



# Social impacts of oil palm in Indonesia

A gendered perspective from West Kalimantan

Tania Murray Li



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Photo by Pujo Semedi/CIFOR

Female farm worker carrying harvested palm fruit to the roadside, in Meliau, West Kalimantan.

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# 1 Introduction

Plantation-based oil palm in Indonesia has massive impacts on receiving communities, transforming every aspect of their landscapes, livelihoods and sociopolitical relations. Smallholders also plant oil palm with the support of various programs, or on their own initiative.<sup>1</sup> The impacts of oil palm are both positive and negative, as oil palm provides improved livelihoods for some actors, and reduces incomes and opportunities for others. As with any new crop or technology, some of the changes introduced are planned, and some are unintended because oil palm intersects with existing forms of livelihood and social organization.

The area planted with oil palm in Indonesia, around 11 million ha in 2012, is rapidly expanding (USDA 2013). Millions of people are caught up in the dynamics of oil palm, whether as investors, workers, smallholders or former landholders. The government has proposed that 20–30 million ha are suitable and potentially available for oil palm. Industry promoters note strong global demand, and the contribution of oil palm to poverty reduction and job creation (Indonesian Palm Oil Board 2007; World Growth 2011). Scholars are more cautious, noting that the social and livelihood implications of oil palm are not well understood (Rist, Feintrenie and Levang 2010). Recognizing the need for more social research, this report adopts a gendered perspective to explore the distributional impacts of oil palm on women and men from different social groups, clarifying who has prospered from their engagement with oil palm, and who has lost out. It situates the positions of women and men in evolving sets of historical and spatial relations,

and identifies the mechanisms and cultural understandings that shape particular outcomes.<sup>2</sup>

The report relies mainly on primary research in Sanggau district, West Kalimantan, during 2010–2012. It highlights the gendered effects of the two main models of oil palm development: 1) large-scale plantations, employing both permanent and casual waged workers, and 2) smallholdings, whether tied or independent. Section one provides an overview of the oil palm sector in Indonesia, reviews the literature on its social impacts, identifies some key dimensions of the position of women in Indonesia and introduces the study site and research methods. Section two explores the gendered dimensions of oil palm smallholdings in the study site, situating them in relation to previous forms of livelihood focused on subsistence rice and smallholder rubber. Section three explores gendered patterns of waged work on two plantations (one state, one private), identifying changes over time as stable work gave way to more casual labor. The discussion summarizes key findings concerning the gendered impacts of oil palm under smallholding and plantation models. It places these findings within the spectrum of oil palm development on old and new land frontiers. It draws some preliminary conclusions with relevance to policy in the oil palm sector, highlighting the gap between the promise that oil palm brings prosperity to all, and the current situation in which some social groups experience mainly negative effects. The recommendations propose approaches that could be adopted to minimize social harms and spread prosperity more evenly.

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<sup>1</sup> See Cramb and Curry (2012) for an informative overview of the oil palm sector in the Asia-Pacific region.

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<sup>2</sup> The importance of situating gender dynamics in a broad set of social, historical and spatial relations is emphasized in Berry (1993); Peters (2004); Razavi (2009); Elmhirst (2011); Behrman, Meinzen-Dick and Quisumbing (2012).

## 1.1 Oil palm in Indonesia

Oil palm is an industrial crop generally grown in monocropped plots that range in size from 2 ha to 40,000 ha. Within 48 hours of harvesting, the fresh fruit bunches have to be transported to mills where they are processed into crude palm oil (CPO) (Sheil et al. 2009). Palm oil produced in Indonesia is used as cooking oil for the domestic market (26%); 73% is exported; small amounts are used in processed foods, cosmetics and as a biofuel (1.3%) (Obidzinski et al. 2012).<sup>3</sup> In 2012, roughly 11 million ha were planted with oil palm, of which about 8 million ha were yielding. An additional 6–7 million ha were held by companies, but not yet developed (USDA 2013). Around 40% of the oil palm was managed by independent smallholders or participants in tied smallholder schemes. The balance of the area was under large-scale plantations run by state or private corporations.<sup>4</sup> Most of the oil palm was on the island of Sumatra (64%), followed by Kalimantan (31%).<sup>5</sup> As shown in Table 1, Kalimantan was the main region of expansion in 2005–2013, with the addition of 1.5 million ha of plantations and a much smaller area (228,000 ha) of smallholdings. The main expansion in Sumatra was in Riau, where the trend clearly favors smallholdings. Permits continue to be issued for new plantations, even though undeveloped concession land is still extensive (Obidzinski et al. 2012).

**Tied smallholder schemes:** Schemes to enable smallholders to plant oil palm were first implemented around 1980 through a collaboration between the transmigration department, the World Bank, State and later also private plantations.

<sup>3</sup> Biofuel use had increased to 4% by 2014 (Obidzinski, personal com). Biofuel potential is discussed in Sheil et al. (2009).

<sup>4</sup> In 2012, Badan Pusat Statistik online data recorded 9231 ha oil palm in total, of which 3774 ha were classified as smallholdings, and 5457 ha as plantations, mostly private. A smallholding is officially defined as a commercial crop holding less than the area that requires a plantation license, hence below 25 ha (Article 6.1, Licensing Guidance for Plantation Businesses, Minister of Agriculture Regulation No. 26/Permentan/OT.1401.2/2007). Unlicensed plantations of a medium size (25–500 ha) evade the license requirement by registering plots in multiple names. The Roundtable on Sustainable Palm Oil defines smallholdings as less than 50 ha (World Bank and IFC 2011).

<sup>5</sup> Palm Oil Area by Province in Indonesia, 2008–2012, Directorate General of Estate Crops.

Under these schemes, plantation companies ran a small ‘core’ plantation and a mill, and developed 70%–80% of the concession land to be managed by smallholders, in 2-ha plots. Smallholders were tied to the plantation until they had repaid the establishment costs, and received title to their plot. There were several schemes, each with its own specifications for the ratio of smallholder to core plantation land, the release of customary land and involvement of transmigrants.<sup>6</sup> By the late 1990s, companies were reluctant to engage in these schemes, which they found burdensome and expensive (Potter and Lee 1998). The World Bank withdrew funding, concerned about ‘market distortions’ (Potter and Lee 1998). It recommended the private sector finance new smallholder schemes, and take the form of ‘partnerships.’ The Plantation Law of 2004 permits plantations to develop the entire concession as core, and requires them to develop an area equivalent to 20% of their concession in ‘partnership’ with smallholders. Plantations have been reluctant to meet even this more limited requirement without the incentive of subsidized credit.<sup>7</sup> In one subdistrict of Central Kalimantan in 2010, for example, 13 of 18 estates that together controlled 130,000 ha (60% of the total land area of the subdistrict) refused to provide any role for smallholders at all (Potter 2012). ‘Partnerships’ include models in which the plantation manages the smallholding area together with the core as a single block, and pays the nominal smallholder ‘partners’ a monthly dividend, akin to rent.

**Independent smallholders:** Independent smallholders use their own resources to plant oil palm on individually owned land, on collectively-held customary land, on land purchased from others or on state-claimed forest land. Some smallholders focus entirely on oil palm, others add oil palm to a portfolio that includes rubber,

<sup>6</sup> For reviews of these models and their dynamics in Kalimantan and Sumatra see Potter and Lee (1998); McCarthy (2010); McCarthy, Gillespie and Zen (2012); IFC (2013).

<sup>7</sup> Partnership schemes and the reluctance of state and private companies to work with smallholders are discussed in Marti (2008); McCarthy and Cramb (2009); Gillespie (2011); McCarthy, Gillespie and Zen (2012); Colchester and Chao (2013); Colchester, Jiwan and Kleden (2014). The required 20% for smallholders may be on additional land outside the concession (Obidzinski pers.com). The state plantation version of partnership is called “*pola satu manajemen*” (one management system).

**Table 1. Oil palm plantations and smallholdings 2005 – 2013 (ha), main oil palm provinces.**

	2013	2013	2013	Increase 2005–2013	Increase 2005–2013
	Oil palm total	Plantations	Smallholdings	Plantations	Smallholdings
<b>Sumatra</b>					
Bengkulu	303,872	109,702 (36%)	194,170 (64%)	50,941	105,806
Jambi	635,159	272,346 (43%)	362,813 (57%)	122,695	109,005
South Sumatra	834,933	465,651 (56%)	369,282 (44%)	185,841	99,414
North Sumatra	1,190,556	781,848 (66%)	408,708 (34%)	191,064	104,579
West Sumatra	380,097	202,305 (53%)	177,792 (47%)	68,639	29,380
Riau	1,940,718	722,870 (40%)	1,217,848 (60%)	174,283	524,119
<b>Kalimantan</b>					
West Kalimantan	694,448	437,244 (63%)	257,204 (37%)	244,696	67,961
Central Kalimantan	1,026,477	896,827 (87%)	129,650 (13%)	562,087	20,909
East Kalimantan	693,745	533,027 (77%)	160,718 (23%)	380,263	112,246
South Kalimantan	429,095	368,591 (86%)	60,504 (14%)	267,759	26,715

rice and other crops. Since 2000, there has been a boom in independent smallholder oil palm, due to oil palm's high returns in relation to both land and labor.<sup>8</sup> Many farmers would like to plant the crop, but need access to roads, mills, high quality planting materials, capital or credit, and land. Studies indicate that smallholders with access to these factors can profit significantly from oil palm, but the threshold for successful entry is too high for ordinary farmers. The main social groups who succeed with independent oil palm are usually plantation staff, government officials, politicians, school teachers, migrants with capital in hand and members of local elites who help broker the land deals that enable outsiders to access customary land. The typical holding size for this group is 10–20 ha, although some extend to 300 ha.<sup>9</sup> The maximum area for a couple focusing mainly on oil palm without recourse to hired labor is 6 ha (Feintrenie, Chong and Levang 2010); smallholdings above this size use hired labor. Management demands are not intensive, and owners may be absentees. Land concentration

among successful oil palm 'smallholders' is a crucial part of the social dynamics set in motion by this lucrative crop (McCarthy 2008).

## 1.2 Social impacts of oil palm: A review

Discussion of the social impacts of oil palm in Indonesia has suffered from polarization. Some accounts are entirely positive, others mainly negative. Industry promoters highlight smallholder livelihoods and the generation of jobs.<sup>10</sup> Scholars note the enthusiasm of independent smallholders for planting oil palm and the benefits that flow from higher incomes.<sup>11</sup> Reports from some parts of Sumatra highlight successful examples of tied smallholder schemes, notably in places where farmers had mobilized to obtain favorable terms from oil palm companies seeking access to their land (Feintrenie, Chong and Levang 2010). As observers note, "[d]one right, palm oil should generate wealth and employment for local communities. Done wrong, oil palm estates can lead to land alienation, loss of livelihoods, social

8 Feintrenie, Chong and Levang (2010); Rist, Feintrenie and Levang (2010); Hall (2011). The lack of data on the proportion of tied versus independent smallholders is noted in IFC (2013).

9 Zen, Barlow and Gondowarsito (2005); McCarthy (2008, 2010); McCarthy, Gillespie and Zen (2012); Budidarsono, Susanti and Zoomers (2013).

10 Indonesia Palm Oil Advocacy Team and Board (2010); World Growth (2011).

11 Sheil et al. (2009); Feintrenie, Chong and Levang (2010); Rist, Feintrenie and Levang (2010).

conflicts, exploitative labor relations and degraded ecosystems” (Forest Peoples Programme and Sawit Watch 2006, 11). Consistent reports from many sites and time periods indicate that some social groups have indeed experienced serious negative social impacts from the introduction of oil palm. There are four main areas of concern.

### 1.2.1 Issues of concern

**Land acquisition by plantations and environmental damage:** Environmental concerns and land conflicts are the most prominent issues raised in the literature. Plantations generally expand at the expense of forest, although what constitutes ‘forest’ is unclear in Indonesia (Sheil et al. 2009). Little oil palm (reportedly 3%) is planted on primary forest land (Obidzinski et al. 2012). Most is planted in secondary forest land, logged land, grass and scrub land. Some of the land was formerly used by customary landholders for swidden and extensive agroforestry production, and they claim it as part of their customary territory. The expansion of plantations onto this land reduces access for customary landholders, diminishing their opportunities for independent farming and collection of forest products. Pollution of rivers and streams presents health risks, and causes a loss of food and income.<sup>12</sup>

The legal status of customary land rights in Indonesia is disputed with communities, the National Land Agency (BPN), the Ministry of Forestry, the National Parliament and the Constitutional Court interpreting the law differently Siscawati (2014). The result of legal ambiguity and overlapping claims is to put customary landholders in conflict with the government, especially the Ministry of Forestry; it claims jurisdiction over much of the land and oversees its release for plantation development (Sheil et al. 2009). The process for issuing plantation licenses intensifies the ambiguity, as it requires companies to negotiate with communities and individuals for release of their customary rights. This means, in effect, that customary rights are only recognized provisionally and contingently, just enough to facilitate their release to corporations. Individuals and communities

are persuaded to sign land release documents in return for small cash payments and/or vague, often verbal promises that they will be included in future smallholder schemes (Marti 2008; Sirait 2009).

Weak protection for customary land rights make land conflicts between plantation corporations and local communities ubiquitous.<sup>13</sup> The Indonesian land agency recognized the massive extent of the problem in a statement at a public meeting of the Roundtable on Sustainable Palm Oil in 2012: the agency had 8000 documented land conflicts in the agrarian sector, of which 4000 concerned oil palm (Colchester and Chao 2013). Land conflicts tend to be enduring, as customary landholders who consider their land was seized unfairly continue to demand redress.<sup>14</sup> Some conflicts have reportedly resulted in the death, injury and imprisonment of protestors (DTE 2012). In the absence of adequate mechanisms to address grievances, settlements between plantations and the surrounding population tend to be ad hoc, and prone to unravel.<sup>15</sup> They may intensify over time, as land becomes increasingly scarce, and former landholders are squeezed into tiny enclaves between plantations with insufficient land to sustain themselves, and very little to pass on to a new generation.<sup>16</sup> Conflicts among villagers intensify due to increased pressure on land access, or perceptions of unfair treatment that may pit customary landholders against migrants.<sup>17</sup>

**Degradation of customary institutions:** Oil palm expansion is associated with the degradation of customary institutions, and the undermining of customary authority. Companies strike deals for land release with customary leaders who may fail to consult with landholders. Companies also invite customary leaders to join official land release

13 For reviews of the disputed status of customary and state forest land, see Peluso (1995); Fay and Sirait (2002); Warren (2005); Fitzpatrick (2007); Peluso, Affif and Rachman (2008).

14 Land conflicts are discussed in Zen, Barlow and Gondowarsito (2005); Colchester et al. (2006); Marti (2008); McCarthy (2009); Sheil et al. (2009); Feintrenie, Chong and Levang (2010); Rist, Feintrenie, and Levang (2010); Obidzinski et al. (2012).

15 Marti (2008); McCarthy (2009).

16 Dove (1985, 1986); Stoler (1995); McCarthy (2009); Li (2011); Potter (2012).

17 Potter and Lee (1998); Rist, Feintrenie and Levang (2010); Obidzinski et al. (2012).

12 Colchester et al. (2006); Marti (2008); Colchester (2011); Obidzinski et al. (2012).

teams, which include company and government officials, as well as security personnel (army, police). As paid members of these teams, they help persuade landholders to agree to company demands.<sup>18</sup> Since only compliant customary leaders are included in these teams, the effect is to diminish the capacity of customary leaders and customary institutions to protect the interests of landholders as a group.

**Deficiencies in smallholder schemes:** The tied smallholder schemes developed in 1980 – 2000 were beset with problems related to land acquisition and allocation, quality of plantation development, road maintenance, pricing, credit and dishonest dealings by companies and company-supported cooperatives.<sup>19</sup> The legacy of these schemes continues to shape the lives of tens of thousands of scheme participants, with uneven results. More recent ‘partnership’ schemes in which the plantation manages the nominal smallholdings together with the core suffer from a serious lack of transparency; evidence suggests that dividends paid are very low – much less than smallholders could obtain if they planted oil palm on their own land.<sup>20</sup>

**Employment:** Employment issues have received less attention in the literature than land issues. Limited access to plantation jobs, unemployment among former landholders, payment of wages below the provincial minimum, a minimum wage insufficient for a decent standard of living and the prevalence of casual, subcontracted, temporary and part-time work are the main points of concern.<sup>21</sup> The neglect of plantation labor is a significant gap in the literature. The expansion

of plantations, especially in Kalimantan (Table 1), means that millions of people in the future will engage with oil palm mainly as plantation workers. Hence, a focus on the gendered dimension of plantation labor and its evolution over time is one of the key contributions of the present study.

### 1.2.2 Disaggregation

Drawing general conclusions from the social impact literature is difficult because some do indeed gain from oil palm, while others lose out. Hence, it is necessary to disaggregate, and specify the differential effects on particular social groups. If jobs are generated, and smallholders make good profits, it is essential to know who has access to jobs and smallholdings. If people who lose their land or previous sources of livelihood are excluded from promised benefits, the result *for them* is impoverishment. Similarly, the social impact of the loss of access to common resources varies by social group. For people who prosper with oil palm, it may be more convenient to buy food than to grow it or forage for it, and they can address the problem of polluted water by drilling a well. But for people who do not prosper, and who cannot afford to drill wells or buy all their food, the loss of access to common resources is a devastating blow.<sup>22</sup>

Disaggregating impacts by generation is also important. Releasing some land to an oil palm plantation may seem a good trade-off where land is abundant, and infrastructure poorly developed. Customary landholders often hope the plantation will bring with it a road, hence improve access to schools, markets, health services and jobs.<sup>23</sup> But a land deal may look very different from the perspective of the next generation. As one elder close to a state plantation stated, “When the company came, we thought our land was as big as the sea.” He thought the company would help develop the area, take its fair share of profits, then return the land to the community after 30 years. Instead, the company replanted the oil palm and renewed its lease, and failed even to inform the customary landholders of its plans, still less to consult with them or request their permission. More companies came. Now his grandchildren

18 Colchester et al. (2006); Marti (2008); Sirait (2009); Colchester (2011); Colchester and Chao (2013).

19 Problems in smallholding schemes and their associated co-ops are discussed in Potter and Lee (1998); Rist, Feintrenie and Levang (2010); Zen, Barlow and Gondowarsito (2005); Colchester et al. (2006); Forest Peoples Programme and Sawit Watch (2006); Marti (2008); McCarthy (2009); Potter (2009); Sirait (2009). The troubled history of co-ops in Indonesia is discussed in Henley (2012). Issues of fairness in contract farming systems more broadly are discussed in Watts (1990); White (1999); Walker (2009).

20 Li (2011); McCarthy, Gillespie and Zen (2012); Colchester and Chao (2013).

21 Potter and Lee (1998); Wakker (2005); Milieudéfensie and KONTAK (2007); Marti (2008); Obidzinski et al. (2012); Sinaga (2013).

