

# Evidence-based options for advancing social equity in Indonesian palm oil

## Implications for research, policy and advocacy

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### Key messages

- **Social equity** is crucial to sustainable development: equity means ensuring that everyone has the resources they need to secure their well-being now and in the future.
- Oil palm is a profitable crop, but the costs and benefits of its expansion are distributed unevenly according to gender, age, class and community of origin.
- Different social dynamics pertain to large-scale plantations employing wage workers, tied smallholders attached to plantations and independent smallholders planting oil palm on their own land.
- Policy should favor independent smallholders with up to 6 ha of land to optimize distributive outcomes for women and men, young and old, while giving priority to customary landholders.

### Key findings

#### Large-scale oil palm plantations:

- The transfer of land from customary landholders to plantations undermines customary institutions and benefits elite men who cut deals to secure good compensation.
- The rights of women and young people as customary landholders are abrogated without consultation, as are the rights of non-elite men (e.g. landless men who rely on rubber tapping).
- Land needs of future generations are not factored into plantation plans, shutting off diverse and flexible farm options as plantations steadily expand to saturate entire plantation zones.
- Although oil palm companies promise jobs, the net number of jobs is small (one per 3–10 ha), and the quality is declining as employers rely more on casual and contract workers.
- Plantations prefer to hire male migrant workers for better-paid, stable jobs to the exclusion of local men; they confine local women to dangerous, poorly paid, casual jobs.

#### Tied oil palm smallholders:

- Tied smallholder schemes bring prosperity to some households, especially those with additional land or capital to expand beyond the limited 2 ha allocation.
- Households dependent on 2 ha are vulnerable to distress land sales and impoverishment, as their plots generate insufficient funds to pay for farm inputs, living expenses and emergencies.
- Smallholder schemes disadvantage women by registering plots to men as assumed 'head of household' and by excluding women from membership of co-ops where key decisions are made.
- Although excluded from formal ownership, women often take joint responsibility for the management of smallholdings and participate in maintenance work.

## Independent oil palm smallholders:

- Independent oil palm cultivation is a lucrative land use, but capital is needed to pay for quality inputs; poor and landless farmers are excluded, unless pro-poor support schemes are in place.
- Plantation expansion reduces the land area available for independent smallholder oil palm.
- Where infrastructure permits, smallholders may add oil palm to mixed and flexible farming systems, including rice, rubber and other crops that increase food security and sustainability.
- If oil palm is the only crop, a minimum of 6 ha is needed to ensure productivity and provide an investment fund for education and/or land purchase to meet the needs of the next generation.
- Women smallholders retain the (generally equal) land rights they have under traditional farming systems, make farming decisions jointly with their husbands and share equally in benefits.
- Prosperous smallholders employ skilled young men as harvesters, but poor women and older men lose income from rubber tapping when oil palm replaces rubber.
- Prosperity among smallholders generates new off-farm opportunities for women and men, rich and poor, to supply goods and services such as transport, cooked food, dry goods, house building and repair, motorbike sales, raising pigs, and peddling housewares or fresh vegetables.

## Introduction

Since 2000, palm oil has expanded rapidly across Indonesia, transforming landscapes, livelihoods and rural social relations on a massive scale. About 12 Mha of land has been planted with oil palm, and government and industry proponents envisage possible expansion to 20–30 Mha. The industry takes two main forms. About 60% of the land area is under plantations (from 25 to 40,000 ha) employing wage workers, while 40% is under smallholdings, some 'tied' to plantations (typically in 2 ha plots) and some independent. It is the plantation form that is expanding most rapidly, especially in the frontier provinces of Kalimantan, Sulawesi and Papua, where proponents argue that plantations reduce rural poverty and create jobs. Scholars and civil society observers are more cautious, noting that the social and livelihood impacts of oil palm are diverse: plantations have very different social impacts from smallholdings, and there are further differences according to gender, generation, class (access to land and capital) and community origins. Some social groups prosper with the arrival of oil palm, while others suffer negative effects including the undermining of customary institutions, loss of livelihoods, degraded ecosystems, disempowerment and impoverishment (Cramb and Curry 2012; Cramb and McCarthy 2016). Gender-based discrimination and negative effects on women have been reported (Julia and White 2012; Elmhirst et al. 2017).

