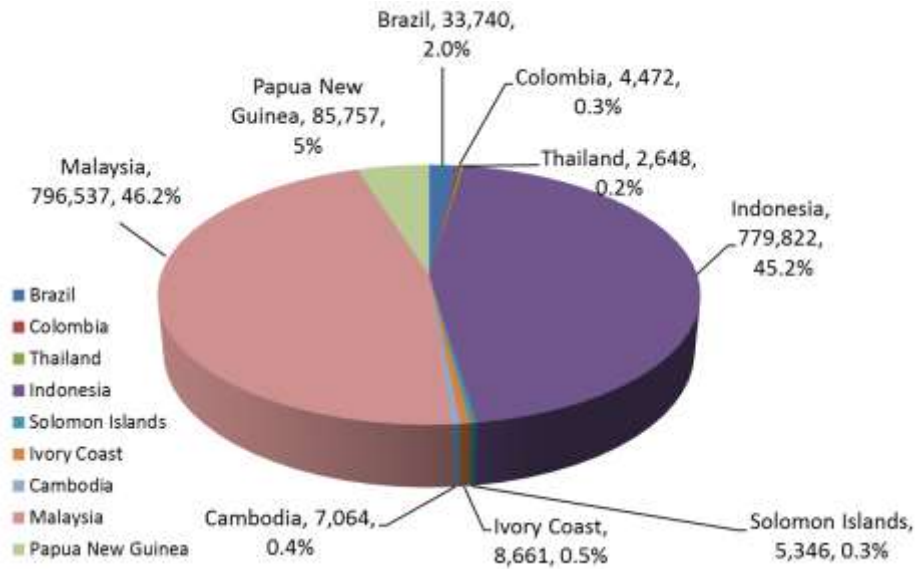


Figure 3.5. CSPO production area (ha, %) by country (RSPO 2013).

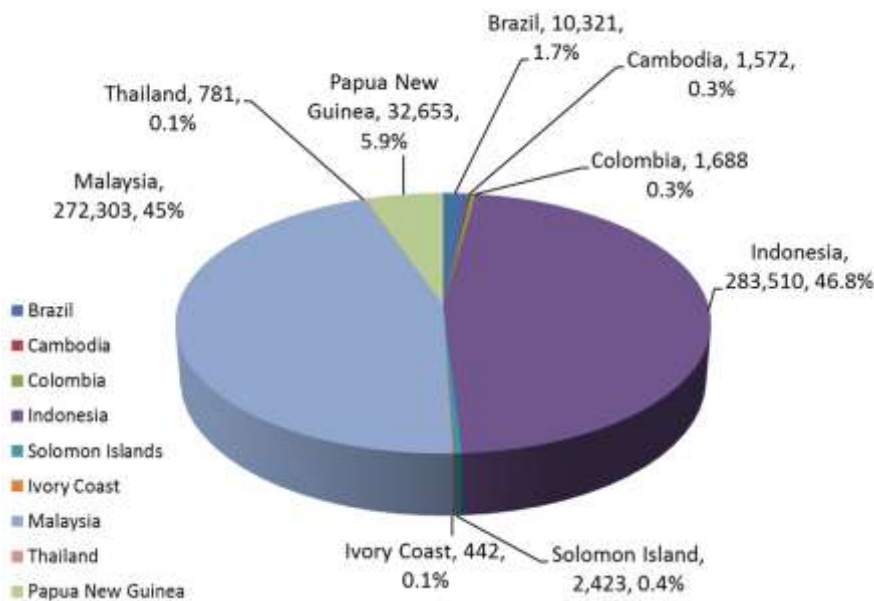


Figure 3.6. CSPO & CSPK supply (mil ton) (RSPO 2013).

Planted area by independent smallholders has grown more than 8-fold since the 1980s. It occupies 700,000 ha in 2011, or about 14% of total planted area for oil palm, up from 10% in

2005. All forms of smallholding, including Managed Smallholder models like FELDA, occupy a significant 39% of total planted area in 2011 (Basiron 2007; May et al 2012).

	1980	1985	1990	1995	2000	2005	2005 Share
	Planted area [ha]						
Private estates	495,412	666,099	749,608	1,230,302	2,024,286	2,412,745	60%
Organised smallholdings	347,856	469,592	650,782	1,230,302	789,558	895,764	22%
State schemes	-	-	-	196,628	242,002	318,292	8%
Independent smallholders	80,761	156,708	261,287	228,621	320,818	424,573	10%
Total	924,029	1,292,399	1,661,677	2,885,853	3,376,664	4,051,374	100%

Source: MPOB

Table 1. Planted area by type of operation (cited from Basiron 2007).

“... smallholder production has made significant progress both in total output and in output per unit land or labour, especially in rubber, coconuts, oil palm and padi. Much of the increases in the rate of growth of output has been attributed to incentive structure and policies in the efforts by the government to improve productivity in existing agricultural areas. In addition, there have been improved access to technology and capital, and improvement in husbandry, processing and marketing. Programmes for replanting, land rehabilitation and land development has also helped.” (Mustapha 1987, p. 51)

Independent smallholders are projected to grow to 940,000 ha in 2015, up from 700,000 ha in 2011. This represents 17% of total planted area for oil palm, up from 14% in 2011. About 80% of this growth is projected to occur in the states of Sabah and Sarawak, which today account for 1/3 of area planted by independent smallholders. Managed smallholders (state or federal schemes) are expected to grow at a comparably slower rate than independent smallholders (May et al 2012; Omar et al 2012).

Smallholder Production Area (mil ha)

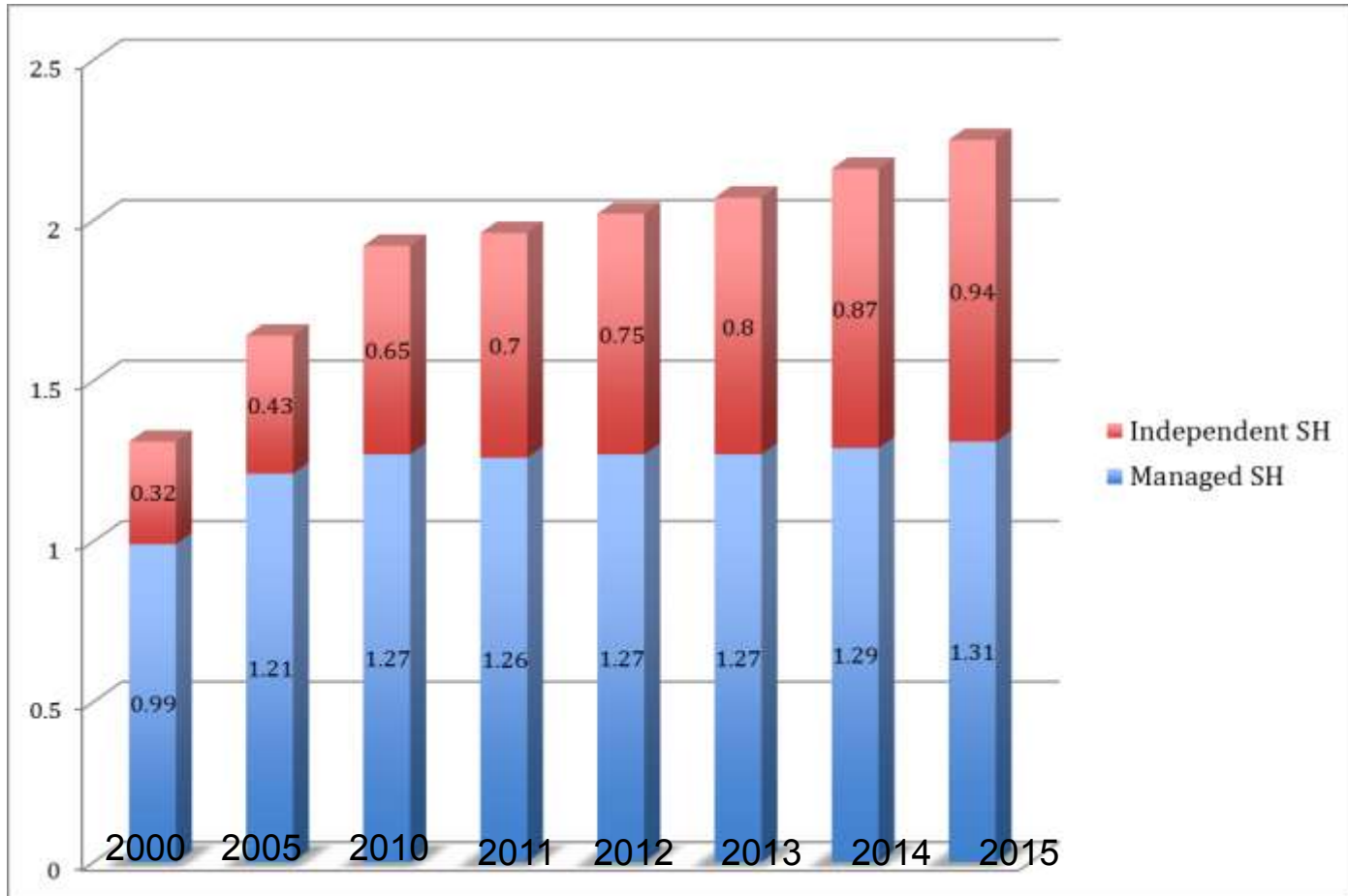


Figure 3.7. Projections for 2012-2015 (May et al 2012).

3.3 TYPES OF SMALLHOLDER MODELS

Typically smallholders in Malaysia are categorized into 2 large categories:

- 1) **Organized** : managed by government agencies such as FELDA, FELCRA, etc
- 2) **Independent** : managed by self with some assistance from the government

The organized farmers tend to have more assistance and thus have better production yields, however the independent farmers typically face problems such as small land holding, low oil palm productivity, lack of oil palm technologies and unorganized. The Malaysian government (via efforts from MPOB) is aiming to organize these independent farmers and improve their living status by increasing income. Hence they are encouraging these farmers to undergo sustainable certification-first through local farm management standards and eventually international standards (i.e: RSPO).

Within the main categories, further distinctions are observed to illustrate the broad range of practices in Independent and Supported models. This is full detailed in the table below.

Technical Advisory Programme

1 Advisory 2 Training 3 Assurance



TYPE	ORGANIZED		INDEPENDENT		
Description	Group title, SH has no control over management of farm		Own title, SH retains control over management of farm		
Model support	Supported		Supported		Unsupported
Examples	FELDA, FELCRA	RISDA, NASH coop.	By a 3 rd party (ie. dealership)	MPOB SPOC, WAGS, KSGS	Farmers with no support
Organization & Farm Management					
Level of organization and farm management	Fully organized, management under a central unit	Fully organized, management under coop.	Some degree of organization. Farm activities managed by dealer.	Some degree of organization. Farm self-managed with external support.	Not organized. Self-managed farm.
FFB Supply					
Supply contract	Yes	Yes	Typically No (verbal agreement)	No	No
Sale of FFB	Group managed		Direct to dealer	Individual	
Land Ownership					
Land type	Transitional (title held by group and eventually handed back to farmer once loan paid off)	Collective (title held by cooperative)	Individual		
Land Management Services					
Land development cost	Loan, paid back by sales	Typically govt. subsidies	Contracted by dealership. Service cost deducted from monthly FFB sales.	Self OR subsidies (ie. MPOB replanting) OR loans/credit system paid back by sales (ie. KSGS)	Self
Seedlings	Subsidies		Same as above	Self	
Agricultural inputs/ Harvesting/ Transport	Group managed		Same as above	Self	
Income					
Income format	Dividends, labour wages	Sales after deducting costs, dividends	Sales minus service costs	Sales	

Table 2. Typical characteristics of smallholder models in Malaysia.