22 Marti (2008); Obidzinski et al. (2012).

23 Rist, Feintrenie and Levang (2010); Therville, Feintrenie and Levang (2010); Feintrenie and Levang (2011).

are landless, squeezed between plantations on all sides. Observing this troubling trajectory when travelling to work or to visit kin, customary landholders may reject oil palm, or engage with it cautiously, and only when they can control the terms (Dove 1986; Colchester, Jiwan and Kleden 2014).

A further point of disaggregation concerns the effects of scale on the viability of oil palm smallholdings. As is typical of boom crops, high prices for oil palm make smallholders enthusiastic to plant the crop, but during periods of adverse prices they may struggle to make ends meet.<sup>24</sup> Scale is a factor in the capacity of smallholders to withstand periods of price adversity. Many studies have noted that 2 ha of oil palm, the standard plot size allocated per household under most tied smallholder schemes, is not sufficient to sustain both farm and family. It makes households with only one oil palm plot (and no other land or source of income) vulnerable to land loss as they may be forced to take on debt, and mortgage or sell their plot to cover immediate needs.<sup>25</sup> At 2011 prices, oil palm smallholders interviewed in Sanggau who were wholly dependent on oil palm (i.e. who did not combine oil palm with rubber or other sources of income or food) said they needed 6 ha to meet their household expenses, buy necessary inputs (fertilizers, pesticides) and invest in the future by educating their children and/or buying additional plots to give them on marriage.<sup>26</sup> Quality also matters. Smallholder yields range hugely depending on whether smallholders have access to good seedlings and other inputs; low productivity makes it harder to save and invest, or even just hold on.<sup>27</sup>

24 On crop booms, see Hall (2011); Li (2014). On price effects, note that even with low prices for rubber and oil palm in 2009, returns from these crops were still more profitable than from rice. See Feintrenie, Chong and Levang (2010).

25 Zen, Barlow and Gondowarsito (2005); Marti (2008).

26 Farmers in East Kalimantan concurred they needed 6 ha of oil palm if that was the only income source. See Colchester and Chao (2013).

27 Smallholder yields are discussed in Zen, Barlow and Gondowarsito (2005); Sheil et al. (2009); Feintrenie, Chong and Levang (2010); Colchester and Chao (2011); World Bank and IFC (2011); Cramb and Sujang (2013); IFC 2013.

### 1.3 A gendered perspective on oil palm

Disaggregation of social impacts by gender is rare in studies of the social impacts of oil palm reviewed above. Only one academic study makes gender its explicit focus (Julia and White 2012). The study is based on a Dayak community in Sanggau district, West Kalimantan, in a village where one-third of the area was under oil palm. Its principal findings concern loss of land for subsistence farming of rice and vegetables, loss of income from rubber trees, the erosion of women's position as landholders through the registration of smallholder oil palm plots in men's names and the vulnerability of women as plantation workers. These issues are explored in some detail in the sections to follow. A study by the advocacy organization Down to Earth (DTE) investigated women's position in an oil palm zone in Papua, highlighting women's lost access to land and forest resources, the high cost of buying food, scarce and precarious plantation work, and increased exposure to domestic violence when their husbands spent oil palm incomes on alcohol (DTE 2014). A study in Bungo collected gender-disaggregated data on participation in land-use decision making, and found that both women and men were enthusiastic about converting agroforests to oil palm and cloned rubber to increase their access to cash (Therville, Feintrenie and Levang 2010; Feintrenie and Levang 2011). A study of social impacts in three plantations (two in Papua, one in West Kalimantan) conducted separate discussions with women and men, but did not report gender-disaggregated results (Obidzinski et al. 2012). Women's position as workers is discussed in a few studies, which note the trend toward casual labor in plantation work is affecting women in particular, and that women workers are exposed to serious health hazards from pesticides.<sup>28</sup> A study by the advocacy organization Sawit Watch showed that women transmigrants in smallholder schemes were active in farm work and management, while local women who worked for plantation companies had mixed experiences (Surambo et al. 2010).

Weak coverage of gender issues in oil palm is symptomatic of a broad tendency in Indonesia to assume that women and men benefit equally from

28 Tenaga Kita and PAN (2002); PAN (2009); Surambo et al. (2010); Julia and White (2012); Sinaga (2013); DTE (2014).

development schemes through their membership in households. Gendered differences are not seen as linked to gendered injustices such as marginalization, discrimination or the imposition of multiple burdens (Siscawati and Mahaningtyas 2012). Married women and men are understood to have distinct but complementary roles, with men assuming the role of ‘head of household’, and women positioned primarily as wives and mothers. This gendered conception was prominent in state ideology in the New Order period (1965 – 1998),<sup>29</sup> and was embedded in government-designed rural development programs, where it continues to dominate. It also resonates with indigenous concepts broadly shared across the archipelago that emphasize husband and wife may work separately, on different tasks or in different spheres of activity, but are jointly responsible for household maintenance and economic advance.

Researchers have observed that married women are often the treasurers of household funds, and participate fully in decisions about matters such as land use, investment and migration.<sup>30</sup> Yet they are weakly represented in Indonesia’s public sphere, where men tend to take precedence as bureaucrats, politicians, office holders, informal leaders (*tokoh masyarakat*) and household heads. Men’s public prominence is consistent even among ethnic groups such as the Minangkabau that pass landed inheritance through women (Benda-Beckmann and Benda-Beckmann 1985). Indonesia has several NGOs and advocacy groups lobbying for women’s rights, but no mass women’s movement.<sup>31</sup> There is little explicit debate in villages or government offices about the rights, interests or capacities of women (Siscawati and Mahaningtyas 2012). Hence, it is not surprising that women’s participation in the oil palm sector is hardly represented in studies or statistics.

29 Sears (1996); Siscawati and Mahaningtyas (2012).

30 Colfer (1981); Locher-Scholten and Neihof (1987); Atkinson and Errington (1990); Tsing (1990, 1993); Colfer and Soedjito (1996); Colfer, Peluso and Chin (1997); Li (1998); Elmhirst (2011). Papua is a notable exception. Customary land rights in Papua may be held exclusively by men, and men do not routinely share income with their wives or treat them as household treasurers. Under these conditions, the impact of oil palm plantations and smallholder schemes on women is more damaging. See DTE (2014).

31 Women’s advocacy groups include Solidaritas Perempuan, Perempuan Aman, Komnas Perempuan, Koalisi Perempuan Indonesia and Kalyanamitra.

New Order development programs centered on households as the building blocks of the nation, and reserved participation in transmigration and smallholder schemes for married couples (Elmhirst 2011). Land allocated through these schemes was registered in the name of the husband as the household head (Julia and White 2012). Women smallholders were thus included and excluded at the same time, as their ownership was folded into the household unit represented by the husband. The impacts of these official arrangements varied according to the cultural milieu into which they were inserted. Section two of this report will show that the registration of oil palm plots in men’s names in a transmigration scheme in West Kalimantan did not diminish women’s sense of co-ownership; other studies in West Kalimantan and in Papua, however, found that men’s official ownership left women quite disempowered (Julia and White 2012; DTE 2014).

State plantations in the New Order period used conjugal units as the basis of labor recruitment, and provided housing, child care and other facilities in recognition of women’s dual role as mothers and workers (Barral 2014). This practice was initiated on colonial plantations in Sumatra in the 1920s; however, it was always in tension with industry concerns to minimize costs by downloading responsibility for the social reproduction of the workforce onto the communities from which workers were drawn. Hence, state plantations in Sumatra in the 1970s shifted away from conjugal recruitment. Instead, they had a small core workforce comprised mainly of single young men, and recruited women from nearby communities on a casual basis that did not take the costs of social reproduction into account (Stoler 1995). Although little recognized, this pattern increasingly dominates in the plantation sector in Kalimantan as well. Industry promoters note the good wages, family housing and health care on plantations.<sup>32</sup> Workers did indeed enjoy these conditions on the state plantation in the research area in 1980–2000, but by 2010–12 the conditions no longer existed, either for most workers on that plantation or on a private plantation nearby. Increased reliance on casual and contract workers, and the recruitment of women and men from different labor pools, have social impacts that are especially damaging for women, a topic discussed in section three.

32 Indonesian Palm Oil Board (2007); World Growth (2011).

## 1.4 The research site

Meliau, a subdistrict of Sanggau, fell within the area designated for the first experiments with oil palm in Kalimantan in 1980. 'Project Sanggau,' as officials called it, was led by the state plantation corporation PTPN. It comprised 18,000 ha of oil palm divided into units of around 5000 ha each. In Figure 1, made in 1990, the colored blocks show the extensive areas of land in Meliau allocated to plantations. By 2012, the plantation area of Meliau was 65,000 ha of a total land area of 150,000 ha. The population density was 32 per km<sup>2</sup> (BPS 2013).

Most of the land in Meliau used for plantations was previously controlled by customary landholders, both Dayak and Malay. The planners of Project Sanggau viewed it as underused state land. In addition to assigning plantation concessions, they proposed to bring in 4500 transmigrant families from Java and Bali as oil palm smallholders. Protests by Dayak villagers and politicians caused planners to scale back their targets, but several transmigration schemes in neighboring subdistricts proceeded, and core-only state plantations were also established.<sup>33</sup>

Between 1980 and 2012, relations between PTPN and the surrounding population did not stabilize. Repeated protests highlighted the loss of access to customary land, and the dearth of jobs. In 1998, land-short Dayaks and Malays, who were squeezed into enclaves between plantations, mobilized in a multi-village, multi-ethnic alliance spurred by the spirit of 'reform.' The protest was quelled when PTPN promised to provide a smallholder scheme. In 1998, however, most villagers no longer had enough land to join the scheme, as much of their former land had long ago been absorbed by PTPN plantations. More serious still, the area of oil palm plantations in the subdistrict continued to expand and in 2010–12 it was still expanding. The result was a land squeeze. Only in upriver areas without four-wheel vehicle roads did customary landholders still have sufficient land to plant swidden rice, and retain extensive rubber groves and agroforest gardens.

In areas where land pressure was severe, the local population was not only prevented from growing rice, it was also robbed of the opportunity to plant oil palm independently. In 1985, people asked for oil palm seedlings to plant on their own land, but authorities refused (Dove 1986). Rubber owners lost their trees, and rubber tappers also lost out, as rubber tapping was previously a major source of employment in this area. In 2010–12, villagers in the enclaves still discussed the need to reclaim land from the plantations, as they could see no other way to join in the prosperity that oil palm promised, and that some people had in fact attained.

Two oil palm plantations were the focus of the team's research. One was a sub-unit of the state-owned plantation corporation, PTPN-ME. This unit began operation in 1980 as a core-only estate.<sup>34</sup> It falls within the area marked Melaboh on the map. It took over land from a nationalized colonial era rubber plantation, and acquired additional land from customary landholders to expand to its current size of 5640 ha. In 2010, PTPN-ME was replanting. It had 3814 ha in production, which yielded 78,343 tonnes of oil palm fruit, i.e. 20.5 tonnes per ha annually.<sup>35</sup> It shared use of a PTPN mill nearby, and had a formal labor force of 883. Casual and contract workers carried out some harvesting, all replanting tasks and many maintenance tasks such as pruning, fertilizing and clearing undergrowth. Labor arrangements at PTPN-ME and the adjacent private plantation, HD-DS, are described in section three.

HD-DS was privately owned by an entrepreneur from Jakarta who was previously involved in logging. It began operating in 1990 in conjunction with the state supported, transmigration linked, tied smallholder scheme known as PIR-BunTrans. The planned area was 38,000 ha, of which 9000 ha would form the core; 18,000 ha of smallholdings would be allocated to 9000 transmigrant and local households in 2-ha plots. The intended area

33 Project Sanggau, PTPN's contentious land acquisition in this area, and local resistance to the transmigration scheme are discussed in several studies: Dove (1985, 1986); Forest Peoples Programme (2005); Colchester et al. (2006); Potter (2009).

34 PTPN-ME is a pseudonym. This unit of PTPN was forced to add a smallholder component following protests by villagers in 1998. The scheme was small and not discussed in this report.

35 Official data supplied by company staff.

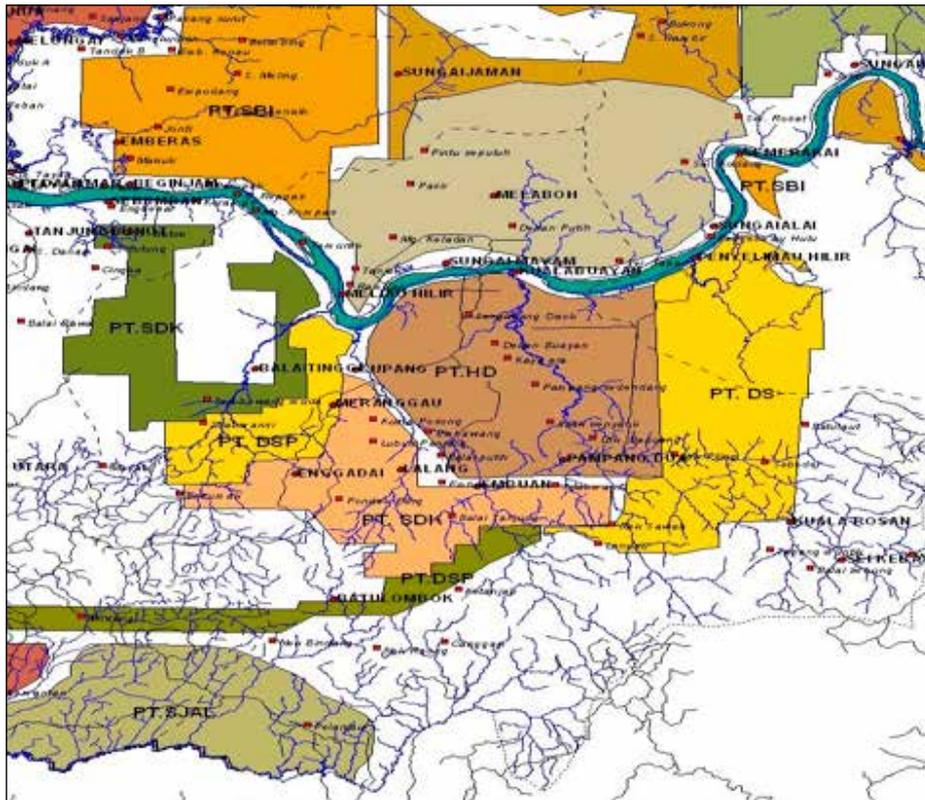


Figure 1. Plantation concessions in Meliau subdistrict, 1990.

is marked in two colors on the map, yellow and brown, as the company ran under two names (HD and DS). The transmigration component of the HD-DS scheme was disrupted by the change of government in 1998 and by the reluctance of customary landholders to release land. As a result, the final land area was 3834 ha of plantation core, and 16,600 ha of tied smallholdings, of which HD-DS classified 14,000 ha as 'productive'.<sup>36</sup> In 2011, the yield in the plantation core was the same as the average yield on the smallholdings, 14.5 tonnes per ha annually.<sup>37</sup> Transmigrants from outside Kalimantan comprised around 2500 of the 8300 households registered in the smallholding scheme, while the remainder were local Malays and Dayaks who released customary land for inclusion in the scheme.<sup>38</sup>

36 HD-DS is a pseudonym. In 2014 HD-DS employed 358 permanent workers on its core plantation, a ratio of one worker to 10.7 ha, plus 187 workers at the mill.

37 Official data supplied by company staff. The average smallholder yield from an IFC survey of 487 tied smallholder plots of comparable age (19 years on average) was 17.7 tonnes of fresh fruit bunches (ffb) per ha per annum. See IFC (2013).

38 Estimate based on the 11 sections of the scheme in which transmigrants were placed.

The terms of land release were onerous. Customary landholders were required to release 7.5 ha, of which 2 ha would be returned to them as an oil palm smallholding and 0.5 ha as a house lot; 2.5 ha were given to transmigrants from Java, Bali and NTT; 2 ha were used by the company for its plantation core; and the balance was used for plantation housing, roads and a company mill on the bank of the Kapuas. Smallholders had to repay establishment costs of IDR 11.6 million, and were obliged to sell their oil palm fruit through company-organized cooperatives. The mill had a capacity of 900 tonnes/24 hours, but in 2012 processed only 350–650 tonnes daily due to limited supply.

In Figure 2, the solid yellow block near the Kapuas River represents the HD-DS core plantation and monocropped oil palm smallholdings assigned to transmigrant and 'local' participants. The yellow patches in the upriver zone are mainly located along roads built by HD-DS before 1998, but the roads were poorly maintained and in 2010–12 were often impassable. The partial collapse of the transmigration scheme meant that customary



**Figure 2.** Location of oil palm in HD-DS concession and study hamlets.

landholders retained control over most of their land in the upriver area, and no transmigrants were placed there. Some Dayak farmers in these areas began to plant oil palm independently in response to high prices after 2008, but faced the stiff entry barriers already described: limited road access and limited capital to buy high quality seedlings. Hence, in 2011, most continued to rely on a combination of rubber tapping and swidden rice production.

Section two provides a gendered account of labor, land use and land access among smallholders in a selection of hamlets, each with a different degree of involvement in oil palm. The hamlets discussed in this report are marked on the map: Kerawang, Nék Sawak, Sei Kembayau, Suak Pram, Kayu Ara, Sengkuang Dauk, Cempaka, Kuala Buayan and Trans 2 Bakti Jaya.

## 1.5 Research design and methods

The research aimed to identify different social groups affected by the oil palm economy, track who gained and who lost, and identify the mechanisms and processes that shaped these outcomes. The research team comprised two principal investigators, both anthropologists, Professor Tania Li from

the University of Toronto, Canada, and Dr Pujo Semedi from Gadjah Mada University, Indonesia, together with more than 100 graduate and undergraduate students from the two universities. The professors and students stayed at the research site for periods of 1–3 months in 2010, 2011 and 2012, living with families in 20 selected hamlets and labor barracks throughout the research area. All the researchers submitted their daily field notes and research papers to a common pool that provides the main qualitative database for this report.

No formal survey was conducted, and the team does not have a record of the total number of people with whom researchers interacted. Student researchers were instructed to spend time with a wide range of people in their research sites, and to pay particular attention to poorer villagers who tend to be shy of visitors. They were trained in techniques of observation, and encouraged to cross-check what people said with what they actually did wherever possible. The research was not designed specifically to have a gender focus, but the gender composition of the research team was roughly balanced, giving the researchers good access to the social worlds of both women and men in their host families and communities. Researchers accompanied workers on their tasks, e.g. riding with truck drivers, tapping rubber and helping to harvest smallholdings. These

qualitative techniques do not permit statistical generalization, but continuous cross-checking from a wide range of sources makes them a reliable means to track differential engagements with oil palm, identify the mechanisms producing different outcomes and explore the perspectives of the actors directly involved.

