

# Understanding gender dynamics in the context of rural transformation processes

An East Kalimantan case study

Carol J Pierce Colfer Markus Ihalainen Iliana Monterroso





# Understanding gender dynamics in the context of rural transformation processes

# An East Kalimantan case study

#### Carol J Pierce Colfer

Center for International Forestry Research (CIFOR) Cornell University

#### Markus Ihalainen

Center for International Forestry Research (CIFOR)

#### Iliana Monterroso

Center for International Forestry Research (CIFOR)

Occasional Paper 212

© 2020 Center for International Forestry Research (CIFOR)



 $Content\ in\ this\ publication\ is\ licensed\ under\ a\ Creative\ Commons\ Attribution\ 4.0\ International\ (CC\ BY\ 4.0),\ http://creativecommons.org/licenses/by/4.0/$ 

ISBN 978-602-387-145-2 DOI: 10.17528/cifor/007858

Colfer CJP, Ihalainen M and Monterroso I. 2020. *Understanding gender dynamics in the context of rural transformation processes: An East Kalimantan case study*. Occasional Paper 212. Bogor, Indonesia: CIFOR.

Photo by Moses Ceaser/CIFOR Portrait of people in East Kalimantan, Indonesia.

CIFOR Jl. CIFOR, Situ Gede Bogor Barat 16115 Indonesia

T +62 (251) 8622-622 F +62 (251) 8622-100 E cifor@cgiar.org

#### cifor.org

We would like to thank all funding partners who supported this research through their contributions to the CGIAR Fund. For a full list of the 'CGIAR Fund' funding partners please see: http://www.cgiar.org/our-funders/

Any views expressed in this publication are those of the authors. They do not necessarily represent the views of CIFOR, the editors, the authors' institutions, the financial sponsors or the reviewers.

# **Contents**

	knowledgments ecutive summary	iv v
1	Introduction	1
2	Historical context	3
3	Landscape changes	5
4	Changes in social differentiation	8
5	Changing livelihoods and agricultural labor patterns	10
6	Changing representations, changing expectations	14
7	Reflecting on rural transformation	18
8	Conclusions	21
Re	eferences	22
Li	st of boxes and figures	
<b>Bo</b>	A framework for examining masculinities	2
	gures	2
1 2	Map of East Kalimantan with study locations identified Map of Long Segar land use by 1990 (from Colfer and Dudley 1993, 32)	3
3	ITCI HTI clearing near Long Anai, East Kalimantan, 1997	9
4	Long Anai woman leader harvesting rice that lodged due to heavy rains, with her family, March 2019	10

## **Acknowledgments**

This work was undertaken as part of the CGIAR Research Programs on Policies, Institutions and Markets (PIM), led by the International Food Policy Research Institute (IFPRI), and the CGIAR Research Program on Forests, Trees and Agroforestry (FTA), led by CIFOR. We are grateful to Cornell University's Southeast Asia Program, which supports Colfer's work generally and contributed some of the costs incurred in the fieldwork associated with this study; to Gideon Suharyanto, Production Team Coordinator; Sufiet Erlita, CIFOR's Data and Information Services Manager, Sarah Oakes for her technical editing,

and to Colfer's son, Andrew Balan Pierce, who accompanied Colfer to the field and contributed to our data collection on masculinities. We thank Rebecca Elmhirst and Anne Larson for constructive reviews of an earlier version of this paper. We are also grateful to the people of Long Segar and Long Anai, who patiently and with good humor worked with Colfer to collect the data discussed here (particularly Tamen Loren, Pesuyang, Dorkas and Erni, our assistants in the field). The opinions expressed here belong to the authors and do not necessarily reflect the views of CIFOR, PIM, IFPRI, CGIAR, Cornell or the financial sponsors.

# **Executive summary**

In this paper we examine if and how various forces that often appear to influence agrarian transformations may shape rural masculinities and femininities among the Uma' Jalan Kenyah in two communities in East Kalimantan. Crucial aspects of men's and women's relationships there have endured, despite significant changes in the habitat, in the distribution of tasks, and in the external pressures relating to gender relations.

We set the stage by briefly describing a) the people's history, b) the changes they have seen in their landscape (from humid tropical rainforest to oil palm plantations), and c) the key elements of their social differentiation (gender, age and social class distinctions).

We examine traditional agricultural labor patterns and other livelihood concerns, recognizing first the central traditional role of rice-based swiddening in both ethnic and (women's) gender identity. Where men were makers of expeditions, women were growers of rice; and more recently, men have shifted to cutters of forests at home and elsewhere (for plantations and formal migration programs). Most recently, with the arrival of oil palm companies near these communities, women's ricefields have shrunk, due to shortage of land, and men have begun to develop kebun (orchards, mainly of oil palm). The non-timber forest products previously collected by both are no longer available. Some women (rarely men) work for the oil palm companies as day laborers. There is considerable and fairly equal out-migration of both men and women, with close relations with home communities maintained. Difficulties in relations between the communities and the oil palm companies are also discussed.

In the next section, we consider the possibilities for adverse change from the Kenyah's comparatively equitable system between men and women (except within the political arena) to a less equitable one. Specifically, we address four key forces that have the potential to alter this comparative gender equity: government, school, the church and industry. Despite Colfer's prior dire predictions of increasing gender inequities, this does not seem to have happened to the degree predicted. The stability of Kenyah gender equity is remarkable; and we suggest that perhaps two qualitative issues that are difficult to define and difficult to measure – mutual respect and resilience – may be linked to this equity.

Considering these rural transformations, both men and women reveal some sadness about losses due to the obvious landscape changes, yet both look ahead with optimism and willingness to adapt. Both of the studied communities retain an interest in maintaining their culture, most visibly in the forms of music, dance and visual arts.