The Independent Smallholder model

Independent smallholders are thought to be essential to the industry due to their cumulative significance in terms of production area and output (Rahman et al 2008; May et al 2012).

Key characteristics of Independent smallholders

Access to resources: Independent smallholders in Malaysia receive little or no support from government or private sectors. These farmers make management decisions on their own and usually have limited access to government schemes, credit and technical assistance. Access to a nearby mill remains one of the most crucial factors in the adoption of OP as a cash crop due to the short processing timeframe of FFB. The proliferation of mills in Malaysia has therefore been instrumental in the growth of independent smallholder OP.

Diversified Livelihood strategy: The oil palm crop has become part of a livelihood strategy that generates relatively high returns to household capital and labor, although yields/ha of land is generally low. When FFB prices are favourable (around USD125/ton), a typical farm-household may earn income from OP that averages just below the rural poverty line of USD217/month for a family of four. Where land is available, OP cultivation is often seen as an important component of a diversified livelihood strategy that includes waged employment and limited rice growing for subsistence needs. Hence, we can see a trend where OP has been increasingly replacing other traditional cash crops, like rubber and pepper, as the preferred option in optimizing labor, capital and availability of land. In some cases, the traditional cultivation of rice for subsistence needs have taken a back seat as OP gradually becomes one of the main livelihood activities.

Access to Labour: The rural population is undergoing profound change in Malaysia, especially in Sarawak, due to a rapid shift from subsistence agriculture to urban waged employment. This has a major implication on the production of palm oil for independent smallholders – the limitation of labor. In cases where land and capital are not in severe shortage, OP productivity is restricted by a shortage of labor as household members are now engaged in waged employment most of the time. Harvesting frequency tends to be lower as a result.

Access to Capital: In reality, capital remains a key limiting factor even though inputs like fertilizers and herbicides have been used. Provided that FFB prices remain favourable, an optimum application of fertilizers is likely to translate to higher incomes from higher productivity. Households with little or no capital are usually not willing to incur debt in order to improve their cash incomes.

Infrastructure: Other factors that influence the production of palm oil by independent smallholders include infrastructure and suitability of land. While some smallholders have been resourceful and creative in transporting their produce to the mill nearby, there remains poorly accessible plots that could be planted with OP provided that farm roads are expanded.

Land: About 80% of independent smallholder growth is projected to occur in the states of Sabah and Sarawak, which today account for 1/3 of area planted by independent smallholders.

Distribution of Independent Smallholder 2011		
State	Smallholder (No)	Oil Palm Area (ha)
Johor	65,813	201,018
Kedah	4,098	21,091
Kelantan	718	3,210
Melaka	1,936	9,379
Negeri Sembilan	3,693	19,334
Pahang	7,790	36,350
Perak	32,992	98,280
Perlis	8	58
Pulau Pinang	1,553	8,486
Selangor	17,845	38,543
Terengganu	1,895	8,413
Peninsular	138,341	444,163
Sabah	24,852	170,643
Sarawak	11,982	66,166
TOTAL	175,175	680,972

Table 3. Distribution of Independent Smallholders in Malaysia (Omar et al 2012).

Age: Majority of independent smallholders are on the elderly side. Approximately 66% are >50 years old. Their children are likely to preferentially pursue waged employment in urban centres or plantations.

As such a trend is seen in these types of farmers relying more on contract farming services offered by 3rd parties and the hiring of workers to help manage their land.

Profiles of Malaysian Independent Smallholder	
Characteristic	Profiles
Age	Average 54.6 yrs old, 66.6% > 50 yrs old
Education	Primary (49.6%), secondary (34.1%), tertiary (8.9%) and 7.4% education less
Family size	Average 5.6 persons
Farm employment	Full-time (55.6%), part-time (28.9%), absentee owner (15.5%)
Farm size	Average 2.6 ha, < 4ha (88.9%)
Source of seedling	Govt. (50.4%), private (24.4%), estate (14.1%)
Average FFB Yield	15 t/ha/year

Source : Idris (2005)

Table 4. Profile of Malaysian Independent Smallholder (cited from Omar et al 2012). Note that it is expected that the profile above, documented in 2005, will be relevant today as labour continues to shift to urban centres.

The Independent Smallholder model can be broadly described through a distinction in whether it is Organized or Unorganized:

Independent – Unorganized	Independent - Organized
Individual farmers operate largely on their own without any organization or grouping to attain common interests. They usually do not organize themselves to gain efficiencies, and opportunities have not arisen to require	Some form of organization exists to reap benefits otherwise not available to individuals, for example: <ul style="list-style-type: none"> • to form a project large enough to access one-off funding and support from the state • to better take advantage of a project’s activities

<p>grouping.</p> <p>This model is probably present in communities with individualistic goals.</p>	<p>that require a focused delivery to a group (rather than to many individuals)</p> <p>Organization may or may not be formal, and can dissolve or re-group over time. Verbal agreements may exist to share resources and gain efficiencies as a group. This model is probably suited to communities with largely similar goals and communal practices.</p>
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Smallholder model	Schemes/Projects	Key Features
Independent – Unorganized	Do not belong to any schemes or projects; outgrowers; previously managed scheme farmers ie. ex-FELDA	<ul style="list-style-type: none"> •SH maintains day-to-day decision-making •Small-scale •Self-financed •Labor: family; hired community labor may be used at times •May access support as secondary beneficiary (rather than main target segment), but this is on an ad-hoc basis and uncertain •Free to sell FFB to any buyer •Transportation of FFB to nearby mill mostly self-arranged •Relatively low yields (except ex-FELDA farmers)
Independent -	Wild Asia WAGS;	<ul style="list-style-type: none"> •SH maintains day-to-day decision-making

Organized	OPME @Sarawak; SHOP @Sarawak;	<ul style="list-style-type: none"> •Small-scale •Mostly self-financed or small initial start-up funds •Labor: family; hired labor community may be used at times •Support provided tends to be one-off and short-term with clearer certainty •Not bound by formal contracts for FFB sales, but may be based on membership agreements •Transportation of FFB to nearby mill may be supported by mill •Yields tend to be low, although high yields have been achieved
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Table 5. Key features of Independent Smallholder models in Malaysia.

Key components for success in the Independent Smallholder (Organized and Unorganized) models

- Autonomy in decision-making by independent smallholders means that farmers can capitalize on favourable conditions to ensure improved livelihoods and efficient use of resources. Often farmers are knowledgeable about juggling returns on labor, capital and land in their own unique and complex contexts.
- In cases where NCR land is involved, farmers are largely in preference of retaining control over their lands. The independence to cultivate OP without entering into unpredictable arrangements that may erode their claims to inherited land is a strong motivation.
- The flexibility of not being tied to contracts, high debt burdens and commitments to a single crop allows the farmer to adjust to changing market conditions quickly. Risk associated with commodity price fluctuations is minimized. If other cash crops and rice farming for subsistence remain viable options and waged employment increasingly pursued, the means to secure a livelihood is maintained.

- Palm oil is a significant income earning opportunity for independent smallholders to diversify livelihoods. Where land is not in shortage, OP thus forms an important part of this strategy to improve standards of living.
- Costs are generally lower than estate models, with a high incidence of profitability even in cases of low productivity. Instances when resources are shared among a group or community, higher incomes can be attained without fixed arrangements typical of government schemes.
- In cases where competition among buyers of FFB exists, smallholders may be able to negotiate for better prices and terms.
- Where government funding for rural development is invested in infrastructure (like farm roads), credit and technical assistance (transfer of technology, planting materials, subsidies for inputs, etc), the independent smallholder model can be a promising way to raise rural livelihoods, without over-burdening public funds (like the FELDA managed smallholders model).

Challenges of the Independent Smallholder model

- Lack of capital or availability of credit is identified as a key limiting factor in developing land for OP and raising productivity as inputs, good planting materials, labor and development of land for plantings are all related to capital. However, some farmers view debt negatively and prefer other forms of assistance like subsidized inputs, extension services, etc.
- Insufficient inputs like fertilizer limits productivity
- Poor access to good planting materials
- Know-how can be limited, like harvesting of unripe fruits, disease treatment, etc
- Often monopsonistic situations place farmers at a disadvantaged negotiating position, and complaints of low prices for FFB are not uncommon. Mills often view supply of FFB from these farmers as unreliable.
- Farmers may not always be updated with current prices, and may not be aware of MPOB's recommended prices
- Replanting of old trees is often delayed to avoid temporary loss of income, thereby limiting productivity
- Theft of FFB has been serious in some cases
- Increasing market demands for certification ie. RSPO, MSPO, may exclude farmers due to stringent standards

- Smallholders often find it difficult to implement management practices that are environmentally sensitive ie. clearing of land without fire
- Farmers that are highly dependent on OP and thus global price fluctuations face higher risks to meet basic livelihood needs
- Land tenure disputes or insecurity can discourage farmers from investing in OP cultivation although some have used this as a strategic move to strengthen their claim on ancestral land

The Organized Smallholder Model in Malaysia

The Organized Smallholder model is characterized by a standard set of practices like centralized decision-making and day-to-day management, high usage of inputs, well-developed market access and supply chain, etc. Thus, this model is the most highly organized of all smallholder models.

As such, questions arise as to whether this model can be considered strictly as a form of smallholding. The following features provide justification for including this as a smallholder model:

- The projects in this model all involve some smallholder participation in the day-to-day operations to varying degrees, usually labor
- There is often land issues involved due to the scarcity of state land, with many schemes promising land titles to NCR landowners and also settlers
- In the case of settlers ie. FELDA, political reasons have often made it necessary to grant land ownership and thus independence to smallholders if they wish to exit the scheme
- Most schemes have a clear poverty alleviation and rural development mandate besides profits, thus there is usually a goal to empower smallholders to become joint-managers (although more field-based) later on in the project timeline

Smallholder model	Schemes/Projects	Key Features
Supported-Managed	FELDA; SALCRA; Konsep Baru; Sawit Kinabalu; FELCRA	<ul style="list-style-type: none"> • Decision-making is centralized, day-to-day management may involve SH to varying degrees, usually labor • Large-scale • Government and/or private financing • Labor: Organized labor • Support provided span the suite of structural (plantation development, landholding, infrastructure, legal) to instrumental (technical, inputs, supply chain) • Yields tend to be high, approaching private estates (about 21 tons/ha/yr) • Land titles to SH are usually promised and issued after repayment of debts and completion of project tenure • Some projects do not offer land titles nor involve land issues, but offers shares instead • SH receive wages for labor and regular dividends from profits, although some

		<p>schemes have reported losses</p> <ul style="list-style-type: none"> •Projects tend to have a poverty alleviation and rural development mandate
Supported-Extension Support	RISDA rubber farmers shifting to oil palm, KBT Subis; ETP supported co-operatives	<ul style="list-style-type: none"> •Decision-making at <u>co-operative</u> level to varying degrees •Small- to medium-scale •Mostly self-financed although financing may be available •Formal organization or grouping exists •Labor: family; hired labor may be used at times •Support provided tends to be one-off and short-term, instrumental as well as structural (management, organizational, land development) •Contracted to supply FFB to mill •Probably average yields

Table 6. Key features of Organized Smallholder models in Malaysia.