The team supplemented qualitative research techniques with a few, highly focused numbers gleaned from key informants, using four main instruments:

- Researchers conducted wealth ranking exercises with the head of each hamlet to assess the pattern of land use and distribution. These data are summarized in Table 4.
- The team obtained a list of all 500 household heads originally assigned plots in one transmigration unit, Trans 2 Bakti Jaya. It checked with the leader of each sub-unit (30 plots) to find out whether the owners were still present or had left the area, and whether they had sold or retained their land. These data are summarized in Table 5.
- Researchers equipped with a global positioning system (GPS) mapped the distribution of oil

palm and cross-referenced the data with Google Earth to produce Figure 2, which shows the HD-DS plantation and associated transmigration area. This spatial data was supplemented by official data from HD-DS on the area of its core plantation and associated smallholdings, and on yields (discussed below).

- The team obtained the complete list of formal employees in PTPN-ME, with information on job category, gender and age. Team members estimated the ethnic composition of the workforce based on distinct ethnic names. Although imperfect, data on worker ethnicity are included in this report because ethnicity was a significant factor in labor dynamics. PTPN-ME formal labor data are presented in Table 6. PTPN-ME had no central record of the casual workforce. HD-DS supplied data on formal employees in 2014. For further insights into the changing employment profile, the team relied on interviews with plantation staff and workers. Unless otherwise stated, all the data reported in sections two and three are derived from primary research conducted through these methods.

# 2 Oil palm, rubber and rice: Smallholder dynamics

This section begins with an account of the gendered division of labor and control associated with different crops. It then outlines land use and distribution in 2010–12 in a selection of hamlets both within and beyond the HD-DS smallholder transmigration zone, and identifies smallholder strategies and concerns regarding oil palm.

## 2.1 Gendered divisions of labor and control among smallholders

The main crops grown in the research area were rice, rubber and oil palm. Each had a distinct gender division of labor, and a different profile in terms of decision making and control of funds.

### 2.1.1 Rice

Customary land holders in the research area, both Malays and Dayaks, grew rice using the swidden method on sloping land, supplemented by small patches of swamp rice. The gender division of labor in rice production followed a pattern common across Kalimantan, Sulawesi, and much of Southeast Asia.<sup>39</sup> Men cleared heavier forest, with women assisting; men and women planted, with men making a hole in the earth and women dropping in the seed; women did most of the weeding, a task made less onerous if they had access to herbicides; and men and women together harvested, threshed and carried the harvest home. Farmers planted rice fields in large collective groups (*royong*) so an entire field could be finished in one day. They reported that they did not guard their fields, citing the need to attend to other tasks such as rubber tapping. Women took the lead in

selecting seeds and managing rice farms, where they intercropped vegetables such as squash, beans and tomatoes.

Since swidden rice was destined for consumption by the married couple and their unmarried children living at home, couples considered it to be jointly owned. Couples planned to divide their fallow swidden fields equally among their male and female children, giving each of them a few plots upon marriage if possible. Married men and women each retained their inherited plots as individual property, even though they worked the plot and consumed the rice together with their spouse and children. This pattern was common to both Malays and Dayaks, despite differences in religion (Malays are Muslim, Dayaks are Christian).

### 2.1.2 Rubber

Beginning in the 1920s, when seedlings from the nearby colonial plantation became available, couples started to plant rubber on some of their fallowed swidden land or in other suitable forest patches. As in other parts of Kalimantan (Dove 1993), they treated rubber as a source of cash that complemented rice production. Couples who were replanting worn-out rubber groves or expanding their holdings in 2010–12 stated they were thinking ahead to the needs of their grandchildren, since their ‘jungle rubber’ took around 20 years before it could be tapped. As with rice land, parents intended to give their rubber groves to their children in equal shares. Couples tapped their own rubber trees, and some men and women also had individual contracts to tap for other people on a share system, seven parts to the tapper, three parts to the owner. Several members of the research team noted that women in their host families

39 Colfer (1981); Atkinson (1990); Tsing (1993); Cramb (2007); Cramb et al. (2009); Li (2014).

were more diligent tappers, but others noted that couples took turns to tap on alternate days, so each had time for other tasks.

Men and women combined tapping with hunting, trapping and collecting wild foods such as rats, bats, snakes, lizards, squirrels, birds, mushrooms, bamboo shoots, ferns and green leafy vegetables for home consumption. In households heavily dependent on rubber tapping income, children were expected to help their parents tap; primary school teachers in the upriver Dayak hamlet of Kerawang began the school day at 10:00 to accommodate this pattern. Some Dayak households in upriver areas built huts in their rubber gardens to combine tapping with the raising of pigs; children in these households had less opportunity to attend school. Hunting and gathering were less common among Malays, mainly because their hamlets were located closer to the Kapuas River and farther from the forest edge, reducing access to the remaining primary forest land. Their main gathering sites were their rubber groves, which doubled as agroforest gardens.

Rubber tapping households were tied to a single trader, to whom they sold their rubber and from whom they took goods on credit. Examination of a rubber trader's record books in the upriver Dayak hamlet of Kerawang showed that married couples did not have separate accounts. Both husband and wife purchased small items for household and personal use (cooking oil, sardines, salt, soap, cigarettes). They also bought rice in varying amounts, depending on the productivity of their swiddens. In previous decades, it was rare for ordinary villagers tapping the average amount of 7 kg per person per day to receive a balance in cash from the trader, after their debts were paid. Hence, couples treated rubber income rather like rice, as part of their shared conjugal commitment to household provisioning. The trader's account books showed that some teenagers still living with their parents had independent tapping blocks, and kept a separate account with the trader so they could finance their personal expenses for items such as shampoo, clothing, cell phones, gasoline and cigarettes.

The team's research in 2010–12 coincided with a boom in the price of rubber: the 2011 price was 224 cents per pound on the Singapore stock exchange, almost four times the price for 2004

(63 cents).<sup>40</sup> The high price of rubber enabled tappers to buy larger items such as tin roofing on credit; enabled some farmers to save with a credit union; and enabled others to buy goods such as motorbikes on credit directly from dealers.<sup>41</sup> Couples suggested they made joint decisions about large expenditures, although there were tensions over some men's excessive spending on gasoline, alcohol and cigarettes. Tensions were no doubt exacerbated as rubber prices fell, and some goods bought on credit were repossessed: the price dropped by 60% between 2011–14 (from 224 to 95 cents per pound).

### 2.1.3 Oil palm

Couples treated oil palm smallholdings as their joint property, whether developed on their own land or allocated through the smallholder transmigration scheme linked to HD-DS. Women were actively involved in oil palm management. Under the gendered division of labor adopted by Dayaks, Malays and incoming transmigrants from Java and NTT, men did most of the harvesting, a task considered too strenuous for women. If the men could not manage this task due to a lack of strength or skill, they hired young men to harvest for them, paying them an average of IDR 125,000 per day (more than three times the provincial minimum wage of IDR 35,000). Each plot had to be harvested twice a month on the date fixed by the schedule for pick-up by the truck that took the fruit to the mill. If a hired harvester failed to arrive, the smallholder missed the truck and might lose the harvest. To attract and keep reliable harvesters, plot owners gave additional incentives such as gas for their motorbikes, energy drinks, cigarettes and lunch. Smallholders with less than 6 ha mainly hired neighbors to help with the harvest. The owners, both women

<sup>40</sup> <http://www.indexmundi.com/commodities/?commodity=rubber>. The price of rice in Indonesia roughly doubled between 2004–11, but it did not quadruple; households that relied on rubber income to buy rice were still ahead. <http://www.indexmundi.com/commodities/?commodity=rubber>

<sup>41</sup> Credit union accounts were held by individuals, not couples. We were unable to obtain records from credit unions on the gender balance of savings and loans. On the rise of credit unions in West Kalimantan, especially among Dayaks, see Endi and Hardoyo (2012).

and men, were active in the harvest process, monitoring the harvesters' work, carrying the fruit to the road side and picking up loose fruit. Some smallholders with more than 6 ha imported male harvesters directly from Java or from West Kalimantan's transmigration zones, and supplied them with lodgings and regular pay. The imported workers were mostly men, but employers encouraged them to bring their wives as it reduced turnover. Local Chinese and Dayaks preferred to hire Javanese migrants, who they thought were hard working. Javanese and NTT transmigrants used kin networks to recruit men from their home areas. Some of these young men married locally, and attempted to save money to buy oil palm plots of their own.

Both men and women performed oil palm maintenance tasks interchangeably: clearing undergrowth, pruning trees, spreading fertilizer, spraying herbicides and using pesticides. Most tasks were completed by the owners working together as a couple, sometimes assisted by children. Some Dayaks and Malays had adapted the labor exchange system they previously used for swidden rice, and formed groups of 3–30 people who worked on each plot in rotation one fixed day per week. These groups could also be hired: the person whose turn it was to receive the day of work could sell the day, for a price roughly equivalent to the local daily wage per person (IDR 40–80,000 in 2011). One group comprised 10 Malay women who routinely hired out their labor. In mixed groups, men's and women's work was treated as interchangeable: a household owed one day of work to the group, which could be performed by the husband, wife or a working-age child. Only smallholders with more than 6 ha routinely hired workers for maintenance tasks. Managing a 2-ha plot took about eight days of work per month (four for maintenance, four for harvest); this left oil palm smallholders with time for other tasks, including rubber tapping in areas where there were still trees to tap.

For reasons noted earlier, almost all the oil palm smallholdings developed through the HD-DS linked transmigration program were registered in the name of men alone. The exceptions were plots registered to widows who were recognized as household heads. Parents had transferred some plots to daughters, as part of

their inheritance. During the research, neither men nor women raised the registration of plots in men's names as a problem. The issue of whose name would be on the certificate of ownership was perhaps rather abstract for them, as in 2011 only about 10% of smallholders in this scheme had paid off their credit and received their land titles. Repayment was slow because oil palm prices were low in the 1990s, and there were irregularities in the company's accounts, which meant the bank's record of payments received did not match the farmers' records of monthly deductions.

Women's exclusion from formal plot ownership could potentially disadvantage them in three ways: a) women's rights to oil palm plots were not secure in case of divorce; b) a husband could sell or mortgage a plot without his wife's consent; and c) husbands who collected the monthly payment for the harvest in cash directly from the co-op could keep the money and spend it without their wives' consent. As in the case of rubber, outlined above, couples stressed that they made decisions about big purchases jointly. The flow of funds from oil palm through men's hands meant that a husband *could* exclude his wife from access to funds, but research team members did not encounter extreme examples. In a group discussion, Malay women smallholders stated firmly they would not tolerate such conduct. As with rubber income, tensions concerned men's excessive spending on gasoline, alcohol and cigarettes, and sometimes on gambling and prostitutes. It was not possible to assess the extent of these problems in a cultural context in which the ideal is conjugal harmony and complementarity, and women kept their grievances to themselves.<sup>42</sup>

An additional implication of registering plots in men's names was that only men were listed as members of the official co-operatives set up by HD-DS as an integral part of its smallholder scheme. Only men could vote in co-op meetings, elect co-op officers or stand for office. Hence, women had no voice in running an institution that played a central role in their livelihoods. Co-ops were the only official

42 The role of idioms of conjugal harmony in masking divisions of labor, ownership and control is discussed in Li (1998).

line of communication between smallholders and the company; they were responsible for managing credit, supplying inputs, organizing transportation and repairing farm roads, and also paid smallholders monthly based on their share of the crop's value

Exclusion of women from co-op membership was a significant failure of the scheme design, a missed opportunity to address a gender injustice by reversing women's marginalization in the public sphere (Siscawati and Mahaningtyas 2012). But women did not comment on their exclusion or mobilize to change it, probably because it conformed to their experiences and expectations from other formal domains of village life in which prominent men dominated in leadership roles, and ordinary men had a role as representatives of their households.

Men and women referred to their income from oil palm as wages (*gaji*) because it was paid on a regular monthly schedule, like the pay of a civil servant.<sup>43</sup> The amount of monthly 'wages' that smallholders received was much reduced by the cost of credit repayment and the charges levied by the co-op for transportation and other fees. Table 2 shows the actual monthly account from one low-yielding smallholder plot, which supplied a net income of IDR 461,893: not enough for a family to live on, if this was their sole source of income and they had to buy all their food. The owners could not afford to buy sufficient fertilizer to raise the productivity from 500 kg/ha/month (6 tonnes per annum). The average yield from the smallholdings tied to HD-DS was significantly higher at 14.5 tonnes/ha per annum, equal to the yield in the HD-DS plantation core. In one HD-DS smallholder unit, 500 smallholders achieved 20.8 tonnes/ha per annum in 2011, equal to the average yield at PTPN-ME. One thousand smallholders achieved 16 tonnes/ha per annum.<sup>44</sup> Some individual smallholders in the hamlet of Trans 2 Bakti Jaya achieved the impressive yield of 30 tonnes/ha per annum, mainly by applying more fertilizer.

43 See also Julia and White (2012).

44 Official data supplied by HD-DS.

**Table 2. A low-yielding smallholder plot, 2 ha, February 2010.**

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

#### 2.1.4 Comparing crops

With oil palm, as with other crops, women were often treasurers, responsible alone or together with their husbands for allocating funds to buy inputs, pay workers, meet credit payments for major items (e.g. motorbikes) and pay for food. As researchers have noted, women's role as household treasurer is a mixed blessing as it recognizes their skills in money management, but also makes them responsible for making scarce funds stretch (Whitehead 1981; Li 1998). Women transmigrants trying to make ends meet from one plot of oil palm commented on their difficulty: rice, vegetables and everything else had to be purchased from funds that were chronically insufficient. At the average yield of 14.5 tonnes/ha per annum, after deducting credit repayments and costs, they had around IDR 1.3 million/month to cover household expenses, including education (see Table 3). They were highly vulnerable to a reduction in the global price of palm oil, since their entire income came from this single source.

Local Malay and Dayak women who could tap rubber were more secure than women who relied only on oil palm in two ways: a) so long as they were diligent tappers, their trader would always give them food on credit; and b) their income was not linked to a conjugal unit. If they were widowed, or their husband seldom tapped, they could still make a living by tapping their own trees or tapping trees owned by others, in return for a 70% share. Older women and men could still do this work, and teenagers of both sexes could tap to make money for their personal needs. The downsides were: a) having to rise early, around 04:00 if the tapping block was some distance away; b) being unable to tap on rainy days; and c) having

returns tied to the market price of rubber. At 2011 prices, the rate of pay and the regular availability of rubber tapping work compared well with the occasional paid work women did in their neighbor's oil palm smallholdings, and it paid significantly better than women's casual work on the plantations [discussed in section three]. The impacts of replacing rubber with oil palm must be considered not only from the perspective of returns to smallholders, but also from returns to paid workers in smallholdings, both women and men. Table 3 summarizes the comparison.

## 2.2 Smallholder land use and access

Women experienced their involvement in oil palm smallholdings either as a boon that helped them meet everyday expenses and invest, or as a burden because they lost more revenue than they gained (from rubber, rice, access to gathered food, etc.). The positive or negative nature of their experience depended on household's assets – how much land they had and the crops they planted. Smallholders in the research area had different degrees of choice in the matter of what to plant. This section discusses land use and access among customary landholders in the upriver area, the middle zone and close to the plantation core, followed by the disposition of land among transmigrants who were fully committed to oil palm. The location of the hamlets discussed is marked on Figure 2. The data are summarized in Tables 4 and 5.

### 2.2.1 Upriver

In the upriver area, smallholders had no option to plant oil palm independently due to lack of access to the necessary road, capital and planting material. Their main decisions concerned the relative emphasis given to rubber versus rice. All farmers in this zone, exclusively Dayaks, had access to customary land, mainly secondary forest fallows and rubber groves planted by their ancestors. In the hamlet of Kerawang in 2010, every household planted swidden rice; almost all owned rubber trees that they tapped themselves. In 26 households, one or more members also tapped for others, mainly for rubber traders who had accumulated large holdings by taking over trees when their clients could not pay their debts. High rubber prices had enabled many villagers to improve their houses, at the very least replacing thatch roofs with tin. The headman was the only person with oil palm; 10 plots he had purchased in the transmigration zone. He planned to pursue negotiations with oil palm companies that promised to build a road in return for access to village land. It was unclear whether fellow villagers would support him, as they were anxious about retaining sufficient land for future generations. This hamlet had previous experience with having its customary land claimed by the forest department and allocated to a logging company. After the company completed its extraction, villagers had

**Table 3. Owner and worker incomes from rubber and oil palm smallholdings, 2011 prices.**

Tapping own rubber trees	Tapping another's rubber trees	Oil palm harvesting for smallholders	Oil palm maintenance for smallholders	Annual returns to oil palm and rubber smallholdings compared
Routine	Routine	Routine	Occasional	2-ha oil palm smallholding yielding 14,500 kg ffb/ha/annum @ IDR 1400/kg = 40,600,000, minus 60% costs (inputs, credit, labor) = IDR 16,240,000/annum, IDR 1,353,000/month
Per day 7 kg @ IDR 12,000/kg = IDR 84,000	Per day 7 kg @ IDR 12,000/kg × 70% = IDR 58,000	Per day @ IDR 125,000	Per day @ IDR 60,000	2-ha rubber smallholding yielding 700 kg/ha/annum @ IDR 12,000/kg = IDR 16,800,000 minus labor @70% = IDR 5,040,000/ annum, IDR 420,000/month
15 days per month = IDR 1,260,000	15 days per month = IDR 882,000	15 days per month = IDR 1,875,000	8 days per month = IDR 480,000	7.5-ha rubber smallholding = (area traded for 2-ha oil palm) = IDR 63,000,000, minus labor @ 70% = IDR 18,900,000/annum, IDR 1,575,000/ month
Men and women	Men and women	Young men	Men and women	

Table 4. Smallholder land ownership and land use, selected hamlets.

	Upriver, Dayak	Middle zone, Dayak	Middle zone, Dayak	Middle zone, Dayak	Middle zone, Malay	Middle zone, Malay	Enclave, Malay	Enclave, Malay	Java/ NTT/ Malay/ Dayak
	Kerawang	Nek Sawak	Sei Kembayau	Suak Pram	Kayu Ara	Sengkuang Dauk	Cempaka	Kuala Buayan	Trans 2 Bakti Jaya
<b>Total households</b>	178	76	149	45	57	180	64	96	377
<b>Oil palm, 2+ plots</b>	1	0	0	19	14	27	17	15	37
<b>Oil palm, one plot</b>	0	27	44	16	15	83	15	15	340
<b>Own rubber</b>	171	58	141	29	41	97	30	16	?
<b>Swidden rice</b>	178	56	133	0	0	0	0	0	0
<b>Landless</b>	0	0	0	3	9	27	21	47	0
<b>Other income</b>	Tapping, trade (21)	Tapping, trade (8)	Tapping, pig raising (138)	Wage work in oil palm	Tapping, trade (10)	Wage work in oil palm	Wage work in oil palm	Trade, wage work	Wage work in oil palm

reclaimed their customary land, and made use of the logging roads to extend their rubber gardens, but they resented the theft of valuable timber, the disruption of streams due to fallen logs and the heavy erosion caused by logging roads that polluted their water supply.<sup>45</sup> This negative experience contributed to their reluctance to allow another corporation to make use of their land.