Whereas previously the people of Long Segar spoke of rice cultivation as central to their way of life and couldn't imagine life without it, they now speak of a two-pronged approach: rice field and garden/orchard, *uma* and *kebun/banit*. The increased pressure on land in these two communities has incentivized men to remain present in the communities, to protect their claims to land. Women have been and remain deeply involved in agriculture, though the nature of their involvement is shifting.

Before, women enhanced their status within a community by showing their hard work and productivity in rice production. Now their time is split in three productive ways: being an independent farmer (*peladang*, a swiddener), helping husbands on their *kebun*, and being a wage laborer (*buruh tani*) – the last having no positive gendered value, no enhanced prestige within the community.

While the forces of education, church, industry and government have grown incrementally stronger over the past decades, the relatively equitable Kenyah gender system has so far shown considerable 'stickiness' in resisting oppressive gender hierarchies.

We conclude that the combination of muting of gender differentiation,<sup>1</sup> routine mutual respect between the genders, and flexibility in the allocation of tasks between men and women, has been crucial in the comparatively non-traumatic adjustments the Kenyah have made, and their resilience, as their landscapes have been changed so utterly through the decisions of the more powerful.

Our study highlights a number of key aspects to be considered in studies on gender and agrarian transformations. It demonstrates how multiple environmental and socioeconomic changes within the landscape interact in shaping the division and nature of women's and men's labor, suggesting that the influence of such changes must be assessed in each locale to determine whether or not there are further potentially far-reaching effects on gender identities. It demonstrates that such dynamics must be analyzed in the broader social, economic and cultural context, based on nuanced understanding of the local sociocultural context as well as looking beyond conventional landscape-actors to a broader set of stakeholders. Importantly, the role that various features of customary systems play in resisting and mediating the diffusion and penetration of mainstream patriarchal norms and relations merits more attention in both academic and policy spheres.

<sup>1</sup> Muting of gender difference refers both to a lack of gender polarization and a more general de-emphasis on gender difference. We borrowed the idea of muting from E. Ardener (1975), who used it differently, to account for the near-absence of women's lives in many ethnographies at that time. He refers to the 'inarticulateness' of women as perceived by particularly male ethnographers.

### 1 Introduction

This analysis was partially inspired by CIFOR's ongoing investigations on the gender dynamics of agricultural labor force participation in Indonesia, a study conducted as part of a wider CGIAR inquiry into the 'feminization of agriculture' thesis. In short, the thesis holds that amidst an agrarian transition characterized by the declining viability of smallholder agriculture, increasing non-agricultural employment opportunities, and an expansion of commercial, largescale agriculture, men tend to exit the agricultural sector at a higher pace – resulting in a 'feminization of agriculture' (Kabeer 2005; Rao 2006; Slavchevska et al. 2016). As women are left to shoulder increasing responsibilities for agricultural production, concerns are being voiced over the potential effects that this development can have on women's welfare and empowerment, as well as agricultural production and food security (de Brauw et al. 2008). However, as observed in various parts of the world (Nightingale 2011; Paulson 2017), notions of masculinities and femininities, as well as social status and hierarchies, are often embedded in and expressed through the various labor and sociocultural activities that men and women perform in different landscapes. While much of the literature on outcomes of feminizing agriculture has focused on assessing positive or negative shifts in women's empowerment (Slavchevska et al. 2016), less attention has been devoted to examining if and how local perceptions of gender are influenced by the shifting nature of women's and men's labor amidst agrarian transformations (and other sociopolitical processes).

Here we examine if and how various forces that typically appear to influence agrarian transformations shape, or fail to shape, rural masculinities and femininities among the Uma' Jalan Kenyah in East Kalimantan. Changing notions of masculinities and femininities mutually interact with the division of activities and practices through which women and men engage with rural landscapes. In this case, crucial aspects of men's and women's relationships appear to have endured despite

significant changes in the habitat, in the distribution of tasks and in the external pressures (from school, government, church, and industry) relating to gender relations.

With this in mind, we show here how these dynamics play out in practice. In Indonesia, despite a national surge in women's labor force participation in agriculture during the Asian financial crisis in 1997, women's participation relative to men's has more or less stagnated on a national level since - fluctuating around a female-to-male ratio of 0.6 (Schaner and Das 2016). Data from the National Labor Force Survey Sakernas suggests a similar pattern and ratio in female agricultural labor participation (BPS 2008, 2018). However, statistics often fail to reflect realities in specific places and among particular groups. This study aims to locate in a particular area a number of broader changes influencing Indonesian rural development trajectories, including the expansion of industrial logging and commercial agriculture, changes in labor and migration patterns, as well as ongoing exposure to inequitable gender norms and relations through public, industrial and religious institutions. As this study shows, these forces are influencing women's and men's work patterns in different ways, despite the apparent stability of gender relations.

The Uma' Jalan Kenyah<sup>2</sup> are a particularly interesting group for this case study because of their unusually equitable gender system, characterized by high levels of mutual respect between women and men, flexibility in labor roles and joint household decision making (Colfer 2008).

In order to illustrate and understand if and how the ongoing processes of rural transformation are influencing women's and men's labor and broader

<sup>2</sup> Subsequently referred to simply as the "Kenyah". The Uma' Jalan are one of several sub-groups of Kenyah who speak slightly different, but mutually intelligible, dialects.

gender relations among the Kenyah, Colfer conducted a two-week re-visit to two villages in East Kalimantan, where she compared current gender conditions with those documented over the past forty years.<sup>3</sup>

Although she has written extensively on women's behavior, beliefs and goals, Colfer has only recently begun to consider ideas about masculinity and how these affect people's life choices (see Colfer 2021 and Box 1). Here, we incorporate attention to both men's and women's identities, as we examine landscape, agricultural and social transformations.

Whereas early studies of masculinity presented a rather uniform and negative view of men – as innately violent and controlling, for instance – recent work has shown the variety of ways in which different cultures provide varying options for men. As noted in Box 1, cultural systems provide constraining frameworks ('harps') within which men have varying degrees of freedom to fashion their own identities (via harp strings).