3.4 “TABLE 1” Technical Advisory Programme

1 Advisory 2 Training 3 Assurance



This table has been provided according to the Terms of Reference. Information contained within “Table 1” is a summary of prior information presented.

Data Type	Indicators	Crop 1: Palm oil in Malaysia
Production trend	1. Describe the trend in commodity production in the country	<p>Production is increasing as expansion of acreage continues. From 3.4 mil ha in 2000, production area has increased to 5.1 mil ha in 2011, representing a 50% growth in the past decade.</p> <p>Crude oil volume has grown even faster at 74%, jumping from 10.84 mil tonnes in 2000 to 18.91 mil tonnes in 2011 (May et al 2012).</p> <p>However, yield per hectare has been stagnating for the past few years since 2008 (ETP 2012).</p>
	2. What is the current production level, and is it projected to increase, decrease, or remain stable? If available, present info on how much?	<p>Production is projected to increase, both in terms of acreage and total output.</p> <p>Production hectareage is projected to increase from 5.1 mil ha in 2011 to 5.6 mil ha by 2015. This is expected to increase crude oil production volume from 18.91 mil tonnes in 2011 to 19.94 mil tonnes in 2015 (May et al 2012).</p>
Independent Smallholders (Organized and Unorganized)	1. Is this model found in this crop production? Yes/ no? Rough estimate about %	<p>Yes.</p> <p>In terms of land size, independent smallholders occupy about 700,000 ha, or about 14% of total land for production in 2011 (May et al 2012).</p> <p>There are no reliable sources of data for independent smallholder output in volume of FFB or crude palm oil.</p>

Data Type	Indicators	Crop 1: Palm oil in Malaysia
<p>Independent Smallholders (Organized and Unorganized)</p>	<p>2. What are some of the characteristics of this model in the region?</p>	<ul style="list-style-type: none"> • Where land is available, OP forms part of a diversified livelihood strategy, which includes other cash and subsistence crops and waged employment (where available) • Small-scale, averaging <4 ha per family • Self-financed, although local credit may be available • Farmers are usually not organized, while a few cases may see loose organization (village committee, groups, cooperatives) • Access to government assistance (schemes, subsidies, technical) is limited • Labor is provided by family, while hired labor may be used at times • Younger generation favours resource labour markets in urban areas and estates • Yields tend to be low as compared to estate averages (below estate average of 21 tons/ha/yr, or around 15-17 tons/ha/yr), mainly due to insufficient labor, capital and access to good planting material • Agricultural inputs tend to be insufficient, therefore limiting yields • Replanting of old tree crops tend to be delayed (SH account for 63% of old trees needing replanting) • Susceptible to middleman influence and terms • Use of poor planting materials tend to lead to poor yields • Approach towards farm management is not based solely on maximising profits as shown by common attitude of not investing in sufficient fertilizer application



Data Type	Indicators	Crop 1: Palm oil in Malaysia
<p>Independent Smallholders (Organized and Unorganized)</p>	<p>3. What components of this model has worked well? And what have the identified challenges been?</p>	<p>Components that have worked well:</p> <ul style="list-style-type: none"> • SH have autonomy on livelihood decisions, which can include pursuit of waged employment • NCR farmers need not enter into unpredictable arrangements that may erode their ancestral claims to land • Palm oil represents a significant cash income earning opportunity in comparison to other crops • Flexibility allows SH to take advantage of positive market conditions (price, subsidies, etc) • Income diversification through alternative cash or subsistence crops reduces risk exposure • Higher incomes can sometimes be obtained without fixed arrangements typical of other models ie. transportation costs of FFB can be lower • Claims to customary landownership may be strengthened with plantings, but without having to wait for state-sanctioned plantation-scale development • In cases where multiple buyers of FFB (dealers, mills) compete, SH can negotiate better pricing and other advantageous terms • Operating costs are usually low, hence incidence of profitability is high even with low yields • WAGS model: Organization of farmers in a group scheme to achieve a common goal on sustainable production. Nevertheless, farmers still maintain their freedom. • Supported model: Allows farmers to reap benefits through organization. Nevertheless, farmers still maintain their freedom.

Technical Advisory Programme

1 Advisory 2 Training 3 Assurance



Data Type	Indicators	Crop 1: Palm oil in Malaysia
<p>Independent Smallholders (Organized and Unorganized)</p>	<p>3. What components of this model has worked well? And what have the identified challenges been?</p>	<p>Challenges:</p> <ul style="list-style-type: none"> • Lack of inputs and know-how limiting yields (fertilizer, harvesting of unripe fruits, poor planting materials) • Lack of financial capability limits productivity, especially in meeting upfront expenses ie. land clearing, replanting • Access to good planting materials tend to be limited • Poor farm data management prevents effective problem-solving in productivity • As younger generation increasingly favours waged employment in urban areas and estates, shortage of labour places limits to productivity • Often monopsonistic situation in more remote locations places SH at a disadvantaged negotiating position • Some farmers may not be aware of market pricing (MPOB Reference Price) • Replanting of old trees is often delayed to avoid loss of income, which is a significant temporary impact if SH is largely dependent on the crop • Theft of FFB has been serious in some cases • Increasing market demands for certification ie. RSPO, MSPO, may exclude SH due to stringent standards • SH often find it hard to implement practices that are environmentally sensitive ie. clearing of land without fire • Reliance on a single cash crop increases risks to global price fluctuations & not meeting subsistence needs • Land tenure disputes discourage farmers to invest in OP • Mindset does not always prioritize farm profitability, hence commitment to invest is not guaranteed • Many farmers may resist adopting modern farming techniques, especially when they are well accustomed to entrenched practices from the past

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Data Type	Indicators	Crop 1: Palm oil in Malaysia
Organized-Extension support smallholder groups	1. Is this model found in this crop production? Yes/ no? Rough estimate about %	Yes. The Organized-Extension support model is not captured in official reporting and hence production estimates are not possible.
Managed farmer groups	1. Is this model found in this crop production? Yes/ no? Rough estimate about %	Yes. The major Managed Smallholder models of FELDA, FELCRA, RISDA plus state schemes like Konsep Baru make up 25% of total planted area.
Government support or policy?	1. Is there any specific government support or policy specifically for smallholder production? If so, please describe how and what.	There are various support and policies in place: <ul style="list-style-type: none"> • Federal and state schemes (FELDA, RISDA, SALCRA, etc) are all targeted to smallholder involvement • Government owned corporations (Sawit Kinabalu) have a clear mandate to involve smallholders where applicable • Economic policies in the agricultural sector often include smallholder concerns (ETP, 5-yearly Malaysia Plans, etc) • MPOB has several initiatives specifically for smallholders: setting up cooperatives, TUNAS officers to advise, KBT models. • Promotion of national guideline Good Agriculture Practices (GAP) to SH
Data Type	Indicators	Crop 1: Palm oil in Malaysia
Government support or policy?	1. Is there any specific government support or policy specifically for smallholder production? If so, please	<ul style="list-style-type: none"> • Official goal to increase productivity of SH from 15t/ha to 22t/ha by end 2013, and eventually 40t/ha • MYR432 mil (USD137 mil) allocated for SH in 2013, mainly for replanting which includes MYR500/mth for initial 2 years subsistence assistance • Cooperatives are encouraged by national economic program (ETP), with 23 cooperatives



	describe how and what.	(43,000 SH) targeted for under the program (Omar et al 2012)
What are the most pressing issues for smallholders involved in producing the crop?	1. Provide a brief description if and how smallholder production for Crop 1 is organised.	<ul style="list-style-type: none"> • National sustainable palm oil certification (MSPO) will include smallholders <p>Organized smallholder palm oil production falls into two main categories:</p> <ul style="list-style-type: none"> • Government-led: state or federal agencies usually implement plantation-scale operations to achieve high productivity, rehabilitate land and alleviate poverty; partnerships with the private sector have also been explored • Grassroots: groups or cooperatives may be formed to improve the situation of SH; loose groupings exist around mills provided mills/buyers are actively engaging SH

Data Type	Indicators	Crop 1: Palm oil in Malaysia
What are the most pressing issues for smallholders involved in producing the crop?	2. What are the main pressing issues?	<ul style="list-style-type: none"> • Raising productivity for unorganized and independent SH as agronomic knowledge and capital is limited • Access to capital and market information is constrained • Access to markets is controlled by mills, with fair pricing a frequent concern among SH • Accumulation of capital is limited, hence upfront expenses ie. replanting, cannot be met without incurring debt or entering into unfavourable partnerships • FPIC is often not obtained in partnerships involving external parties • Benefits are often not shared with everyone impacted or involved in production
	3. Any pressing social or environmental related issues in smallholder productions?	<ul style="list-style-type: none"> • The role of women as traditional custodians of the agrarian economy is eroded as oil palm has modern cash economy features ie. land titles and cash benefits are directed to men • The landuse mosaic consisting of secondary forest and fruit orchards on fallow lands and cropland supports rich biodiversity, but is being replaced by oil palm monocropping • Soil fertility on non-oil palm plots are being diminished as availability of land for fallow is replaced by oil palm • Encroachment into forested areas • Poor pollution management ie. storage of chemicals, fertilizer run-off, etc

Data Type	Indicators	Crop 1: Palm oil in Malaysia
<p>What are the most pressing issues for smallholders involved in producing the crop?</p>	<p>4. Is the government involved or facilitating?</p>	<p>The government is involved in a number of ways:</p> <ul style="list-style-type: none"> • Past and ongoing support in inputs, subsidies, price supports, training, R&D, marketing, land development schemes • MSPO will include SH • The formation of organized independent smallholders is an initiative which was stated in the Malaysian National Key Economic Transformation in Chapter 9 of the ETP 2012 report. The government believes through organizing these independent smallholders will make farming more professional and productive. Hence, this will improve the quality of life for the smallholders.