### 2.2.2 Middle zone

Dayak and Malay farmers in the middle zone had more choices: they had rubber and sufficient land for swidden rice. Some also had oil palm smallholdings through the HD-DS linked transmigration scheme. If they had capital and access to customary land that was near enough to a road, they could also plant oil palm independently. Team members did

not find that women and men, whether Malay or Dayak, had different perspectives on the ideal crop mix. Differences in customary law (*adat*) and religion notwithstanding, Malay and Dayak farming practices and crop choices were very similar. The similarity could be due, in part, to their shared history: they had lived in separate but adjacent hamlets for generations, and the Malays acknowledged that their ancestors had once been Dayak, before Islam arrived.

In the Dayak hamlet of Nek Sawak, 27 of 76 households had one oil palm plot, but were at the tail end of the smallholder scheme, their production hampered by poor roads. In 2010–12, they were enjoying prosperity from the relatively high price of rubber. Nek Sawak had abundant rubber trees, and households without their own trees (18) made good incomes as tappers. Although most households had access to swidden rice land, in 2000–08 most stopped planting swidden rice. Feeling the pinch of the high price of rice in 2008, 56 households responded to the shock by planting rice again in 2009. In the 56 swiddens made that year,

<sup>45</sup> For a similar experience with negative effects from logging in upriver areas in West Kalimantan see Siscawati (2014).

10 harvests failed completely due to a poor burn. Fifteen households planted rubber in their swidden fields, as the price of rubber rebounded and they saw more future in this crop.<sup>46</sup> Some households kept small swidden fields for growing the special varieties of rice used to make rice wine, and for the vegetables grown alongside the rice, but they bought most of their rice from the store. Their farming pattern, in short, was diverse and flexible, as they responded to prices, preferences and local tastes. Women and men expressed an interest in adding oil palm to their mixed farm repertoire, but not to the exclusion of rubber. They wanted to plant oil palm independently, so they would not have to release any of their land to outsiders, and could give some to each of their children.

In a second Dayak hamlet, Sei Kembayau, access to the HD-DS oil palm smallholder scheme was again limited, and road quality was poor. Nevertheless, this hamlet was prospering mainly from the high price of rubber, and from raising pigs: 138 of 149 households had income from this source. They also maintained their rice production: 133 households planted rice in 2010. As a measure of prosperity, note that 60 of 149 households had bought motorbikes, and 52 had generators.

The Dayak hamlet, Suak Pram was situated within the HD-DS oil palm smallholding zone, and the residents had all participated in the transmigration scheme. They had given up much of their land, and received one oil palm plot per household around 1995. Some had managed to accumulate more plots (19 of 45 households), but 16 still had only their initial allocation. Access to remaining rubber trees (29 households) and wage work for neighbors helped them to make ends meet, and also helped households with only one plot of oil palm to hold onto their plot, despite modest returns (see Table 3 above). Flexibility in this hamlet was limited by its location in a sea of monocropped oil palm. No one grew rice, nor did they grow vegetables in their house lots. In the more remote sections of Suak Pram, where Javanese vegetable sellers on

motorbikes did not venture, meals were made from white rice and instant noodles.

In the Malay hamlets of Kayu Ara and Sengkuang Dauk, around half of the households had access to the HD-DS oil palm smallholder scheme, and many still had rubber trees, which helped them to make ends meet. They had no more land for rice, however, and in both hamlets absolute landlessness had emerged, mainly among younger couples whose parents had just one oil palm plot and not enough rubber trees to pass on to them. In Sengkuang Dauk, three couples had divided their single oil palm plot (2 ha) to provide a share to two or three children. Despite the land squeeze, they still divided the land equally among male and female children.

### 2.2.3 Enclaves

The problem of landlessness was most acute among the Malay population in Cempaka and Kuala Buayan, enclave hamlets on the bank of the Kapuas River. They were surrounded by oil palm on all sides, most of it belonging to the HD-DS plantation core. Although members of other ethnic groups often blamed the Malays for failing to hold on to their land, the problem was primarily spatial: Malay hamlets were concentrated on the banks of the Kapuas, on land HD-DS had been determined to acquire for its core plantation and mill. Malay respondents' accounts of how they became landless included: a) the company took their land, but they were not assigned a plot as promised; b) they had one 2-ha plot, but were forced to sell it due to illness or other financial crisis; or c) their parents received only one plot, hence not enough to pass on to their children on marriage.

Landless families in the enclaves experienced the arrival of the oil palm plantation and its associated transmigration scheme as a disaster. They had lost the pride and stability that came from being independent smallholders; they could no longer grow their own rubber and rice, as they did before; they could not work as rubber tappers, because there were no more rubber trees nearby; and they lost access to rubber groves as places to hunt, trap

<sup>46</sup> Farmer assessments of the relative merits of rice, jungle rubber, cloned rubber and oil palm in Sumatra are discussed in Feintrenie, Chong and Levang (2010); Rist, Feintrenie and Levang (2010). The dearth of government, donor or NGO programs for rubber intensification in Kalimantan is noted in Potter and Lee (1998).

and gather. Pollution of the Kapuas River curtailed men's fishing activities, and created an extra burden for women who struggled to find clean water to drink, and worried about whether bathing and washing laundry in the Kapuas would give their children skin rashes. The main source of income for men in this group was loading cargo on the Kapuas, rubber tapping in distant locations where rubber was still abundant or mining work elsewhere in Kalimantan. While men migrated out, their wives stayed in place to anchor households, and relied on casual work on the plantation core. This is discussed in section three.

#### 2.2.4 Transmigrant hamlets

Javanese and NTT transmigrants in the intensive oil palm smallholding zone had no choice about crops: their 2-ha plot was planted with oil palm. They had no inherited customary land for rubber or rice. This group was especially aggrieved by the poor quality of plantation roads and corruption in the company-sponsored co-ops, as they were highly dependent on oil palm for their livelihoods. They did casual work for the plantation in the establishment phase. Some Javanese diversified by growing vegetables and making soy bean cake (*tempeh*) for sale locally, pedaling their produce to each hamlet by motorbike. A few accumulated some capital to invest in buying trucks or starting stores. Although all of them aspired to accumulate more oil palm, so they could live comfortably, educate children and give each child some land, most had not achieved that goal 20 years after their arrival in Kalimantan.

In the hamlet of Trans 2 Bakti Jaya in 2011, where about half the registered population were transmigrants from Java and NTT,

37 households (10%) had accumulated some additional plots of oil palm, while 340 of 377 households had only one plot (Table 4). Most of the transmigrants who stayed in place were stagnant, getting by but unable to provide a land-based livelihood for the next generation.

The team checked which of the original oil-palm scheme participants still held the land 20 years later. Table 5 shows that half the transmigrants had sold up, and one-third were no longer living in the area. Many of them left in the 1990s, discouraged by the low quality of the smallholdings, and the low price of palm oil. They were also intimidated by local Malays and Dayaks who were not satisfied with the terms of land release. Intimidation and extortion became more intense during the 'reform' period after 1998, and still created an atmosphere of violence and insecurity during the team's research in 2010–12.

### 2.3 Summary

To summarize the research findings from the smallholder sector: women and men were actively involved in all aspects of the smallholding economy, and married couples worked together to support their households. Both swidden rice and oil palm cultivation had a marked gender division of labor, and were strongly associated with conjugal units. In contrast, men or women, young or old, tapped rubber, and tapping agreements were made directly between the tapper and the owner of rubber trees. Regardless of the income source, married couples in the main ethnic groups (Javanese, Malay, Dayak) shared access to the proceeds and discussed major purchases, with women often assigned

**Table 5. Ownership status of smallholdings in Trans 2 Bakti Jaya, 1992 and 2011.**

Farmer origin	Number of households in 1992	Retain their plot in 2011	%	Sold their plot	%	Left the area by 2011	%
local	282	204	72	78	28	0	0
transmigrant	218	112	51	106	49	77	35
Total	500	316	62	184	38	77	15

the role of treasurer.<sup>47</sup> The registration of the oil palm plots allocated to ‘locals’ and transmigrants through the Pir-BunTrans scheme in men’s names potentially undermined women’s rights to shared ownership and control. Women were not represented in the co-ops, and the monthly income for sale of the oil palm fruit was paid to men. However, neither transmigrant nor local women in the research area raised this as a problem. For local Malay and Dayak women, loss of income from rubber tapping was a much more serious problem, as it deprived them of the means to earn money independently and to support their families either together with their husbands, or alone if necessary.

Women and men did not express different preferences concerning the mix of crops in their fields. The actual mix was shaped by the situation of each hamlet (whether oil palm reached it), and also by household assets (whether they still had access to rubber and rice land outside the oil palm scheme). ‘Locals,’ especially Dayaks in the upriver hamlets who still had abundant land, were able to adapt their crop mix flexibly in response to changing prices, preferences and opportunities. In the middle zone, where oil palm smallholdings took up most of the space, Dayaks and Malays no longer planted rice (or the vegetables typically intercropped in rice fields), and they had reduced access to incomes and collected foods from rubber groves.

In 2011, local smallholders who still had access to rubber were experiencing relative prosperity due to high rubber prices. They were reluctant to enter new agreements with companies that demanded an exchange of at least 7 ha for 2 ha of oil palm. Not only would they make less money (IDR 1.4 million versus 1.6 million per month, Table 3), but they would be unable to give land to the next generation. Hence, their preference was to engage with oil palm as independent smallholders, adding the crop to their repertoire gradually, as road access improved.

Transmigrants with just one plot of oil palm were mostly stagnant: holding on, but not prospering. The people who lost most from the arrival of oil palm were those who ended up landless, especially residents of Malay enclaves on the bank of the Kapuas like Kuala Buayan, which was surrounded by oil palm on all sides. Landless women recruited from these enclaves did much of the casual day labor on the plantation core. Their urgent need for work enabled the plantations to pay them very low wages, and to shift away from a stable workforce anchored in household units resident in the plantation core toward more ‘flexible’ arrangements. Tracing these gendered shifts is the focus of the next section.

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<sup>47</sup> The team did not collect sufficient data on the internal dynamics of NTT transmigrant households to report here.

# 3 Gendered labor on oil palm plantations

Both plantations in the study employed a mix of permanent workers (who provided the stable workforce and lived mostly in plantation housing), as well as contract, casual and part-time workers. Migrant men were dominant among the permanent workforce, while landless women recruited from the enclaves predominated among casual workers. This section examines the labor arrangements in the two plantations, traces the shift toward more casual work during the past decade and assesses returns to labor and work experiences for migrants and ‘local’ women and men.

## 3.1 Gendered labor on the state plantation, PTPN-ME

### 3.1.1 Permanent workers

When it was established in 1980, PTPN-ME recruited workers directly from Java through a formal program organized by the Department of Labor. It did not recruit singles, only married couples. Unlike the transmigration program that subsumed women’s work and ownership rights within the household unit (discussed above), PTPN-ME hired married women as permanent workers, with the same pay structure, benefits and pensions enjoyed by their husbands. The company

provided a wooden house per family, child care facilities and a ration of rice for the couple and up to three children.

Couples interviewed in 2011 appreciated the dignity afforded by their living conditions and their worker status, which they described as comparable to being members of the civil service. They received regular wages, and were subject to a bureaucratic regime that was hierarchical but predictable, and offered them far more security than they could find in Java at the time of their recruitment. Their experience of Java was “too many people, not enough work,” and wages barely sufficient to live from day to day. One couple working for PTPN-ME received IDR 65,000 per month in 1983, from which they saved IDR 30,000 because their cost of living was low. The company took them once a month by boat to Tayan for shopping, and later by road to Meliau town. Overall, their experience was of an institution that took care of its workers. They often mentioned the medical attention they were entitled to receive in the plantation clinic or PTPN hospital, and the subsidy for higher education if their children entered state universities. They had the option of returning to Java after the expiry of their initial 5-year contract, but most of them chose to stay at the plantation until their retirement 30 years later.

**Table 6. Permanent workers at PTPN-ME in 2010, by ethnic group and gender.**

	Total	Javanese	Batak	Dayak	Malay	Other	Men	Women	Women %
Office, technical	170	81	47	24	18	0	143	27	16
Field workers	713	540	28	86	48	11	442	271	38
Total	883	621	75	110	66	11	585	298	34
Ethnic group %	100	70	8	12	7	1			

As Table 6 shows, PTPN-ME recruited few Malays and Dayaks from the surrounding area. Managers were predominantly Batak, reflecting the colonial-era concentration of plantation agriculture in their ethnic homeland of North Sumatra. Fieldworkers were mainly Javanese. Local Malays and Dayaks resented their exclusion from permanent plantation jobs, which they felt breached the plantation's commitment when it took over their customary land (Dove 1986). Several plantation managers expressed frustration that 'locals' continued to demand jobs for which they were not qualified. They had been alarmed in 1998 when Dayak and Malay villagers blockaded the plantation roads, demanding that PTPN redress grievances by returning their customary land, or providing them with smallholdings. In 2010–12, the research team observed little social interaction between plantation workers and their 'local' neighbors.<sup>48</sup> While Javanese men who had worked on the old colonial-era rubber plantation at this site had married local Dayaks and Malays and moved into the neighboring communities, Javanese couples recruited by PTPN-ME who began to retire after 1998 did not follow this pattern. They preferred to buy land in the province's transmigration areas where they could live among fellow Javanese, and feel more secure.

The permanent workforce at PTPN-ME had aged in place: the mean age was 46, and the mean number of years of employment was 20. No new permanent workers had been recruited since 2003. Instead of replacing its aging labor force by recruiting couples, as it had in the past, PTPN-ME shifted to recruiting men and women as individuals, based on contracts for particular types of work. It is difficult to know how many contract and casual workers were present at any time, since PTPN-ME did not keep a central record. An estimate can be derived from the number of workers needed per hectare. The total plantation area was 5640 ha (3814 in production, the rest in the process of replanting). At a ratio of 1 worker per 4 ha, the required number of workers

would be 1410.<sup>49</sup> This means that in addition to 883 permanent workers, PTPN-ME may have employed up to 527 contract and casual workers.

### 3.1.2 Casual and contract workers

One form of contract was the formal, fixed-term contract or PKWT (*perjanjian kerja waktu tertentu*). In 2010, PTPN-ME used these contracts to employ 150 young men as harvesters, to replace the older male workers who – even if not yet retired – could no longer do this strenuous job. Harvesting older palms required attaching two or three poles to a curved harvesting knife (*egrek*) to reach the fruit, and injury was common. PKWT were not entitled to pensions. If their wives and children joined them, they were not entitled to use the plantation health center, nor were their health care costs covered. These men lived in plantation housing, since there were many vacant houses following the departure of retirees. But they did not feel part of the plantation system. Most were Javanese recruited from within Kalimantan. Many were sons of current or retired plantation workers, who aspired to replace their fathers in permanent, full-time jobs. Their pay scale was the same as permanent workers, but they resented their reduced status: “they just want to use us then throw us out” was a common refrain.

Informal subcontracting had emerged as a profitable, self-help solution to the shortage of male harvest workers. Permanent workers recruited young men from Java, and claimed they were 'nephews' who wanted to help out. They also recruited local men to help at peak harvest periods. Since the permanent harvesters were paid a premium for each kilogram above their basic quota, the workers profited from these informal sub-contracting arrangements and paid a share to their supervisors.

PTPN-ME recruited women casual workers from among the wives of PKWT and from the

48 For an analysis of interactions between plantation managers and Dayaks in West Kalimantan in 1985, see Dove (1999).

49 Budidarsono, Susanti and Zoomers (2013) calculate that 91 labor days are needed per hectare, producing a ratio of roughly 1 worker per 3 ha. Cramb and Curry (2012) use the 1:3 ratio, citing Barlow et al. (2003). World Bank and International Finance Corporation (2011) cites industry estimates of 1:5. Hence, the mid-point of 1:4 is used here.

nearby enclaves. The women worked exclusively in maintenance tasks, supplementing the labor of the original group of permanent women workers. The casual workers were classified as BL (*buruh lepas*, workers who are let go), initials also glossed informally as *buruh luar* (outside workers), or *buruh liar* (unaffiliated or 'wild' workers). Remarkably, the company kept no central record of their number, giving autonomy to the field supervisor to recruit them and pay their wages. Since these women were treated as both casual and part time, they did not receive health care, pensions or other benefits. They were paid a wage of IDR 20,000 for a 5-hour work day (07:00–12:00), although supervision was lax and some workers were home by 10:00. As with male harvest workers, some women were also informally subcontracted by permanent workers to complete tasks for which the permanent worker received a bonus. If they were family members, they were unpaid (e.g. women who collected and hauled fruit to speed up the work of their harvester husbands).<sup>50</sup>

A different set of casual workers was employed by contractors to carry out construction, replanting and other non-routine tasks. If recruited from nearby, they went home at night, but many lived in empty plantation houses for the duration of their contracts. In 2011, casual contract workers included some women: 30 Malay women at the seed nursery; a mixed group of Batak and Dayak women cleaning ditches alongside the roads. Most contract workers were men, mainly Javanese recruited directly from Java or West Kalimantan's transmigration zones. They worked on land preparation for replanting and house construction. A group of 30 men from Madura worked on road repair. These men did not bring their families with them. Some lived in tents erected near their construction site. Their goal was to earn as much money as possible and keep their expenses low, so they could pay off debts, take money home to their families or save for projects like buying a motorbike.<sup>51</sup> They compared wage rates on different tasks, and also evaluated their own strength. A young man in good health could make IDR 150,000 per day doing the strenuous work

of land preparation for replanting, but workers paced themselves to avoid injury and exhaustion. The company took no responsibility for their medical expenses if they were sick or injured. For emergency assistance and daily social interaction, they depended upon their co-workers, among whom they often had kin. Some contract workers formed social ties with permanent workers, usually based on shared place of origin, but others were quite isolated. Their main social contact outside the work group was at the informal stores run by plantation residents, where they bought food and charged their cell phones.

After 2003, as the plantation core began to hollow out, permanent workers who had been recruited as couples were replaced by individual workers on short-term and casual contracts, without job security. Tasks that were always segregated by gender (men harvesting, women in maintenance) began to be additionally segregated by form of contract and rate of pay. Women daily casual workers were paid the least; from a management perspective, they were: a) unskilled; and b) in abundant supply, since the density of plantations in Meliau had created a pool of landless workers squeezed into tiny enclaves located close by. These conditions did not pertain in the 1980s, when local men and women still had access to land, and were unwilling to work for the plantation on a casual basis: they only wanted secure, permanent jobs, of the kind held by imported Javanese (Dove 1986). By 2000, landlessness in the enclaves was chronic, and landless women could be readily recruited. Landless men were still locked out, however, because of a perception among the largely Batak managers that they were less diligent or reliable than Javanese. Conveniently, young Javanese men were also readily available in Kalimantan by 2003: they were the sons of Javanese plantation workers and sons of transmigrants whose families had been allocated only 2 ha of land. Hence, Dayak and Malay men from the enclaves were not recruited as PKWT, the best paid contract job available. Gender, ethnicity and age played a role in defining access to work and rates of pay for different segments of the population. There were still good jobs at PTPN-ME, but only a select few had access to them. For most workers, the conditions of work were precarious, and for women casual workers in particular, the pay was very low.

50 The use of unpaid family labor to meet quotas is noted in Wakker (2005), Marti (2008) and Sinaga (2013).

51 Diverse migrant trajectories and goals are discussed in Pye et al. (2012).

### 3.2 Gendered labor in the private plantation, HD-DS

For the initial work of establishing the plantation core and the smallholdings in 1990, HD-DS relied on casual workers from among transmigrants on the attached smallholder scheme. These workers needed income while waiting for their own oil palm to yield. The company gradually recruited core male workers from among people who arrived looking for work, many of them Javanese ex-transmigrants already in Kalimantan, sons of PTPN workers or spontaneous migrants from Java and Sumatra. Women workers in the maintenance section were almost all recruited on a casual basis from the enclaves, and from among the wives of men in the plantation core. HD-DS employed 358 permanent workers in 2014. Using the estimate of 1 worker per 4 ha applied above, the plantation core of 3834 ha needed 959 workers. Hence up to 600 workers were employed on a casual or contract basis. Permanent workers included 119 male harvesters, 66 field supervisors (mainly male), and only 35 female maintenance workers.

Management and supervisory staff were quite stable, with employment terms of 5–23 years. There was high turnover among harvesters, with 79 of 119 (66%) hired since 2010. Some core workers complained about the poor quality of company housing and water supply, which were far below the standards at PTPN-ME. They also complained about the poor quality of management, which they attributed to nepotism. They reported that some senior managers had only primary school education, and were not competent to handle complex technical and social issues. Mill workers reported that some of their co-workers had insufficient education and training to handle dangerous machinery. Based on comparison with other plantations, many workers believed the company was inefficient, corrupt and poorly run. Nevertheless, some made a reasonable living, saved enough to educate their children and expected to receive a pension if they stayed on until they retired.

A stormy period in labor relations erupted in 2011, causing workers to question whether they could continue to survive as employees. At issue was the deepening trend toward hiring casual male labor, and a further reduction in the wages and working conditions for women who were already classified as casual. These changes are

explored in the next section, which pays particular attention to workers' experiences and their differential capacity to organize in response. The subsequent section examines the spatial and ethnic dynamics of gendered labor recruitment, as the company shifted toward greater reliance on male migrant harvesters, and fired its local recruits.

#### 3.2.1 Changing labor arrangements and worker response

The changes discussed in this section were initiated in 2011, when the owner of HD-DS fired the general manager and his senior assistants. The new general manager had previous experience working on plantations in Malaysia. He was tasked with making the plantation more efficient. The new general manager tightened the labor system, disrupting the accommodations through which workers had adapted to their situation. Each group of male and female workers was affected differently by these changes. A review of each of the gendered tasks shows how workers understood the value of their labor, and the particular challenges they faced. The core problem, as workers recognized, was their position as a disposable labor force that could easily be replaced.

**Male harvesters.** Most were permanent workers living in plantation housing. These men were especially aggrieved by the changes. Under the new rules, they no longer received a base pay for meeting their daily target, plus a premium for extra fruit. Instead, they were paid a flat rate of IDR 55 per kg. The change enabled the company to pay less to harvesters who failed to meet their targets, often older men. It also devolved all the risk onto the workers. Difficult terrain, dry weather, small or sparse fruit, and days of work lost due to illness or injury translated directly into lost income. Younger harvesters recognized they could potentially earn more under the new system, when conditions were good and fruit abundant (see Table 7). But they too rejected the change because it had the effect of demoting them to casual status. If they had no basic wage, how would the company calculate the annual pay raise they were supposed to receive, or their annual bonus? Would they still be entitled to pensions? What would happen to them if they were sick or injured? Did they still qualify as permanent workers under the Manpower Law (2003), a status that gave them a definite set of rights and protections? They had many questions about the new system, and felt the company's refusal to clarify was a bad sign.

A few months into the new system, harvesters went on strike for three days and demonstrated outside the office complex. The managers made verbal promises about paid sick days, but these were not followed up. The harvesters said the company did not take proper care of them as workers. Some 'local' harvesters recruited from the enclaves left their jobs in the core, and pieced together income by harvesting for smallholders and tapping some remaining rubber. Fifteen permanent harvesters left in one day, enticed away as a group by another plantation that heard about the turmoil and sent three buses to pick up the workers, together with their families. Most harvesters stayed in place, waiting to see if conditions would improve before they took the decision to move on. Significantly, the company renewed its efforts to recruit new harvesters direct from another Indonesian province, Nusa Tenggara Barat (NTB), driving home the message that the current work force could be replaced.

**Male loaders.** One job young men recruited from the enclaves could obtain on the plantation was that of loaders (*hokmen*). They hurled the fruit bunches, each of which weighed 20–30 kg, from a pile by the roadside onto the truck that took the fruit to the mill. Under the new system, the company proposed to change the loaders to a kilogram-based system with no base pay. This meant the loaders would not be paid for days when the truck broke down, and would lose income when transporting small loads. "The company wants us to do charity work, work for free," said one loader. The loaders were the only group to reverse the changes through a successful strike action. For three days in 2011, all 24 *hokmen* who manned the company's 8 trucks stayed home, and achieved a reinstatement of their basic pay. Their success was linked to the strategic nature of their work. Without loaders, heaps of harvested fresh fruit bunches rotted by the roadside and the mill had to close, causing significant, direct and immediate loss to the company. None of the women maintenance workers had this leverage.

**Female maintenance workers.** From the beginning, the plantation's maintenance workers were almost all landless women recruited from the enclaves, a cheap, captive labor force conveniently at hand. Some of them described their casual status in positive terms, as a sign of freedom (*bebas, tidak terikat*), but they were only as free as their need

for income to support their families allowed. They had to supply their own equipment – buckets, sprayers, gloves, boots and knives. They accessed work through a personalized process, namely by approaching work group supervisors, who were often their neighbors. Access was not guaranteed: they could be turned away if a work group was full, or if the supervisor was not inclined to 'help' them. Workers who were not on good terms with the supervisor, or refused to pay kick-backs, were assigned the heaviest, least lucrative tasks. Their access to credit at the company store depended on their supervisor's willingness to stand guarantee: each entry in the credit book had the name of the supervisor alongside that of the worker. Much was at stake in these relations, and long-standing tensions were intensified as women tried to negotiate the new labor arrangements.

The main change for women casual workers was a shift from a daily wage of IDR 35,000 (@ 24 days/month = IDR 840,000) plus overtime to a piece rate, or to a daily wage based on meeting a quota, with no overtime. Under both the piece rate and the quota system, they were negatively affected by the late arrival of the trucks that transported them to their work sites, and by a new rule that they had to report to the main office before heading off to work. The result was that they wasted 1–2 hours each morning, and had to continue working in the heat of the day. As one woman accurately observed, "the company wants to claim our hours, but it isn't reasonable. The return we get doesn't fit the work we do." There was a gendered dimension to the women's sense of grievance, as their supervisors were mostly men who did none of the heavy lifting, but just stood around watching. The gendered hierarchy was also reflected in the ways workers moved around the plantation: male supervisors and drivers sat in the cabin of the trucks, while women stood in the back.

Women who worked clearing undergrowth around the palms with a parang (*babat, piringan*) were switched from a day rate to a piece rate of IDR 700 per palm, and lost out heavily. Since much of the plantation was overgrown, the most they could clear per day was 10 palms, giving them an income of just IDR 7000. Workers could be assigned this unpopular and unrewarding task at any time, on a supervisor's whim or when their usual task dried up for some reason. Typically, this work was done by older women, the most vulnerable group.

Women who picked up loose fruit (*brondolan*) and loaded it into buckets preferred the new system. Their pay was also switched to a piece rate. On a good day, strong workers could increase their pay, but they absorbed the risk of finding few loose fruit. Their output per day ranged widely, from 2 to 60 buckets weighing 10 kg, paid at IDR 2200 per bucket. If they collected 30 buckets, they could make IDR 66,000 per day. Women considered gathering *brondolan* the least strenuous of the female tasks: “If there is a lot of fruit I can sit down for a while to fill the bucket,” one worker observed. But they still had to carry heavy loads from the field to the collection point: 50 kg at a time, 4 buckets on a shoulder pole, one in the hand. They were also at risk of sexual harassment and gossip as they worked alone all day with a male harvester, unless he happened to be their husband. Women workers who took their school-age daughters to work with them during school holidays kept the girls close.

Women tasked with spreading fertilizers were switched to a fixed daily rate based on meeting a target, with no overtime. They calculated that the loss of overtime reduced their average monthly income from IDR 1,200,000 to IDR 840,000 (24 days @ IDR 35,000), a loss of about 30%. The work was extremely strenuous. Each fertilizer worker had to spread 350 kg per day, 2 kg per palm on 175 palms. Their stock was loaded into 7x50 kg baskets. Two women carried each of these baskets – 14x50 kg, 700 kg in total – from the road side into their respective work areas. From there, the women loaded the fertilizer into smaller buckets of 18 kg slung from the shoulder, enough for 9 palms. The task was especially slow and exhausting on hilly terrain, when they had to climb up and down multiple times to refill their buckets: “Sometimes when I’m carrying that fertilizer I feel I just cannot do it anymore, I’m so worn out... I get a headache from the smell. It makes my eyes swell up, and I cry until night.”

The workers who sprayed chemicals were also switched to a fixed daily quota: 12 spray tanks. Rain was an additional risk they had to absorb, as they were sent home without pay on days when it was too wet to spray, and received no pay for half-finished tanks. They often worked for less than a full month because the company ran out of chemicals. They were especially vulnerable to injury. In addition to the strain

of carrying buckets of water up from the river, carrying the tanks on their backs and continuous pumping action with the right arm, they suffered burns where the chemicals touched their skin. They also experienced damage to their lungs, manifested in a burning sensation, shortness of breath and chronic coughing. These problems have been traced to the chemical gramaxone (Paraquat), banned in many countries, but still commonly used in Kalimantan (Tenaga Kita and PAN 2002; Julia and White 2012). The women did not wear masks, which they said made it impossible to breathe. Instead, they tied scarves loosely around their mouths and noses. The effects of the chemicals were severe enough to disable women, and stop them from working after 15 years. In response to the health risks, the company provided the women with a tin of milk per month – a paltry boost to their strength, and no cure for lung damage. Besides, the supply of milk was erratic. In 2011, the workers had received none for several months. They feared it had been stopped under the new labor system, further evidence of the company’s lack of care.

**Female workers’ responses.** The workers’ attempts to push back against reductions in their pay were limited by their casual status, which robbed them of a clear sense of their rights. It was also limited by the non-strategic nature of oil palm maintenance work: it could be delayed without the company suffering too much loss. The women did not have a framework for organizing, hence their attempts at a collective response were small in scale and ineffective. A group of six sprayers from one enclave, supported by their supervisor, went on strike for six days to protest against the new rules, but the company threatened to send thugs to intimidate them. Another group of women workers inquired at the office about the withholding of 5 days from their December pay: “If we are paid by the day, it should really be per day, how can they say it was 22 days in December when we worked 27? They say there is no money, but we are just claiming our rights.” These women were quite sure the company had stolen from them. Changes in the pay structure for different tasks were not so easy to classify as theft.

The women felt aggrieved, but they were acutely aware of their disposability and their lack of options. “We have to hold on, where else would

we go?” one worker lamented. Her comment referenced two gender-specific elements of these women’s situation. First, women in the enclaves tended to stay in place, as they valued kin and community ties, and wanted to keep their children in school at least to the end of elementary. Hence, they anchored their households, while their husbands and sons migrated out to search for work elsewhere: harvesting oil palm for smallholders, working as rubber tappers or doing short-term contract work on plantations, in construction or in mines.<sup>52</sup> Second, women were very short of alternative work opportunities. The surrounding area was saturated with oil palm leaving them with no space to grow food, and no chance to tap rubber, previously a key source of income.

Even young women with high school education were reduced to casual day labor on the plantations, some of them commuting daily by road or river from the nearby town. Although the work was dirty, dangerous, heavy and poorly paid, it was better than their alternatives: waitressing for even lower pay or sex work, which was better paid but high risk. Although girls in Sanggau district outcompeted boys at both junior and high school levels, boys with high school education held 78% of the formal sector jobs. Only 2% of the district labor force was employed in manufacturing; of the few manufacturing jobs available, 82% were held by men.<sup>53</sup> The dearth of jobs for young women contrasted with the timber boom of the 1990s, when women from upriver Malay and Dayak communities worked in plywood factories in Pontianak for a few years before they married. Some women in the research area looked back fondly on this period of adult autonomy and city experience. Oil palm, in contrast, did not generate downstream jobs for women.

52 The pattern of women remaining in the enclaves working for the plantations on a casual basis, and/or engaged in sex work while men migrate out is also described in Marti (2008) and Sirait (2009).

53 BPS Sanggau Jumlah Peserta Ujian SMP dan Yang Lulus Menurut Kecamatan (2012); BPS Sanggau Jumlah Penduduk Berumur 15 Ke Atas Yang Bekerja Menurut Tingkat Pendidikan Yang Ditamatkan (2012); BPS Sanggau Banyaknya Usaha Menurut Jenis, Jumlah Tenaga Kerja dan Nilai Investasi Tahun (2011/2012); BPS Sanggau Penduduk Berumur 15 Tahun Ke Atas Yang Bekerja Menurut Lapangan Usaha Utama (2012).

Forced into plantation work by the lack of alternatives, the best women workers could do was to attempt to defend themselves in small ways. One woman summed up her approach thus: “If we’re not smart about it, they will tire us out.” Her friend remarked that defending themselves was increasingly difficult: “The rules are tighter, wages are tighter. We cannot get ahead, we are really suffering.” Another woman added that the system was out of balance: tighter rules would be fine, if the pay increased to match. She emphasized the extremely heavy work they had to do, so hard it gave them pain. She was especially aware of their disposability because of her mother’s experience. When her mother stopped work due to injury, a manager responded to her distress with a callous remark: “If you’re too old to work, you should stop, we only need workers.” Young women’s self-defense took an expressive form. They rejected the layers of baggy clothing worn by older women to protect their bodies, and came to work in fashionable jeans and T-shirts. They spent their breaks listening to Korean pop music on their cell phones. Plantation work was not the future they had anticipated during their school days, and they would definitely have preferred to be somewhere else.

### 3.2.2 Migrants versus ‘locals’ in labor recruitment

As noted earlier, company managers in PTPN-ME and HD-DS regarded women workers as unskilled, and since the enclaves were full of landless Malay and Dayak women who needed work, the women were self-disciplining: they presented themselves for work every day. Conversely, managers viewed men recruited from the enclaves as lazy and unreliable. Initially, HD-DS was flexible, recruiting any male workers willing to work. In 2011, managers tasked with increasing the company’s efficiency complained about poor discipline among locally-recruited Malay and Dayak harvesters. They noted that local harvesters were often tempted away to do harvest work for smallholders, who paid twice as much per kilo (IDR 100–150/kg, compared with the HD-DS rate of IDR 55). The result was over-ripe or un-harvested fruit, producing a low yield per hectare (and low bonuses for field supervisors and managers).

**Table 7. Summary of changes in labor arrangements 1980-2012.**

	PTPN-ME 1980-2003	PTPN-ME 2003-12	HD-DS 1990-2010	HD-DS 2011-12
Male harvest workers	Permanent core workers Provincial minimum + bonuses	Aging core + contract harvesters Provincial minimum + bonus = IDR 2,500,000 (2010)	Core paid daily wage of IDR 35,000 based on quota + premium Range IDR 2-2,500,000/month	Core? IDR 55/kg @ 1000/kg/day x 24 days = IDR 1,320,000 (range IDR 660,000- IDR 2,640,000)
Female maintenance workers	Permanent core workers Provincial minimum + bonuses	Aging core + BL Core earn provincial minimum + bonuses = IDR 2,500,000 BL earn IDR 20,000 for 5-hour work day x 24 days/month = IDR 480,000	Casual. 7-hour day = IDR 35,000 x 24 days/month = IDR 840,000+ overtime = approx IDR 1,200,000	Fertilizing and spraying, daily quota, no overtime IDR 35,000 x 24 days/month = IDR 840,000 Clearing IDR 7000 x 24 days = IDR 168,000 Loose fruit 30 buckets x IDR 2200/day x 24 days = IDR 1,584,000

Migrant harvesters were also tempted by the prospect of harvesting for smallholders at the higher rate per kilogram, but did not want to lose their jobs in the plantation core that provided a steady income and free housing. Besides, they had limited access to casual jobs outside the core, as they did not own motorbikes or have contacts in surrounding villages. The core plantation housing where they lived was located well inside the plantation borders, marooned in a sea of palms. These were precisely the considerations that led colonial plantation managers to favor migrant workers over 'locals': the idiom was one of native laziness, but the fact was that migrants were wholly dependent on the plantation, hence more easily disciplined (Alatas 1977; Stoler 1995; Breman 1989). In 2014, "locals" comprised 22 of 119 harvesters (18%) and 130 of 358 (36%) of the total permanent workforce.

During the main research period 2010–2012, company managers were actively firing their "unreliable" local harvesters. They were replacing them with migrant harvesters from Nusa Tenggara Barat (NTB), especially valued because of their previous experience working as oil palm harvesters in Malaysia. Male migrant workers from NTB and Nusa Tenggara Timur (NTT) arrived periodically at the plantation office in groups of 10–30, accompanied by a labor broker who attempted to place them in return for a fee. These attempts could fail when brokers had promised

the workers that their passage would be free, and the company refused to reimburse travel costs. Workers caught in this situation could accept the debt, try a different company or return home. Although Indonesia has rogue brokers, and cases of coercion and entrapment sometimes dubbed 'modern slavery,' successful brokers depend upon maintaining a good reputation among potential workers in their home areas. Cell phones enable information to circulate freely, limiting abuse (Lindquist, Ziang and Yeoh 2012; McKeown 2012). HD-DS had no means to lock down its plantation fields or houses to prevent workers from absconding.<sup>54</sup> It did not hold the workers' identity cards, a common practice to guard against worker flight. Indeed, migrant workers, wise to company practices, left their identity cards at home, and brought only photocopies with them. A group of disgruntled workers acting collectively could also put up fight. In 2010, a group of 23 NTT workers threatened to riot if HD-DS staff did not permit them to move to another plantation.

54 Colonial plantations were locked down at night, and workers were kept deliberately isolated from the surrounding population. Even police and government officials were not permitted to enter (Breman 1990). A contemporary case of entrapment was reported in <http://www.businessweek.com/articles/2013-07-18/indonesias-palm-oil-industry-rife-with-human-rights-abuses>.

**New Recruits.** HD-DS managers found that small-scale recruitment via personal networks was the most effective approach. In March 2011, eight harvesters were recruited by telephone by an NTB worker who had started work at the company two years previously. Each worker borrowed IDR 850,000 from kin or village moneylenders toward their travel costs. They had to repay with 100% interest, since ‘repay double,’ (*kembali dua*) is the standard loan system in NTB (Lindquist 2010). These men had all worked previously in Malaysia and left after three years when their visas expired. They were not willing to take the risk of remaining in Malaysia or returning illegally. To return legally to Malaysia, they had to pay a formal labor broker to prepare their passports and make arrangements. The costs were high: IDR 4.5 million for work in oil palm or IDR 6 million for work in construction, doubled by interest on borrowed funds. Lacking capital of their own, and unwilling or unable to borrow the necessary sums, these eight men opted to try their luck in Kalimantan instead. They recognized that their earnings in Kalimantan would be lower than in Malaysia, but still hoped to accumulate funds to finance the projects they had in mind. For some, the goal was to save money to finance a return to Malaysia. One older man wanted to pay for the university education of his youngest son, who was finishing high school. “If we stay in NTB,” he said, “the most we can earn is enough to get by from day to day. The daily wage is only IDR 50,000. What we are looking for here is the possibility to earn more than we spend, to get ahead.”

All but one of the eight men from NTB was married, and all were landless or near-landless. Their wives worked in NTB as agricultural laborers, the only work available if they stayed at home. The women’s alternative, if they met the age and other criteria, was to leave their families to work as maids in Saudi Arabia (Silvey 2007; Lindquist 2010). The men hoped their own work in Kalimantan would enable their wives to stay at home. Their target for income at HD-DS was IDR 3 million per month. There were plenty of palms to harvest, but the palms were tall and the fruit undersized, so the men were not sure how many kilograms they could harvest per day. They also had to pay various start-up costs. Unlike in Malaysia, where their employer provided good, fully equipped houses, HD-DS provided the bare minimum: a two-room unit in an old wooden

barrack building shared between four workers, without mattresses, pillows, mats, lamps or kitchen equipment. The company supplied electricity for one light bulb, but the water situation was poor. The men were given one drum, which a company truck filled every two days with river water. It was polluted and insufficient for four people who had to use it for drinking, cooking and bathing. They had to buy their own harvesting tool (*egrek*) for IDR 800,000. For a further IDR 400,000 they could buy a wheel barrow to transport fruit from the field to the road side. The costs were deducted from their pay at IDR 100,000 per month for each item. Lacking capital on arrival, they had no choice but to buy their goods, equipment and food on credit from the company store.

Despite the bleak living situation and uncertain wage prospects, the new recruits were encouraged to stay by the example of the worker who had recruited them. This man had been at the plantation for two years, and in that time had set himself up and made progress. He had his own equipment. He had also bought a motorbike and formed some links outside the plantation core, enabling him to take on extra work harvesting for smallholders on his days off. His success suggested to the newcomers that it was probably better to stay in one place and adapt to it, rather than move again and start over, incurring more expenses. But in the meantime they were not remitting any money to their wives, and worried about how their families were surviving. They also worried about whether their wives would remain faithful to them, in view of the long separation and absence of funds. NTB has a notoriously high divorce rate and a telling name, *jamal*, a contraction of *janda Malaysia* (Malaysia widow) for women who are left behind by their migrant worker husbands (Lindquist 2010). These left-behind wives are another social group impacted by oil palm, whose situation merits research.

### 3.3 Summary

By the time of the team’s research in 2010–12, PTPN-ME had abandoned its former practice of recruiting married couples into permanent, well-paid jobs, and relied on an increasingly casual work force. The status of the core workforce at HD-DS, always more transient, became more casual with a set of changes in 2011 designed to increase efficiency

and reduce costs. Both companies recruited landless or near-landless Malay and Dayak women from the enclaves to work on a casual basis for very low wages, and provided no medical benefits or protective equipment. Both companies preferred to recruit male migrant workers as harvesters, a move justified by ethnic stereotypes, but also supported by local labor dynamics. 'Local' men, especially young men with good social networks in the surrounding communities could do harvest work for smallholders for good pay, while migrant men without local networks were tied to the plantation and could be paid lower wages. Local men who were not employed in oil palm, either by smallholders or on the plantations, had to migrate out in search of work elsewhere. From the plantation perspective, 'efficiency' was achieved by recruiting women and men from spatially distinct labor pools, contracting them on different terms and minimizing the obligation to support workers' households.

For women and men, migrants and 'locals,' sustaining families under precarious work conditions was a huge challenge. It took a toll on the health and dignity of individuals, and undermined social relations and possibilities for extending care. How long male migrant workers stayed away from home depended on their family situation, and also on their goals in migration. Some had specific financial goals, e.g.

to pay off debt. For others, prospects for work and livelihood in their home areas were so bleak that they expected to be away from home more or less permanently. They saw their lives in terms of suffering, mitigated only by the satisfaction of earning sufficient money to make the sacrifice worthwhile. Like managers, workers at both plantations were obliged to think about efficiency, make calculations and worry about risk: the risk of injury, the risk of taking on debt to pay for travel, the risk their families would fracture and the risk that no matter how hard they worked they would not get ahead, but merely make enough to survive from day to day. Unlike PTPN-ME workers in the 1980s and 90s, contemporary workers had to bear all of these risks themselves, yet they had limited control over their work environment, and scant means to contest or change it. Workers struggled to protect themselves and sustain their families in isolation, sometimes in competition with fellow workers, and often in ignorance of their fellow workers' plight. Women workers from the enclaves who reported they cried at home every night with injury, exhaustion and quiet fury at their abuse felt they had no way out. It did not occur to them to ally with the male migrant harvesters living in the plantation core, from whom they were separated by gender, age, ethnicity, place of origin and place of residence. They worked for the same plantation, but had no communication at all.

# 4 Discussion

As this study has demonstrated, the social impacts of oil palm are diverse and need to be disaggregated to account for the different experiences of women and men, old and young, 'locals' and migrants, and those with and without access to land and capital. In the research area, some groups gained from their engagement with oil palm, while others lost out. More specifically, some oil palm smallholders prospered, and others were impoverished by their loss of access to rice and rubber smallholdings. At 2011 prices, incomes from casual work on the plantations (IDR 20–35,000 per day) were significantly lower than the incomes that could be earned from rubber tapping (around IDR 54,000). However, opportunities for rubber tapping were scarce as oil palm had replaced much of the rubber. Some plantation workers obtained stable jobs with good pay and conditions; some women and men were forced by lack of alternatives to work under dangerous and insecure conditions; and landless women casual workers had to work for very low pay. Some young people whose families prospered through oil palm smallholdings or good oil palm jobs enjoyed expanded opportunities for education and off-farm work. For other young people, the arrival of oil palm meant the loss of access to land and the possibility of a future as farmers, combined with a shortage of work that paid a living wage.

The gendered approach to understanding social impacts of oil palm adopted in this report situated the positions of women and men in evolving sets of historical and spatial relations, and identified the mechanisms and cultural understandings that shaped particular outcomes. This section summarizes the findings derived from the gendered approach, and outlines two quite different scenarios for oil palm development in future.

## 4.1 Gendered mechanisms and understandings

Among the gendered mechanisms and understandings that shaped engagements with oil palm in the research area, the following stand out:

**Smallholder decision making:** There was a generally egalitarian approach to farm labor, decision making and income management among the three main ethnic groups that engaged with oil palm as smallholders: Malay and Dayak 'locals' and Javanese transmigrants. In all three groups, women and men saw their roles as distinct but complementary. Where they had sufficient land, they valued mixed farms, and showed no gendered preferences concerning involvement in oil palm. The main difference between households was not ethnicity but opportunity; access to land, roads, rubber gardens and capital or credit shaped their crop mix, their income and food sources, and the balance they struck between oil palm and other crops.

In upriver areas, Dayak smallholders still had rubber groves that provided income and sources of food. They retained the option to grow rice, routinely or in years when the price of rice was high, and they wanted to secure their food source directly. Vegetables intercropped with rice enriched the family diet. Control over their customary land enabled them to adapt to changing farm conditions and prices, and to pass on land to each of their children, boys and girls equally. At the time of the team's research in 2011, local smallholders were enjoying some prosperity from the high price of rubber. They understood that the price of rubber would rise and fall, but they saw rubber as a source of security for themselves and for coming generations. Most did not have access to oil palm for lack of roads, planting material and capital. In the middle zone, Malay and Dayak farmers had

obtained oil palm plots through the transmigration scheme, but paid a high price in terms of lost access to land they previously used for rubber and rice. The rules of the transmigration scheme required them to give up 7.5 ha in return for 2.5 ha, a ratio they felt was scandalously unfair. Some lost more, or received less than their due, because of irregularities in the land transfer process. These were bitter experiences they did not want to repeat.

Transmigrant smallholders in the research area were allocated only 2 ha of oil palm per household, and struggled to make ends meet. At 2011 prices, the income they earned from their 2-ha plot (IDR 1,353,000 per month on average) was sufficient to sustain them from day to day, but insufficient to accumulate funds to establish their children as farmers. They were highly vulnerable to price shifts in palm oil, and also in the price of rice since they had to buy all their food. Local smallholders who gave up all their land to the HD-DS linked scheme and received just one 2-ha plot of oil palm in return were in the same situation. Over the years, with no capacity to grow food, and no cushion of savings, many were forced to sell their oil palm plot to meet urgent needs, and ended up landless. Women from these ex-landholder families joined the pool of casual workers on the plantation core. In contrast to this downward trajectory, transmigrants and 'locals' who could accumulate three or more plots of oil palm lived comfortably, and could send their children to university. Women and men from this group also invested in businesses such as transportation and food stalls. Despite their diverse income sources, they too were vulnerable to a collapse in the price of palm oil, since much of their income derived directly or indirectly from this source.

**Women's weak position in tied smallholder schemes:** Women involved in the transmigration-linked oil palm smallholder scheme were disadvantaged by a bureaucratic bias that recognized men as heads of households, and listed men as the formal owners of oil palm plots. The result was to exclude the majority of women from ownership, an outcome quite out of step with women's customary status as landowners. Among both Malay and Dayak smallholders in the research area, women inherited an equal share of land from their parents, and they were co-owners of conjugal property acquired together with their husbands.

Since local smallholders gave up the land that was used for the oil palm smallholder scheme on a ratio of 7.5 ha released to 2.5 ha received (a 2-ha oil palm plot plus a 0.5-ha house lot), male participants lost access to 66% of their land. For women, the loss was 100% since the registration of oil palm plots in the name of men alone meant taking their inherited land and transferring it to: a) the company (66%); and b) their husbands (33%). Transmigrant women (Javanese, NTT) did not lose their land, since most of them were landless on arrival, but the registration of the smallholdings in men's names meant a missed opportunity to formally establish women's co-ownership in a valuable new resource.

Registration in men's names is a gender injustice: an unacceptable and completely unnecessary loss of ownership and control for women. It could be remedied by changing the rules governing land registration in smallholder schemes. Women were also excluded from active involvement as members and office holders of co-ops. To include women as active participants in co-ops would require both a cultural and bureaucratic shift, since women in the research area tended to accept men as the dominant actors and representatives of households in the public sphere. Recognizing women as members and encouraging their participation would be a positive step toward women's empowerment and gender justice. Since most of the co-ops in the research area were corrupt and poorly run, women's social and business expertise would be a valuable asset that could help improve standards.

**Plantation labor practices:** The gendered and ethnically-inflected labor policies adopted by oil palm plantations massively shaped incomes and opportunities for women and men. In the 1980s and 90s, the state oil palm company PTPN-ME treated women as both workers and wives, and gave them a full set of individual and family-based entitlements. Since 2003, in the context of generally deteriorating labor conditions, the gendered division of labor instituted by plantation managers relegated women to lower paid casual jobs. Gendered plantation labor policies required workers to adopt a strongly gendered and spatially adaptive response as they struggled to sustain households and family lives. The outcome was that landless or near-landless Malay and Dayak women 'locals' who had lost their land to the plantations remained in the enclaves, where they engaged in casual work for the plantations and attempted to

anchor their families and keep children in school. Their husbands and sons were obliged to migrate out in search of work. Meanwhile, incoming male migrant workers from Java, NTB and NTT who were favored by the plantations for more permanent jobs as harvesters were discouraged from bringing their families with them. As the men's job status became less secure (contract based at PTPN, casual at HD-DS), they were obliged to absorb greater risks (e.g. the risk of low or erratic income, injury, lay off). Income and employment instability together with poor housing and lack of health provisions for family members obliged them to leave their wives and children in their places of origin, and attempt to support them through remittances. The result for both sets of workers, migrants and 'locals' alike, was family fragmentation.

## 4.2 Situating gendered outcomes in evolving historical and spatial relations

The findings of this report about the gendered, social impacts of oil palm and their evolution over time are specific to the study site, although they are not unique to it. Rather than attempt to generalize from this study, or compare between different sites as static snapshots (site a versus site b), it is more useful to situate the processes that evolved in Meliau over 1980–2012 in relation to comparable processes that can be observed on historical and contemporary oil palm frontiers.

**Meliau 1980–2012:** In 1980, Meliau was a classic land frontier. It had abundant land, and relatively few people. The local population released land to oil palm plantations on the promise of development and jobs, but already in 1980 astute Dayak leaders foresaw that a land squeeze would eventually arise as plantations saturated the landscape. They were particularly alarmed by the idea that thousands of transmigrants would be imported, and their protests succeeded in reducing the size of transmigration schemes in Sanggau district. Anthropologist Michael Dove observing the situation in Meliau in 1985 also sounded a warning: "The one eventuality that the project management should probably try to avoid at all costs is the creation of a landless and unemployed class of people in the vicinity of its projects" (Dove 1986, 18). Three decades later, that was precisely the situation.

Looking ahead, the pool of cheap labor available to the plantations in Meliau, which is already deep, will likely increase because few transmigrants linked to HD-DS could supply land to the next generation. In *Trans 2 Bakti Jaya* in 2011, 90% of transmigrant households who had retained their land and stayed in place (51% of the original number) still possessed only 2 ha of oil palm. No doubt some of their children will move away, but some will join other second generation Javanese transmigrants who already comprise a significant portion of Kalimantan's emerging landless labor reserve. The presence of a new generation of near-landless Javanese men in proximity to the plantations might change the ethnic composition of the labor force, displacing migrant men. Local women workers could also be displaced. Already in 2011, women workers in HD-DS contemplating how to protest against their low and deteriorating wages were restrained by the fear that the company would fire them and bring in gangs of contract workers from Meliau town. Meliau had plenty of unemployed women and men who were prepared to travel daily to different plantations for maintenance work. As noted, some young women from Meliau town were already working at HD-DS in 2011, and more could be recruited from that source, leaving landless women in the enclaves stranded without work.

**Sumatra's colonial and contemporary plantation belt:** As in Meliau in 1980, land in Sumatra's colonial-era plantation belt was initially in abundant supply. Plantations could not readily recruit 'locals' as permanent workers, as 'locals' preferred to retain their autonomy by farming their own land. 'Locals' pitied plantation workers, or treated them with contempt (Ruiter 1999). The core workers in colonial-era plantations were male migrants, held in place by indenture. Casual and contract workers were around 5% of the plantation labor force in 1902 (Breman 1989).

When plantations began recruiting migrants as couples in the 1920s, it was mainly for political reasons: managers hoped the presence of families would calm political agitation and a budding union movement. By the 1950s, a significant labor reserve comprised of Javanese former plantation workers, and near landless 'locals,' had emerged (Stoler 1995). Indeed, plantation managers in the 1920s had eagerly anticipated the emergence of a near-landless population tucked into enclaves

of residual and reclaimed land adjacent to the plantations. They recognized that the desperation of land-short people would make labor cheap and easily disciplined, but also disposable: unlike permanent workers in the plantation core, casual workers from the enclaves could be hired or fired at will, and the plantations would not be responsible for maintaining their households (Stoler 1995).

In Sumatra in the 1950s, the frontier closed down and the landscape was saturated with plantations. The trajectory toward more casual labor was interrupted by plantation workers' unions, which pressed to retain the permanent workforce and to enfranchise casual workers with full labor rights. The nationalization of foreign-owned plantations in 1957 curbed the unions and strengthened the role of the military, which was given responsibility for ensuring the orderly takeover of estates (Stoler 1995). The rise of the military culminated in the 1965 massacre of half a million people among whom plantation workers, especially union members, were overrepresented (Stoler 1995). After 1965, the move toward casual labor proceeded apace. State plantations dismissed workers who had been recruited as couples, hired only young men in the core, and relied on casual workers recruited from the enclaves (Stoler 1995). In the following decades, a paternalistic, military-corporate-bureaucratic management system was entrenched in the state plantations (PTPN), and tied them into the oligarchic structures of New Order rule (Stoler 1995).

This brief history of plantations in Sumatra relates to the contemporary situation in Meliau in several ways. First, it shows the key role that unions can play in protecting workers, especially when plantations are tempted to shift to a casual workforce because labor is abundant. Second, it accounts for the bureaucratic-paternalistic management style of PTPN-ME in 1980–2003. The goal of Project Sanggau was to demonstrate that PTPN could provide for workers and bring development to the Kalimantan hinterland. It pursued this task with strong support from the military-bureaucratic structure that dominated at the time. Although Indonesia has made significant advances toward democracy since the initiation of reform in 1998, coercion and rent seeking blended with paternalism are still endemic in the plantation sector (McCarthy 2011; Barral 2014). Third, this bitter history accounts for the absence of an effective

union presence on plantations, and the difficulty of organizing. Casual workers, segmented by gender, age, ethnicity and place of origin, must be convinced that collective bargaining will bring them more security than seeking individual protection from patrons. The situation in contemporary Sumatra is similar. A study of five plantations in North Sumatra in 2010 found that casual workers earned roughly 25% of the pay of permanent workers (IDR 600,000 per month versus IDR 2,400,000); one plantation had no permanent workers at all; and workers who feared losing their jobs were reluctant to organize (Situmorang 2010).<sup>55</sup>

**Toward the future on Kalimantan's contemporary land frontiers:** The situation on Kalimantan's land frontiers today is more dynamic than was the case in Meliau 30 years ago, or in Sumatra in the 1920s. Alongside plantations, with their huge and massively expanding land concessions (see Table 1), there are also 'locals,' transmigrants, spontaneous migrants and entrepreneurs attempting to establish independent smallholdings in response to the oil palm boom (Hall 2011). 'Locals' still have access to abundant land and the opportunity to maintain mixed farming systems that include rubber, rice and other crops. As a result, plantations may experience labor shortages. The government has tasked the revamped transmigration program with supplying workers for new oil palm plantations, but the relationship between transmigrants and plantations is an awkward one (Li 2011; Potter 2012). As noted in section one, contemporary oil palm plantation companies prefer to use the 'partnership' system in which the land allocated to transmigrants is assigned to the plantation to manage as a single block. This approach may not be appealing to transmigrants, who aspire to be proper smallholders with control over their own land, and who often plan to use the transmigration scheme as a stepping stone to buy additional land to develop independently (Potter 2012). Plantation workers may have a similar plan: to save money from their wages in order to buy land (Barral 2014). In contrast, few plantation workers in Meliau in 2011 mentioned an aspiration to become independent oil palm smallholders, as their low pay and high land prices put the prospect far out of reach. The

<sup>55</sup> Labor conditions in North Sumatra are further described in Wakker (2005) and Marti (2008); on Riau, see Sinaga (2013).

only workers who had bought land or planned to do so were plantation managers with good incomes, relevant networks and information about how to obtain cheap land in other parts of the province.

Faced with the challenge of securing a stable workforce, plantations on new land frontiers may repeat the approach of PTPN-ME in its pioneer days: paying workers a decent wage, or perhaps recruiting them as couples and providing high quality facilities to hold them in place. If so, these plantations may be a source of good jobs for a generation, until enclaves of landless workers again provide a disciplined workforce, at low cost. But even on new plantation frontiers, good plantation jobs for couples are not guaranteed. Instead of recruiting couples, new plantations may attempt to meet their labor needs by segmenting the labor force, hiring male harvesters from one source, and casual maintenance workers from another. So long as road access is good, casual workers can be trucked in daily from nearby towns and transmigration zones.

The trajectory toward impoverishment among plantation workers, especially among women who have become landless as a result of plantation expansion, is cause for alarm. It is a trajectory that takes shape over time, in the intersection between the smallholder and the plantation economy, and between different sets of workers: women and men, 'locals,' migrants and transmigrants. The trajectory could be interrupted by a strong union movement pressing for decent wages and conditions, especially if it foregrounds the labor rights of women casual workers, but so far no such union movement has emerged and the challenges are formidable. Learning from the experience of smallholders and workers in the well-established plantation zones of Sumatra and West Kalimantan is important when considering the millions of hectares allocated for new oil palm concessions on Kalimantan's land frontiers, and the likely social impacts over a generation.

### 4.3 Two gendered scenarios for the future development of oil palm

The findings of this report suggest that Indonesia is at a crossroads, with two possible futures for oil palm development, each with quite different

gendered social impacts and massive implications for the shape of rural lives, livelihoods and farming systems for generations to come. One future involves the continued expansion of large-scale, monocropped corporate plantations. The other involves the promotion of independent oil palm smallholdings as part of mixed farms with flexibility to evolve and adapt. These two scenarios are summarized here.

#### 4.3.1 Plantation expansion

In 2012, Indonesia already had 11 million ha of oil palm, around 6 million ha in large plantations. An additional 6–7 million ha was reported to be held by companies in so-called land banks (USDA 2013). Government policies strongly favor the further expansion of plantations on the grounds that they bring development to hinterland regions (Jakarta Post 2009; DTE 2012). In keeping with these policies, the Plantation Law of 2004, the Investment Law of 2007, the Manpower Law of 2003, and other laws and regulations strengthen the position of plantations. The government's 2011 Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI) resolutely supported large-scale, top down schemes, and the further expansion of oil palm, with up to 29 million ha designated for this crop (DTE 2012). New president Joko Widodo, elected in 2014, indicated a willingness to review the Master Plan's priorities, especially with a view to Indonesia's food deficit, but no new approach to oil palm has yet been announced.<sup>56</sup>

A prominent argument used by industry and government representatives in support of plantation expansion is that plantations reduce poverty and create jobs. The results of the present study throw this claim into doubt. Good jobs have been few and short-lived, and the trend has been toward poor quality jobs and more casual labor with gendered effects that are damaging to women, men and families. Loss of land and customary institutions, and the concentration of excessive power in the hands of corporations and their state allies, are also serious problems. These

<sup>56</sup> <http://www.cnnindonesia.com/ekonomi/20141020082500-99-6880/warisan-masalah-pangan-sby-untuk-jokowi/>

problems are neither idiosyncratic, nor confined to rogue companies. They are integral to the plantation sector as a whole, for two reasons:

First, plantations remove large areas of land from customary landholders, reducing their capacity to farm independently. The result is a structural imbalance, in which plantations gain inordinate power over the land and livelihoods of rural populations. The people affected are not just workers, but everyone whose former use of the land is precluded, and everyone who might have used the land in diverse mixed farming systems in generations to come. Oil palm plantations lock both land and people into rigid forms for an indefinite period, as aging palms are replanted every 20 years. Plantations produce an ecologically simplified landscape in which the range of species and the regenerative capacity of rivers and forests are drastically reduced, and flexible adaptation to processes such as climate change is impossible. They also consolidate a profoundly undemocratic set of political relations. In addition to a favorable legal regime, plantations reportedly enjoy the informal protection of bureaucrats, politicians, military and other members of the district-level elite who benefit directly or indirectly from the presence of plantations and the flow of funds they generate (McCarthy, Vel and Afiff 2012). These officials are too close to the plantations to be effective advocates for customary landholders contesting land acquisition, smallholders caught in inequitable contract schemes or workers seeking fair pay. The result is a severe deficit in legal protection and support for the many people who are adversely affected by the expansion of plantations.

Regulation to limit the excessive power of plantations over the lives and livelihoods of affected populations may be attempted, but the record thus far shows this is very difficult. Even major corporations such as Wilmar, a founding member of the Roundtable on Sustainable Palm Oil (RSPO), fail to meet the standards to which they have agreed (Milieudefensie, Lembaga Gemawan and KONTAK Rakyat Borneo 2007). Indonesia's proposed national standards (ISPO) only require corporations to adhere to Indonesian law, but the law, as noted, favors corporations. More seriously, attempts at regulation do not address the vulnerabilities

that emerge over the long term.<sup>57</sup> To take one example, even if the land acquisition process for a new plantation was carried out in a fair and transparent manner, with 'free, prior and informed consent,' the loss of land and livelihood could still impoverish customary landholders and make them vulnerable to deeper impoverishment in generations to come. Whether abruptly or over time, the status of the former landholders shifts from being independent farmers with control over their own destinies to workers without bargaining power, desperate for work on any terms. Women, who may be equal owners and full participants in the smallholder economy, lose their economic autonomy and decision-making power. They also suffer the worst conditions as workers due to their limited mobility, and the classification of their work as unskilled. No variant of 'corporate social responsibility' implemented thus far has come close to restoring the land, livelihood and independence of surrounding populations, nor has it proposed to increase wages and benefits for workers.

Second, the trend toward greater reliance on casual labor and reduced wages identified in this report is also structural. It is not an aberration, but a process built into the plantation system so long as superior 'efficiency' is a source of profit. In the study area, both the state plantation (PTPN-ME) and the private Indonesian-owned company HD-DS moved toward more casual labor. The trend also occurs in global multinational corporations such as Wilmar, which has acknowledged that some of its plantations employ around 75% of their workers on a casual basis (Milieudefensie, Lembaga Gemawan and KONTAK Rakyat Borneo 2007). These companies all operate with the same economic parameters: labor costs are a large part of their operating budget. Hence, they attempt to minimize labor costs and seek 'efficiencies' to provide company owners and shareholders with optimal returns.

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57 The challenges of regulating oil palm plantations through voluntary standards in a context of decentralized powers, entrenched corruption and weak rule of law are discussed in Potter and Lee (1998); Milieudefensie, Lembaga Gemawan and KONTAK Rakyat Borneo (2007); McCarthy (2009, 2012); McCarthy and Zen (2010); McCarthy, Gillespie and Zen (2012); Obidzinski et al. (2012); Varkkey (2012); Colchester and Chao (2013); Colchester, Jiwan and Kleden (2014).

Again, regulation to secure labor standards on plantations may be attempted, but it is very difficult to achieve for structural reasons. If unions, or standard-setting bodies such as the RSPO, insist on decent wages and conditions, plantation companies complain that high costs of production scare off investors. By hiring more casual workers, plantations can bypass the minimum wage and other protections that formal-sector workers are guaranteed under the Manpower Law of 2003.<sup>58</sup> Even the small, formal 'core' workforce of male harvesters at the two plantations discussed here was vulnerable to deteriorating labor conditions. In PTPN, young harvesters were hired on fixed-term contracts with limited benefits; at HD-DS harvesters were switched to a piece rate with no base pay, which made it unclear whether provisions of the Manpower Law still applied to them. Women casual workers in both plantations were fully exposed to the economic law of supply and demand, as plantations took advantage of the abundant supply of workers who had no choice but to work for very low pay. Note that the corporate imperative to seek efficiency operates not only during difficult times, but also when the price of oil palm is high, and the sector is booming. PTPN-ME was under pressure to cut wage costs to match levels of 'efficiency' in the private sector. The squeeze on workers at HD-DS in 2011 occurred during a price boom. Should the price of palm oil on global markets drop significantly, the squeeze would no doubt be even more severe, placing extreme strain on the women, men and families whose livelihoods have come to depend on oil palm work.

The problem of impoverishment among plantation workers is not unique to Indonesia. According to the International Labour Organization (ILO), agricultural wage workers (around 450 million people worldwide) are the least organized, worst paid and least protected of all workers. They receive little attention from national and transnational agencies despite the fact that their net number

<sup>58</sup> In Indonesia, only 20% of workers officially classified as 'formal' (6% of the total workforce) have a permanent or limited term contract that specifies pay and benefits, and enables them to press legal claims. See World Bank (2010). Core plantation workers in both state and private plantations are among the privileged group of 'formal' workers who are protected by the law, but even for them, enforcement is weak, as only 1% of Indonesian firms are serviced by labor inspectors each year. See ILO (2013).

continues to grow. Casual and subcontracted plantation workers (especially women) fare worst, but even permanent core workers are not secure (Hurst 2005). Based on the structural processes identified here, low wages, impoverishment and fragmented families are the future that lies ahead if plantations continue to expand. Already, 6 million ha of plantations subject around 6 million people to these conditions (2 million workers plus their families). Twenty million hectares of plantations would mean around 20 million people living under the conditions this report has described.

Attempting to re-empower groups that have been structurally disempowered by the plantation system is a huge challenge for Indonesia, one that will take decades to resolve. Moving forward, it is possible to avoid extending the problem of disempowerment by stopping or limiting the further expansion of plantations, and pursuing a second scenario: promoting a vigorous, independent oil palm smallholder sector, with a focus on equity and retaining the adaptive capacity of mixed farms. Other studies confirm that smallholder oil palm has a high potential for strong employment multipliers and poverty reduction. For this reason, the World Bank and the International Finance Corporation (IFC) emphasize smallholder support as the central pillar of their new policy for engagement with oil palm. Their studies show that smallholdings have a far greater poverty-reducing effect than the expansion of state or private plantations (World Bank and IFC 2011).

#### 4.3.2 Expansion of independent oil palm smallholdings

Independent smallholders who retain control of their own land also retain control over their lives and livelihoods, often strengthened by customary institutions and the support of neighbors and kin. Hence, they have more capacity to protect themselves from unfair practices, and the potential to prosper from their engagements with oil palm and other crops. Retaining a variety of income sources and realistic options for diverse farm-based livelihoods is also a crucial dimension of gender justice, as the UN Special Rapporteur on the Right to Food has noted. Only when women and men have access to land and a broadly based

system of farm support can they create the balance between food and cash crops that meets their own priorities (De Schutter 2013).

The evidence from this study is that women and men with their own land were interested in planting oil palm; they were expanding and replanting their rubber; and they valued the flexibility to sustain food production and maintain mixed agroforests. Farmers who had the opportunity to pursue a mixed farm strategy had higher incomes and more capacity to weather periods of adverse prices than transmigrants who had only 2 ha of oil palm to sustain them. Other studies report a strong preference for conversion to oil palm, sometimes as a monocrop (Feintrenie, Chong and Levang 2010). No doubt farmer preferences and strategies vary according to local conditions. As noted earlier, scale is also important: if oil palm is the only crop, 6 ha is needed for a viable farm at 2011 prices, but under adverse prices, 6 ha may not be enough.

The risk of ecological collapse, or price collapse, can be mitigated by maintaining a flexible farm strategy, which may include high-yielding rubber and food. Meliau's intensive oil palm zone is a food desert in which vegetables have to be imported because the shortage of land, combined with the proliferation of rats, preclude food production. Hence, oil palm farmers have to buy all their food. They go to Meliau town, or to the cities, Sanggau or Pontianak, or wait for Javanese traders from outside the oil palm zone to bring vegetables in by motorbike. The dearth of locally produced food, especially fruit and vegetables, creates an opportunity to promote a vigorous and diverse food economy in other parts of the district, but at the time of this study there were no support programs promoting food or mixed-farm development paths.

Empowering independent smallholders simultaneously empowers workers in three ways. First, smallholders who opt to work full or part time for plantations are not obliged to accept dangerous work for low rewards. They can bargain for fair wages and conditions based on their capacity to sustain themselves from their farms. They can take on dignified work, but not work that leaves them disabled or obliges them to live away from their families for prolonged periods of time. Second, a vigorous smallholder

sector is itself a source of employment, and smallholders typically pay their workers significantly higher wages than plantations (2–4 times higher in the area discussed in this report).<sup>59</sup> Third, a prosperous smallholder sector generates a multiplier effect in small businesses such as transportation, house construction, retail, restaurants and services (hair salons, motorbike repair). These businesses create wealth and jobs. In contrast, plantation workers on low wages cannot afford to buy goods and services, so the multipliers are limited.

To achieve beneficial social impacts, support for independent oil palm smallholders needs to have a strong equity focus, deliberately extending access to key means of production to farmers who wish to grow this crop on their own land, but do not have the necessary means.<sup>60</sup> All forms of land transfer mediated by state agencies or corporations, or plans to rationalize holdings by taking land from one group to allocate to another, should be avoided, as they are: a) unnecessary; and b) very prone to abuse, as names are inserted and deleted fraudulently from lists of scheme 'candidates.' By supporting farmers to develop their own land and avoiding land transfers, women's customary rights as owners and inheritors of individual land, and their entitlement to use of common land, are also protected.

To promote equitable access to oil palm, the target group for smallholder support should be farmers who have less than 6 ha of this crop. Their main need is for access to high-quality planting materials and credit to meet establishment costs. Building of roads and access to mills is also necessary, but caution is needed: too often, the provision of these facilities is used to persuade smallholders to release land to plantations. Ideally, roads should be provided by the government out of its development budget. Mills can be provided by the private sector on a range of scales, including 'mini-mills' that can process the output of 500 ha of independent smallholder oil palm. Farmer associations should

59 For a similar finding in Sulawesi, see Li (2011).

60 Susila (2004); Sheil et al. (2009); Feintrenie, Chong and Levang (2010); Rist, Feintrenie and Levang (2010); Therville, Feintrenie and Levang (2010); Budidarsono, Susanti and Zoomers (2013); Cramb and Sujang (2013).

be organized and run by farmers independent of the mills, so they can properly represent their members in negotiations with mills, and achieve relevant economies of scale.<sup>61</sup>

Although oil palm smallholders currently achieve lower yields than plantations on average, some smallholders – including some in the research area – achieved significantly higher yields. The key to smallholder success is the provision of good planting material, and access to roads, a mill and credit. As other scholars have noted, with these conditions in place, there is no technical reason why oil palm must be grown on plantations.<sup>62</sup> Oil palm does not have economies of scale at the farm level. The technology used on plantations and smallholdings is the same, as most of the operations (planting, harvesting, spreading fertilizers, etc.) are done by hand with basic tools. Smallholders monitor their plots more closely, and are less vulnerable to theft. Plantations, in contrast, tend to be corrupt and leaky systems beset by graft and theft of materials such as fertilizers and equipment. The tragedy, as observers point out, is that most independent smallholders planting oil palm only have access to poor quality planting material, resulting in yields of only half their potential over the 25-year life of the palm (Zen, Barlow and Gondowarsito 2005; IFC 2013). With low productivity per hectare, these oil palm smallholders are vulnerable to impoverishment should the price of palm oil drop. Hence, a government program to make high quality planting material and fertilizers available to smallholders with less than 6 ha at a reasonable price would have a huge effect on rural incomes and productivity in the decades ahead.

As noted in section one, the smallholder sector is already expanding rapidly in Riau, but it is not clear this development is equitable. Failure to provide government support with an equity focus ensures that ‘smallholders’ who gain access to this lucrative crop are mainly government officials and business people with holdings of 10–300 ha. The entry costs of oil palm are too high for most smallholders. Hence, government support

schemes are essential.<sup>63</sup> The World Bank and its finance branch, the IFC, urge the private sector to step up to provide smallholder support through ‘partnership’ and ‘benefit sharing’ schemes (World Bank and IFC 2011), but plantation companies are reluctant to do this.<sup>64</sup> The partnership models preferred by plantations are not genuine smallholder support schemes because plantation managers maintain full control over land, labor and decision making. Indeed, it is not reasonable to expect plantation corporations to empower smallholders who might compete with them for control over land, and also compete with them for labor by offering workers higher wages. A more healthy synergy could be established if oil palm corporations let smallholders grow the palms, and focused their own efforts on providing high-quality planting material, farm inputs and mills.

A final consideration in the promotion of independent oil palm smallholdings is the potential for achieving certification by meeting environmental and social standards. So far, only around 10% of palm oil produced in Indonesia is certified by the Roundtable on Sustainable Palm Oil (RSPO). Companies seeking certification have difficulty meeting standards for free, prior and informed consent in land acquisition, due to the ambiguous and conflicted situation regarding the recognition of customary land, outlined in section one. The RSPO complaints system is burdened by hundreds of reports of land disputes involving RSPO members (Silva-Castañeda 2012). Independent oil palm smallholdings on farmers’ own land avoid this problem entirely. Smallholders are also less prone to exert downward pressure on wages since they compete with each other to attract and hold workers who are skilled and reliable. Meeting environmental standards can be a challenge for smallholders due to the kinds of evidence required, but this problem could be overcome through education and training, and perhaps through group-based certification for farmer associations. Linking government support for independent smallholders to transparent rules offers a realistic point of leverage for environmental

61 Alternative models for linking smallholders to plantations, mills, sources of finance and producer associations are discussed in IFC (2013).

62 Marti (2008); Sheil et al. (2009); Feintrenie, Chong and Levang (2010); Rist, Feintrenie and Levang (2010).

63 Zen, Barlow and Gondowarsito (2005); McCarthy (2008); Sheil et al. (2009); McCarthy, Gillespie and Zen (2012).

64 IFC (2013) shifts away from promoting corporate-based assistance models. It emphasizes the role of government and donors in providing the necessary support to smallholders, and refers to plantation corporations mainly in their role as mills.

regulation in the smallholder sector, and good prospects for meeting the standards some importer markets now demand.<sup>65</sup> In contrast, the size and political influence of plantations make them much more difficult to regulate, and poor adherence puts the entire certification system into disrepute (McCarthy 2012; McCarthy, Gillespie and Zen

2012; Colchester, Jiwan and Kleden 2014). No doubt attempts to regulate plantations should be vigorously pursued, but for the structural reasons emphasized in this section, independent smallholders have an advantage in meeting standards for sustainable, equitable and socially responsible oil palm development.

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<sup>65</sup> Measures to support smallholders in improving productivity and meeting environmental standards are discussed in IFC (2013).

# 5 Recommendations

This section presents four principal recommendations, and specifies the role to be played by government, civil society and scientific organizations in putting these recommendations into practice.

## 5.1 Review policy options for oil palm expansion

### 5.1.1 Government

The election of a new president and the appointment of a new cabinet in Indonesia in 2014 present an opportunity for national policy review. Advocacy groups operating at the national level have demanded an end to the expansion of oil palm plantations, framing their arguments in terms of rights: indigenous peoples' rights to exercise free, prior and informed consent over the use and disposition of their lands; the right to food, human rights and personal security; and the economic and social rights of workers, women and children (Bali Declaration 2011). So far, however, calling attention to rights violations has not prevented the expansion of plantations, which is often defended in terms of poverty reduction and job creation. Hence, there is an urgent need to deepen and expand the policy debate, taking into account the structural issues and the gendered social impacts explored in this report.

The two different scenarios outlined in the previous section herald very different futures for rural Indonesia. If both oil palm plantations and independent smallholdings will expand, what is the appropriate balance in the nation overall, and in different provinces and districts? Should it be 20% plantations, 80% smallholdings, as it was in the New Order, or 80% plantations, 20% smallholdings, the ratio permitted under the 2004 Plantation Law? Are the 6 million ha dedicated

to large-scale oil palm plantations already enough land to place under corporate control, and under a single crop? If so, should the government consider rescinding the licenses of plantation companies currently holding 6–7 million ha in so-called land banks? Holding land idle goes against the stipulation of the 1960 Agrarian Law that requires land to be used for a 'social function.' Could such land be restored to customary landholders, or to landless people, who could use it for oil palm and other crops in flexible, mixed farming systems? These are among the issues that a national policy review on the future of oil palm should debate.

The different patterns of oil palm expansion in Sumatra and Kalimantan shown in Table 1 indicate that provincial governments have taken distinct approaches to the question of plantations versus smallholders, and the trajectories of rural development in each province will be quite different as a result (McCarthy, Gillespie and Zen 2012). The massive and rapid expansion of oil palm plantations in Kalimantan contrasts with the expansion of smallholdings in Sumatra, especially in Riau. Spatial planning processes at the provincial level could assist in and democratize the process of decision making, allowing civil society groups and farmers to have input on alternative pathways for oil palm development. Districts also make spatial plans. Decentralization of plantation licensing to district level enables district governments to determine the desired balance between plantations and smallholdings. Districts can allocate funds for smallholder support programs. They can issue district regulations governing plantation land acquisition, labor and environmental standards, and institute their own inspection regimes. With sufficient pressure from voters, it should be possible to elect politicians who are aware of the gendered social impacts of oil palm, and willing to accommodate popular demands for rural infrastructure and smallholder support.

### 5.1.2 Civil society

At present, the field of policy making is dominated by plantation interests. Civil society groups cannot obtain accurate data on the number, extent and precise location of plantations, current and planned; this makes it difficult for them to help different sectors of society to get involved in decision making. Transparency in all matters concerning existing and future plantations is essential to democratize the plantation sector and empower affected parties. So far, the most important victories achieved by advocacy groups pressing for national legal review and reform concern the recognition of customary land rights (DTE 2012, 2014). Advocacy groups have been less active in drawing attention to other structural imbalances such as the lack of government support for independent oil palm smallholdings, or the profoundly unequal relations between plantations and surrounding populations. These elements should be brought into policy debate.

Mobilizing to demand government support for independent oil palm smallholdings, or to redress the imbalance in plantation-smallholder relations, or to form strong associations among smallholders so they can articulate their aspirations and advance their claims, is at a very early stage. Advocacy on behalf of women in the oil palm sector is also rudimentary. The focus so far has been rights based, highlighting women's poor labor conditions on plantations, their loss of access to customary land, diminished opportunities for food production, loss of cultural knowledge and institutions, and the additional burdens caused by environmental damage (DTE 2014; Deklarasi Makasar 2014). These are very important issues, and as advocates point out, the numerous deficiencies in oil palm plantations and smallholder schemes amount to infringements of women's rights, the right to food and other important social and economic rights. These rights are guaranteed in UN conventions signed by Indonesia, and are supported by clauses in the Indonesian Constitution (Siscawati and Mahaningtyas 2012; Siscawati 2014). As this report has shown, a rights-based approach needs to be supplemented by attending to structural processes that work systematically to disadvantage women, even when no harm or discrimination is intended.

### 5.1.3 Scientific organizations

To improve the quality of debate and decision making regarding oil palm, scientific organizations should carry out supporting studies. Most of the studies produced thus far focus on the economic potential of oil palm and concerns over forest loss. Research on social impacts is patchy and scarce. Site-specific studies like the one presented in this report are effective for uncovering structural processes and the cultural understandings that produce particular outcomes. Further site-specific studies are needed in different provinces, and could usefully be combined with more quantitative analysis based on survey research, or on existing data from household surveys and the census.

One possible study would use existing data on social indicators (health, education, income), household assets and economic activities, together with census data from the *desa* level, to compare human development outcomes for women and men in oil palm plantation-intensive zones; zones with independent oil palm smallholdings; and comparator, non-oil palm zones dominated by mixed farms. The purpose would be to bring more evidence to the question of which model is most effective in poverty reduction, women's empowerment and the generation of incomes and jobs.<sup>66</sup>

## 5.2 Strengthen recognition and restitution of customary land rights

### 5.2.1 Government

Government agencies should implement Parliamentary Decree TAP MPR IX 2001 on agrarian reform and natural resource management, and move forward on the Constitutional Court ruling of 2012 that recognizes and potentially restores customary rights to state-claimed forest land. Only a secure legal foundation will enable customary communities to accept or reject plantations based on their own priorities, and negotiate with plantation corporations from a position

<sup>66</sup> Preliminary findings from a study of this kind are reported in World Bank and IFC (2011), but the completed study is not available.

of strength. Women's customary rights to both common and individual land must be fully recognized, so they become full participants in all land-related decisions. In places where customary land systems are patriarchal and disenfranchise women, as in Papua (DTE 2014), further measures are needed to protect women's rights to participate in decisions over land.

Processes of land acquisition for new plantations must be governed by the principle of free, prior and informed consent. Current practices that rely on land release teams to provide information verbally to individuals or groups (known as 'socialization') are not sufficient. Women, in particular, are absent from socialization meetings, and have little or no information about what will happen to their land. Women and men who hold customary land individually must each be given a formal, legal document that specifies exactly which patches of land they have agreed to release, and what they will receive in return. If the land to be released is collectively held, all the landholders, both women and men, must participate in the decision and have the opportunity to reject land deals that negatively affect them. If the release of land is to be permanent, landholders must fully understand the consequences.

The principle of free, prior and informed consent requires that landholders have the opportunity to evaluate and select between realistic and viable alternatives. Currently, land release teams persuade customary landholders that the company already has a license and will take the land anyway, so their 'choice' is to sign and receive some compensation, or refuse to sign and end up with nothing at all (Sirait 2009). Landholders who refuse to sign are accused of standing in the way of prosperity not just for themselves, but also for their neighbors. They are not presented with alternative ways of achieving prosperity through developing the productivity of their own farms. Hence, the entire land release process is in need of serious democratization, not just at the procedural level, but also in terms of expanded opportunities for landholders to participate in shaping their own future.

Redress or restitution is in order where the land release process for existing plantations was coerced; fell short of current standards for free, prior and informed consent; or involved forest land now recognized as customary rather than state land.

Redress is especially urgent in sites where conflict is ongoing and has led to violence. In particular, it must address the structural violence of landlessness among former landholders who have lost the opportunity to farm independently. Restitution may involve restoring land to previous landholders immediately; restoration when a license expires; offering shares in productive plantations by distributing blocks of land or shares; and other mechanisms that could be devised. It is essential that restoration fully and formally recognize women as equal landholders, since half the land ceded to plantations belonged to them, either individually or in common. The land needs of former transmigrants and plantation workers who have lived for generations in and around plantations should also be accommodated.

### 5.2.2 Civil society

Advocacy groups, notably those concerned with indigenous people and land reform, have already played a very significant role in pressing for the recognition of customary land rights. They continue to press for revision of sectoral laws that undermine these rights, and seek to uphold the social function of land guaranteed in the Constitution and the 1960 Agrarian Law. Broadening the concept of free, prior and informed consent to include the necessity of providing alternatives could help to move the land agenda forward. It is, as noted earlier, an essential component of gender justice; we cannot know what women and men would choose to do with their land, or the futures they would like to construct, if they can only choose between an oil palm plantation or the status quo. Advocacy groups may also be constructively involved in devising and testing alternative approaches to restitution of plantation land, perhaps beginning with the 6–7 million ha held by corporations in so-called land banks.

Orderly, transparent and fair processes for future land acquisition and for restitution require constant monitoring by advocacy groups. The stakes in land transactions are very high for the parties involved, and there are opportunities for land grabbing at every scale (by customary leaders, by village headmen, by plantation officials, by district and provincial officials, by politicians and members of regional elites). Advocacy groups

also need to be active in debates over distributive land reform, promoting democratic approaches to negotiate a proper balance between the rights of customary landholders and the land rights of migrants and workers who also wish to farm independently.

### 5.2.3 Scientific organizations

Scientific organizations have carried out extensive research and entered the land debate vigorously in the context of environmental concerns, especially forest loss and climate change. So far, they have paid less attention to customary landholders, and how to carry out land acquisition, restitution and distribution in a fair and transparent manner. They can play a very useful role in piloting different approaches, and writing up research results that can build on good practices and indicate how they can be adapted to different conditions.

## 5.3 Review, upgrade and extend smallholder support programs

### 5.3.1 Government

Existing smallholder schemes are in need of review and upgrading, due to unfair rules or problematic implementation. Smallholders who are already locked into relations with plantations through models such as the Pir-Bun Trans or KKPA need more transparency, clarification about the terms of the original agreement and the means to enforce company compliance. Endemic problems that arise over corruption in company-sponsored co-ops, debt repayment, quality control, weights and measures, payment schedules, production inputs, and provision and upkeep of roads and other infrastructure need to be identified, and grievances resolved.

Smallholder schemes based on the partnership model should be reviewed on an urgent basis, since this is the model that is currently expanding, especially in Kalimantan. Problems of transparency are especially acute with this model, because the smallholders do not manage their own land, and may not know which patch of oil palm belongs to them. They have no access to company accounts to verify whether the dividend they are paid is a fair return. There is a clear risk that people who did

not release land will have their names included on lists of dividend recipients, while people who did release land may be excluded, or may receive a smaller share than they are due. Processes for returning control over land to smallholders after an agreed period need to be clearly documented, and legally binding rules enforced. The profound imbalance of power between smallholders and plantations means that continuous, stringent government oversight is necessary to ensure fairness both in initial negotiations and ongoing relations.

In all smallholder models, would-be smallholders who were promised membership in schemes that did not materialize need adequate redress. Women should be actively recruited as members of smallholder co-ops, and encouraged to take on leadership roles. Where land titles have not yet been issued, there may be a chance to insert women's names, rectifying the error of registering scheme participation in the name of men alone. Women landholders should be given individual land title and independent scheme membership where the land released was their own, and joint membership with their husbands where the released land belonged to the couple jointly, or was part of their customary commons. Where the scheme format is based on dividend payments, women's rightful share must be paid directly into their own bank accounts. If not, they could be entirely excluded from the scheme's rewards, or dependent on the whim of their husbands who may or may not share resources.

Moving forward, landholders that enter agreements with plantation companies should be given a choice of types of partnership, including the option of maintaining management of their own plot, with the company supplying planting material and other inputs. To meet requirements for free, prior and informed consent, potential participants should receive clear information about the obligations, rights and benefits entailed in each model, and realistic, properly documented information about their likely incomes.

Government agencies should devise and support a new generation of schemes for independent smallholders who wish to plant oil palm and other crops. These schemes should offer a menu of options to smallholders, including oil palm,

high-yielding rubber, food and other cash crops. The menu approach permits women and men to choose different pathways toward enhanced productivity and prosperity, as they make their own assessments of relative costs, benefits and risks. Smallholder support models need to be flexible enough to meet different needs, and to adapt as conditions change.

### 5.3.2 Civil society

Civil society organizations need to be actively involved in the review of existing smallholder schemes, redress of grievances and creation of smallholder support schemes that are balanced, equitable and appropriate for specific situations. Above all, they need to facilitate the democratization of decision making so that women and men can participate in designing smallholder support systems that meet their needs. In view of the risk of elite capture, they need to monitor access to smallholder support schemes, ensuring that support is channeled to farmers who wish to develop their own land, with a limit of 6 ha.

### 5.3.3 Scientific organizations

Scientific studies are urgently needed on several topics, among them the following:

**Partnership schemes:** Study the implementation of ‘partnership’ schemes to identify forms taken in diverse provinces, assess transparency and documentation, and examine whether all the former landholders who were promised participation are, in fact, included. It is also urgent to compare the incomes participants receive as dividends from these schemes to the incomes they could receive from managing their own smallholdings under oil palm or other crops, such as rubber.<sup>67</sup>

**Independent oil palm smallholders:** Survey the independent smallholder sector in several provinces and districts to find out what type of farms (by size) comprise this expanding sector, who owns the smallholdings (by gender, ethnicity, occupation)

<sup>67</sup> For a comparable study in Malaysia that measures differential returns to stakeholders under various plantation and smallholder schemes see Cramb and Ferraro (2012).

and how they sourced their land, planting material, and capital or credit.<sup>68</sup> Such a study would clarify the extent to which government smallholder support is necessary to produce equitable outcomes.

**Pilot independent smallholder schemes with an equity focus:** Devise and pilot alternative support models for independent oil palm smallholders with up to 6 ha to identify the conditions under which such schemes can produce: a) yields per hectare that are equal to or better than plantations; and b) equitable outcomes, extending access to women and men who would not otherwise be able to plant this lucrative crop. These models should extend a genuine choice to smallholders, which includes the option to balance commitments to oil palm with crops such as rubber, food and other cash crops.

## 5.4 Improve conditions for plantation workers

### 5.4.1 Government

In view of the vulnerability of both formal and casual workers on plantations, specific measures are needed to raise labor standards. Formal core workers are protected by the Manpower Law, but there are problems with compliance. For the increasing number of casual and contract workers unprotected by the Manpower Law, further steps are needed, perhaps through regulations specific to the plantation sector. Elements to be addressed are: promoting non-discrimination based on ethnicity or gender; bringing rates of pay for piece work up to the official minimum wage; and extending housing, education, health, safety, disability, maternity and pension provisions for casual and contract workers. Particular attention needs to be paid to women workers, to ‘local’ men excluded from plantation employment or consigned to the least remunerative jobs, and to the fragmentation of families when men are forced to migrate.

<sup>68</sup> The IFC’s diagnostic study of oil palm smallholders did not address inequality among smallholders. It noted that the average holding size was 3 ha, and 11% of owners were women. See IFC (2013). It did not identify the range of landholdings, which can be from 1–25 ha or more. Nor did it consider the extent to which women’s landholding rights might have been folded into the conjugal unit, hence obscured in the survey data.

### 5.4.2 Civil society

Labor issues have received insufficient attention from civil society groups, and the lack of labor unions on plantations means that problems faced by plantation workers seldom enter public debate. These workers live in isolated, rural locations, mostly out of sight and out of mind, and are especially vulnerable to harassment and dismissal. Hence, it is very difficult for them to organize without strong union support. Independent unions are legal under the Manpower Law, but the urgent work of rebuilding strong plantation workers' unions that represent both core and casual workers has not begun.

### 5.4.3 Scientific organizations

There is an urgent need for solid empirical investigation of labor conditions for women and men employed as core or casual workers on plantations in diverse parts of the archipelago, covering both oil palm saturated zones and new frontiers of expansion. By investigating the number and quality of core and casual jobs that are created, and how they are distributed among different groups (men and women, migrants and 'locals,' young and old), this research would address the oil palm industry claim that plantations generate good jobs. The results of such a study may indicate that well-run plantations can incorporate a full package of labor rights while still remaining profitable, and provide 'best practice' guidelines on how to accomplish this. Alternatively, the results may indicate that the shift toward greater labor 'efficiency' through more casual labor is irreversible, so that structurally, in the long term, plantations cannot provide good jobs.

A second area for investigation is the total employment picture associated with oil palm. A study should compare the number of jobs created in oil palm plantations with the number of jobs lost through the displacement of former landholders, and calculate the opportunity cost of jobs that could have been created through alternative land uses. It should compare plantation and smallholder oil palm jobs, both direct and secondary, assessing the distribution of jobs by gender, age and ethnicity. It should also examine the downstream jobs that could be created through the expansion of oil palm processing facilities. From this evidence, policy makers could more realistically assess the jobs gained and lost through oil palm, and confront the issue of what kinds of work will be available for coming generations who will not inherit farmland.

A further study should examine the palm oil commodity chain, value addition and prospects for downstream employment. These topics were outside the scope of this report, but there are lessons to learn from other processing and manufacturing sectors. In Kalimantan, young women responded eagerly to the opportunity to work in plywood factories during the timber boom; in Java, they flocked to factory work, valuing the opportunity to earn and expand their horizons (Wolf 1994). Currently, very few manufacturing jobs are available in the provinces where oil palm is grown. While growing oil palm places smallholders and plantations in opposing positions, as one sector gains at the expense of the other, adding oil palm processing jobs is a win-win scenario with particularly positive benefits for young women.

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Oil palm plantations and smallholdings are expanding massively in Indonesia. Proponents highlight the potential for job creation and poverty alleviation, but scholars are more cautious, noting that social impacts of oil palm are not well understood. This report draws upon primary research in West Kalimantan to explore the gendered dynamics of oil palm among smallholders and plantation workers. It concludes that the social and economic benefits of oil palm are real, but restricted to particular social groups. Among smallholders in the research area, couples who were able to sustain diverse farming systems and add oil palm to their repertoire benefited more than transmigrants, who had to survive on limited incomes from a 2-ha plot.

Over time, plantations that monopolized large areas of land constrained smallholder options and limited opportunities to prosper from oil palm or other crops, such as rubber. Among plantation workers, who were initially recruited as couples, privileged positions in the plantation core deteriorated; plantations began to employ more casual workers and recruit men and women from distinct labor pools. Situating this particular, site-specific trajectory in the context of broad historical trends and spatial dynamics indicates that further expansion of plantation-based oil palm poses a serious risk of impoverishment, especially for women. Conversely, support for independent oil palm smallholding offers good prospects for empowering both women and men, and enhancing their prosperity. Investment in oil palm processing would be especially beneficial for young women.



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