Here, we analyze how manhood and womanhood interact with agricultural transformations in two communities in East Kalimantan. We necessarily draw on a holistic understanding of the communities in which these views hold sway – only accessible via long-term, location-specific, qualitative research.

We first summarize the Kenyah's recent history, followed by an account of the landscape, social structural and livelihood changes that have transpired. We then focus on local representations and expectations and how these interact with dramatic rural transformations. In the last section, we identify five key aspects to be considered in studies on gender and agrarian transformations.

## Box 1. A framework for examining masculinities

Recognizing the growing evidence that masculinities vary enormously from place to place and group to group, Colfer (2021) examined her ethnographic experience in three contexts characterized by very different masculinities: a rural American logging community in the early 1970s, the Kenyah group described here in the late 1970s, and a multi-ethnic transmigration and Minangkabau area in West Sumatra in the mid 1980s. She also examined her experience working over four decades in international conservation and development contexts, seeking patterns of masculinity among her colleagues.

The stability of cultures, and their persistence (even resistance to change) have long been noted. However, in recent decades, there has been far more attention to the *dynamism* of cultural systems and the variation in people's sense of their own identity, even within one cultural system.

In order to capture these conflicting tendencies stability versus dynamism – Colfer used the analogy of a harp to analyze the various masculinities she encountered. The frame of the harp represents the stability of a given cultural system; and the harp strings represent the options available to the men in a particular group as they fashion their own preferred identities. Of course, cultures do change (as indeed the shapes of harps have changed over the centuries), but the rate is considerably slower than is reflected in the ideas, behaviors and goals of individual men. This analogy has been useful both in a) capturing withincommunity variation, along with enduring and shared ideas about how men can and should behave, and b) comparing different masculinities across space and time.

<sup>3</sup> Methods used in the initial 1979–80 research: one year of participant observation, complemented by studies of time allocation, circular migration, women's decision making and status, family planning, cognitive mapping, dietary recordkeeping, ethnoscience, rice production and gender and land-use histories (Colfer 2008); 1990: comparative land and forest use among four Kenyah villages, NTFP identification (Colfer and Dudley 1993; Colfer et al. 1997); 1999: indigenous silviculture and fire management; 2001: indigenous silviculture and fire management, causes and effects of the 1997–98 fires, dietary survey (Colfer et al. 2000; Porro et al. 2001; Dennis and Colfer 2006); 2019: participant observation 'light', questionnaire on gender dynamics in Long Segar (n=143) and Long Anai (n= 134) (Colfer 2021).

## 2 Historical context

The two communities studied are in East Kalimantan, which is in the Indonesian part of the island of Borneo (see Figure 1). The inhabitants of both have links to Long Ampung, another Kenyah village in the very center of Borneo (the Apo Kayan). In 2004, the first study village, Long Anai, was accessible only by canoe; it is now accessible via a bumpy 2-3 hour car journey from the East Kalimantan capital, Samarinda. The Kenyah began moving to this locale in 1983, after major fires decimated much of the province (Colfer and Dudley 1993); its proximity to the city opened up commercial possibilities that had not existed in their remoter home village of Long Segar; nor had the Kenyah expressed any interest in commerce in earlier years. Their values

strongly emphasized sharing, and commerce was uncomfortable for them.

The Kenyah began settling in Long Segar in 1962. The central government declared Long Segar a 'resettlement village' in 1972, as part of their policy to 'resettle' those living in remote areas. The government's purported purpose was to provide better housing (specifically *not* longhouses, which policymakers considered 'communist'), economic and educational opportunities, and health benefits. Long Segar's men began receiving various benefits (2 ha land allocations [without certificates of ownership], agricultural implements, seeds, extension services), some of which they were still receiving in 1980 when this program was drawing

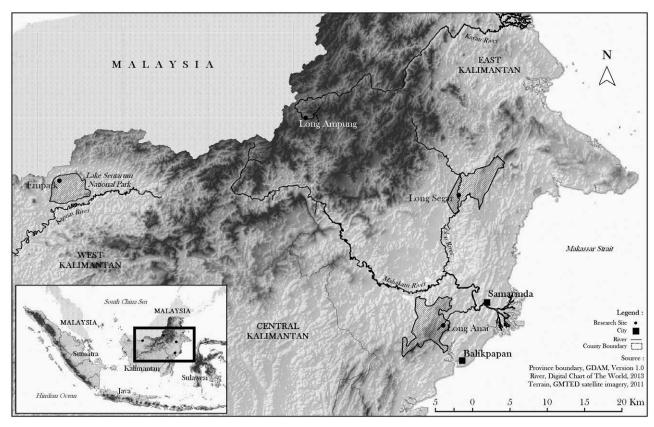


Figure 1. Map of East Kalimantan with study locations identified

to a close. Although such allocation of benefits to men (and not women) has had adverse effects on gender equity in other areas (Lin 2008; Elmhirst 2011), gender equity was rather taken for granted in Long Segar, and locals saw these benefits as being for the household. This interpretation was strengthened by women's powerful traditional role in the subsistence base of rice cultivation (Colfer and Dudley 1993; Colfer et al. 1997; Colfer 2008).

In Long Segar (in 1980 accessible via a two day, one night riverboat journey up the Mahakam and Telen Rivers; in 2019, a 10-hour drive over rough roads west of Samarinda), swidden cultivation of upland rice was the mainstay, supplemented by hunting, fishing and mainly male wage or

contract labor elsewhere, until at least the late 1990s. Swiddening (making *uma*, or a dry rice field) was both a central part of ethnic identity, and Kenyah women's most fundamental 'profession'. It produced a surplus, which families sold for the small amounts of cash they required (for medical emergencies, education, trade goods). The incomes men produced from their excursions tended to be used to buy chainsaws or outboard motors; a few bought a rice mill or a generator. In Long Anai, people maintained their emphasis on swiddening but expanded it to include *kebun* (gardens/orchards) of cash crops for sale in the now closer urban areas. Both communities were surrounded by significant areas of primary rainforest. In the early years of settlement, available land was abundant; not so now.