3.6 SUMMARY OF OIL PALM SMALLHOLDER MODELS RESEARCHED

Project/Model	Contracts	Dev. Cost	Technical support	Agri. Inputs	Land ownership	Day-to-day mgmt.	Sales of FFB	Income format
INDEPENDENT Unorganized								
Outgrowers	Usually N	Usually Self	Usually N	Usually Y	Own	Self	Self	Sale of FFB
Ex-managed scheme farmers (ie. FELDA)	Usually N	Self	Usually Y	Y	Own	Self	Usually self	Sale of FFB
INDEPENDENT Organized								
WAGS	Y	Self	Y	Y	Own	Self	Self	Sale of FFB
OPME (Sarawak)	N	Scheme	Y	Y	Own	Self scheme /	Self scheme /	Sale of FFB / dividends
SHOP (Sarawak)	N	Scheme	Y	Y	Own	Self	Self	Sale of FFB
SUPPORTED Unorganized								
RISDA (rubber farmers shifting to OP)	Usually Y	Self, scheme	Usually Y	Usually Y	Own	Self	Self scheme /	Sale of FFB
SUPPORTED Organized								
KBT Subis	Y	Self, scheme	Y	Y	Own	Self	Contract	Sale of FFB
RISDA grouped farmers / ETP sponsored cooperatives	Usually Y	Self, scheme	Usually Y	Usually Y	Own, cooperative	Self	Cooperative	Sale of FFB
MANAGED								
FELDA, FELCRA, RISDA, SALCRA, Sawit Kinabalu	Y	Scheme	Y	Y	Scheme / cooperative / own	Scheme	Scheme	Dividends, wages, rent
Konsep Baru (Sarawak)	Y	Scheme (JV with private corp.)	Y	Y	Own	Scheme	Scheme	Dividends, wages, rent
KLPKM (cooperative)	Y	Cooperative	Y	Y	Cooperative	Cooperative	Cooperative	Dividends

Table 7. Summary of oil palm smallholders researched.

WAGS – Wild Asia Group Scheme

OPME – Oil Palm Mini Estates

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SHOP – Smallholder Oil Palm Planting Program

KBT – Smallholder Buying Group (fertilizer)

ETP – Economic Transformation Programme

KLPKM – Smallholder Farmers Cooperative of Malaysia

4. OTHER COMMODITY CROPS

4.1 Background

Since the 1960s when rubber prices plummeted, the Malaysian government has adopted a policy of agricultural diversification to broaden the economic base. The main commodity crops besides oil palm in Malaysia includes:

- Rubber
- Cocoa
- Coconut

Rubber has been the main commodity crop in pre-independence Malaya up till the 1980s. Due to falling prices and the superior profitability of palm oil, rubber has been progressively replaced by oil palm since the 1970s. Nevertheless, rubber remains as the 2nd most important commodity crop today (ETP 2012).

For cocoa and coconut, the industry is dominated by smallholdings (>90% of total planted area) which operate predominantly under the Independent Smallholder model. Organization of farmers is limited, while support from either the government or private sectors is not common practice. The production of these commodity crops are not prioritized due to several factors like low prices, high labour requirements, etc. The other major commodity crop in Malaysia is rice, but its production is entirely for local consumption and hence excluded from this study.

4.2 PRODUCTION TRENDS

Key commodity crops like rubber, cocoa and coconut have been facing declining hectarage and production at least since the 1990s due to the superior profitability of palm oil (see Figure 4.1).

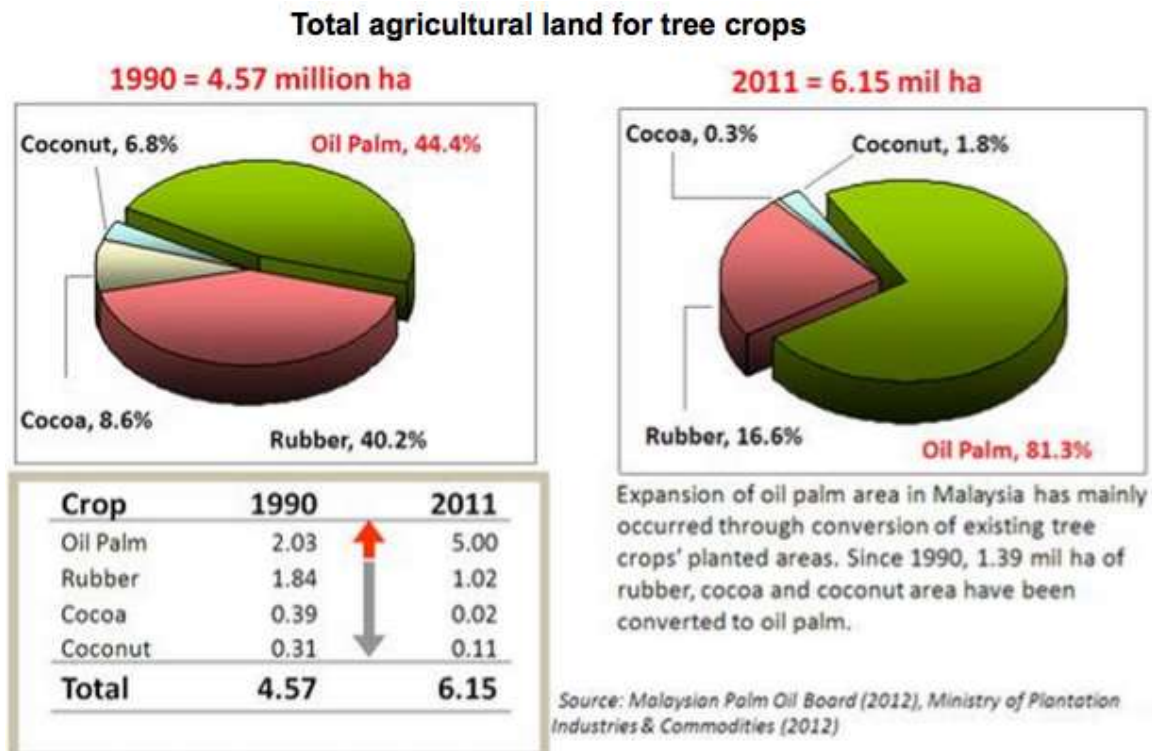


Figure 4.1. Declining trend for other commodity crops since the 1990s (cited from MPOC 2013). [Note that oil palm and rubber account for 97.9% of total agricultural land for tree crops.]

Production area for rubber continues to decline since the 1980s, with estates largely shifting to oil palm. Smallholders today make up >90% of total planted area at 977,000 ha, down from 1.2 mil ha in 1980. The recent slight growth in hectareage is probably due to government policies to maintain national production area at 1.2 mil ha.

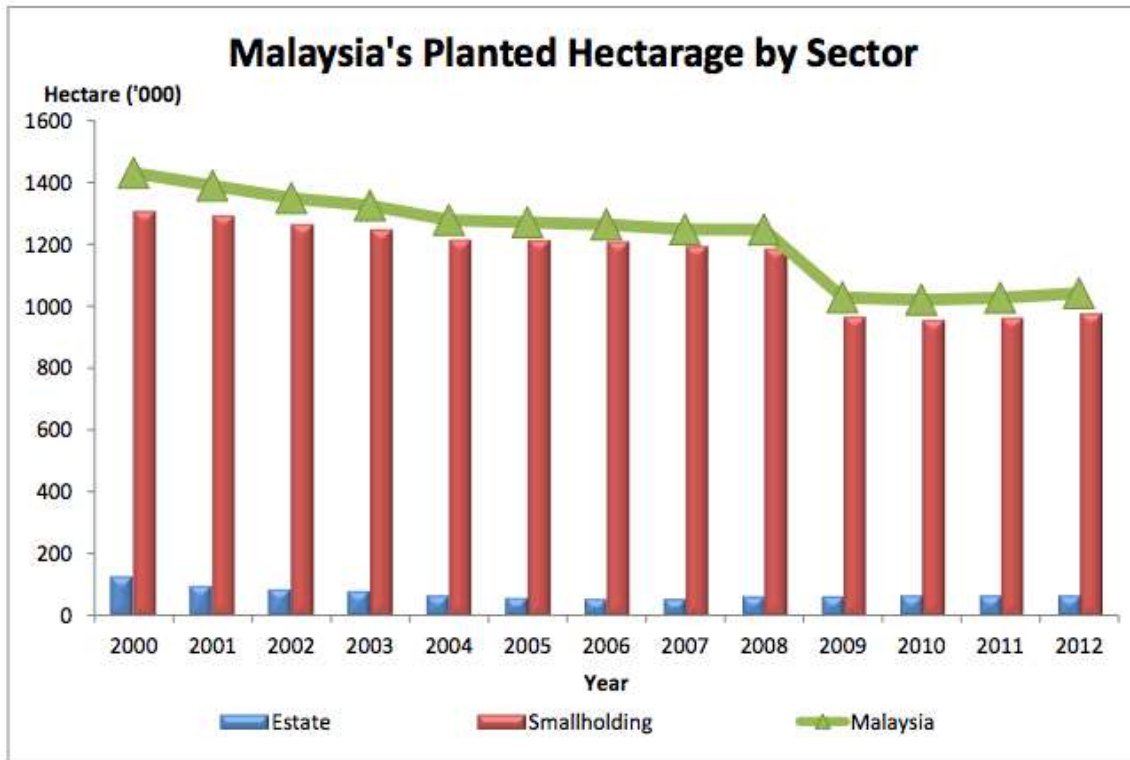


Figure 4.2. Rubber production area trend (MRB 2012).

Cocoa production peaked in 1990 at 247,000 tonnes when prices were high, and both estates and smallholders capitalized on this by expanding land allocated (Gustafsson 2002). From 123,900 ha in 1980 before cocoa prices spiked, the hectareage jumped to a historical high of 414,000 ha in 1989 during the cocoa boom, with estates and smallholder sectors each contributing half of total planted area. Today, however, the industry has very much shrunk to only 21,710 ha, dominated by smallholders at 97% of total planted area as estates have largely moved away from this crop (MCB 2004). In the states of Sabah and Sarawak, there is growing interest again in cocoa cultivation (Ramle Kasin, pers. comm.)

Coconut is the fourth most important commodity crop in Malaysia, after oil palm, rubber and rice. In 1981, total production area stood at 410,000 ha, but by 1995 it had declined drastically to 248,000 ha, and stands at 108,828 ha in 2011. It is estimated that around 90,000 smallholder farm

families contribute about 93% of the country's total coconut production. In 2011, production amounted to 577,000 tonnes, up from 513,000 tonnes in 2006 (COGENT 2009; MOA 2012).

4.3 TYPES OF SMALLHOLDER MODELS

There appears to be two main models currently practised for non-oil palm commodity crops in Malaysia on a significant scale. These are the Independent and Organized Smallholder models.

RUBBER-PLANTED AREAS IN MALAYSIA BY FORM OF MANAGEMENT

	(1,000 ha)		
	1960	1980	Growth Rate (%)
Private estates	782.9	491.6	-37.2
Traditional smallholders	753.8	805.9	6.9
Organized smallholders	11.8	399.8	3,388.0
Total	1,548.5	1,697.3	9.6

Source: Lim Sow Lin, "Marketing Malaysian Rubber: An Approach by Sector," in *Proceeding of the International Rubber Marketing Conference* (Kuala Lumpur: Rubber Research Institute of Malaysia, 1983), p. 348.

Figure 4.3 (cited from Horii 1991).

