In search of sustainable and inclusive palm oil production: The role of smallholders in Indonesia

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Contents

List of Figures

List of Tables

List of Abbreviations

ADP	Area development plan
APL	Areal penggunaan lain (non-forest estate land)
ANT	actor-network theory
B	Boron
BBC	Black bunch count
BD	Bonai Darussalam
BMZ	German Ministry of Economic Cooperation
BPS	Badan Pusat Statistik (Indonesian Bureau of Statistics)
CIFOR	Centre for International Forestry Research
CPO	Crude palm oil
CRH	Central Rokan Hulu

DJP	Direktorat Jenderal Perkebunan (Directorate of Estate Crops)
DM	Dry matter
EFB	Empty fruit bunches
FFB	Fresh fruit bunches
GAP	Good agricultural practices
GTZ	German Agency for Technical Cooperation (now GIZ)
HCA	hierarchical cluster analysis
IDR	Indonesian Rupiah
IPOA	Indonesian Palm Oil Association (Indonesian acronym is GAPKI)
ISPO	Indonesian Sustainable Palm Oil
IQR	Inter-quartile range
IUP-B	Izin usaha perkebunan untuk budidaya
K	Potassium
KfW	German Bank for Reconstruction and Development
KKPA	Kredit Kooperasi Primer Anggota
LPI	Large peat investors
LRF	Large resident farmers
masl	Meter above sea level
Mg	Magnesium
MLF	Medium-sized local farmers
MMF	Medium-sized migrant farmers
Mt	Metric ton
N	Nitrogen
P	Phosphorus
PCC	Provincial Coordinating Committee
PTPN	Perseroan Terbatas Perkebunan Nusantara (State-owned plantation company)
PIR/NES	Perkebunan Inti Rakyat/Nucleus Estate Smallholder
RP	Rock Phosphate
RSPO	Round Table on Sustainable Palm Oil
SHM	Surat hak milik (nationally recognized land certificate)
SKT	Surat keterangan tanah (village level document stating land history/ownership)
SKGR	Surat keterangan ganti rugi (letter from sub-district stating compensation for land has been given)
SMF	Small migrant farmers
SMPF	Small & medium-sized peat farmers
SPKS	Serikat Petani Kelapa Sawit
STD-B	Surat tanda daftar usaha budidaya tanaman perkebunan (plantation registration certificate)
US$	United States Dollar

1 Introduction

Neatly maintained independent smallholder oil palm plantation in Central Rokan Hulu (photo taken by the author in May 2015)

1.1 The debate

This dissertation builds on an old debate. Already at the end of the 19th century, Kautsky published The Agrarian Question, in which he debates the dynamics of capitalist agriculture, and the role of the peasant and the small farm therein, and the need for policies to steer these dynamics. According to Kautsky, peasants and their small farms were self-exploitative and therefore socially undesirable, and he predicted a gloomy future for both. Further policies were deemed unnecessary, as they would eventually disappear by themselves (Birner and Resnick, 2010; McLaughlin, 1998).

Despite the lack of clear and uniform definitions of smallholders or family farmers and the difficulties associated with this, smallholder farmers have far from disappeared and still form the backbone of many rural societies. Lowder (2016) estimates that globally there are roughly 500 million family farms, of which 475 million cover less than two hectares. Not only have small farmers persisted but policies that support smallholder agriculture have proven a successful strategy in poverty reduction (Birner and Resnick, 2010; Lowder et al., 2016; Valdés and Foster, 2010). Smallholder farmers and supportive policies therefore appear indispensable in achieving Sustainable Development Goal 2.4.1 on sustainable agriculture and fighting hunger.

Interest in agricultural policy development and the position of smallholder farmers therein has undergone considerable fluctuations over time and between regions. In Asia and Africa, colonial governments put a strong emphasis on large-scale plantation agriculture for export; smallholders generally received limited support (Birner and Resnick, 2010; Wiggins et al., 2010), as they were deemed traditional and inefficient, as opposed to large-scale plantations with their modern production techniques. In many countries, this paradigm remained intact after independence and government support for smallholders generally remained minimal (Budidarsono et al., 2013; Byerlee, 2014; Hayami, 2010). Agriculture was generally discriminated against and regarded as a labour pool for industry rather than a source of raw materials and the surplus needed for industrialization and poverty reduction (Birner and Resnick, 2010; Wiggins et al., 2010). Research in the 1960s, however, showed that smallholders hardly need to be motivated to properly manage their plots, rarely shirk labour activities compared to plantation workers and, if properly supported, are likely to be more efficient producers than large-scale plantations (Hayami, 2010; Poulton et al., 2010; Rigg et al., 2016). In the 1970s, there was acknowledgement of the importance of smallholders in poverty alleviation and policies to support smallholder farmers were implemented. The 'green revolution' highlighted the alignment of public investments in agricultural research, subsidized access to credit and other inputs, and price guarantees for smallholders, and led to smallholder-based intensification and poverty reduction (Birner and Resnick, 2010; Hazell et al., 2010). However, the structural adjustment programmes of the 1980s and 1990s promoted market liberalization and limited the involvement of the state. Funding for agriculture diminished, resulting in reductions in smallholder support and services (Birner and Resnick, 2010; Wiggins et al., 2010).

As a result of the 2007/08 agro commodity price hike, agriculture and agricultural investments were put back on the development agenda (Birner and Resnick, 2010; Wiggins et al., 2010; World Bank, 2010). The World Development Report 2008 emphasized the importance of agriculture for development and achieving the Millennium Development Goals. Several pathways for sustainable agricultural development and possible roles for smallholder farmers therein were explored (Oya, 2009; World Bank, 2007). The price hike, however, also increased interest in large-scale land investment and it soon became evident that many of these investments had negative consequences for local populations (Schoneveld, 2013; Vermeulen and Cotula, 2010b). These findings fuelled the land grab debate (Li, 2017; Zoomers and Kaag, 2014) and revived the old debates on how to include

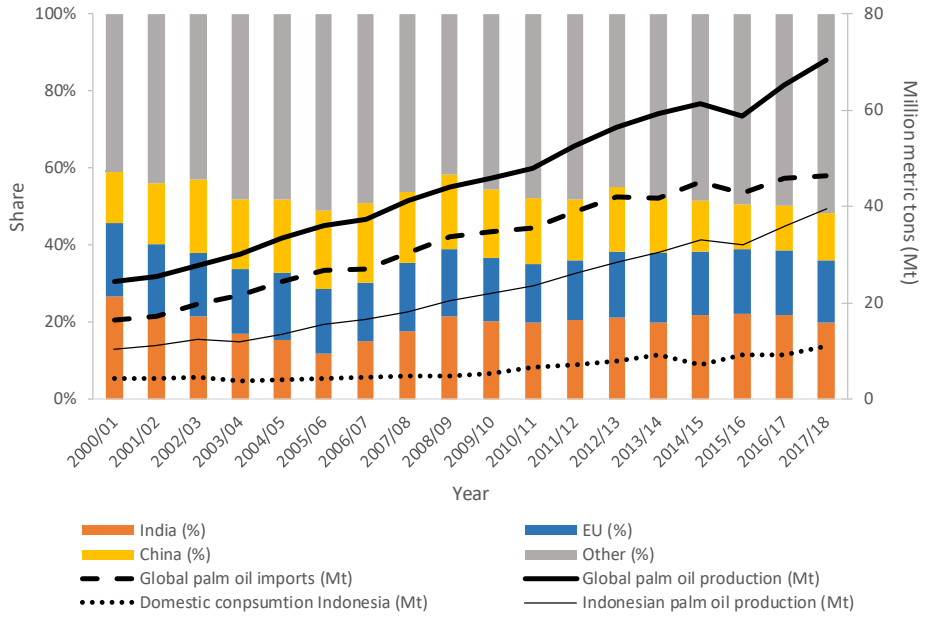

Figure 1.1 Palm oil production and major destinations
Sources: USDA (2005, 2007, 2011, 2015 & 2019)

local populations in agricultural value chains (Lorenzo and Leonard, 2010; Paglietti and Sabrie, 2013) and large-scale plantations versus smallholder farming (Byerlee, 2014; Hazell et al., 2010).

A 2010 special issue of World Development (volume 38) titled the 'Future of Small Farms' shows that the debate on policy development for smallholders has changed since Kautsky. The current debate highlights market failures and deals with such issues as the increasing regime complexity of global food systems and related barriers to market participation, upgrading challenges in contemporary global value chains, challenges in institutional conditions under which smallholders enhance competitiveness, as well as the possible trade-offs between conservation and development, to name just a few (see e.g. Hazell et al., 2010; Narrod et al., 2009; Oosterveer, 2015). Although all these debates feed into each other, and many will be touched upon in the following chapters, this dissertation primarily contributes to the debate on inclusive and sustainable business models.

Inclusive business refers to linking low-income communities in an economically viable manner with businesses that allow the former to participate in value chains (Chamberlain, 2018; Lorenzo and Leonard, 2010; Paglietti and Sabrie, 2013). However, it is not just about participation but also about the conditions under which participation takes place (Cramb and McCarthy, 2016; du Toit, 2009). There are often unequal relations between businesses and their local partners, resulting in the risk of inclusion on adverse terms, corporatization and the loss of autonomy for local populations (Chamberlain, 2018; Cramb, 2013).

A sector in which these processes are highly relevant is Indonesia's smallholder oil palm sector, which has experienced massive smallholder engagement, faces considerable sustainability challenges, is part of global value chains and highlights the influence of complex global agro-commodity governance initiatives on smallholders. It therefore provides an interesting case to further explore the policy, sustainable development and smallholder agriculture nexus.

1.2 The case: Smallholder oil palm farming in Indonesia

In 2017/18, palm oil accounted for 35% of all major oil crops, making it the most produced and traded vegetable oil globally (USDA, 2018). Its popularity is largely based on its versatility for use in a huge number of food and non-food products and its unmatched productivity per hectare compared to other major oil seeds. Although the oil palm (*Elaeis guineensis*) originates from West Africa, the vast majority of palm oil is currently produced in Southeast Asia. Indonesia and Malaysia are the world's main palm oil producing countries, accounting for 55% and 29%, respectively, of global production in 2017/8 (USDA, 2018). Palm oil has become the most important single source of foreign exchange in Indonesia, provides millions of jobs in rural Indonesia and has been hailed by the Indonesian Palm Oil Association as 'God's gift to the world through Indonesia' (GAPKI, 2018).

The vast increase in palm oil production over the past two decades has provided many parts of the world with a cheap and abundantly available vegetable oil (see Figure 1.1). Furthermore, the United Nations World Population Prospects (2017) predicts a global population increase of 2.8 billion people by 2050; of these people, 2.3 billion will be born in less developed countries where vegetable oil consumption per capita is expected to increase due to economic growth (Corley, 2009). In light of the predicted population growth, the increasing vegetable oil consumption per capita and the current aggressive bio-fuel targets set by such countries as Indonesia, the demand for Indonesian palm oil is expected to increase from 38.5 million Mt in 2017/18 (USDA, 2018) to 51.1 million Mt in 2025 (Khatiwada et al., 2018). The clear indications of a steady rise in demand for vegetable oils mplies that the oil palm sector has bright prospects.

However, the rapid expansion of oil palm is controversial and oil palm has become one of the world's most scrutinized agro commodities (Cramb and McCarthy, 2016; Ivancic and Koh, 2016). The crop has been associated with a large number of environmental and social ills, including large-scale deforestation (Abood et al., 2015; Susanti and Maryudi, 2016), biodiversity loss (Koh and Wilcove, 2008; Meijaard et al., 2018), greenhouse gas emissions (due to peat subsidence in oil palm plantations) (Hooijer et al., 2012; Miettinen et al., 2013), smoke and haze hazards associated with the burning of especially peat for oil palm plantation development (Gaveau et al., 2014; Purnomo et al., 2017), land rights issues (Afrizal, 2013; McCarthy, 2010), dubious benefit sharing agreements between local populations and companies (Cramb, 2013; Gillespie 2011), labour issues (Bou Dib et al., 2018; Sinaga, 2013) and corruption (KPK, 2016; Li, 2017). The sector also experiences limited yield increases and increasing labour costs compared to competing oil crops such as soybean (Fry, 2017). These unresolved performance issues have been acknowledged by both the private and the public sector as threatening the long-term sustainability of the palm oil industry (Hidayat et al., 2018; Pacheco et al., 2018; Susanti, 2016).