This Infobrief summarizes findings fully reported in (Li 2015). It draws from primary research and published sources to outline the main impacts of oil palm for different social groups. The primary research (2010–2012) covered a spectrum of experience in Meliau, an oil-palm-saturated subdistrict in Sanggau, West Kalimantan. The focus was on two plantations, one state owned and one privately owned; 'enclaved' Malay and Dayak hamlets entirely surrounded by plantations with little residual land; a tied smallholding scheme involving both locals and transmigrants; independent oil palm smallholdings developed by local Malay and Dayak farmers,

sometimes alongside mixed farms; and surrounding Dayak communities without access to oil palm, where livelihoods were based on swidden rice, rubber and forest products (e.g. fish, game, ferns, fruit).

**Methodology:** Primary data collection was mainly qualitative. Teams of 2–3 student researchers from the University of Toronto and Gadjah Mada Anthropology Departments spent 2–3 months living in 20 different hamlets and labor barracks spread through the two plantations and smallholding areas. They observed daily activities and household dynamics, and kept detailed field notes. In addition, they used rapid appraisal methods to collect select quantitative data on land ownership, farm composition (rice, rubber, oil palm), employment and educational attainment. Plantation officials supplied quantitative data on the labor force. The two senior researchers, Prof Tania Li from Toronto and Dr Pujo Semedi from Gadjah Mada, supervised the students, and conducted interviews with hamlet heads, plantation officials and workers, traders, co-op leaders, local officials and other key informants. Primary research findings were contextualized through an extensive review of the literature on the social impacts of oil palm across Indonesia.

## Large-scale plantations: Findings

Study of the two plantations revealed an important change over time. In 1980, the state plantation (5640 ha) recruited workers directly from Java, favoring young married couples. Both the husband and wife were employed with full salaries, pensions and benefits. For both women and men, these were good jobs, and most workers stayed until retirement. In 2010, there were 883 formal full-time workers on the state plantation (one worker per 6.4 ha, 34% of them women). Following a change in the Labour Law (2003), the plantation stopped hiring permanent workers and began hiring young migrant men on 2-year contracts as harvesters, making no provision for their families. It began to hire local

Dayak and Malay women for maintenance work, on a casual basis without benefits.

The private plantation, which began operating its core plantation (3834 ha) in 1990, adopted a similar pattern. In 2014, it had 358 permanent workers, one per 11 ha. These included 119 harvesters, mostly young male migrants who arrived without their families to do harvesting work; 66 field supervisors; and only 35 women maintenance workers. Most of the maintenance work was done by local landless women on a casual basis with no security, for very low pay. These women lived in enclaved hamlets entirely surrounded by the plantations. They had become landless because of the arrival of the plantation, which had taken over land they previously used for rubber and rice. They had no alternative to plantation work, although it was often dangerous, exposing them to chemical injuries and strain from carrying heavy loads. They were key breadwinners, as the plantation did not employ their husbands, who had to migrate out to find work elsewhere.

Local elite men who were able to retain land or obtain good plantation jobs benefitted most from the plantations. These were also the men who negotiated the release of land to the plantations, in a process that excluded the voices and interests of women, non-elite men and the young generation (Semedi and Bakker 2014). Excluded groups were radically disempowered. Close alliances between local elites, plantation managers and local government officials left the excluded groups without the means to lodge grievances or secure redress (Varkkey 2012; Li 2017a). Nor could they find alternative work: since migrant workers remitted most of their pay to their home districts, and local women workers were poorly paid, there was no thriving service sector (e.g. food stalls, house building). Instead of broad-based development, the trajectory in communities surrounded by plantations was towards impoverishment and severely limited livelihood options (Li 2017b).

*Similar problems* concerning plantation land acquisition and poor labor conditions have been reported in plantation zones in other parts of Kalimantan and Sumatra (Wakker 2005; Marti 2008; Sirait 2009; Colchester and Chao 2011 2013; Obidzinski et al. 2012; Sinaga 2013 ). A key difference between sites is the level of plantation saturation: in frontier areas where there is still ample land surrounding a plantation, the local population may benefit from plantation infrastructure that enables them to develop their own land for independent oil palm activities (Sheil et al. 2009; Rist et al. 2010; Potter 2012; Budidarsono et al. 2013). Plantations may offer good employment terms for migrant families, in order to recruit and hold much-needed workers. They may seek association with transmigration schemes in order to increase the local labor pool (Li 2016). Yet over time, as more plantations move in and migrants seek to purchase land for oil palm, land prices rise and the local population is squeezed for access (Li 2017b). Newly landless local men may seek plantation work, but employer preference

for migrants excludes them. Local women are hired, but in the lowest paid jobs with high risk (e.g. spraying pesticides, spreading chemical fertilizers) (Tenaganita and PAN 2002).

## Implications for research, policy and advocacy

### Research:

- Site-specific studies indicate there are serious problems with plantation labor conditions. A nation-wide, coordinated study is needed to investigate the actual quantity and quality of plantation jobs, attending to both plantation frontiers and to plantation-saturated areas.
- Data should be disaggregated by gender, age and worker place of origin, and should cover both core and casual workers.
- Livelihoods and incomes displaced by plantations (e.g. smallholder land uses, rubber tapping incomes) must be measured to fully assess the impact of plantations on specific social groups.
- Social and economic indicators in plantation-saturated subdistricts should be compared with subdistricts without plantations to test the industry argument that plantations reduce poverty and bring development.

### Policy:

- Government agencies need to increase monitoring of labor conditions on and around plantations, and ensure that plantation hiring promises are met.
- Government regulations must ensure that negotiations for plantation land acquisition adhere to principles of 'free, prior and informed consent' and that women have equal voice and choice as landholders and community members.
- Government spatial plans should limit plantation expansion and associated transmigration schemes to leave room for diverse and flexible farming systems and accommodate the land needs of future generations.

### Advocacy:

- Advocacy groups should strengthen capacities and support communities in negotiations with plantations, to ensure that all social groups (including women, young people, landless people) are fully consulted and presented with options that include 'no' to plantations.
- These groups should also support and strengthen plantation worker unions and organizations to represent casual workers and surrounding villagers in their ongoing relations with plantations.

## Tied oil palm smallholders: Findings

The state plantation in the study area did not have a smallholder scheme attached to it. After 'reform' in 1998, protest by surrounding villagers obliged the plantation to

develop 2 ha smallholdings. The oil palm was to be planted on the villagers' own land, and hence it excluded villagers who no longer had any land because of the extensive land area occupied by the plantation. Elite villagers with more land and more capacity to negotiate ended up with more of the smallholdings and prospered. As elite villagers replaced their remaining rubber trees with oil palm, poor villagers lost access to rubber tapping incomes.

The private plantation was associated from the beginning with a tied smallholder scheme of 14,000 ha, designed for local Malays and Dayaks who had released land to the company, and transmigrants from Java, Bali and Nusa Tenggara Timur. Locals resented the terms of land release, as they were obliged to give up 7.5 ha of land in return for a 2 ha smallholding, while bearing the same debt as transmigrant smallholders who had not released any land.

There were many irregularities in the process of land release and the allocation of smallholdings, which worked in favor of elite men. Women were not consulted about the release of their own inherited land; smallholdings were assigned to men as assumed household heads, and men automatically became members of the company-supported co-ops where key decisions were made. Despite their formal exclusion from the smallholding scheme, women were observed to participate actively in managing the smallholding, undertaking maintenance tasks, helping to haul fruit to the roadside for pickup and supervising the harvest. Many smallholders hired young men as harvesters, as they did not feel competent to carry out this skilled and strenuous task. Hence, there were new employment opportunities for young men, but not for women.

Over time, a marked class division emerged, separating smallholders who prospered from those who were barely able to hold on to their plots. Those who prospered were a) transmigrants who had arrived with capital they used to buy up extra plots, accumulating holdings of 6 ha or more; or b) local smallholders for whom the tied 2 ha oil palm smallholding was an addition to a diverse farm portfolio, which included rice, rubber or oil palm planted independently on their own land. Those who failed to prosper were transmigrants or locals who depended solely on their 2 ha smallholding, which yielded a monthly income insufficient to repay credit, buy farm inputs and purchase family food, and no prospect of saving to meet emergency expenses (e.g. medical bills). These marginal and struggling smallholders were highly vulnerable to land loss through distress sale, and they were unable to invest in education or land purchase to establish viable livelihoods for their children. Despite low yields on some plots (see the example given in Table 1), some tied smallholders achieved high yields of 24 tons of fresh fruit bunches per hectare per annum, and the average yield on the tied smallholdings was **equal to** that on the plantation core (14.5 tons).

**Table 1. Farm income and expenses for a low-yielding tied smallholder plot, 2 ha, February 2010.**

Farm income and expenses	Amount (Rp)
Harvest – 1087 kg fresh fruit bunches @ Rp 1301/kg	1,414,980
Charges & fees (transport, road repair, co-op staff, fertilizer, fines)	303,087
Credit repayment	550,000
Harvest labor @ Rp 100,000	100,000
Net balance = 33% of gross	461,893

*Similar findings* have been reported from other tied smallholder schemes that provide good incomes for some farmers but exclude or impoverish others. Irregularities in land release and allocation are widespread, as are problems with co-ops that are corrupt, undemocratic and subject to capture by local elites (McCarthy 2010; McCarthy et al. 2012; Colchester and Chao 2013). In the research area, smallholders were active in managing and monitoring their tied 2 ha plots, and looked forward to receiving the land title once the debt was paid. In contrast, in more recent 'partnership' schemes, the 2 ha smallholding is nominal, as all the land is managed by the plantation using hired workers. Scheme participants do not know which land is theirs, and play no part in managing it, receiving a monthly dividend from the company based on production minus costs. These partnership schemes are not at all transparent, and they are especially disadvantageous for women, who have no opportunity to assert their shared ownership rights by actively managing and working on the smallholding alongside their husband. Men receive the dividend in cash or it is paid directly into a bank account, giving women no access or control (Elmhirst et al. 2017).

## Implications for research, policy and advocacy

### Research

- Partnership-style schemes in which the 'smallholding' is a nominal 2 ha, managed by the plantation, are proliferating: almost all new schemes take this form. There is an urgent need to supplement site-specific reports with systematic, broadly based research on the costs, benefits and distributive outcomes of these schemes in different provinces.
- Research should address: who is included or excluded from scheme membership; transparency and accountability of co-ops and of co-op–company relations; how dividend payments compare

with returns from actual smallholdings managed by participating farmers; and who has access to dividend income.

- Particular attention should be paid to women's access and control, and to provisions made for the transfer of assets to future generations.

### Policy

- Regulations governing tied smallholding schemes including those using the partnership model should be reviewed and outcomes monitored to ensure accountability, transparency and fairness in scheme setup and ongoing operation.
- The bureaucratic practice of treating men as 'head of household' should cease. Women smallholders should be formally recognized as co-owners, managers and co-op members, entitled to equal treatment, including participation in decision making and receipt of rewards.
- To avoid land loss and impoverishment, tied smallholder schemes should ensure that households have plots of sufficient size to cover farm maintenance, family expenses, savings for emergencies and an investment fund for the next generation. The land needs of the next generation should also be anticipated.

### Advocacy

- Advocacy groups need to strengthen capacities and support communities in negotiations with plantations about smallholding schemes, to ensure that all social groups (including women, young people, landless people) are fully consulted and presented with options about scheme types.
- Advocacy groups should monitor land transfer and allocation processes and co-op operations to ensure transparency and fairness.
- Advocacy groups need to support and strengthen unions or similar organizations that represent the interests of tied smallholders in their initial negotiations and ongoing relations with plantations, and link local farmer organizations into national networks for information sharing and mutual support.

## Independent smallholdings: Findings

In the study area, some members of the local elite and retired plantation officials had been able to establish independent smallholdings with areas of 6–25 ha. One couple – a former plantation manager married to a female village head – reportedly held 300 ha. Owners with more than 6 ha hired workers and farm managers, making these 'smallholdings' operate like small plantations. Locals with land not too far from a road replaced some of their rubber trees with independent oil palm smallholdings of 1–6 ha, often using

poor quality planting stock due to lack of start-up capital. Locals who had lost all their land to the plantations were unable to develop independent smallholdings since the price of suitable land was very high. Plantation workers who aspired to start their own smallholdings were also locked out due to the high price of land. This situation contrasts with that in frontier areas, as reported by Potter (2012), where plantation workers and other migrants buy up land around plantations at cheap prices to establish independent smallholdings.

Dayak farmers in upriver hamlets without access to roads could not plant oil palm independently. Many of them expressed satisfaction with their current livelihoods, which were based on swidden rice and rubber. During a period of high rice prices (in 2008–9) they had the flexibility to plant more rice; and during the research period (2010–12), the high price of rubber afforded both rubber owners and rubber tappers good incomes, sufficient to improve their houses, buy motorbikes, and make other savings and investments. They also benefited from access to clean water, fish and game, and from vegetables they planted in the swiddens or gathered from nearby forests and rubber groves. They saw no need to plant oil palm at that time, but after 2013 when rubber prices were low, they were eager to try planting oil palm. Women were fully involved in all farm work and decision making. They were especially recognized for their skill in farming swidden rice, but they also owned and tapped rubber independently, keeping control of their own income; and they participated in discussions about the potential costs and benefits of planting oil palm.

In 2013, village headmen in upriver areas were negotiating with oil palm companies, but had not yet reached agreement. Headmen were not consulting with villagers; hence, it was unclear what kind of consent or veto power villagers would have in land deals with plantation owners. The main element driving headmen towards plantation companies was the need for roads to connect distant villages and hamlets to the nearest mill: their repeated requests to local government authorities to extend the road network had not been answered. Villagers knew that plantation owners would demand that they release land in return for road access, and worried that they would have insufficient land reserves to meet the needs of coming generations. If land acquisition commenced, it was very likely that villagers would be divided, some convinced that the trade-off (land for a road) was worthwhile, while others rejected the prospect of a plantation taking control of a large percentage of village farm and forest land. While it is possible that men and women would take different positions on this matter, there is not much evidence either way: failure to consult with women means that women's evaluations of the pros and cons of oil palm are neither investigated nor brought into decision-making processes.

Studies in other areas have identified *similar patterns*: many farmers would like to plant oil palm independently, as it produces good incomes while requiring little labor. Farmers may convert all their rice and rubber land to oil palm, or take a more cautious approach, retaining a variety of crops and land uses while adding oil palm to their repertoire (Feintrenie et al. 2010). There is a tendency towards class differentiation,

as independent smallholders with more capital expand their holdings at the expense of marginal farmers, especially when oil palm prices are low (McCarthy 2010; Zen et al. 2016). A consistent finding is that oil palm yields for independent farmers are highly varied, depending on the quality of the initial planting material and inputs (Molenaar 2013). Farmers with low-quality oil palm plots achieve low yields, which is

**Table 2. Summary of smallholder experiences in the research area.**

	<b>Transmigrant and local smallholders in tied oil palm schemes</b>	<b>Local smallholders with rubber, rice and some independent oil palm cultivation</b>	<b>Households in enclaves surrounded by plantations</b>
Successful >6 ha	<ul style="list-style-type: none"> <li>• Able to buy additional oil palm plots and invest to make them productive</li> <li>• Can accumulate capital for investment on- or off-farm (e.g. transport, food stall)</li> <li>• Children are educated and inherit land &amp; capital</li> <li>• Have access to well water and purchased food, motorbike, housing</li> </ul>	<ul style="list-style-type: none"> <li>• Have flexible farms with rubber, rice, vegetables</li> <li>• Can accumulate capital for investment on- or off-farm (e.g. transport, food stall)</li> <li>• Plant oil palm if road and mill access permit</li> <li>• Children are educated and inherit land &amp; capital</li> <li>• Can buy some food; able to buy motorbike, improve housing</li> </ul>	<ul style="list-style-type: none"> <li>• Plant oil palm if able to retain land during plantation establishment</li> <li>• Have off-farm enterprise such as general store, transportation, contracting, construction to service plantations</li> <li>• Children are educated; outmigrate</li> </ul>
Position of women	<ul style="list-style-type: none"> <li>• Participate fully in oil palm farm work, management and decision making</li> <li>• Formally excluded from co-op membership</li> <li>• Name omitted from land titles</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in household decision making, but limited role in negotiation with outsiders</li> <li>• Inherit land and rubber; retain ownership after marriage</li> </ul>	<ul style="list-style-type: none"> <li>• Have some business opportunities e.g. food store</li> <li>• Purchase all food; well water is essential due to high pollution</li> </ul>
Poor <2 ha	<ul style="list-style-type: none"> <li>• Low oil palm productivity due to insufficient inputs</li> <li>• Vulnerable to losing smallholding with price squeeze or family crisis, e.g. illness</li> <li>• No investment fund</li> <li>• Men do well-paid casual wage work as harvester for neighbors</li> <li>• Children have limited education &amp; inherit little or no land</li> </ul>	<ul style="list-style-type: none"> <li>• Excluded from community decision making</li> <li>• Good income from rubber tapping when price high</li> <li>• Vulnerable to loss of rubber-tapping income when neighbors convert to oil palm</li> <li>• New opportunities for wage work harvesting oil palm and services, e.g. raising pigs.</li> <li>• Children have limited education.</li> <li>• May have option to develop new farms on underused land</li> </ul>	<ul style="list-style-type: none"> <li>• Men excluded from work on nearby plantations due to ethnic bias</li> <li>• Men migrate out to find work in plantations, rubber tapping or mining in other districts</li> <li>• No capital for off-farm enterprise</li> <li>• No motorbike to access wage work among smallholders</li> </ul>
Position of women	<ul style="list-style-type: none"> <li>• Excluded from co-op and plot ownership</li> <li>• Have limited opportunity for wage work for neighbors</li> <li>• Depend on low-quality/polluted water and struggle to pay for food</li> </ul>	<ul style="list-style-type: none"> <li>• Excluded from community decision making</li> <li>• Achieve good income from rubber tapping when price is high</li> <li>• Lose independent income from rubber tapping when neighbors convert to oil palm</li> <li>• Have some new opportunities for wage work and off-farm income</li> <li>• Have limited opportunity to migrate out for work</li> </ul>	<ul style="list-style-type: none"> <li>• Casual work on plantations for very low pay, with exposure to injury</li> <li>• No independent farms</li> <li>• Must buy all food</li> <li>• Suffer from polluted water, causing illness and skin rashes</li> <li>• Raise children alone and struggle to keep them in school</li> </ul>



a problem that could be remedied with better smallholder support. Among independent smallholders, while women are active in all farm work and decision making, and are the recognized owners of farm plots they have inherited, they are largely overlooked in official development programs (De Schutter 2013).

## Implications for research, policy and advocacy

### Research

- Site-specific studies have shown that social groups with land and capital profit from oil palm smallholdings, while poorer people are excluded. Further research is needed to determine farm size and capital thresholds, and other variables that enable or preclude the running of successful independent smallholdings.
- Gender and generational dynamics of independent smallholders are not well understood: do men, women and young people have different aspirations and preferences for crop mix, and if so, what are their reasons?

### Policy

- Evidence indicates that independent smallholders are far more prosperous than plantation workers or tied smallholders, and their demand for services generates a healthy secondary economy. Hence, policy should favor independent smallholders, with a ceiling of 6 ha.
- Effective support should be given to customary landholders, both women and men, to strengthen their capacity to develop independent smallholdings so they are not displaced by incoming migrants or local elites (e.g. government officials, plantation managers).
- Support programs should consult women, men and young people about their farming preferences, and offer a range of options, e.g. support for vegetable and livestock production to complement oil palm by ensuring a healthy local food supply.

### Advocacy

- Advocacy groups should support independent smallholders who choose to include oil palm in their farm plans, offering a range of options to meet farmers' needs.
- Vigilance is needed to ensure that smallholder support programs designated for poverty reduction are not captured by elites, but actually benefit poor and landless farmers.

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