Since the 1960s, RISDA (predominantly, while FELDA and FELCRA mostly focused on oil palm) spearheaded efforts to organized smallholders into mini-estates for rubber cultivation. However, as oil palm was preferentially supported by the government, the expansion of Organized Smallholders was directed to oil palm cultivation since the 1980s. The Independent Smallholder model for non-oil palm commodity crops resemble that of oil palm, with the distinction that non-oil palm independent smallholders receive even less support from the government or private sectors.

Smallholder Model	Scheme/Project/ Crop	Key Features
Independent	Rubber; cocoa; coconut	<ul style="list-style-type: none"> • Smallholder is decision-maker and day-to-day manager • Small-scale • Self-financed, although local credit may be available • Labor: family; hired labor may be used at times • May get support ie. replanting subsidy, but this is unreliable and ad-hoc • Relatively low yields • May participate in self-organization
Organized	RISDA (Rubber); CSDP (cocoa)	<ul style="list-style-type: none"> • Centralized decision-making; smallholder may retain day-to-day operational management • Medium to large-scale • Financing may be available through scheme participation • Labor: family; hired labor may be used at times • Support provided includes management, inputs, replanting, marketing • Yields tend to be better than Independent Smallholders • Participation in schemes and bounded by contractual agreements

		•May be further organized into cooperatives
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Table 8. Typical characteristics of smallholder models for other commodity crops. Note that all of the above key features are very similar and characteristic of oil palm smallholders.

4.4 “TABLE 2” & CASE STUDY

Literature on smallholder models or schemes for rubber, the 2nd most important commodity crop in Malaysia, appears to reflect very similar concerns pertaining to oil palm smallholders ie. replanting of poor yielding varieties, organization into block schemes for efficiency, etc. Hence, it is thought that another commodity crop quite different from oil palm may provide a wider perspective of workable smallholder models.

CSDP (Cocoa Smallholder Development Programme), Sabah

One of the better documented smallholder models in Malaysia is the Cocoa Smallholder Development Program (CSDP) in Tenom, Sabah, initiated in 1995. A study was conducted to assess the outcome of a large government assistance package allocated to this crop in Sabah. The implementing agency was the Malaysian Cocoa Board (MCB). A total of 1,100 cocoa farmers were involved, covering an area of 1,200 ha.

The goal of the program was achieved as average yield after the program at 1.6 ton/ha/yr is above the set target of 1.5 ton/ha/yr within 3-yrs of program implementation. Another key success of this project was the setting up of a dry bean processing facility that simultaneously addressed farmer income, bargaining power, organization of farmers and thus efficiency in pooling resources.

CSDP: Phone interview with Dr Ramle Kasin (MCB – Director of Transfer of Technology)

If you could replicate CSDP’s model, which components do you think will be most transferable to a commodity crop like oil palm in Indonesia?

Participation in the cluster to work together and leadership within the cluster. Agency also prefers to target clusters rather than individual farmers because this is more cost-effective.

What are the key limitations for this model?

Agency capacity in extension services delivery to impart skills and information.

What are the key factors that prevent farmers from embracing such a model?

The culture of the farmers matter as working together in a community or group is not always comfortable for everyone.

Did the collection centres assist in improving access to market information?

MCB is helping farmers to find the best price for their produce, so these collection centres are very helpful in this sense although it does not help to build farmer capacities to access market information.

“TABLE 2”

As per the Terms of Reference, “Table 2” is presented with data from the CSDP model. Additional information not covered previously is included here in “Table 2”.

Barrier	Addressed in the model
a) Poor production technologies and agronomic practices and therefore low yields	<ul style="list-style-type: none"> •Assistance provided for replanting of old cocoa trees •Transfer of technology ie. grafting techniques, suitable clones, importance of fertilizing, pruning, disease treatments •Visits to farm by MCB personnel •Processing centre established to dry cocoa beans, thereby significantly improving incomes of farmers •Drying yards were established for farmers without •Monitoring and coordination was conducted at all levels of program to ensure success

b) Limited access to training	<ul style="list-style-type: none"> •Training (classroom and field) were conducted to improve overall farm and crop management •Training to manage a business venture was also provided to ensure effective use of the processing centre
c) Lack of awareness of environmental benefits/deforestation issues	Not addressed in the programme.
d) Limited or no access to loans/finance	<ul style="list-style-type: none"> •Financial assistance in the form of seedlings and agricultural inputs were given •Information session by bank personnel to highlight sources of funding
e) Access to market information and prices	•Cocoa collection centres were set up to streamline marketing of produce. MCB assumes role of marketer to obtain best prices for farmers.
Does the model provide specific incentives for smallholders to produce sustainably? For example, incentives not to deforest, premium price for certified products, access to certain benefits/funding etc.	No.
Are there still	•A small number of farmers (23%) failed to achieve improved

challenges?	<p>productivity due to low interests in the program and crop activity</p> <ul style="list-style-type: none">• Similar efforts to assist farmers elsewhere in Sabah and Sarawak in setting up processing centres have failed. It was suggested that cultural reasons, farmer's attitudes and MCB personnel capacity may be contributing factors for the unsuccessful cases.
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5. SUMMARY OF SMALLHOLDER MODELS

Model	Components that work	Challenges
Independent	<p>Landownership is maintained, and not put at risk by entering into unclear contractual arrangements. Thus, future generation's inheritance of land is not jeopardized.</p>	<p>In some cases, farmers have no choice as land tenure may only be secured by entering into state-sanctioned schemes that promise land titles upon completion of scheme</p>
	<p>Autonomy in decision-making to balance cash income and profits with other priorities (subsistence farming & hunting, livelihood diversification with other cash crops and waged employment)</p>	<ul style="list-style-type: none"> •Land availability may limit choices and force farmers to rely on a single cash crop. •Farmers are usually not well-informed on ways to maximize returns on resources invested •Wage employment limits labor available for farming
	<p>Livelihood diversification reduces risk exposure to global price fluctuations and maintains some level of food security. Farmers are also free to shift resources to crops that fetch the best price at any one time.</p>	<p>Because OP often provides the highest return among other crops, there is an opportunity cost to diversify.</p>

Model	Components that work	Challenges
Independent & Supported	Without fixed contracts, especially in cases where there is no monopsony, farmers can sometimes obtain better prices and terms for FFB and transportation of FFB.	<ul style="list-style-type: none"> •Farmers are exposed to global price fluctuations, whereas some contracts fix prices and so protect farmers from price drops •Farmers may face unprepared mills rejecting FFB due to over-capacity •Self or community provided transportation may not be as reliable as buyer's to meet 24hr timeframe for FFB processing
Independent & Supported	Costs are usually low, hence incidence of profitability is high even when prices are depressed.	Low costs partially reflect insufficient capital investment in good planting material and inputs, all of which limits productivity.
Organized	For organized farmers, they can reap benefits of resource efficiency, knowledge sharing and better bargaining power while maintaining autonomy.	Organizational capacity is often lacking in smallholders.

Table 9. Independent & Organized Smallholder models.

Model	Components that work	Challenges
<p>Wild Asia WAGS</p>	<ul style="list-style-type: none"> •Field base office establishes trust amongst farmers and builds understanding of key challenges in the area. •Good relationship with farmers & supply chain members on the ground •Works on existing relationships •Good data management-in dealing with large quantities of data •Wide experience and expertise of implementers (Wild Asia) in dealing with international sustainability standards and its requirements •Good networking with various industry players including buyers – opens market access as well as links to expert groups (I.e: agronomists) 	<ul style="list-style-type: none"> •Start-up funding required •Resources requirements in scaling up •Addressing mind-set change

Table 10. WAGS model.

Model	Components that work	Challenges
<p>KBT Subis, Sarawak</p>	<p>Smallholder buying group for fertilizer initiated by MPOB (agency) established relationship and clear terms between farmer-mill-agency.</p> <p>Relatively simple solution that simultaneously tackles issues of capital, productivity, fair pricing and reliability of FFB supply.</p> <p>Key components:</p> <ul style="list-style-type: none"> •Clustering of farmers facilitates cooperation and enables efficient delivery of extension services •Fertilizer supplied to farmers on credit to improve productivity •Fertilizer cost deducted from FFB sale at mill •Mill repays fertilizer supplier •MPOB facilitator of scheme 	<ul style="list-style-type: none"> •Mill did not perceive improvements in productivity •Agency capacity and resources may not be able to deliver desired project outcomes

Table 11. KBT Subis, Sabah model.

Model	Components that work	Challenges
Sawit Kinabalu, Bagahak, Sabah	<ul style="list-style-type: none"> •Land issues were circumvented by not offering individual land titles •Smallholder landowners formed a company to represent their collective interests, thereby effectively galvanizing support for project to proceed 	<ul style="list-style-type: none"> •It is very difficult to convince >1,500 smallholders of making collective decisions •Smallholders are often open to outsider influence to exit project and cash out by selling their land
Cocoa Smallholder Development Program (CSDP) @Sabah	<p>Key components that resulted in major improvements:</p> <ul style="list-style-type: none"> •Clustering of farmers enabled efficient delivery of project and extension services •Supply chain was streamlined to help farmers access market (collection centres set up, agency graded and marketed beans) •Agency provided partial funding to set up dry bean processing centre •Farmers organized themselves to pool remaining funds to finance processing centre •Agency assisted in building drying yards to improve quality of beans 	<ul style="list-style-type: none"> •Agency resources and capacity may not be able to deliver project outcomes due to limitations in extension officer skills and knowledge •Replication was difficult in other areas due to reluctance of farmers to organize and pool resources •Farmers may be unwilling to provide land as collateral to invest in processing centre •Cultural barriers may discourage farmers to adopt new approaches

Table 12. Sawit Kinabalu Bagahak & CSDP models.

5.1 RECOMMENDATIONS

“Solutions are situation-specific, arising out of particular biophysical, tenurial, market and policy conditions. This will limit the transferability of tools and innovations from one successful context to another untried context. In particular, the prevailing conditions in the two major producer countries, Malaysia and Indonesia, are very different, and differ further among provinces, states or districts ... But contextual differences do not mean lessons cannot be transferred – practitioners can use their own best judgement to pick up and apply what might work from another context, and discard what is irrelevant.” (Vermeulen & Goad 2006, p. 32)

The following recommendations are drawn from the analysis presented, studies cited and models of smallholder in oil palm researched for the baseline study. They are deemed priority areas to be further investigated for replication in commodity crops like oil palm for Indonesia.

1. **Getting farmers to organize themselves into clusters and work together has multiple benefits:** improved bargaining power, easier for extension services to be delivered (more cost effective than individual farmers), efficiencies in shared resources, dissemination of technical know-how. Many native customary cultures and clustering projects (WAGS, KBT, CSDP, etc) have shown this communal organization to be effective and resilient. Clusters should be based around existing relationships on the ground. This could be around a buyer-seller or social/cultural relationships (Example: grouping around a mill or dealership, longhouse, village community, etc).
2. **The outgrower model is identified as promising provided the mill is open to buying FFB from surrounding smallholders.** Research has pointed to the high potential of smallholders being able to capitalize on oil palm production once a mill is situated within the FFB delivery distance. Options to explore include incentivizing private plantations and mills to engage and buy from surrounding farmers to strengthen trading relationship. Support to target planting materials, inputs and technical advice. Example: The KSGS example is a good example of an existing mill supporting smallholders living outside the

borders of the plantation and selling crops to the mill. An implementing partner (in this case, Wild Asia) was used to group the farmers, set up the management system and help get the group certified. The implementing partner has to have good knowledge of the certification requirement in order to make this work.

3. **Group certification of independent and supported smallholders. Example is the Wild Asia WAGS MPOB SPOC in Beluran, Sabah case study.** This model is based on the Wild Asia group scheme management system but based in an area where MPOB has already initiated some form of support for farmers. This can be explored to bring these farmers into the growing certified sustainable palm oil market. Private companies can also initiate such group schemes provided there is a good understanding of the local situation and general certification requirements. May require an experienced implementing partner.
4. **Government to encourage independent smallholders in the same area to pool resources together in order to streamline market access.** Seed investment can be provided as an incentive to motivate formal cooperation (committee, cooperative) between farmers to simultaneously improve farmer incomes and consistency of FFB supply to the mill, for example as shown by the KBT Subis and CDSP case studies. The mill can be roped in as a stakeholder to ensure timely and regular delivery of FFB. Another example is the proposed establishment of cooperatives within the MPOB SPOC clusters once they have been formed. These cooperatives are then expected to set up their own collection centres in order to reduce dependence on the middleman. Private companies can also initiate such group schemes provided there is a good understanding of the local situation and general certification requirements. May require an experienced implementing partner.
5. **Smallholder buying groups to encourage sufficient use of fertilizer can be initiated to form closer cooperation between smallholder-mill-palm oil agency in raising productivity.** Example is the KBT case study. The challenges of lack of farmer organization, capital, poor agronomic knowledge, insufficient fertilizer use, fair FFB pricing and transportation can be addressed simultaneously. This is considered a low hanging fruit. Currently this are mainly run by government programs however could be

seen as a method for private companies to engage with smallholders supplying them. Fertilizer is provided based on a credit scheme

6. **Government or privately run nurseries can be established at growing areas to supply high yielding planting material.** Private-run nurseries will need to be regulated to supply high quality stock. Plantations, whether government or private-run, can be incentivized to supply quality seedlings for the outgrower model. This could be seen as a method for private companies to engage with smallholders supplying them. Seedlings can be provided based on a credit scheme but some form of monitoring is required.
7. **Extension services can be integrated into previous recommendation to encourage cooperation among farmers.** This will prove to be an additional incentive for farmers to work together to achieve efficiencies in receiving technical input. Another service that can be used to center farmer groups. Private companies have agronomist as resources that can provide these extension services. It is a win-win situation for both mill and farmers as the farmers will produce better and higher yield.
8. **Encourage intercropping and food crops for subsistence use to increase food security and lower risk exposure to volatile commodity price fluctuations.** This helps to reduce high costs stemming from establishing oil palm crops. Example, planting banana during the growth of young palms.
9. **Standardised and fair pricing set by government** need to be made available to farmers, dealers and mills to promote market transparency, uniformity in prices and encourage farmers to strive towards improving the quality of FFB supplied. If farmers have access to mobile telecommunications, a text messaging service upon demand may be effective. Example is the MPOB's Sawit SMS Info service-daily prices by state are offered at a rate of 50cents per sms. Private companies looking to form smallholder groups should also consider how to make this type of info more accessible and transparent for members.
10. **Share-based systems (for the Managed Smallholder model) may strike a balance between maximizing productivity and maintaining smallholder equity, while controversial land tenure issues can be avoided.** Costly and time-consuming land titling

exercises can also be excluded without placing NCR or settler claims to land at risk. Company can use this system by providing shares instead of land tenureship. **Example:** Sawit Kinabalu. Risk of this model is that subsistence farming has stopped and sometime shares does not cover this loss in income. Hence sometimes it comes across that farmers are forced into this.

6. APPENDICES

6.1 ACRONYMS

CSDP	Cocoa Smallholder Development Programme (MCB)
FELCRA	Federal Land Consolidation and Rehabilitation Authority
FELDA	Federal Land Development Authority
FFB	Fresh fruit bunches – oil palm
ETP	Economic Transformation Programme
JV	Joint venture
KBT	Kelompok Baja Terkumpul (Smallholder Buying Group – Fertilizer)
KLPKM	Koperasi Ladang Pekebun-pekebun Kecil Malaysia (Smallholder Farmers Cooperative of Malaysia)
LCDA	Land Custody and Development Authority (Sarawak)
MCB	Malaysian Cocoa Board
MPOB	Malaysian Palm Oil Board
MRB	Malaysian Rubber Board
MSPO	Malaysian Sustainable Palm Oil
NCR	Native Customary Rights
OP	Oil palm
RISDA	Rubber Industry Smallholders Development Authority
RSPO	Roundtable on Sustainable Palm Oil
SALCRA	Sarawak Land Consolidation and Rehabilitation Authority
SH	Smallholder
SPOC	Smallholder Palm Oil Cluster – MPOB
WAGS	Wild Asia Group Scheme

6.2 KEY GOVERNMENT AGENCIES IN SMALLHOLDER OIL PALM PRODUCTION

FELDA

The Federal Land Development Authority (FELDA) was set up by the Malaysian government in 1956 to consolidate and rehabilitate smallholder lands into economically sized estates to boost agricultural productivity through intensification. FELDA has had a strong mandate to alleviate poverty and drive rural development through ex-situ and in-situ infrastructure development. Oil palm cultivation has been the focus of the vast majority of over 300 schemes involving more than 100,000 farmers. The agency is the central decision-maker and manages the entire project, from financing to marketing and processing, with smallholders and settlers employed as waged labourers. Once farmers repay their debts, some schemes offer them the option to exit the scheme and become independent, although many choose to remain. Among the three federal agencies (which includes FELCRA and RISDA), FELDA is most involved in the organization of farmers. Recognized widely as a successful state-run commercially viable model with social goals, it is also probably the most expensive as compared to other models in Malaysia and other countries (Mustapha 1983; Arshad & Mustapha 1987). FELDA manages 700,000 ha of oil palm plantations today (May et al 2012).

FELCRA

The Federal Land Consolidation and Rehabilitation Authority (FELCRA) was set up by the Malaysian government in 1966 to rehabilitate unsuccessful state-schemes and create rubber growers of an appropriate size of 6 acres each, and to raise farmer incomes. This was done by providing additional unopened land close to smallholders with pre-existing land. FELCRA assumed farm management, financing and sale of produce as well as basic infrastructure, while smallholder farmers were allowed to retain land titles, employed as waged workers and enjoyed dividends. However, in 1970, FELCRA introduced a different scheme without conferring land titles. Instead, shares were given to participants of the scheme and upon completion of the project or repayment of debts, joint ownership rights of a group of farmers are recognized. Oil palm has

become the crop of choice (Arshad & Mustapha 1987; Cramb & Sujang 2012) for the agency. FELCRA manages 160,000 ha of oil palm plantations today (May et al 2012).

RISDA

The Rubber Industry and Smallholder Development Authority (RISDA) was set up by the Malaysian government in 1973 to improve smallholder's economic wellbeing. Although rubber was initially the focus of the agency, much effort has since been put into shifting cultivators to oil palm. Like FELCRA, RISDA provides subsidies, and manages basic infrastructure and processing of the crop (Cramb & Sujang 2012). The agency also runs smaller managed plantation schemes, mostly <1000 ha (Fold & Whitfield 2012; Cramb & Sujang 2012). RISDA manages 80,000 ha of oil palm plantations today (May et al 2012).

SALCRA

The Sarawak Land Consolidation and Rehabilitation Authority (SALCRA) was modeled after the FELDA and FELCRA schemes. Founded in 1976, the agency is tasked to develop rural agriculture into plantations with the in-situ approach. Various schemes involving smallholders were tried and tested with mixed results since its inception. Land titles are usually promised to attract landowner participation. However, it has been observed that Konsep Baru has been the preferred model in Sarawak since its launch. Today, SALCRA operates 18 oil palm plantations covering some 51,000 ha in Sarawak (Cramb & Sujang 2012; Majid Cooke et al 2011; <http://www.salcra.gov.my/v1/index.php/about-us/corporate-info>).

LCDA - Konsep Baru

The Sarawak government introduced Konsep Baru (New Concept) in the mid 1990s to develop land under Native Customary Rights (NCR). A three-way joint venture (JV) is set-up between a private corporation (60% share), NCR landowners (30%) and the parastatal agency (10%). The oil palm JV is hoped to then access private investments, free up NCR lands for development at very low costs while retaining customary land rights. The lease term is 60 years and landowners

are promised dividends and sometimes an annual rent on their land. Konsep Baru has been mired in controversy as various aspects of the agreement clearly place landowners in the position of disadvantaged shareholder. As such, landowners have been reluctant to enter into this scheme (Ngidang 2002; Majid Cooke et al 2011).

Sawit Kinabalu

Formed in 1996 by the state of Sabah's corporatization exercise to optimize value of assets under SLDB (Sabah Land Development Board), Sawit Kinabalu is today the investment arm of the state, while SLDB maintains agency responsibilities. The company operates 72,000 ha of oil palm plantations in Sabah, with 18,000 ha under partnership with local landowners. Land titles are usually promised to attract landowner participation (Majid Cooke et al 2011; <http://www.sawitkinabalu.com.my/index.php/about/>)

6.3 KEY INDUSTRY PLAYERS IN THE SMALLHOLDER SECTOR

- MPOB (Malaysian Palm Oil Board)
- FELDA
- FELCRA
- SALCRA (Sarawak Land Consolidation and Rehabilitation Authority)
- LCDA (Land Custody and Development Authority – Sarawak)
- Sawit Kinabalu
- WildAsia WAGS (WildAsia Group Scheme)
- NASH (National Association of Smallholders Malaysia)
- KLPKM (Koperasi Ladang Pekebun-pekebun Kecil Malaysia – Smallholder farmers cooperative)

Technical Advisory Programme

1 Advisory 2 Training 3 Assurance



- RISDA (Rubber Industry Smallholders Development Authority)
- MRB (Malaysian Rubber Board)
- MCB (Malaysian Cocoa Board)

6.4 CASE STUDIES FOR OIL PALM SMALLHOLDER MODELS

Selected case studies are presented here to provide insights into successful models or models identified as employing successful components for oil palm smallholders, as required by the Terms of Reference. It is not an exhaustive list and only highlights notable examples.

Wild Asia Group Schemes (WAGS)

	Description
Date Initiated	2010
Aim	<ul style="list-style-type: none"> • Assist independent smallholders to be certified to international sustainability standards (i.e: RSPO)
Key Goals	<ul style="list-style-type: none"> • Adaptability • Financial Sustainability
Unique Features of model	<ul style="list-style-type: none"> • Standalone “support programme” which is adaptable to different situations • Internal Control system (ICS) which standardizes management of the various group scheme • Natural groupings. Clusters are developed based on existing relationships • Partnerships with supply chain partners : mills, dealerships, manufacturers, refineries, etc
Funding	<ul style="list-style-type: none"> • Current model works on the basis that <i>donor funds or social capital funds</i> are required to invest in the scheme. As the numbers grow (members and certified product) the scheme can begin to reduce its overhead costs and increase its potential income from the <i>sale of sustainable product</i>.