A myriad of initiatives have been launched to improve sector sustainability in order to counter these threats. Some of the most relevant in the Indonesian context are the Round Table on Sustainable Palm Oil (RSPO) and the Indonesian Sustainable Palm Oil (ISPO) initiatives (Hidayat, 2017; Ivancic and Koh, 2016; Rival et al., 2016). The RSPO is a private governance initiative that was established in 2004 by Unilever and the World Wide Fund for Nature. These organizations responded to civil society demands in especially Northern countries, where public campaigns highlighted the negative environmental and social consequences of the oil palm boom in producer countries (Casson, 1999; Pacheco et al., 2018; Schouten and Glasbergen, 2011).

In June 2017, the RSPO covered 3.2 million ha of oil palm globally and claimed that 19% of global palm oil is RSPO certified (RSPO, 2017b). In the same year, the RSPO certified plantations

covered 1.7 million ha in Indonesia and thereby accounted for about 14% of the country's estimated 12.3 million ha of oil palm (DJP, 2017b). Although the RSPO is the most relevant global sustainable palm oil initiative (Ivancic and Koh, 2016), it suffers legitimacy issues as it is based on voluntary acceptance, lacks direct public sector involvement and holds predominantly Northern views about sustainability (Hidayat et al., 2018; Rival et al., 2016; Schouten and Glasbergen, 2011).

The ISPO was launched by the Indonesian Ministry of Agriculture in March 2011 through regulation No. 19 (Hidayat et al., 2018). The ISPO can be regarded as an attempt by the Indonesian state to regain control on setting the sustainable oil palm agenda and to further the development of the oil palm sector, countering the increasing influence of private sector governance initiatives such as the RSPO (Hidayat et al., 2018; Hutabarat et al., 2018; Schouten and Bitzer, 2015). The ISPO is based on the implementation of existing legislation, mandatory for all local firms and verified through third-party audits. Besides social and environmental concerns, the ISPO also emphasizes the improvement of the sector's competitiveness (Hidayat et al., 2018; Hutabarat et al., 2018; Schouten and Bitzer, 2015). The ISPO certification scheme, however, suffers severe credibility issues especially in Northern countries but also within Indonesia itself. The authority and capacity of the ISPO organization to implement or enforce sanctions are limited and solutions for the numerous conflicting laws and regulations are yet to be developed (Hidayat et al., 2018; Rival et al., 2016). Whereas ISPO certification was to be obligatory for companies from 2014 onwards, the ISPO has so far failed to achieve extensive company certification and it is therefore doubtful that the even more complex smallholder sector will be ISPO certified by 2022, as initially planned (Hidayat et al., 2018). However, the Ministry of Agriculture and the Coordinating Ministry for Economic Affairs are currently engaged in the multi-stakeholder processes required to increase the credibility of the ISPO, which increasingly appears to align with RSPO standards, indicating momentum towards improving the sector's performance (Luttrell et al., 2018; Pacheco et al., 2018). In 2017, smallholdings accounted for 5.6 million ha of oil palm in Indonesia, which is equivalent to 46% of the country's total oil palm area (BPS, 2018). It is thus clear that oil palm provides a relevant example of smallholders' participation in a global agro-commodity value chain. However, whilst initiatives such as RSPO and ISPO aim to improve social, economic and environmental wellbeing, their impacts on smallholders are questionable. Although a common and important differentiation among smallholders is the scheme versus independent smallholders, they generally have lower yields than companies (BPS, 2018) and are included in the value chain on adverse terms. Whereas scheme smallholders usually maintain relations with the plantation company that assisted plantation development, especially independent smallholders often receive low prices, are last in line to sell their produce, have poor access to high-quality planting material and other agricultural inputs, have difficulty accessing technological knowhow, often do not possess formal land titles and have limited access to formal credit suppliers and subsequently suffer low yields (Cramb and McCarthy, 2016; Hidayat, 2017; McCarthy, 2010). With the increasing importance of emerging public and private sustainability standards, it appears that smallholder participation in the oil palm value chain is increasingly shaped by differentiated capabilities to comply with sustainability standards such as ISPO and RSPO.

Although the RSPO and the ISPO acknowledge the importance of smallholders in the oil palm value chain and have developed strategies and pathways for the certification of smallholders, these have thus far proven effective or beneficial to smallholders to only a limited degree (Hidayat et al., 2018; RSPO, 2017a). Whereas in 2015 the total smallholder oil palm area in Indonesia amounted to 4.5 million ha (DJP, 2017b), only 148,856 ha of plots belonging to scheme smallholders were RSPO certified as of November that year (RSPO, 2015). For independent smallholders, the figure is even

lower: in 2017, only 501 farmers were RSPO certified (RSPO, 2017b) and only one independent smallholder group held ISPO certification, a group which had already undergone more stringent RSPO certification (Hutabarat et al., 2018). These certified independent farmers have often received considerable external assistance from companies and NGOs and certification schemes interested in promoting smallholder certification (Hidayat, 2017; Hutabarat et al., 2018), assistance that is unlikely to be available to the vast majority of smallholders. The number of RSPO certified independent smallholders fell from 810 in 2016 to 501 in 2017 due to the expiration of smallholder groups' certificates (RSPO, 2017b). It is clear that although the aim of certification is to increase sector sustainability, it currently fails to include the vast smallholder sector and may even lead to the further marginalization of smallholders.

The RSPO and the ISPO – as well as other key organizations whose aim is to improve smallholder performance, such as the CPO replanting fund – regard the formation of farmers groups as a key instrument to improve smallholder performance and have established group formation as a precondition for certification (DJP, 2017a; Johnston et al., 2018; RSPO, 2017a). Benefits associated with smallholder organization are related to scale advantages in production, marketing, monitoring compliance, traceability, knowledge dissemination, networking and community benefits (Brandi et al., 2015; Ibnu et al., 2018; Poulton et al., 2010). However, smallholder organization leads not only to benefits: the oil palm sector is frequently associated with corruption scandals, and corruption is also common in many farmers' organizations (KPK, 2016; Li, 2017). Other frequently encountered issues in farmers' organizations are their complex structures, management's lack of required skills, a lack of focus on business activities, politicization, slow decision-making and a lack of transparency therein, and benefits accruing to the organization but not reaching members (Chamberlain, 2018; Paglietti and Sabrie, 2013).

Smallholders' organizations have also been highly politicized in Indonesia. Whereas in the Soekarno era farmers' organizations played an important role in advocating the interests of peasants and the rural poor, this political force was largely destroyed during the New Order regime's purges of anything associated with communism (Lee Peluso et al., 2008). Farmers' organizations remained popular under the New Order regime in the 1970s–1990s but were fundamentally transformed under, for example, the village cooperative programme (Suradisastra, 2006). These cooperatives primarily functioned as the government's resource distribution centres, aimed at building support for the government and increasing production (Hazell et al., 2010; Suradisastra, 2006). However, with structural adjustment programmes in full swing in the 1990s, decreasing Indonesian oil incomes and the eventual collapse of the New Order regime, state-led support diminished (Badrun, 2011; McCarthy, 2010). These village cooperatives often no longer received government input and collapsed (Suradisastra, 2006), leading people to associate cooperatives, or farmers' organizations more broadly, with failure.

Farmer organization is currently strongly promoted as a tool for improving the sustainability of the oil palm smallholder production systems. However, it is doubtful whether an organization of farmers by itself can lead to improved conditions for sustainable smallholder oil palm cultivation. The objective of this dissertation is to provide a better understanding of the dynamics within the Indonesian smallholder oil palm sector and thereby contribute to the debate about the role of smallholders in sustainable production.

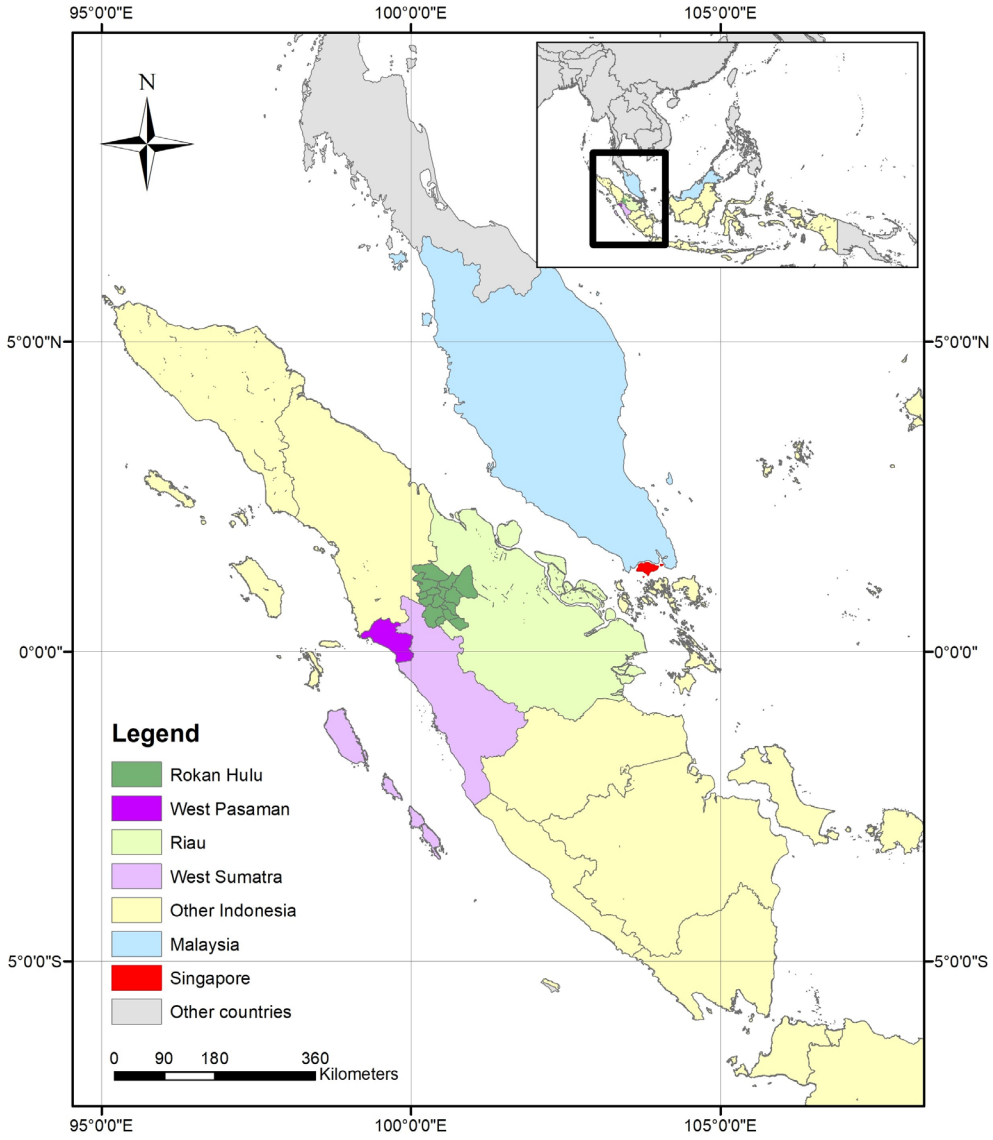

Figure 1.2 Research area