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Environmental Governance Meets Reality: A Micro-Scale Perspective on Sustainability Certification Schemes for Oil Palm Smallholders in Jambi, Sumatra

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ABSTRACT

Multi-stakeholder sustainability certification schemes have become a favorite instrument for applying good governance, though studies indicate their inefficiency at the producer level. In this study, we used a mixed-method approach to first, map the institutional context of independent oil-palm smallholders in rural Sumatra while, second, reflecting upon the impact of the Smallholder Standard proposed by the Roundtable on Sustainable Palm Oil on smallholder management practices. We hold that non-recognition of micro-scale perspectives within governance processes may partially explain noncompliance with certification principles among smallholders. The Smallholder Standard appears unable to mitigate challenges important for smallholders, who in turn cannot properly comply with it, due to problems including weather instability and high management costs. We suggest that certification schemes need to work on some overlooked but essential preconditions of good governance, namely gaining micro-level visibility and acceptance.

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Farmer group; governance; independent smallholders; power mapping; smallholder certification; social network analysis; Southeast Asia

Introduction

The instrument of sustainability certification schemes is considered as good governance practice that can globally solve problems such as resource exploitation and human-right abuses (Vatn 2015; Arias et al. 2013; Hatanaka, Bain, and Busch 2005). In this context, sustainability is generally defined via a set of principles and criteria that are revised and agreed upon in frequent multi-stakeholder meetings (Silva-Castañeda 2012). The Forest Stewardship Council (FSC), established in 1993 and the Roundtable on Sustainable Palm Oil (RSPO), established in 2004, are only two examples of such schemes, the rising number of which indicates their increasing popularity as a policy instrument (Tayleur et al. 2017; Ruyschaert and Salles 2014; Maertens and Swinnen 2009; Rametsteiner and Simula 2003).

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However, some studies claim that governance processes are likely to face problems when focusing solely on the producer level. Hatanaka, Bain, and Busch (2005), for example, argue that certification schemes are a mechanism to “shift the burden of the system’s costs to other stakeholders and to producers in particular,” proposing that stakeholders who have little influence in the standard-setting process will likely lose access to markets if they do not comply with sustainability standards. Meanwhile, Gatti et al. (2018) have shown that, between 2001 and 2016, certified oil-palm concessions led to more tree removals than concessions that were not certified in Indonesia, Malaysia, and Papua New Guinea. Further, Tayleur et al. (2018) found that, although certified areas where biodiversity levels are high can be identified, areas that suffer most from poverty are usually not reached by certification schemes. This challenges the understanding of certification schemes as automatically improving not only environmental but also social problems. Rather, such results seem to indicate a kind of misgovernance that is embedded in existing certification schemes and requires further investigation.

Initially, multi-stakeholder certificates, such as the early Fair Trade movement, were established to improve smallholder livelihoods by giving them access to new markets and implementing direct trade relationships for providing benefits such as price premiums (Schleifer 2016; Hauff and Claus 2012). New certification schemes, such as FSC or RSPO, were established to transform the whole sector towards sustainability, rather than focusing on the different needs of different producers and their access to resources (Schleifer 2016). Consequently, smallholders, who are still regarded as the world’s poorest farmers, have lost their prominent role within such certification schemes. Some studies have indicated difficulties for smallholders to properly access certification schemes (Saadun et al. 2018; Azhar et al. 2017; Azhar et al. 2015; Brandi et al. 2015). One possible factor here is that they have rarely been invited to take part in decision-making regarding governance processes (Gillespie 2012), meaning they are not considered essential stakeholders. Other proposed reasons are remoteness of smallholders from knowledge infrastructure and lack of technical and financial resources (Martin et al. 2015; Brandi et al. 2015; Arias et al. 2013).

Realizing that smallholders can hardly access certification schemes, prominent schemes such as FSC and RSPO have recently started special smallholder programs to weaken access barriers. A commonly adopted solution consists in lowering the standards and implementing group certification for smallholders, intended to decrease transaction costs and increase smallholder bargaining power in horizontal supply chains (Brandi et al. 2015; Auer 2012). Although this might prove helpful to an extent, questions remain regarding whether smallholders can actually benefit from multi-stakeholder approaches initially targeting whole sectors (Brandi et al. 2015; Hidayat, Glasbergen, and Offermans 2015; Clavel 2014; Food and Agricultural Organization (FAO) 2012). For instance, interviewing 194 smallholders within an RSPO pilot-project area, Brandi et al. (2015) found that 74% of them had never even heard about RSPO certification.