Current projects	<ul style="list-style-type: none"> •WAGS_MPOB SPOC Beluran (Sabah) – <i>1st independent smallholder group to be RSPO certified in Malaysia_6th Sept 2013</i> •WAGS_Nestle Kinabatangan (Sabah) •WAGS_Cargill Air Kuning (Perak) •WAGS Keresu (Sarawak)
Pros	<ul style="list-style-type: none"> •New and proven concept •Addresses sustainability impacts (social, environmental, health & safety) of palm oil production •Ultimately supply chain partner owned & managed (i.e: community/mill/dealership owned)
Cons	Requires start-up funding

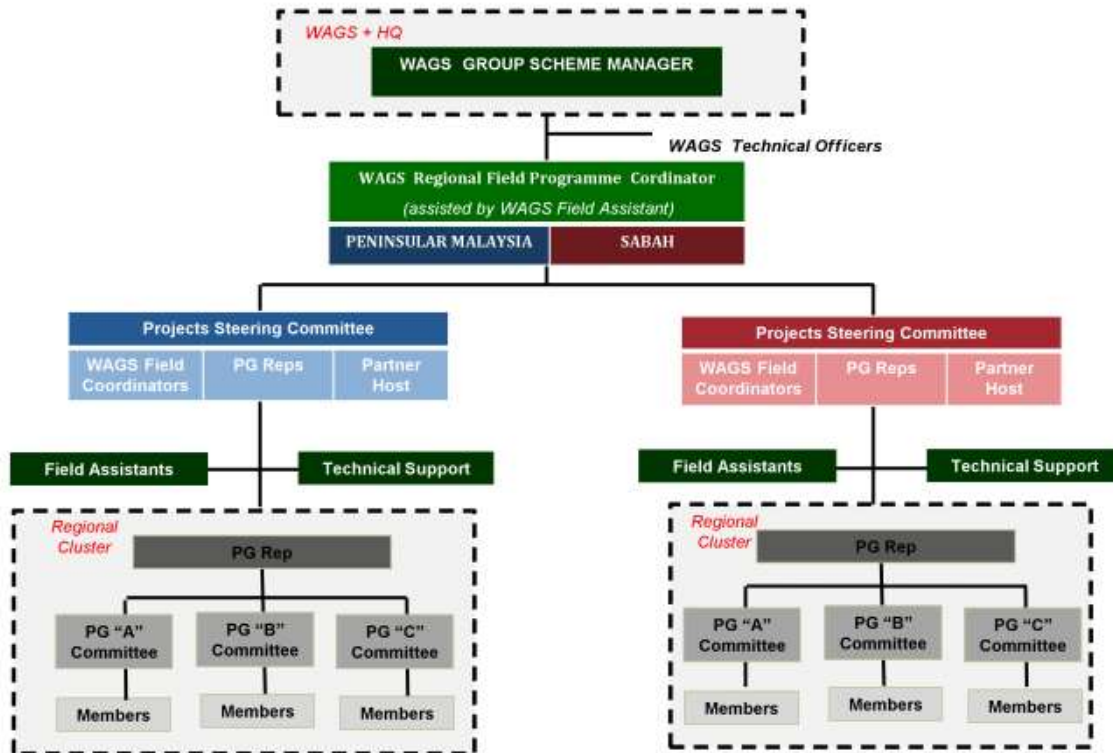


Figure 6.1. Organisational structure of WAGS model.

WAGS is a management system designed to support small farmers or small producers achieve international standards of sustainability. The working model is currently based around a central HQ (to manage the administrative and certification requirements) and field offices (to manage implementation on the ground).

Kelompok Baja Terkumpul (KBT) Subis, Sarawak (Smallholder Buying Group)

	Description
Date Initiated	2004
Aim	<ul style="list-style-type: none"> •Target: independent farmers in Subis, Sarawak •To improve farmer’s productivity and yields by addressing agronomic practices
Key Goals	<ul style="list-style-type: none"> •Improve fruit production & yield •Increase smallholder income & technical know-how
Unique Features of model	Described as one of the most successful of the MPOB’s smallholder buying groups, KBT Subis was formed in 2004 as a contractual agreement between four parties: (1) Sarawak Oil Palm (SOP) Bhd – mill operator; (2) The Area Farmers’ Association (PPK) for Subis; (3) Smallholders in the Subis area (must be members of PPK); and (4) MPOB – monitoring and enforcing agency
Funding	<ul style="list-style-type: none"> •Farmer’s own funds, government funds
Pros	<ul style="list-style-type: none"> • Average yields increased from 5 tons/ha in 2006 to 16 tons/ha in 2009 with some farmers regularly achieving 20-25 tons/ha – this was attributed to increased fertilizer use • Number of participating farmers increased from 1,425 in 2004 to 5,697 in 2008 • FFB tonnage delivered to mill increased from 12,000 tons in 2006 to >44,000 tons in 2008 • Annual extended credit rose from MYR121,000 in 2006 to MYR394,000 in 2008 • Mill and dealers reported positively on quality and consistency in supply of FFB, and improvement in farmer’s knowledge. • Smallholders reported improvement in yields, monthly incomes, field management, fertilizer application, disease control, MPOB’s FFB pricing

	mechanism, and functions of MPOB
Cons	•No perceived increase of yield and fertilizer use (reported from Wahid et al 2010)

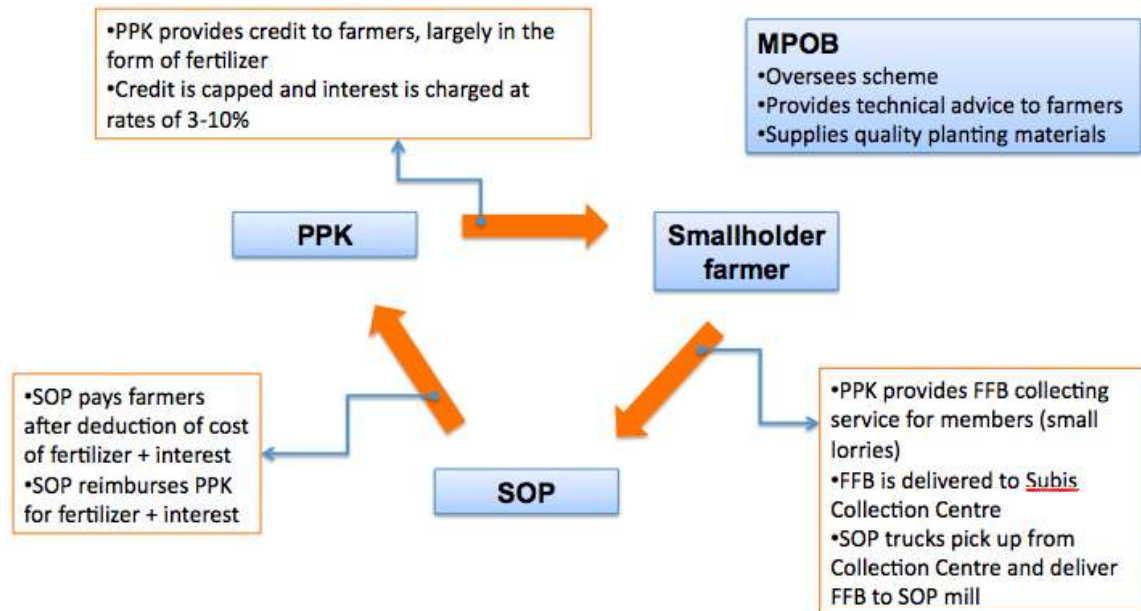


Figure 6.2. KBT Subis model.

KBT Subis: Phone interview with Wahid Omar (MPOB – Director for Integrated Research and Extension Division)

Why is the KBT model recognized as successful in Subis?

The arrangement has been around for some time now and the farmers have had time to warm up to the model. It’s also likely that relationships between cooperative-dealers-mill have matured to facilitate efficient implementation of the model.

What are the key limitations for this model that prevent its replication in other sites?

- It takes time for these arrangements to become established and effective. For example, it is unlikely for a new cooperative with few members to obtain loans or funding from the government.
- Dealers are unhappy with cooperatives because it undermines their business, and so it's likely that farmers are wary of jeopardizing existing relationships with dealers.
- New cooperatives have to prove its business viability before it can obtain commercial loans – this is not likely to be possible for a newly formed entity, so government loans or funding must be accessed which tends to be limited.
- Existing cooperatives are unwelcoming of neighbouring cooperatives to be set up as this will introduce competition. This has also deterred more cooperatives to be set up.

MPOB SPOC (Smallholder Palm Oil Cluster)

	Description
Date Initiated	30 th Nov 2009
Aim	<ul style="list-style-type: none"> •Target: independent farmers in Malaysia •To improve farmer's best agronomic practices based on an internal certification scheme and to increase farmer income through development of farmer cooperatives.
Key Goals	<ul style="list-style-type: none"> •Improve fruit production & yield •Increase smallholder income •Improve smallholder technical know-how
Unique Features of model	<ul style="list-style-type: none"> •Direct MPOB support in terms of technical officers, fertilizer subsidies, discount on harvesting tools and contract services for land opening •Internal certification standards: GAP (Good Agricultural Practices) and CoP (Code of Practice) •*Placement of technical (aka TUNAS) officers in the field @ 1:250 smallholders or 1:1000ha •Establishment of cooperatives to reduce dependence on middleman. TUNAS officers will cluster smallholders around their nearest mills into 134 cooperatives (1,200 smallholders per cooperative)
Current projects	
Funding	<ul style="list-style-type: none"> •Short term : Government grants and MPOB operational budget •Long term: Earnings from cooperative & government funding

Pros	
Cons	<ul style="list-style-type: none"> •Does not meet sustainability standards (i.e: RSPO) •Financial sustainability?

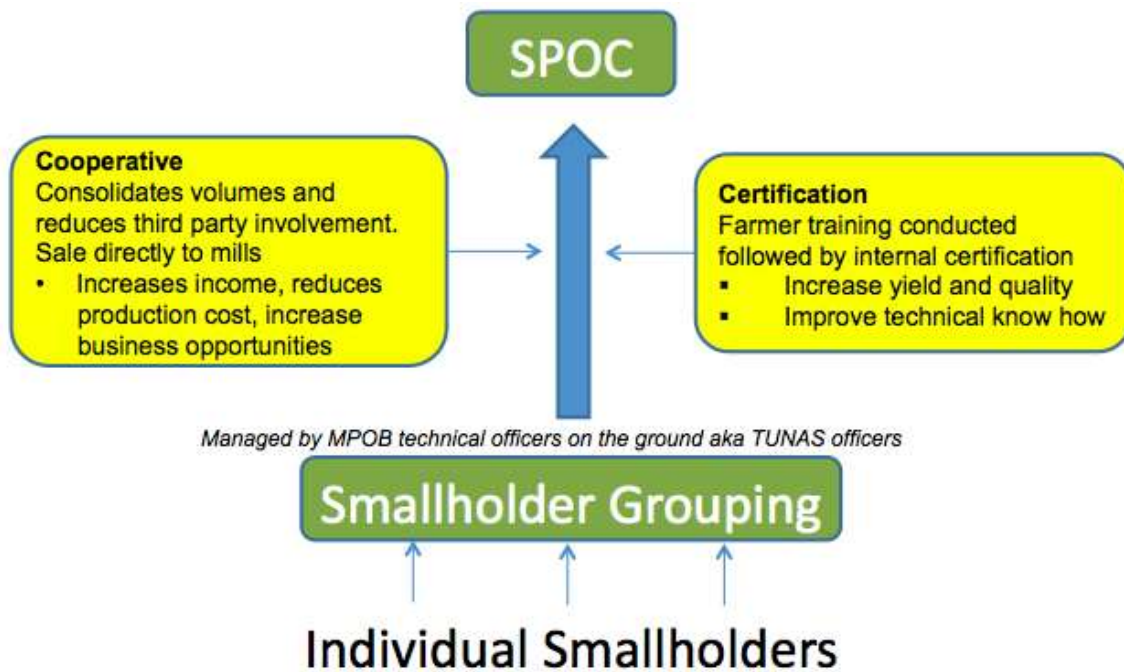


Figure 6.3. MPOB SPOC model.

FELDA (Federal Land Development Authority)

	Description
Date Initiated	1956
Aim	<ul style="list-style-type: none"> •Resettlement and rehabilitation scheme to eradicate poverty and expedite rural development for smallholders
Key Goals	<ul style="list-style-type: none"> •Consolidate and rehabilitate uneconomic agricultural land to modernize productivity •Raise living standards for the rural poor •Education & training for younger generation of settlers •Entrepreneurship through introduction of other economic activities (i.e: vegetable planting, cattle rearing, fish rearing, tailoring, etc) •Development of modern infrastructure in farmer settlements
Unique Features of model	<ul style="list-style-type: none"> •Government funded and managed (large scale) •Resettlement of rural poor in townships with good infrastructure •Smallholder farmers are given land titles and option of independence
Current projects	<ul style="list-style-type: none"> •317 settlements established across Malaysia •Total outreach : 90,511 farmers (OP only)
Pros	<ul style="list-style-type: none"> •Largely successful in poverty eradication and modernizing rural areas •Hands-on experience has spurred government to invest heavily in the industry
Cons	<ul style="list-style-type: none"> •Extremely costly and taxing on public funds to establish as it draws disproportionately higher allocations, thereby undermining fair distribution

- Reach of scheme is limited as only about 100,000 farmers (of 500,000) have been involved to-date, therefore sustainability and replicability of scheme is questionable
- Considerable management capacity and experience is needed

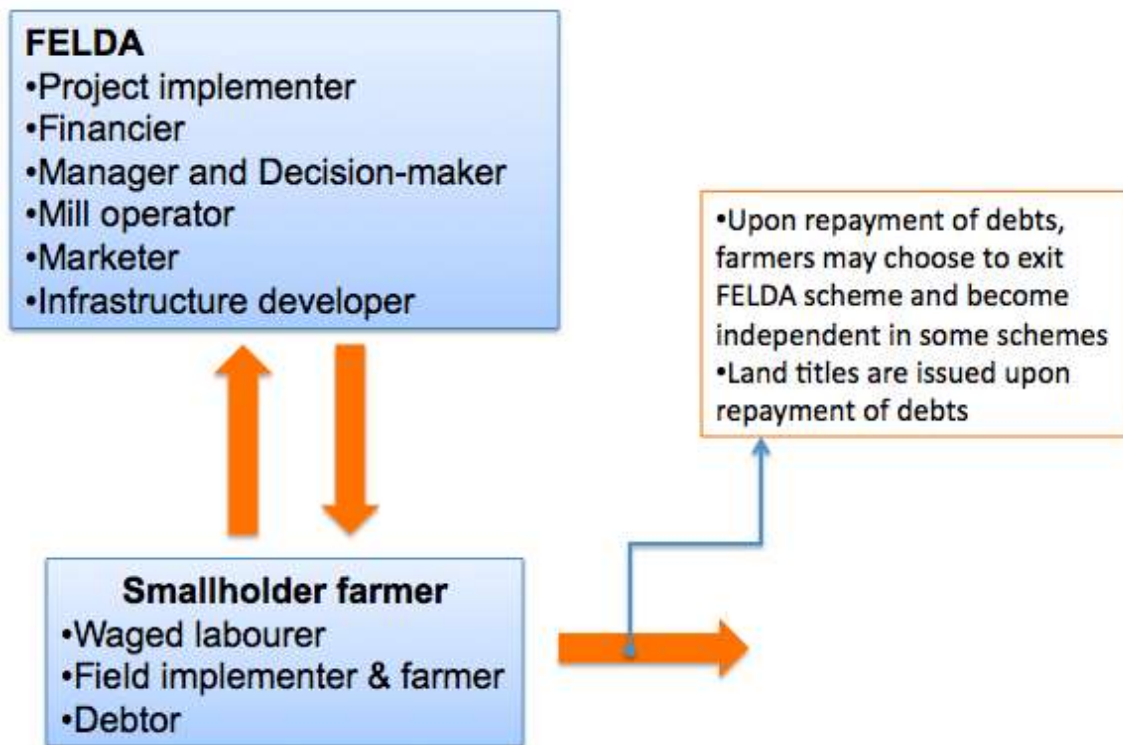


Figure 6.4. FELDA model.

Sawit Kinabalu, Bagahak, Sabah

	Description
Date Initiated	Around 1993
Aim	<ul style="list-style-type: none"> •Commercially-run oil palm estates with social mandate to eradicate poverty and aid rural development (similar to FELDA)
Key Goals	<ul style="list-style-type: none"> •Commercial profitability of large-scale oil palm estate •Poverty eradication and rural development where applicable
Unique Features of model	<ul style="list-style-type: none"> •Corporatized commercial entity but owned by State •Commercial goals are combined with social mandates •Land issues appear to be managed in a win-win arrangement where landowner set-up company receives land title in order for project to proceed, thereby circumventing individual land titling
Current projects	<ul style="list-style-type: none"> •11,000 ha at Bagahak •About 1,500 smallholders
Pros	<ul style="list-style-type: none"> •Problematic and resource-consuming individual land titling averted •Housing and land is not given to landowners or settlers, thereby greatly reducing burden on public funds (financial aid from the federal government is sourced for the purpose of poverty eradication and rural development) •Profits have been generated continuously for the past 8 years and since its inception, presumably due to efficiencies in corporate practices in the scheme

Cons	<ul style="list-style-type: none"> •Dividends given only once a year •Dividends at MYR6,000 – 7,000/yr for average smallholding of 5 ha appear to be comparatively low by commercial standards
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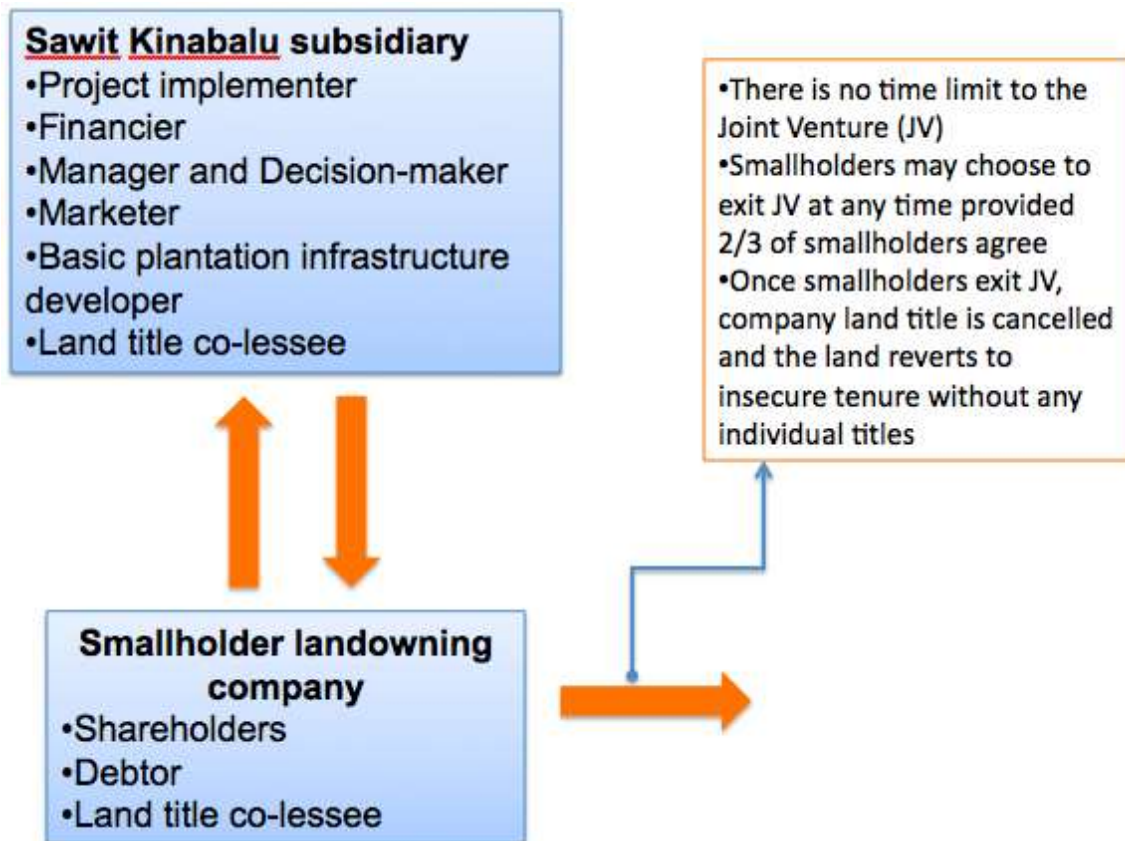


Figure 6.5. Sawit Kinabalu Bagahak model.

Sawit Kinabalu, Bagahak: Phone interview with Basari Sarkun (Board of Director representative of landowning smallholder company in Joint Venture with Sawit Kinabalu, and smallholder himself)

Identify key factors that have contributed to the project's success?

- Joint venture agreement with smallholders with 70:30 shareholding (30% smallholders) has been workable to obtain consent from smallholders to proceed with development project
- Previously undeveloped land for oil palm is now not only being developed as a commercially-viable plantation, but further developments are now being planned ie. downstream palm oil processing, housing, township, better infrastructure. A long-term view to develop with the participation of smallholders (although mainly as shareholders) rather than a short-term cash-out mentality is seen to better benefit smallholders.
- Support from the government in terms of policies and plans to jointly develop the township and infrastructure for strengthening the palm oil supply chain (ie. deep sea port for shipping of palm oil) is important.

What are the challenges to this model of smallholding?

- It is very difficult to convince 1,500 smallholders to come to a consensus on past and future plans
- Smallholders are often influenced by third parties to cash out and sell their land
- Returns on investment need to be viewed on a long-term basis
- Government support is not always forthcoming

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