1 A short history of palm oil in Indonesia: A 'success story'

Within the span of only a few decades, Indonesia has become the world's foremost producer of CPO (crude palm oil), overtaking Malaysia in 2007. With a production of 23.9 Mt in 2011, Indonesia accounts for 49.7% of world production (Oilworld 2011), followed by Malaysia (37.8%), Thailand (3.2%), Nigeria (1.8%) and Colombia (1.7%) (Jacquemard 2012). A third of Indonesian production is consumed domestically – roughly 7.82 Mt in 2012, mainly due to growing demand from urban areas – with the rest being exported.

Demand for CPO is driven by many major importing countries, with India ranking first (7.8 Mt), representing 47% of Indonesia's CPO exports, followed by China (6.3 Mt; although it mainly imports other palm oil products), the European Union (5.2 Mt) and Bangladesh (1 Mt), representing 10% of all Indonesian exports (BPS 2010).

Several factors are behind the economic success of the Indonesian palm oil industry: investments in agro-industrial assets, governmental support and increasing global demand. These translate into high prices. However, palm oil production also presents some drawbacks. Intensive palm oil production requires initial investments that individual farmers can rarely afford (McCarthy and Cramb 2009; Feintrenie et al. 2010). As a result, much of the Indonesian CPO market is dominated by industries that capture most of the benefits. In addition, this activity raises several broader issues: primary forest protection, biodiversity conservation, climate change, poverty alleviation and energy production. This highlights the need for research into palm oil from the socio-economic and agronomic points of view.

This Indonesian success story started at a rather slow pace in the middle of the 19th century.

1.1 Colonial times: 1848 to 1945

The African oil palm, *Elæis guineensis*, originates from West and Central Africa. The first seeds of the oil palm were brought from West Africa by the Dutch and planted in the Bogor Botanical Garden (Java Island) in 1848 (Wahid et al. 2004). Oil palm plantations expanded by 91,000 ha between 1916 and 1938 (Kehati et al. 2006), at about the same rate as rubber tree plantations. During this period, much research was undertaken on palm oil and improvements for cropping systems. The Basic Agrarian Law, ratified in 1870, was the beginning of the colonial plantations' expansion in this Dutch colony. Since customary claims were not recognized over non-cultivated lands, such as forests, large tracts of land were considered 'empty lands'. The Basic Agrarian Law thus encouraged the wealthy rulers to create and develop new plantations on forest lands. The first colonial plantations in Sumatra soon faced labor shortages and had to resort to forced labor from Java and in-migration of indentured servants from China, known derogatorily as coolies.

Faced with a steady increase in population and poverty on Java (which had the highest population densities in the world by the turn of the century), the Dutch colonizers started to implement the '*Kolonisatie* program' from 1905. Under this program, landless people from the island of Java were moved to the less populated outer islands of Borneo and Sumatra. The transmigration program, as it was renamed after independence, had two main goals: reducing the population pressure on Java and developing food-crop production in the outer islands. Strengthening its grip on the colony by mixing populations of different origins was undoubtedly also part of the colonizer's hidden agenda. A secondary goal of the program was to grow sufficient food crops locally to be able to provide food to the colonial plantations in the vicinity of the colonization projects (Levang 1997; Sevin and Levang 1989). At the time, *Kolonisatie* was perceived as a 'moral duty' to alleviate poverty on Java and secure the supply of rice in Java and Sumatra (Levang 1997). The aim of the program was not to procure laborers for the colonial plantations, even though some porosity in this respect may have existed.

The Japanese occupation from 1942 to 1945 during the Second World War put a halt to the expansion of oil palm plantations. The Japanese accorded priority to the war and to supplying food to its army (Wan Kian 2008). Difficulties in transporting and exporting palm oil caused by tense international relations and the promotion of food crops for war needs slowed down the development of the palm oil sector considerably (Kehati et al. 2006 in Wan Kian 2008).

1.2 The old order: 1945–1966

On 17 August 1945, Indonesia declared independence. However, this independence only became effective during the final days of 1949. Sukarno became Indonesia's first president (Vickers 2005). From 1950 to 1966, a period referred to as the 'old order', Sukarno opted for a 'guided democracy', driven in part by anti-capitalism resentment, convinced that Indonesia could "stand on its own two feet" (Casson 1999). During this period, palm oil production declined, most likely due to poor management. Indeed, plantations were nationalized and managed by demobilized soldiers with no specific knowledge of palm oil production (Fallmeier 2012). The new managers were far from efficient and most of the funds dedicated to the development of production were diverted into private pockets, contributing to the stagnation of the palm oil industry until 1967 (Sevin and Levang 1989).

At the same time, Sukarno believed transmigration was "a matter of life and death for the nation" and the program was presented as a social response to growing unemployment (Levang 1997). The program's underlying goal was to build a new nation by reducing ethnic diversity and, in this way, reducing political unrest on the outer islands (Levang 1997; Sevin 2001). However, the program fell far short of its planned targets[1] and was seriously questioned (Sevin and Levang 1989). The program also suffered from a lack of funds, funds that most Javanese would rather have spent on modernizing and developing Java (Sevin and Levang 1989). The absence of any development of the palm oil sector, declining revenues from palm oil sales and international pressure for liberalization through both the World Bank and the International Monetary Fund (IMF) opened the door to a new era.

1.3 The New Order: 1967–98

In 1967, Suharto became the new president and he soon redefined the priorities for economic development. In a context of high inflation, he justified his politics of repression and authoritarian rule by the desire for rapid economic development (Hartveld 1985). Using 5-year plans, Suharto used the transmigration program as a key to achieving rice self-sufficiency, starting huge projects to improve rice cultivation in the lowlands of Sumatra and Kalimantan. However, these projects suffered from a lack of funding, despite the support of the World Bank (Levang 1997). As a result, most of them were far from successful and the government switched its focus to palm oil production as a way of improving the efficiency of transmigration (Zen et al. 2005; Levang 1997). Palm oil soon became a major vector for developing rural areas and lands with the help of the many transmigrants (Zen et al. 2005). In the early stages, during the 1960s, the expansion of oil palm cultivation was led by public companies called *Perusahaan Negara Perkebunan* (PNP). Subsequently, in the 1970s, these companies were turned into *Perseroan Terbatas Perkebunan* (PTP), semi-public companies supported by loans from the World Bank (Casson 1999). The government retained the management of existing PTP companies and created new ones (Larson 1996). The plantations of these companies accounted

1 For example, one target, set in 1951, called for the displacement of 48 million people to the outer islands within 35 years.

for the majority of the areas under oil palm cultivation until the 1990s (Directorate General of Estate Crops 2010).

Within the private sector, a few companies, called *Perkebunan Besar Swasta* (PBS), started to develop with the consent of the Indonesian government, which viewed them as vehicles to boost national income and attract foreign investment. The State gradually shifted away from funding its public companies and began granting large concessions to the PBS. However, the government rolled out a program designed to improve integration of smallholders in the palm oil sector.[2] This evolution was embodied in the Nucleus Estate and Smallholders (NES) program, launched in 1978 (McCarthy 2010). The nucleus (*inti* in Indonesian) refers to the core plantation of the company, located around the industrial mill. 'Plasma' refers to the periphery of the nucleus, which is still under the company's supervision but is allocated to outgrowers, mainly transmigrants, under various partnership contracts. Smallholders were usually allocated a 2-ha plot of oil palm (McCarthy et al. 2012a). Local people who had to surrender land for the project were included as outgrowers. The company, publicly or privately owned, could ask for a concession comprising both State land and privately owned land. As soon as the agreement was reached, the company had either to convince the local landowners to participate in the scheme or to sell their land to the company. In order to help develop oil palm plantations and create jobs, the transmigration program was then linked to the NES business models through the creation of the *Perkebunan Inti Rakyat-Trans* (PIR-Trans or NES for Transmigration) schemes, allocating plasma land to transmigrants. In the case of PIR-Trans, land usually originated from 'conversion or production forest' allocated to companies through long-term leases. Transmigrants could thus acquire forest land from State Forests converted into PIR-Trans or from local people via the NES scheme. An unconventional way to acquire land from the plasma was to illegally buy already developed plots either from transmigrants or from local people participating in the project (Colchester et al. 2006). While the physical development of the scheme was the responsibility of the company, the State took over the recruitment and displacement of the transmigrants, as well as food and housing expenses during the first few years of the oil palm plantation, i.e. during its immature stage (Larson 1996).