Our perspective here is in line with Cornell et al. (2013), who propose that good governance cannot be achieved while ignoring important stakeholders in the process. Although current top-down approaches such as RSPO and FSC have been trying to improve smallholder certification, they appear to lack understanding of smallholder management practices and how knowledge is created and transferred among

smallholders (Offermans and Glasbergen 2015; Moreno-Peñaranda et al. 2015; McNie 2007). Stakeholders steering environmental governance processes need to be aware of constraints on smallholder interaction, namely formal and informal rules they perceive as important and which shape their institutional background (North 1990). Along with transparency at the steering level, good governance requires awareness and acceptance of given environmental governance processes on the producer level (Okereke and Stacewicz 2018; Vatn 2015).

To increase knowledge in this field, we applied a mixed-method approach, using a.o. the novel Net-Map tool, which has not been applied yet to investigate oil-palm smallholders' institutional backgrounds towards sustainable certification schemes. The Net-Map tool was developed by Schiffer (2007) to respond to criticism of common governance analysis tools. It combines social network analysis, to identify actors and their interaction within a social network (Lauber, Decker, and Knuth 2008; Bodin, Crona, and Ernstson 2006), and power mapping, to investigate how much influence one actor has on decision-making processes (Schiffer and Waale 2008). This combination allows not just mapping formal hierarchies but allows identifying networks that "tend to be located outside the existing hierarchies" (Schiffer and Waale 2008, 1). Thus, this method allows for enhancing knowledge on smallholder institutional backgrounds regarding their management practices. With this study, we seek to address criticism from Offermans and Glasbergen (2015) that research on certification schemes has rarely gone beyond measuring the intensity of different stakeholder interactions. Hence, we aim at identifying challenges that prevent smallholders from accessing certification schemes rather than revealing the reasons why such challenges occur, to begin with (Martin et al. 2015; Brandi et al. 2015).

This paper, first, gives a brief overview on the topic of oil palm certification schemes in Indonesia, secondly, introduces the case study area and design. The results and the discussion will be presented along with three research questions: First, which stakeholders are perceived as influential within the institutional context of oil-palm smallholders? Second, what makes stakeholders important to independent oil-palm smallholders? Third, how does RSPO affect independent smallholders' institutional context? This last question helps us to understand whether the RSPO can potentially be a meaningful tool in the environmental governance smallholder context. Finally, broadening scope, we reflect upon the knowledge gained regarding governance processes related to certification schemes and provide recommendations for improving them in the future.

Research Context: Sustainable Certification Schemes for Independent Oil-Palm Smallholders in Indonesia

The palm-oil industry has become one of the most widely discussed sectors worldwide, due to its unique environmentally threatening characteristics combined with growing demand. Together, Malaysia and Indonesia are responsible for 85% of world palm-oil production (29% and 56%, respectively), putting high pressure on the natural capital of these countries (U. S. Department of Agriculture (USDA) 2018; Levin 2012). Indonesia's production has been continuously rising, from 33,000,000 metric tons in

2014 to 41,500,000 metric tons in 2018 (U. S. Department of Agriculture (USDA) 2018).

Smallholders play a significant role in Indonesia's palm-oil industry (Bissonnette 2016), operating 42% of its oil-palm plantations, which is estimated to rise to 60% by 2030 (Suhada, Bagjia, and Saleh 2018). These numbers include scheme smallholders, which are contractually bound to and regulated by a large-scale oil-palm producer or mill, and independent smallholders, who work independently and, therefore, need to organize their local infrastructure themselves. Thus, independent smallholders have to organize themselves in farmer groups to collect and sell their fresh fruit bunches (FFB) to the mill offering the best price or sell their FFB to a middleman that takes over this job (Azhar et al. 2017; Brandi et al. 2015; Lee, Ghazoul, et al. 2014).

The number of independent oil-palm smallholders has grown steadily (Kubitza et al. 2018; Gatto et al. 2017; Euler et al. 2016; Gatto, Wollni, and Qaim 2014), prompting criticism of the social and environmental impacts of their plantations. Although oil-palm production was initially promoted as a development program by the Indonesian government, it has become very cost-intensive. Many smallholders now need to hire employees (Kubitza et al. 2018), making the benefits of independent smallholding quite heterogeneous within communities (Krishna et al. 2017; Rasch and Köhne 2016; Lee, Ghazoul, et al. 2014). Criticism of oil-palm smallholders has also arisen in connection with the sustainability debate, linking them to deforestation, land grabbing and land clearing using fire, which is seen as problematic for releasing massive amounts of CO₂ emissions (Nesadurai 2018; Dauvergne 2018; Bissonnette 2016; Daemeter 2015). Contrarily, Lee, Abood, et al. (2014) indicate that in comparison to large-scale plantations, until now, small-scale plantations' environmental impacts to be rather low, whereas Azhar et al. (2011, 2014) found small-scale plantation to be less harmful regarding biodiversity loss.

Established in 2004 by nonprofit and private organizations in Europe, the RSPO (2018) seeks to establish sustainable palm oil as a norm and has managed to certify nearly one-fifth of world palm-oil production, which makes it the biggest voluntary certification scheme for sustainable palm-oil and therefore interesting for further investigation (Dauvergne 2018). Initially only targeting large-scale production units, smallholders were not at first treated as essential stakeholders within the process (Brandi et al. 2015). Although RSPO published its "Guidance for Independent Smallholders under Group Certification" in 2010, it took until 2015 for the 12th General Assembly of the RSPO to establish a Smallholder Strategy, "acknowledge[ing] the significance of smallholders and the need for a change in current practices and approaches to improve their inclusion into the RSPO system" (2017, 2). This strategy is primarily aimed at improving smallholder management practices, increasing the number of smallholders in the RSPO system and increasing smallholder support through (non-)financial incentives (RSPO 2017).

Besides the RSPO, the Indonesian government established its own mandatory certification scheme, the Indonesian Sustainable Palm Oil certificate (ISPO) in March 2011. According to the government, the ISPO shall "ensure the adherence of palm oil plantations to government laws and regulations" (Suharto et al. 2015, 3), saying if oil palm smallholders comply with the national law, they can label their FFB as sustainable.

While until March 2015 every plantation owner was obligated to be certified by ISPO, it is no longer mandatory for smallholders neither for companies that produce biofuel for the local market (Suharto et al. 2015). According to Suhada, Bagjia, and Saleh (2018), until 2017 less than 1% of Indonesian independent smallholders were certified by RPSO or ISPO showing a massive lack in governing sustainable oil palm management in Indonesia.

Case Study Design and Area

In order to investigate issues of transparency, awareness, and perceptions on the micro-level, the present paper analyses the interpretations of individuals, seeking to capture how people behave within different institutional settings. To enhance reliability when researching individual decision-making processes, fieldwork shall be conducted in environments where groups of interest act, with a single case study being seen as the best means for achieving this without any of the restrictions that a comparative or quantitative study would require (Rasch and Köhne 2016; Flick 2016; Lund 2014)

The case study for this paper was conducted on Indonesia's island of Sumatra, in Jambi, a province that has experienced one of the country's most rapid land-use shifts over the last 50 years (Collaborative Research Centre [CRC 990] 2017) (Figure 1). From 1970 until today, primary forests have nearly vanished in Jambi, due to rubber and more recently oil-palm plantations (Laumonier et al. 2010; Feintrenie and Levang 2009).

The case study village of Merlung was selected because there is a farmer group in the RSPO certification process. Second, the village allowed studying different subgroups of

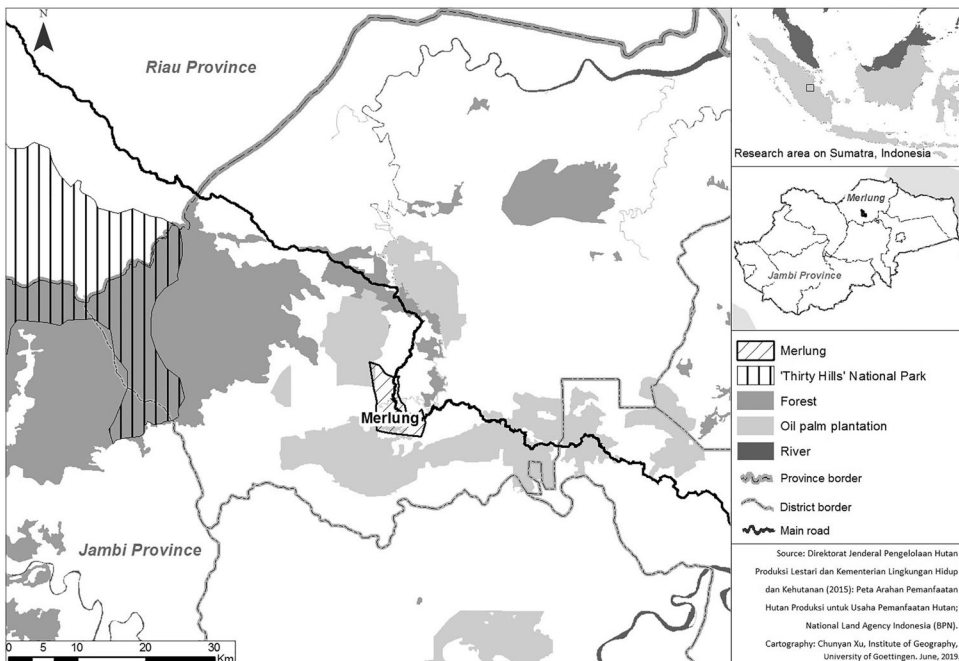


Figure 1. Case study area.

independent smallholders and, therefore, different management practices. This was seen as crucial to capture the heterogeneity of independent smallholding: some were part of a farmer group, some were part of the RSPO certification process,¹ and others were neither part of a group nor of a certification process.

Data collection took place from July to September 2016. Interviews were carried out in the local language (Bahasa Indonesia) with an assistant from Bogor University. A mixed-method approach was applied by, first, conducting expert interviews with scientists, village authorities and a local NGO to gain in-depth knowledge about the history of the village, current problems and management of the farmer group. After this step, snowball technique was used to identify 25 smallholders with whom we carried out semi-structured interviews. Key questions addressed the history and motivation to grow oil palm, including questions about their experience and from whom they have learned to manage oil palm. To enhance knowledge about smallholders' perceived challenges, interview partners were asked to name the most urgent oil-palm management challenges as well as coping strategies. Knowledge on certification schemes for sustainable oil palm, opinion on these schemes and individual understandings of the concept of certification were further fields of interest. If smallholders had joined a certification scheme, additional questions regarding the process were asked.

To build on gained knowledge and relationships, we approached the 25 smallholders twice to conduct the Net-Map tool, 17 of them agreed. Additionally, aiming at triangulating information, two group discussions with smallholders, four additional expert interviews with stakeholders from NGOs and certification-scheme organizations as well as an extensive literature review were conducted. All interviews were recorded, translated and then double-checked with the research assistant. Qualitative content analysis was applied using the software MaxQDA.

The Net-Map tool was conducted in four steps, following instructions by Schiffer and Hauck (2010) and Schiffer and Waale (2008). First, smallholders were asked to name all stakeholders they perceived as being important for their oil-palm business, recorded on paper in front of each participant (Figure 2). Second, as we wanted to know whether smallholders interact with certification stakeholders (e.g. the government, the local NGO, RSPO, ISPO, and farmer group) and perceive them as important, we asked smallholders to identify three different flows as follows (Schiffer and Waale 2008). First, they were asked to identify flows of support and information provided, aiming at mapping streams of knowledge transfer and, thus, whether certification stakeholders do play a role. Second, we asked about financial flows to identify whether smallholders receive incentives to adopt certification schemes and, third, about formal lines of command to see, whether they see RSPO or ISPO as an authority. These three categories were then drawn in different colors on their paper, connecting named stakeholders with each other. As a third step of the Net-Map tool, participants were asked to rank these stakeholders by building stone towers to indicate each stakeholder's influence on smallholders decision-making. After participants were satisfied with the picture of stakeholders that they had created, a qualitative discussion followed to better understand given answers and choices. The results of this process are summarized in Figure 3, achieved by using Gephi software. The sizes of the arrows and circles therein illustrate how many stones smallholders chose

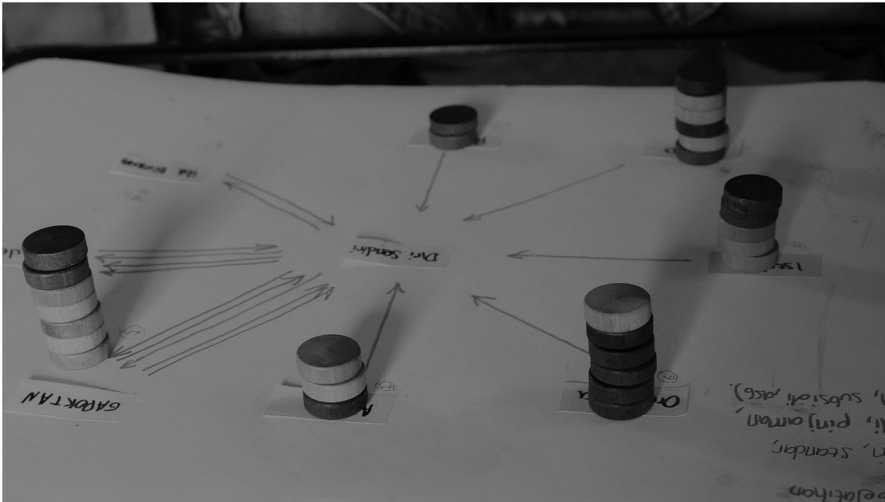


Figure 2. Applied Net-Map tool during fieldwork.

for named stakeholders and how often links between stakeholders and smallholders were drawn. The length of each arrow and the position of stakeholders in [Figure 3](#) have no significance. In order to gain transparency, flows related to information, commands and money are displayed separately in the figure.

Results and Discussion

Beside expert interviews and the literature review, our findings were drawn from 25 independent smallholders. Of these 25 smallholders, 14 were part of the local farmer group, 5 of whom reported to be part of the RSPO certification process. Because only one smallholder had heard about the ISPO certificate, we mainly focused on the RSPO in our analysis. Results and discussion will be guided along with our research questions.

Which Stakeholders Are Perceived as Important Within the Institutional Context of Oil-Palm Smallholders?

Answering the first question, we mostly focused on results drawn from the Net-Map method. Of special interest were, which stakeholders are perceived as important regarding smallholders oil-palm business and how much influence do these stakeholders have. With regard to smallholders' decision-making processes, the stakeholders whom interview partners perceived to have the most influence actually have very little influence in the overall oil-palm business. For instance, stakeholders such as oil-palm mills—which have the power to accept or dismiss FFB—retailers and the government, were rated with low influence scores by smallholders interviewed. As shown in [Figure 3](#), stakeholders perceived as essential by smallholders are, first, family members, such as wives, brothers or parents; second, people belonging to their community, such as neighbors and friends; and, third, people they depend on to manage their oil-palm plantations, such as their farmer group or middlemen to sell their FFB, employees for the harvest

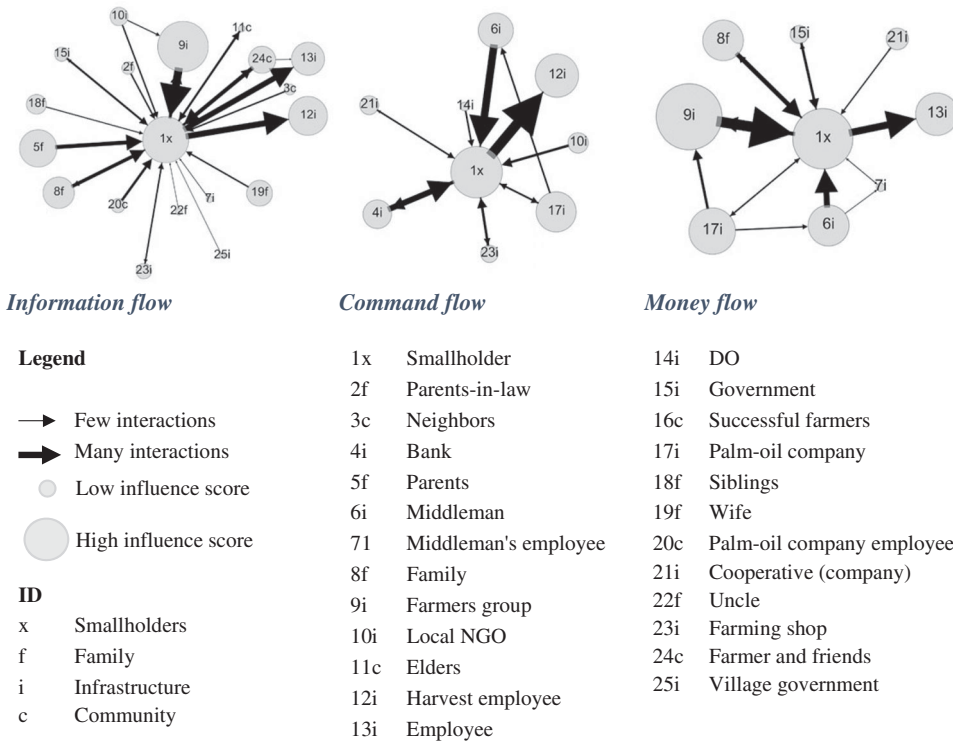


Figure 3. Results from the Net-Map analysis of independent oil-palm smallholders in Jambi, Indonesia.

process and the local farming shop to obtain fertilizer. These results suggest that smallholders have not yet integrated the vertical oil-palm supply chain into their managerial decisions and still tend to see only players on the horizontal level as being important for their management practices.

New stakeholders can become institutionalized over time, which means their influence can change, as it is a dynamic process. In the case considered here, a farmer group was established in 2013 by a local NGO. Although the farmer group was established recently, it has become an essential stakeholder for independent smallholders (see Figure 3), whose reasons for joining the group include, for instance, a collective harvest system and provision of subsidized fertilizer. Interview partners also state that the group is organized democratically, as group members elect a group leader and decisions are made collectively, which generates trust among interviewed smallholders that have joined the group. Furthermore, interview partners stated that, as a group, they can increase their bargaining power and perhaps obtain loans from the group to buy fertilizer. This acknowledgment of the importance of the farmer group among smallholders seems to indicate that smallholders can accept new stakeholders. It also suggests that smallholders not only integrate stakeholders to be individuals close to them but also potentially organizations, which are more abstract entities. This is important as the RPSO can also be considered an abstract entity.

Furthermore, smallholders do not link certification schemes to any particular stakeholder, as they have not once mentioned RSPO. Although farmer-group membership is

a precondition for independent smallholders to enter the certification process, no smallholder mentioned this as a reason for entering the group during semi-structured interviews. In fact, some smallholders who were in the certification process did not even seem to be aware of it. The local NGO that initiated the farmer group to gain more independence for smallholders was perceived by some as helpful, because of training provided, but smallholders did not link this training to the certification process itself. Focusing on smallholders' interaction within their networks and linking this knowledge with information gained during semi-structured interviews allows us to investigate the following question:

What Makes Stakeholders Important to Independent Oil-Palm Smallholders?

Stakeholders' perceived important to smallholders rises with the number of contact points they share (Figure 3). Especially, if stakeholders are deemed necessary actors in matters of information, commands, and finance. For instance, family members not only provide support through advice but are also usually a key incentive for buying a plantation so that, as a household, good school education for the children becomes affordable. Moreover, since some smallholders may have no access to bank loans, they often borrow money from family members to buy a plantation or fertilizer. Meanwhile, drawn information flows highlight the importance of employees to smallholders, giving employees instructions about what to do on the plantation and even providing them loans. In fact, some independent smallholders never work on their own plantations and, therefore, would not be able to manage them without employees.

Interestingly, the remoteness of stakeholders does not seem to be a limiting factor on accessing information and considering someone as influential. Most interviewed smallholders were migrants, still strongly connected to relatives living in other parts of Indonesia. Especially, interviewed smallholders considered family members and friends that were oil-palm smallholders as crucial. Hence, remoteness itself does not necessarily lead to disconnection, as suggested by Martin et al. (2015). Rather, the present study supports Boschma and Frenken (2010) argument that whether one perceives information as important or not depends on the stakeholder providing it, and thus, whether this stakeholder belongs to the institutional context. These findings might indicate that merely receiving information, e.g. regarding certification requirements, is generally not enough for smallholders to become involved in sustainable management practice. The information needs to be disseminated through the right stakeholder and reputation, as well as trustworthiness, seems crucial. These results are in line with claims that implementing policies generally do not work well when using purely top-down approaches (Köhne 2014; Moran 2010).

While trust is reported to be a precondition for building shareholder-stakeholder relationships, there are exceptions. Independent smallholders are embedded in complex relationship networks, which need investigation in order to understand smallholders' actions. For instance, many independent smallholders still rely on middlemen, even though they often mentioned not really trusting them and would rather be in the local farmer group. This implies that, just because certain stakeholders are perceived as important to smallholders, it does not mean they are considered highly trusted people.

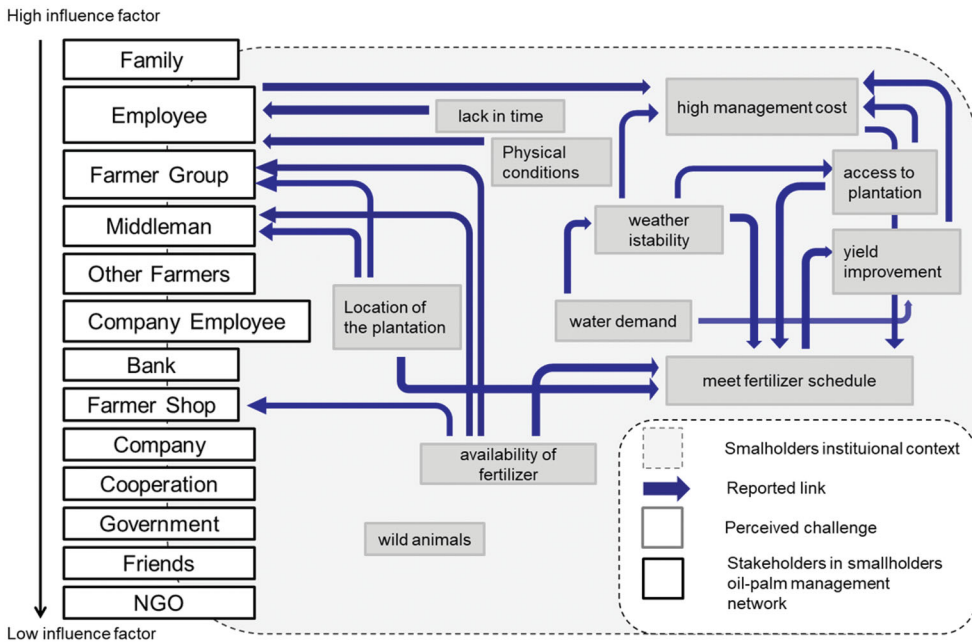


Figure 4. The institutional context of independent oil-palm smallholders.

Reasons why smallholders were not in the farmer group mainly revolved around it involving too many responsibilities towards other stakeholders, or the distant location of their own plantations, making it too expensive for the farmer group to collect their FFB. Furthermore, some smallholders had not even known of the group’s existence, although they did not live far away from its members. Joining a farmer group is a requirement for smallholders to be certified, but these two examples demonstrate how easily they can become excluded from information flows among smallholders, miss out on training to enhance sustainable management practices or be unaware of certification processes around them. These findings further demonstrate the importance of considering external forces before judging the adaptive capacity of smallholders on the micro-scale. To integrate these external forces in our analysis, we have investigated the connection between stakeholders that are perceived as important and challenges smallholders have faced recently.

As presented in Figure 4, stakeholders with a high influence score, such as employees, family or the local farmer group, can help to mitigate some of the challenges smallholders face. For instance, smallholders lack time to manage their plantations, especially if they are located far away from their homes and are difficult to access. Such challenges are generally mitigated through employees. Meanwhile, the farmer group is an essential stakeholder for collective harvesting, accessing subsidized fertilizer, and facilitating knowledge exchange among smallholders. Such challenges and essential stakeholders are dynamically linked to each other within the smallholders’ institutional context. Consequently, although hiring employees can mitigate some challenges for smallholders, it also increases management costs. Thus, mitigating one challenge may raise another, demonstrating the complexity of the smallholders’ management system, as illustrated in Figure 4.

Environmental Governance Meets Reality: How Does the RSPO Affect Independent Smallholders' Institutional Context?

Finally, results of the net-mapping tool and semi-structured interviews need to be reflected against the background of environmental governance and therefore whether and how smallholders formalized and informalized rules are affected by the RSPO. Answering this question, we would like to discuss results gained during experts interviews, group discussion, and semi-structured interviews. These results demonstrate the complexity of smallholders management context in two ways. First, the complexity in regard to human relations and knowledge transfer among smallholders and stakeholders linked to the RSPO scheme and secondly, the complexity based on external circumstances smallholder face in their everyday life, which prevent them from obeying rules as demanded by the RSPO certificate.

Based on the above analysis, we assume that one reason why smallholders have not integrated RSPO as an influential stakeholder within their oil-palm management is that they do not seem capable of mitigating any of their key challenges displayed in [Figure 4](#). Although RSPO (2017) aims towards establishing financial and non-financial incentives for smallholders that might mitigate such challenges, the interviewed smallholders already in the certification process seemed not yet aware of any such incentives.

Meanwhile, interviewed smallholders did not seem to trust certification schemes, which is supposed to be a precondition for good governance (Vatn 2015). One smallholder even accused the certification process of being unfair, because all smallholders had to wait for a year to get their certificates because one smallholder selected by the audit team failed. This is a finding in contrast to Rametsteiner and Simula (2003) claim that independent audits are an incentive for improving management practices. Another smallholder reported that members of an already-certified farmer group did not receive a price premium promised for their FFB, which led to disappointment and mistrust among the members.

Moreover, smallholders need to cope with uncertainty, which may then become a driver of deforestation. Especially when buying their second plantation, some smallholders reported preferring to buy forest or a rubber plantation, clearing the land, buying good quality seeds² and planting it on their own, rather than buying a plantation already planted with oil palm and, therefore, facing uncertainty about seed quality. They are not wanting to take this long-term risk may thus push smallholders towards participating in deforestation and not investing in sustainable management practice as requested by RSPO. Hence, ignoring smallholders institutional context may be one explanation, why independent smallholders do not adapt their management practice towards RSPO requirements.

As part of their overall livelihood strategies, Euler et al. (2016) found that independent smallholders are more likely to expand than replace their oil-palm business, which our study partly confirms. Interviewed smallholders own between 1 ha and 20 ha oil-palm plantation, mostly spread among different locations. On the one hand, many smallholders wanted to buy another plantation. On the other hand, smallholders also wanted to improve their current situation, which can mean selling plantations that have uncertain seed quality or are far away or difficult to access. Moreover, many smallholders are trying to mitigate the uncertainty involved in new plantations and diversify their

income strategies by investing in other ideas, including other crops, guest farms or fish farms, rather than invest their money to cope with RSPO requirements. Some have even opened shops.

Smallholders need to cope with pressing short-term challenges before dealing with long-term improvement on their plantations. As reported by smallholders and researchers (Purnomo et al. 2018; Hartmann et al. 2018), in 2015 large parts of Sumatra suffered from drought, followed by large-scale forest fires. According to smallholders, the smoke of these fires reduced palm fertility, leading to harvest losses of about 50–70%. Thus, smallholders earned less money, whereas fixed costs including bank loans, employee wages, and fertilizers remained high. Since fertilizer prices and wages have increased over the years, it is clear why management costs are perceived as the principal challenge among smallholders (Figure 4).

Interestingly, concerning the future, independent smallholders are more worried about external forces associated with the global trade market than about natural forces, such as another drought. Within our group discussion, nearly all smallholders agreed that a rising number of standards and requirements, as well as the decreasing price of FFB, are considered their main future challenges. This finding is somewhat surprising, as these external forces were not mentioned as priorities within current challenges (Figure 4). Smallholders reported fearing being unable to sell their FFB to the mill, citing this as their key motivation to join the RSPO, whose certificate they hope will lead to recognition of their palm oil on the world market. Hence, certification schemes seem to be considered as a form of problem-solving strategy to reduce uncertainties about the future among independent smallholders, which aligns with the call of Zilberman, Zhao, and Heiman (2012) for proactive adaptation. However, smallholders do indeed not perceive certification schemes as a more sustainable approach for mitigating resource exploitation and addressing social-rights problems, as aimed at by stakeholders who steer certification processes. Thus, it seems, smallholders support RSPO because of external threats that have nothing to do with the scheme's approach towards making sustainable oil palm the norm.

Besides these points, our results suggest that existing certification schemes can generate some knowledge regarding environmental governance. Although independent smallholders did not directly link certification with standards they shall meet, they perceived training from the NGO initiated in connection with the certification process as helpful. The results also reveal that most independent smallholders interviewed, do care about environmental sustainability and want to improve their management strategies. These results reflect those of Saadun et al. (2018), who have investigated smallholders in Malaysia, stating that the socio-ecological background needs to be considered when designing a certification scheme.

Conclusions and Recommendations

Our case study suggests that using multi-stakeholder certification in order to reach sustainable transformation is actually a more difficult undertaking than its advocates have anticipated. It has neither generated the expected levels of success envisioned by

theory nor those assumed based upon the immense number of certificates already issued.

Using a mixed-method approach with independent oil-palm smallholders in Jambi, Sumatra, this paper has identified key shortcomings that may explain the currently poor outcomes associated with the RSPO there. Our results show that smallholders targeted by the Smallholder Standard neither perceive themselves as part of the vertical palm-oil supply chain nor link RSPO to any particular stakeholders whom they may consider to be important. Meanwhile, they suffer from high uncertainty regarding price development and increasing standards within the world market. Consequently, the motivation of independent smallholders to participate in certification schemes seems a proactive risk-reduction approach rather than a reactive one that could help mitigate current challenges smallholders face or improve sustainability.

Our findings suggest that, at the bottom, RSPO has failed to meet good governance conditions. Smallholders do not perceive traceability when it comes to their business and are not accepted as essential stakeholders in the governance process. Both findings, however, pinpoint necessary preconditions governance processes must address to transform the oil-palm business towards sustainability.

For RSPO to become properly recognized as an essential stakeholder with respect to smallholders' own business interests, it needs to remedy the following shortcomings. First, stakeholders engaged in many forms of interaction in different areas of smallholders' lives have greater influence on their decision making than those, possibly more powerful stakeholders, involved in fewer interactions. Smallholders perceive stakeholders from whom they can obtain information on how to deal with problems concerning their oil-palm businesses to be most important. Second, as oil-palm management becomes increasingly cost-intensive, smallholders need access to funding, especially to bridge crisis periods. In order to increase the number of certified smallholders, RSPO needs to understand the impact of such challenges on certification uptake. Third, impacts from shocks such as floods or droughts require a dynamic concept rather than a static catalog of principles and criteria. Fourth, knowledge about sustainable oil-palm management does exist among smallholders, but it is not always clear where it is coming from. Nevertheless, the founding of a farmer group and knowledge gained from training indicated that institutions could be changed through participation and collective activities. Private and public organizations should thus work together to reach good governance, reduce transaction costs and enhance resource allocation.

We found the Net-Map method to be a useful tool to capture governance processes on the local scale and well-applicable during fieldwork. It allows investigating on formal and informal rules smallholders follow and reasons for doing so. However, during the case study, a few issues arose that require further research. It would be helpful to know whether spillover effects exist for other smallholders who are not in the process of being certified. Additionally, more detailed analysis could assess essential flows of information and commands between smallholders and other stakeholders, especially the role of the government and the ISPO certification schemes and extension services. Such work may help to improve transparency and evaluate independent smallholders' awareness of how they can be better integrated into the certification process.

Notes

1. A subgroup of the farmer group finished the RSPO certification process in 2015, but the official decision regarding whether certification would be granted was postponed for a year, due to non-compliance of one of the audited plantations.
2. Experts mentioned that smallholders buying and planting uncertified seeds that bears less or no FFB is a big problem. Especially, because it takes up to 4 years until a palm can be harvested, there is much investment needed before smallholders can earn money with their oil-palm plantations.

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