## 3 Landscape changes

The lands in Long Segar and Long Anai are not fertile. Soil scientists concluded in the 1980s that local soils were appropriate for tree crops, but not for sustained food crop production in the conventional manner. The Kenyah's traditional swidden system provided the long rest that the soil needed and the additional fertilizer from ash after the burn. The various 'development' efforts described below have reduced the long-term prospects for biodiversity and the 'insurance' that such diversity provides for human livelihoods. In 1979, Colfer found a world of mainly old growth forest, with small mosaics composed of gaps for rice production, and varying stages of regrowth in the 'fallows'. A few trees were being extracted from each hectare by timber companies. By the 1980s and 90s, timber extraction had become less profitable, and industry shifted to timber plantations (HTI, Hutan Tanaman *Industri*) followed by government-sponsored transmigration, seriously reducing the areas available for local people and for biodiversity. Substantial forest still remained, however.

The landscape began changing dramatically in the 1990s. Long Segar was within the territory assigned to an American timber concession in the 1970s and 80s (Georgia Pacific and later the Indonesian affiliate, Kiani Lestari). Negotiations with the timber company, which harvested only a few trees from each hectare, were relatively easy. In the early 1990s, the first HTI came, beginning an ongoing process of permanent reduction of land available to the Kenyah. Plantations, that impinged on the lands the Kenyah had cleared and claimed, were developed by the aforementioned timber companies (with close political ties to the

Soeharto regime). By the mid-1990s, the central government (GOI) implemented a transmigration program, designed both to reduce population pressure on Java/Bali and to 'develop' Indonesia's 'Outer Islands'. Such movement of peoples from Java dated back to Dutch colonial days. Several hundred thousand transmigrants were settled at Wahau, a few kilometers north of Long Segar,<sup>5</sup> further hemming in the community. The new millennium brought a steady stream of combined government and industry efforts to convert Long Segar and Long Anai to large-scale plantation agriculture, culminating most recently in a landscape dominated by oil palm. Long Segar's people report that three kilometers either side of the Telen River remain available to them. Figure 2 shows the pattern and extent of land use through 1990.6 Government officials, who tended to see the Kenyah as 'primitive headhunters', shamed Kenyah men in negotiations, to convince the skeptical villagers of the value of abandoning claims to lands they considered their own. Colfer recalls one Javanese official asking a group of Long Segar's leaders in the 1990s, his voice dripping with disdain, "Do you want land or modernity?" The 'correct' answer was obvious. The underlying threat was also based on people's lack of land ownership certificates, and the fact that their rice fields and village were in the national forest estate (which at that time comprised some 75–80% of the country).

<sup>4</sup> In the fall of 1991, Kiani Lestari had a concession of 350,000 ha that included Long Segar; their HTI had 53,000 ha, some 23,000 of which had already been cut and planted with various tree species by transmigrants (mainly fast-growing; Colfer et al. 1997, 159-60).

<sup>5</sup> Colfer and Dudley (1993) report the 1980 plans to bring 6000 transmigrant families to reside on 33,200 ha of primary evergreen dipterocarp rainforest (15); and the results from interviews with Kenyah who had 'transmigrated' (*tran local*) from Long Segar in 1991.

<sup>6</sup> Although Kenyah practice was to follow rivers and select fields near them, it appears that this pattern has shifted to one along roads, given the current availability of roads and the ubiquity of motorcycles.

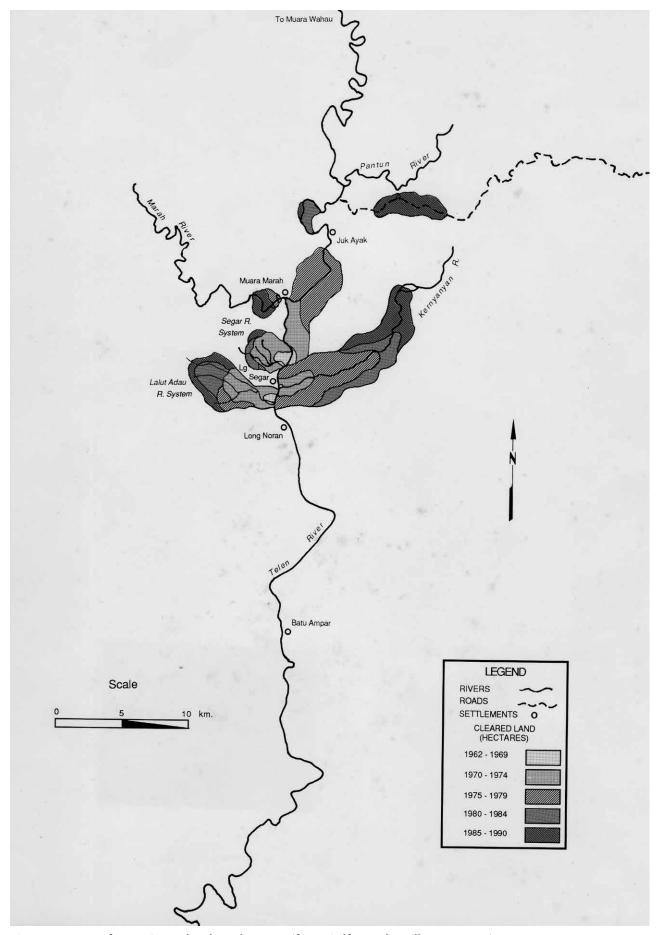


Figure 2. Map of Long Segar land use by 1990 (from Colfer and Dudley 1993, 32)

A similar process has been occurring in Long Anai. Long Anai was within the American Weyerhauser timber concession (taken over in 1986 by their affiliate, ITCI, International Timber Corporation of Indonesia), which also initially caused few problems regarding land access. But, as in Long Segar, HTIs began to be developed, consistent with Indonesian national policy in the 1990s. There were no transmigration programs in this area, but oil palm companies followed, further reducing the lands available for communities. Now Long Anai, like Long Segar, is surrounded by oil palm. The most recent landscape changes planned include mining in their territory<sup>7</sup> and the inclusion of Long Anai in the area specified for Indonesia's new national capital (on hold as of November 2020, due to COVID-19).

The landscape transformation, which began with timber extraction, proceeded in both places through HTI development once the valuable timber was gone, to oil palm with its comparative profitability for companies. Like the timber

concessions and HTIs, coal mining company officers and government officials have long had close ties - making communities' negotiations a delicate process (with companies paying off both local officials and community elites a standard practice). Although national efforts are underway to limit the payoffs and special privileges that accompanied these ties, corrupt practices have long been the norm. The people of Long Anai have already been approached by the coal mining company operating just downstream from them and have begun considering their options and negotiating strategies. The mining company has already taken over lands that the community considered their own. The Kenyah are aware of the significant environmental and agricultural problems associated with coal mining, as these are visible downstream. The trickery of both oil palm and mining companies is well established in the literature; paying off leaders, encouraging and flaming the fires of internal factionalism, and other destructive maneuvers have been common in both communities.

<sup>7</sup> Although coal mining has been underway in East Kalimantan for a long time (already underway in 1979), it is recent and still under negotiation in the precise area of Long Anai. In December 2019, a video on Facebook showed a Long Anai demonstration and nearly violent confrontation between its men and the military, which was supporting the mining operatives.

## 4 Changes in social differentiation

The two communities manifest social differentiation in various ways, with two predominant axes: gender and aristocratic versus commoner ancestry. Although gender differentiation is muted in this group, it can be seen in forms of negotiation and decision making, which have implications for men's versus women's involvement. Elmhirst et al. (2017b) discuss such customs in two nearby Muslim societies in East Kalimantan (see also Elmhirst et al. 2017a). They describe,

...the ways in which men's social networks are crucial for negotiating benefit sharing arrangements of smallholder oil palm....Women's engagement in these arrangements is contingent on their husbands or other male relatives, as the 'spaces' in which such relationships are fostered are male spaces. Negotiations take place through long, seemingly informal discussions over coffee and cigarettes, conducted on the front porch of people's homes, usually at night. This includes the undertaking of formal business with official decision makers at different levels, which takes place outside office hours and office spaces, and, importantly, outside mechanisms that may be subject to local government gender mainstreaming initiatives. (Elmhirst et al. 2017b, 18, our italics)

Gender norms of Long Segar and Long Anai (discussed further below) moderate this kind of male advantage, though they surely cannot obliterate it, particularly as such interactions increase over time with ever more contact with outsiders. On the other hand, in both Long Segar and Long Anai, there were two women heads of village neighborhoods (*rukun tetangga*, RT) in 2019; and the routine involvement of several women in strategy, planning and implementation of agreements with oil palm companies was clear. In addition, most women today understand and speak Indonesian, which was not the case during much of the 20<sup>th</sup> century. This has given them a stronger voice in such discussions.

Elmhirst et al. (2017) also note the dangers for the youth of loss of lands and their apparent lack of involvement in relevant negotiations. Although in Long Segar and Long Anai, the youths' voices are also muted vis-à-vis those of older people in the same ways as women's, youth have an additional, widely-recognized advantage – their higher educational achievements – which may in time lead to greater political involvement. A few remaining elders in both communities are illiterate, and those who can read and write still have only a few years of schooling.

Young Kenyah women in particular have shown a greater interest in education than men, though their gender is an obstacle that *can* obliterate this advantage in interactions with the less equitable formal external institutions. Still, by 2019 women in both communities had taken on leadership roles in the church. This is despite the KINGMI (a Lutheran denomination) church's explicit norms against women's leadership. One apparently capable woman preacher, discussed below, described the church's overt demeaning of her leadership capabilities vis-à-vis those of her less qualified husband. Many educated Kenyah women had found jobs in government, industry and the church; and virtually all saw education as the path to a better future for their children. However, this implies a path away from agriculture.

The second vital traditional source of internal marginalization is *Panyen* ancestry. These communities have in the past been divided into aristocrats (*Paren*) and commoners (*Panyen*).<sup>8</sup> Being *Paren* had granted a person – men and women – additional respect, leadership authority, contributions of labor, rice and other goods, as well as the right to use certain symbols on their

<sup>8</sup> In the past, there were also slaves, though this practice had disappeared sometime before 1979.

baby carriers and graves (e.g. tiger teeth, particular beaded patterns). Paren men were also expected to speak well publicly and lead others on expeditions; and both Paren men and women were expected to show leadership in community life and concern for the needs of the populace (a kind of noblesse oblige). One Paren woman complained in 1980 that the Paren were being strangled by the Panyen, just as the strangler fig (Ficus spp., lunok) attacked the Parenlike ironwood (Eusideroxylon zwageri, beli'en) – a tree with many valued local uses.

This differentiation has changed over time. It was illegal to mention it in the 1980s, according to local (revised) customary law – the revision due to

the work of the single commoner headman among all Uma' Jalan Kenyah villages, Pelibut. By 2019, though, controversies regarding this differentiation again raged and were being discussed openly in Long Segar. Pelibut's son, also a leader, maintained in 2019 that excellent leadership should render a person *Paren*. His father had earlier (and successfully) argued that the differentiation was against nationalism, democracy and Christianity. Another *Panyen* individual, Pelibut's grandson in fact, spoke out in favor of a Kenyah candidate in a regional election. He argued that Long Segar should support this candidate because Kenyah everywhere would recognize and value his *Paren* status and thereby strengthen the Kenyah voice on the regional stage.



Figure 3. ITCI HTI clearing near Long Anai, East Kalimantan, 1997 Photo by Carol J. Pierce Colfer/CIFOR.

# 5 Changing livelihoods and agricultural labor patterns

In both communities, the 'profession' of almost every inhabitant has been fundamentally rice production in swiddens. When expressing their ethnic identity, both men and women would say, *Ilu uyan uma* ('We make rice swiddens'). And when women were praised, their care of and involvement with swiddens was routinely emphasized. Although the Kenyah normally translated this into *petani* (the Indonesian word for farmer), their meaning was quite different from the also valued *petani* identity of Javanese farmers, for instance, who emphasized hoeing and permanent agriculture, and placed less emphasis on rice per se. Kenyah women were the mainstay, completely involved, on a day-to-day basis, in agriculture, though helped a great deal by co-resident

men. Men were also involved in agriculture, but, just as successful rice production was seen as a symbol of a life well-lived for a woman, [one favorite version of] a successful man was one who had travelled far, had numerous expeditions to distant lands (at least to Malaysia), and had come home with interesting tales to tell, adventures to recount (see Colfer 2021). In the Apo Kayan homeland, these mainly male expeditions had typically involved travelling through dense forest, across raging streams, encountering dangerous animals (and earlier, other headhunters), to the Malaysian side of Borneo. There, they had worked for plantation companies most typically – thus also remaining involved in another form of agriculture, though large in scale.



Figure 4. Long Anai woman leader harvesting rice that lodged due to heavy rains, with her family, March 2019 Photo by Carol J. Pierce Colfer/CIFOR.

Since the moves to Long Segar and Long Anai, however, trade goods were more readily available in situ, reducing the need to travel far for goods. Men began traveling within the province, for cash. Their work, in the late 20th century, was most often forest clearing, whether under contract to a logging company, a transmigration project based on agriculture, or a plantation firm; again, most work was agriculturally based (including forests and plantations as 'agriculture'). As before, men would try to come home at busy agricultural times (especially forest/land clearing and harvest). Women continued as the mainstay of rice-based subsistence agriculture; the key role this activity played as the central Kenyah symbol of their own ethnicity no doubt also contributed to the prestige attached to womanhood.

Both men and women were involved in an extensive array of supplementary subsistence activities: growing vegetables, legumes and fruits, as well as gathering wild and semi-wild leaves, shoots, fruits and roots from surrounding forests. All these foods, although vital to nutrition, carried little in the way of symbolic load – whether gendered or ethnic---requiring additional research to fully capture the variety of the people's forest uses (a dietary recordkeeping study and a plant identification study focused on fibers, medicinal plants and timber species used by the Kenyah). Men's hunting supplied valued meat, and brought widespread approval to men who excelled at this.

Now, there has been a shift such that men are less likely to leave on expeditions (Elmhirst et al. 2016; Colfer 2021). On the one hand, there are fewer opportunities for land clearing – Kenyah men's preferred line of work – as most of East Kalimantan has already been cleared, and on the other, there is less personal need, due to the local availability of consumer goods. There were always serious downsides to men's expedition-making as their labor was not available to the household during their absences; and families longed for their loved ones.

Recently, men have been trading their involvement in industrial and governmental forest clearing for involvement in their own mini-plantations — mostly oil palm now in Long Segar, and oil palm and other crops (e.g. corn, cacao) in Long Anai. Some are part of outgrower schemes and some are independent smallholders, but Kenyah men particularly seem averse to wage labor. Their

forest clearing was inevitably done by contracts organized by entrepreneurial Kenyah leaders, who were constrained in their distribution of proceeds by strong norms of fairness. Although this did not prevent corruption, it did succeed in avoiding dramatic or oppressive treatment of the work teams involved. The few men who do accept jobs as agricultural workers tend not to display the elements of the 'Protestant work ethic' that companies seek. Kenyah men tend to see a huge difference between working hard on their own land and for their own and their families' good, versus working for the benefit of a large company (particularly perhaps in light of the trickery that they have experienced at the hands of industry and government; see discussion below on working for a timber company).

Another important component of such decision making is the common (and recent) perception that men may be needed at home to safeguard their lands. The costs of land certification remain beyond people's financial capabilities in both communities.9 Being on site and working the land agriculturally are the surest ways in Indonesia to strengthen claims. A loose division of responsibility (with a sharing of labor on both fields) has emerged. Women continue to focus on rice fields (though these are smaller than before, partly because of the reduction in land availability);10 while men work to establish gardens/ orchards (kebun) for additional cash income and to strengthen land claims. A number of women in both communities also work as field laborers for the oil palm companies (also noted by Elmhirst et al. (2016) in Long Segar; and Li (2015) in West Kalimantan). One woman in Long Segar reported about 25 Kenyah women doing such work for one

<sup>9</sup> Traditional land ownership in both communities has been established by clearing forest areas not claimed by other people or communities. Each spring, groups have gone into the forest to choose (and divide up) forest lands for that year's swiddens. Long Anai respondents to our March 2019 questionnaire unanimously reported no involvement in choosing land for a rice field the previous year, strongly suggesting there is no more land freely available to claim there. In Long Segar, there remained people choosing land from the surrounding forests, but it's quite likely this was from among lands they had previously cleared and already claimed as their own.

<sup>10</sup> Land is less available despite the smaller number of people in Long Segar now (837, evenly split between men and women) than in 1980 (1,052), though more than in 1990 (551) – the latter reduction was due to out-migration to Long Anai (previously Tanah Merah), Sungai Bawang (previously Karang Umus), Muara Wahau Transmigration area (Colfer with Dudley 1993, 69) and elsewhere. Long Anai currently has a population of 435.

of the two oil palm companies operating in March 2019. She added, "In Kernyanyan [neighboring Muslim Kutai village], both men and women work for the oil palm company, but Kenyah men want their own *kebun*. Kenyah men use a chainsaw and cut down trees (*nepeng*). [But] all that work is over."

In trying to ascertain women's involvement in household decision making in 1980, we asked the women of Long Segar if they'd been involved in determining how to use the money their household received from the sale of rice, the most common, day-to-day cash available at that time (Colfer 1985). Sixty four percent of the 229 adult women interviewed answered in the affirmative. In 2019, Colfer asked 100 Long Segar men and women, "Do you help consider how to use [family] money?" the wording had to be changed slightly, because rice is no longer sold for cash. Interestingly, nearly the same percentage (65%) reported deciding with their spouse.<sup>11</sup> Of the 25% who responded that they decided alone, one third were women. Women's decision making about financial matters is not unusual in Indonesia (see Brenner 1995 or Keeler 1985 on Javanese; Novianti et al. 2016 on Minangkabau; Peletz 1995 on Malaysians; and Colfer et al. 2015 on the Tolaki and Makassar of Southeast and South Sulawesi, respectively).

Reduction in land devoted to rice cultivation could mean a reduction in women's workload, but that doesn't appear to be the case. Besides the usual domestic responsibilities and rice cultivation that fall more heavily on women than men, other household economic endeavors appear to draw on all available labor. One married mother in her 30s, for instance, had a small rice field, worked on the family *kebun*, helped take care of a small shop in the front of their house and worked part time for the oil palm company, as well as helping take care of her sickly husband and aging parents across the road. When asked why she also worked for the company, she expressed her desire to continue her education and the resulting need for additional cash.

In Long Anai, people's growing interest in *kebun* is a fluorescence of their longstanding involvement in selling produce; it is also an attempt to secure the land they've considered their own by proving it is 'in use'. In Long Segar, this interest has also been

stimulated by the presence of the oil palm industry and related concerns about maintaining rights to land. With the exception of the early days of the resettlement program (mid-1970s), when the GOI was encouraging Long Segar residents to come and remain there, 12 tenure insecurity has been a persistent concern. Pressure has increased, as the oil palm industry wants longer term access to the land and is infringing ever closer to Long Segar. The landscape has truly been transformed, with little in the way of forest remaining. But, unlike in Long Anai, many Long Segar residents reported choosing rice fields this past year.

The circular migration of young and productive age men, so common in earlier times, has basically ended, but the Kenyah remain quite mobile. Although there is no mass out-migration, middleaged families may now move together to other areas in search of work, and young people regularly leave in search of schooling. Interestingly, with Kenyah women's typically higher educational achievements, men sometimes follow their wives - particularly those wives who obtain work in a government agency or with industry - though the Kenyah reported that, more frequently, women still followed their husbands. The mobility of the Kenyah was already evident from Kenyah Facebook posts in the 15 months prior to the fieldwork (November 2017 – February 2019); these posts came from all over the province, with a few having settled in Jakarta. Those who have moved away often maintain excellent relations and continue to share information with those staying in the village. In 2020, much Kenyah Facebook conversation focuses on COVID-19, encouraging each other to use masks and stay safe.

Unlike some contexts, where out-migration is explicitly linked to lack of access to land, that has not been so clearly evident in Long Segar or Long Anai. Traditionally there has been very little connection between Kenyah social structure (whether *Paren-Panyen* or religion-based) and access to land. Land has traditionally been abundant; and access to land depended primarily on the physical

<sup>11</sup> Alternative response options included alone, with parents, grandparents, or someone else (reported more fully in Colfer et al. 2021).

<sup>12</sup> At that time, GOI policy was to move people out of remote areas, ostensibly to more easily provide village infrastructure (education, health care, markets). There was also government concern that Dayaks might be communist (because they lived in longhouses) as well as concerns about their 'primitive' lifestyle – widely seen also as an embarrassment to the nation.

strength to cut the forest and on willingness to work hard to establish swiddens. The land so obtained became family property and was divided equally among children, whether boys or girls, *Paren* or *Panyen*, Catholic or Protestant.<sup>13</sup>

Some inequities did exist traditionally, and included the boundary-making process in defining a rice field for the coming year. Paren were likely to have some advantage based on traditional patterns of 'respect'. In 1979, for instance, *Panyen* planted an average of 2.6 ha, whereas *Paren* planted an average of 3.13 ha, closely paralleled by production (2,500 kg versus 3,014 kg; Colfer and Dudley 1993, 41–2). Widows and women whose husbands were on expeditions had more difficult access to men's labor for clearing, and thus were more likely to re-use a field a second or even third year. This meant the field was typically more weed-infested and likely to produce less rice. But norms of mutual assistance were extremely strong and women in such circumstances were often helped by others (see Chapters 10 and 11, Colfer 2008, for qualitative and quantitative analyses of rice production and women's involvement in Long Ampung and Long Segar in the 1970s and 80s).

In 2019, Colfer informally asked ten Long Segar residents (a convenience sample) the whereabouts and activities of all their adult children. Of the 41 offspring, six sons remained (40%, one for each of six households), nine had left; ten daughters remained (38%, spread among five households) and sixteen had left. The broader spread among households, for the men, may reflect the concern to have at least one adult man available to safeguard the family's land; but there seems to be no serious discrepancy between men's and women's outmigration in either community.

This is particularly interesting in light of the previous centrality of expedition-making for Kenyah ideas about masculinity. Not all men went on expeditions; it wasn't a requirement (rather a valued 'harp string'). But it was a standard and appreciated avenue to community admiration,

as well as a valued way to gain forest-related skills so necessary to life in the past. It was also a way of forging strong friendships later important in men's political networks, the importance of which in negotiations with oil palm companies has been discussed (e.g. Elmhirst et al. 2017b).

The fact that both communities have been subjected to trickery by these companies, resulting in loss of lands they had assumed to be theirs, heightens the importance of good negotiation skills. <sup>14</sup> People in both communities agree that rice fields are smaller these days, due both to company use of these lands and probably to out-migration as well (reducing the available labor supply – a longstanding problem in Borneo).

Disagreements among elite men in Long Segar and other Kenyah communities are encouraged by the oil palm companies, which try to gain access to the remaining lands (and avoid violence in the process). One company provided transport and paid expenses for three men from daughter communities to return to Long Segar in March 2019, to negotiate continuing rights to the lands they'd cleared when they'd lived there. The purpose was the expectation that these men would allow the oil palm companies to buy these lands the men could no longer use themselves. Long Segar's leaders had been dragging their feet, claiming those lands as their own. 15 The traditional system is vague on what happens to lands abandoned, whether the original cutter retains rights or the lands return to the community's estate. Similar discussions had occurred earlier in Long Ampung with regard to lands once cleared by those now residing in Long Segar (discussed in Colfer and Dudley 1993).

<sup>13</sup> Those originally leaving Long Segar to establish Long Anai in 1962 were all Protestants, which reflects more the bonds of affinity than religious controversy in this case. Groups came from Long Ampung to Long Segar first in 1962 in religious tranches, with the Protestants first, followed by a large group of Catholics (and more *Paren*) in 1972. One typical pattern was for a longhouse to decide to move together (see Chapter 13, Colfer 2008, for a fuller discussion).

<sup>14</sup> Both communities theoretically could apply for community land rights under the Constitutional ruling of 16 May 2013 (MK35/PUU-X/2012), which declares that 'masyarakat adat' (traditional communities) have the right to retain their traditional lands in national forests; however, the process of proving this status is unclear and has proceeded very slowly. Neither study community has tried to establish this legal right as yet.

<sup>15</sup> Land tenure has been and remains exceedingly complex and unclear in the Outer Islands of Indonesia. GOI and regency (*Kabupaten*) governments have legal rights to vast areas of land, which they regularly allocate to industry; but at the same time, local communities have traditional systems that cannot be completely ignored, in recognition of the fact that communities may resort to violence if their situations are made untenable. Very little is clear about land tenure in Kalimantan; all is subject to negotiation.

# 6 Changing representations, changing expectations

As noted before, the gender system among these groups has been characterized by considerable equality, expressed particularly through high levels of mutual respect between men and women, as well as flexibility in gendered labor roles (see Colfer et al. 1997; Colfer 2008, 2021; for other Dayak groups, see Sutlive's 1991 collection; for high levels of gender equity in Southeast Asia more generally, see Atkinson and Errington 1990; Ong and Peletz 1995). Although there are tasks that more normally fall to one sex or the other among the Kenyah, neither is ridiculed, chastized or discouraged from performing the tasks more often performed by the other (also noted by Appell 1991, 86, for the Rungus in neighboring Sabah). The one context in which inequity is and has been clear is in the political arena. Where age has consistently carried with it considerable authority, men have no greater authority than women except in the formal context of local-level politics, or in interactions with other ethnic groups. Older women also have considerable authority in other local contexts.

Our study identifies four forces at work that have the potential to alter this comparative gender equity: Government, the school, the church and industry. Here we document the strong forces that in many contexts have adversely affected women's lives, recognizing their potential to do so in Kalimantan as well. But we emphasize instead the degree to which the gender systems – in the sense of meanings and emotions involved – have not changed. The stability of Kenyah gender equity is remarkable; and we suggest that perhaps two qualitative issues that are difficult to define and difficult to measure – respect and resilience – may be linked to this equity. But here we first document the strong anti-equity forces at work.

Elmhirst (2011) has written eloquently about the gender inequities explicit in recent Indonesian government policies. GOI had dealings with

Long Segar via the Resettlement Program in the 1970s, with Kenyah men as go-betweens, but this interaction was primarily in the form of items (seeds, implements, tin for roofing, etc.) that appeared periodically for distribution. GOI involvement, practically non-existent in people's daily lives at that time, is now both more explicit and more apparent in day-to-day life than in earlier days. Communications between the village and outsiders has vastly increased. There is an explicit GOI expectation, now widely recognized, that men are heads of household, that men support their families, that men, not women, own land. Decisions about the activities and rights of oil palm companies are also made in all male groups, as documented by Elmhirst et al. (2017b) and seen previously by Colfer; candidates for public office acceptable to the government have typically been men, though in both communities, as noted above, two women have been recently elected as heads of RTs.

In 1979–80, many adults could not read or write; there had only been three years of schooling available in their home village of Long Ampung in the 1950s. But Long Segar had primary and middle schools, both staffed by local Kenyah. Academic quality was poor and teachers' education levels minimal, but children were gaining basic skills and learning the national language. Shortly thereafter, there were problems maintaining the middle school and students who wanted to continue their education after grade 6 had to go to distant cities. But by 2019, all levels from K-12 were available in Long Segar.

Several 2019 discussions with Long Segar school teachers were instructive regarding educational narratives of women's expected domesticity. In the elementary school, teachers included both genders and all teachers were Kenyah, as before. Although the teachers did stress the need for girls to learn to clean house and boys to be responsible, most of

their comments applied equally to boys and girls. At the junior high school, the head teacher was a Bugis Muslim woman from Sulawesi wearing a headscarf, as were several others of her staff. Gender differentiation was clear in the teacher's response to Colfer's question about differences in the training of boys and girls. For boys the teachers stressed skill development; for girls, attitudes and demeanor (*sikap*). She went on to say that for boys, they emphasized books, but for girls, *sopan santun*, or being well-mannered. When Colfer subsequently spoke with some Kenyah men about this discussion, they said 'Well, we *all* need to be *sopan santun*.'

The teacher's responses were particularly interesting, given the universal and longstanding perception that Kenyah girls enjoy and appreciate school more than boys do.<sup>17</sup> The teacher compared the Kenyah with her Kernyanyan students (from the adjacent Kutai village), saying that 1% of the Kutai went on to further schooling (elsewhere) but 40% of the Kenyah did. