

Oil Palm Development: Success Story or Nightmare?¹

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Starting virtually from scratch in the 1960s, oil palm development in Malaysia and Indonesia led the two countries to control 85% of global palm oil production by 2010 (IndexMundi, n.d.). The success of oil palm attracted prompt criticism. By the end of the 1990s, the oil palm had become the *bête noire* of non-governmental organizations (NGOs) concerned with protecting the environment and the rights of indigenous people. The oil palm was accused of every kind of evil. It was made responsible not only for the degradation of the environment—through the conversion of primary forests, the loss of biodiversity, the disappearance of wild fauna and pollution—but also for the increase of poverty among indigenous people, through land grabbing, dispossession, the disappearance of forest resources, forced lifestyle modifications and excessive debt. In addition, it was blamed for a range of attacks on human rights, such as the enforced displacement of people, intimidation, violence, starvation salaries, unhealthy working conditions and, in the worst-case scenario, rape and murder (Andrews, 2014).

What Led It to Be Such a Success?

In spite of the negative picture painted by some NGOs, the oil palm continued to spread throughout the archipelago, often at the express request of the local people. Indeed, during visits to ‘spared’ villages, some villagers enjoined the author of this paper to contact a palm oil company on their behalf and encourage it to approach them. In villages that have now been ‘subject’ to the oil palm for several years, the visitor is struck by the high proportion of permanent structures with tinted windows and concrete colonnades topped by Corinthian capitals, by the number of motorbikes and cars, and by the numerous mobile phone shops. The change in lifestyle is obvious, but where are the signs of the increasing poverty we have heard so much about?

Oil palm cultivation can generate a high and stable source of income and support a rural middle class over several generations, something few tropical crops can achieve today. For example, in Sumatra (Indonesia), the average annual income per hectare over the full cycle of a plantation comes to €2,100 (US\$2,675²) for palm oil, as compared to only €200 (US\$255) per hectare for a rice field. A comparison of the return on labour is even more striking: €36 (US\$46) per day per person for oil palms against only €1.70 (US\$2.17) per day per person for irrigated rice (Feintrenie, Chong and Levang, 2010). In Indonesia, the Nucleus Estate

¹ This background paper draws heavily on Rival and Levang (2014).

² Conversions were calculated using the yearly average currency exchange rate for 2010: 0.785, as per IRS (n.d.).

Smallholder Project has generally been successful in reducing poverty. The number of poor people in the project's areas is 2–7%, which is markedly below the national poverty level of 14% (Drajat, 2010).

Can't Oil Palm Be Developed without Destroying Huge Tracts of Forests?

While it cannot be denied that the socio-economic impact of oil palm expansion has been positive rather than negative, it is equally true that its environmental impact has been disastrous. In Southeast Asia in particular, expansion has taken place chiefly to the detriment of humid tropical forest, one of the world's most extraordinary reservoirs of biodiversity. In the span of a few decades, Indonesia has seen the conversion of more than 50,000 km² (5 million ha) of primary forest, Malaysia more than 4 million and Nigeria 1 million, while an equivalent total has been converted in the rest of the world (WWF, 2011). The conversion of primary forest into monospecific oil palm plantations is undoubtedly an ecological disaster. After the bulldozers have been through and the land has been burned, little is left of the biodiversity of fauna and flora, nor of the habitats of innumerable forest species. Orangutans, gibbons, tigers and elephants are often in the headlines, but the damage extends well beyond these few emblematic species.

Environmental NGOs are right to emphasise this negative aspect of oil palm expansion. However, the oil palm—as a plant—bears no responsibility for this. We should remember that *Elaeis guineensis* originated in the great tropical forest bordering the Gulf of Guinea and that it occupies a modest place in this rich biodiversity. The problem is not the oil palm but the way people have chosen to exploit it. The palm tree is just the vehicle; the real problem is the conversion of the forest for agricultural use, particularly if this use takes the form of a monoculture. Be it oil palm, soybean, sunflower, rape seed, sugarcane or *Acacia mangium*, the problem remains the same: the forest, along with its rich biodiversity, is sacrificed.

It makes little sense to boycott palm oil if in replacing it you convert eight times more forest into soybean and sunflower fields. This happens to be one of the favourite arguments of the palm oil industry: since yields of oil palm are eight times higher than those of soybean (Hoyle and Levang, 2012), the use of the former requires eight times less surface area to be deforested than the latter. But the argument is misleading: neither soybean nor oil palm require deforestation.

The appeal of the forest to big palm oil-producing companies comes down to two things: the relatively free access and the wood.

Few countries recognise their citizens' rights of ownership—or even usage—of primary forest, let alone the rights of indigenous forest peoples, who are often considered second-class citizens (FPP, n.d.). The refusal to recognise the customary rights of forest peoples is very widespread in tropical areas (FPP, 2014). In general, forest management is entrusted to centralised state services responsible for their conservation and exploitation, and possibly for authorising their conversion. It is relatively easy for a company to obtain a vast concession of primary forest to convert into a plantation from a few civil servants who may not be pillars of probity. To secure land in an area that has already been cleared, company representatives would need to negotiate with a multitude of smallholders, which would add considerably to the cost of the transaction. Possible rejection by any of these would produce a series of enclaves, preventing the establishment of large-scale homogeneous blocks.

The availability on site of a large amount of wood or biomass is another attraction. Where authorisation is given for lumber to be exploited, this can cover a large part of the costs of the operation. If not, slashing and burning a significant amount of biomass can bring down the cost of fertilisation and control of weeds in the early years. In the worst-case scenario, the establishment of an oil palm plantation can just be an excuse for unscrupulous entrepreneurs to gain access to timber resources. A project to plant oil palms, which in theory is very profitable, can also serve as a guarantee to obtain the bank loans needed to exploit the forest. Towards the end of the 1990s, several million hectares of Indonesian forest were apparently destroyed in this way, on the pretext of developing oil palm plantations (Casson and Obidzinski, 2002).

Can Oil Palm Be Developed without the Agro-Industry?

Contrary to what we are frequently told, palm oil production need not involve agro-industry. The forest populations of the Gulf of Guinea were producing red oil for local needs several millennia before the industrial revolution. Even today, in the original home of *Elaeis guineensis*, a large proportion of production originates in village plantations—the established term for plantations in the hands of independent smallholders. The surface area of these plantations varies, from around one hectare for the smallest to several hundred hectares in the case of plantations that belong to the urbanised elites. The oil is usually pressed and processed by traditional methods and sold locally.

The activity employs many local people and has a multiplier effect that results in intense economic activity in production areas. In Cameroon, for instance, smallholders even in the vicinity of an industrial mill prefer to deliver their fruit to artisanal mills. Although artisanal mills have a much lower extraction rate than industrial mills (15% or less vs. 22–24%, respectively), they allow farmers to benefit from much higher prices for their oil at the local urban markets, especially during the low season (Nkongho *et al.*, 2014). The success of artisanal mills is such that the industry often has to shut down its mills during the low season. As motorized artisanal mills are relatively inefficient, two to three man-days are necessary to produce 1 ton of palm oil, whereas an industrial mill can produce about 7–10 times that amount. Lone-standing women can make a living by buying fruit bunches from a planter, having them pressed at a mill and selling the red oil at the local market. All costs paid, such business can provide US\$100 per week (Nchanji *et al.*, 2013).

Plea for a Win–Win Partnership

In Indonesia and Malaysia, smallholders own 40% or more of the surface area of plantations (WWF, 2011), a share that is continually growing. An increasing number of smallholders are becoming independent of the big groups and are happy simply to deliver their product to the company oil mills. The first smallholders were forced to sell their yield to the region's single oil mill, but the emergence of numerous competing firms has changed the situation. Competition—among mills, transporters and plantation developers—works to the benefit not only of smallholders, but also of small and medium investors.

As the examples of Malaysia and Indonesia show, the help of agro-industries is initially indispensable to smallholders with respect to the clearing and planting of land, gaining access to selected planting material, improving access to agricultural inputs, organising the transportation of bunches to the oil mill, obtaining titles to property and guaranteeing bank loans. Furthermore, since the oil palm is a relatively new crop for smallholders in Southeast

Asia, the transfer of knowledge and learning of techniques has required the assistance of public or private companies. As smallholders become accustomed to the work, they no longer need to rely on agro-industry, as can be observed in the oldest production areas. Once the industry is established, family farming can take over from agro-industry and deliver primary production. However, agro-industry continues to play a dominant role in the processing and marketing of palm oil. Industrial-scale units are essential when it comes to producing large amounts of standard-quality oil for export.

The current projects developed in the Congo Basin—such as Biopalm and Herakles Farms in Cameroon, Atama in Congo and Olam in Gabon—are ideal for agro-industry and only rarely involve smallholders. However, an association of the two, following the model that has contributed to the success of the oil palm in Southeast Asia, would be beneficial in economic, social and environmental terms. Economically speaking, the involvement of a large number of smallholders creates more jobs, both directly and indirectly, and triggers an economic snowball effect that has a major impact on the reduction of rural poverty. Part of the additional cost of involving smallholders (mainly transaction costs) can be made up by requiring them to pay the cost of development through the medium of credit. On the social level, shared goals and development aid—rather than competition and the exclusion of smallholders—will boost social cohesion. Finally, on the environmental level, the development of plantations on farmed land, preferably on land that has already been cleared near villages and roads, means that the equivalent area of primary forest will be spared (Hoyle and Levang, 2012).

In Cameroon, for instance, smallholders and medium-scale farmers manage approximately 1,000 km² (100,000 ha) of oil palm plantations. Due to difficult access to improved seedlings, the prohibitive cost of fertilizer and poor management techniques, annual yields are very low, on average 0.8 ton of crude palm oil per hectare (Nkongho, Feintrenie and Levang, 2014). Considering that Indonesian or Malaysian smallholders can reach annual yields of 4 tons of crude palm oil per hectare, there is huge room for progress. By increasing the average yields to only 2 tons per hectare, the country would regain self-sufficiency in palm oil—as 50,000 to 100,000 tons are imported every year—and even become a net exporter. Increasing smallholders' yields is feasible, but it has a cost and requires political will. Unfortunately, rather than providing subsidies for inputs, credit and adequate extension services, many governments prefer to offer attractive conditions to international investors (Nguiffo and Schwartz, 2012).

Not a Technical Choice, but a Societal One

Smallholders or agro-industries? Which is the best development model? This is the question politicians keep asking researchers. The quick answer is that this is not a technical choice. There is no doubt that agro-industries are often more efficient than family farming in terms of fruit and oil yield. Transaction costs are lower and state involvement may be limited to granting easy terms to investors. In addition, in terms of duties and taxation, monitoring compliance with environmental rules (such as the Roundtable on Sustainable Palm Oil certification or pollution control) or social standards (such as workers' rights), it is always easier to deal with a small number of big enterprises than thousands of unorganised or poorly organised smallholders.

In terms of social justice, job creation and reduction of poverty, however, there is no doubt that family farming has proved itself. While permanent employees of agro-industries usually

enjoy good working conditions (such as regular salaries, housing, and health and education benefits), all labour-intensive operations are generally competitively outsourced to contractors, who tend to exploit their workers (by paying low wages, offering piecework and failing to provide benefits). These workers tend to be packed in low-cost housing and have to buy all their food at the company store; by payday, little is left. In contrast, family farms provide labour opportunities to the whole family, redistribute cash income to all members (although seldom equitably or according to the labour actually provided), and produce most of the food on the farm. Work discipline is less tight, and the farmer remains his own boss.

The choice of development model is therefore not a technical decision but a societal choice. What future do we want for our children? Do we want them to live the lives of independent smallholders or employees of agro-industries? Both options have advantages and disadvantages. And the choice we make may not be the choice our children would make. One thing alone is definite: the oil palm as a plant has nothing to do with it.

Abbreviations

NGO	Non-governmental organization
WWF	World Wide Fund for Nature (World Wildlife Fund)

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