In 1988, the government realized that the high initial investment needed for oil palm cultivation was still an obstacle to smallholder participation in the scheme, partly because of the reluctance of banks to provide credit to individual farmers without any collateral. Local people were thus finding themselves barred from participating in outgrower schemes, even when they owned enough land (at least 5 ha were required to participate) (Colchester et al. 2006), since they were unable to pay the management costs of their plots during the immature stage (Fallmeier 2012). As oil palms only reach their maximum production 7 years after planting (Jacquemard 2012), farmers were forced to taking out long-term loans. The local people also complained that their bargaining power with the companies was very unequal, giving them little say in the allocation of lands. Very often, the companies allocated most of the land handed over to the *inti* and allocated the least productive lands to the plasma (McCarthy and Cramb 2009). Thus, in 1988, the *Koperasi Kredit Primer Anggota* (KKPA) scheme was created to improve farmers' ability to cultivate oil palm. This scheme, funded in part by World Bank loans, the Asian Development Bank and foreign investors, promoted the creation of farmer cooperatives. The cooperatives served as intermediaries between the company and the smallholders who owned plasma plots. Furthermore, the cooperative would help the farmers manage the plasma while providing credit at concessionary rates to cover their costs (McCarthy and Cramb 2009; McCarthy et al. 2012a). The concessionary interest rates offered by participating banks were 11% during land preparation and 14% during harvests (Casson 1999), which encouraged local farmers to participate in the program and migrants to buy land.

The 'New Order' represented a period of steadfast commitment by the government to developing the palm oil sector. However, despite its goodwill and best intentions, the recurrent recourse to unclear

2 Smallholders are defined as landowners with less than 50 ha of land (RSPO 2006).

regulation, the lack of commitment of cooperatives toward farmers, the above-mentioned economic reasons and all-pervading corruption started to threaten Indonesia's economic stability (Casson 1999).

1.4 The Asian economic crisis of 1998

Indonesia was one of the countries most impacted by the Asian economic crisis of 1998, with the economy shrinking by an extraordinary 13.6% in that year (Colfer and Resosudarmo 2002). This situation was partly the result of the pervading corruption under Suharto's regime, which allowed companies to take on excessive foreign currency debt and avoid transparency in accounting (Casson 1999). Thus, while the depreciation of the rupiah, combined with the earlier liberalization efforts, led to higher exports of palm oil and, consequently, immediate huge profits, the drawbacks soon caught up with the sector and the country. As an illustration, while the Lon Sum company benefited from a 17% increase in its profits through high CPO world prices and a favorable export climate, this soon turned a net loss by 1998 (Tripathi 1998). Indeed, the depreciation of the rupiah against the dollar during the crisis had dramatic consequences, especially with foreign currency debt ballooning rapidly (Colfer and Resosudarmo 2002). Companies were forced to lower their targets in terms of new concessions and planting areas (Casson 1999).

However, the symptoms of the crisis were mitigated by the agricultural sector. As an essential sector of the country at that time, agriculture was free from foreign currency debt and could help prevent foreign currency outflows for the import of expensive commodities. It was also able to absorb the workforce made redundant from the collapsing manufacturing sector (Sunderlin 1998). For the farmers, both smallholders and laborers on rented land, inflation led to hardships and forced them to extend their land in order to increase their incomes, notably by intruding into the forest. Furthermore, high export prices attracted them to cash crops, such as oil palm and rubber, in the expectation of higher revenues from selling to the company's mill or through smuggling (Colfer and Resosudarmo 2002).

The El Niño-induced drought further aggravated the crisis and the rising costs of inputs led to decreasing palm oil productivity. With the rise in production costs, the planting rate in 1999 had declined by 33% compared to 1997 (Casson 1999). As described by Casson (1999), this situation resulted in rapid inflation in the prices of palm oil products on the local market. Supply could not meet the peak demand at Christmas and Ramadan due to low production and increased smuggling. Shortages started to appear in the local market and CPO prices skyrocketed from IDR 1.245/kg to IDR 3.277/kg. In addition, export tax rates aimed at reducing exports so that domestic demand could be met, reached 60% in mid-1998, while farmers' incomes and foreign currency earnings sank dramatically (Casson 1999). On the one hand, local prices of palm oil were inflated because of the weakness of the rupiah and production shortages. On the other hand, however, world prices of CPO were declining. Indeed, CPO faced competition from cheap Brazilian soybean oil, due to massive conversion of land to this crop, and local CPO smuggling (Danareksa 1999 in Casson, 1999). This pounded both the local market and exports and the palm oil sector suffered hugely from the mismanagement of the crisis by the government (Danareksa 1999 in Casson, 1999).

1.5 The Reformasi era: 1998 to today

Eventually, even as the crisis neared its end, the uncertainty and poor communication between parties left the sector's actors in turmoil. The government proved incapable of reassuring investors and was inefficient in keeping its plantations afloat. There was massive social unrest, caused not only by the crisis but also older grievances. The lack of clarity in its new regulations concerning export taxes, sales of new concessions and business development hampered investment and proved detrimental to companies. This confusion caused the performance of the palm oil industry to start plummeting. The government responded by a drastic change in its industrial strategy, moving from a policy of heavy intervention in the industry toward more indirect action, as discussed below. This led to the resignation of President Suharto in May 1998 and the election of Jusuf Habibie to the post.

With Jusuf Habibie as president, Indonesia adopted a strategy of increased liberalization and democratization in order to regain the trust of international institutions and donors (Casson 1999). The transmigration program was also scaled back and fewer families were moved, due to a lack of funds (Singer 2009). The land cleared by the fires of 1997–98 and the reverse effect of the El Niño oscillation gave a new impetus to the production of CPO, further bolstered by export tax reforms. The production of CPO increased dramatically (Casson 1999). In 1999, the government ratified laws number 22 and 25 that gave autonomy to regional authorities such as of districts (*Kabupaten*) and municipalities (Moeliono et al. 2009). This process of decentralization allowed the districts and villages to manage their own resources and to increase their tax revenues from their exploitation.

The Reformasi era, also called the 'laissez faire' era by McCarthy (2010), was marked by the withdrawal of the government from dictating or influencing business strategies. The government moved away from controlling the organization of companies, providing them with funds, land grants and regulating exchange rates, focusing instead on a 'partnership' approach in which it would 'shape outcomes by establishing a regulatory framework and by providing the institutional context' (McCarthy 2010). As a combined result of this new orientation and budget constraints, the government stopped providing credit and developing infrastructure related to the development of the KKPA scheme (McCarthy and Cramb 2009). However, subsequent years showed these joint-venture models to be rather inefficient because of the local farmers' lack of initial capital, reduced availability of credit for every type of stakeholder and the many ways companies cheated the locals (McCarthy 2010). Smallholders could not enter or remain in the scheme because they usually lacked the cash necessary to meet unexpected health- or education-related expenses or to deal with a reduction in income. They were thus forced to sell their lands, usually before the palm trees reached maturity, but obtaining high prices resulting from the scarcity of land. Consequently, the Indonesian government adopted the 'Plantation Revitalization Program' to boost the sector's recovery by providing credit (Direktorat Jenderal Perkebunan 2007). Expansion of the sector was no longer dependent on joint ventures between private companies and the local people; it was now driven more by a 'partnership' between the government, smallholders and companies. As a result, smallholders constituted as much as 38% of the planted area and 35% of the production in 2010 (BPS 2010).

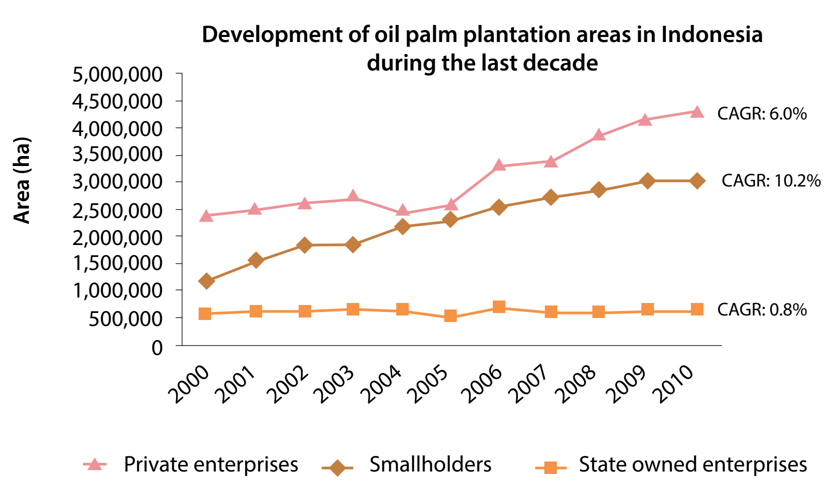

Figure 1. Oil palm plantation area in Indonesia during 2000–10 according to type of ownership
Note: CAGR (Compound Annual Growth Rate)
Source: Tree Crop Estate Statistics 2010–2011 for Palm Oil Plantations by the Directorate General of Estates in PWC (2012).

More recently, a new kind of partnership called '*kemitraan*' is becoming popular. In this model, a smallholder surrenders his land along with the property title to a company which uses the latter as collateral to obtain a loan and manage the land as part of its palm oil plantation. The smallholder then receives a 20% share of the production (McCarthy et al. 2012a). The rapid expansion of palm oil areas has led to the establishment and modification of a large number of regulations, especially concerning the status of forests. Thus, pressure from the IMF (International Monetary Fund) and discussions at the Conference of Parties in Bali led to a moratorium on the granting of new concessions of forestland by the Indonesian government in an effort to protect the forest.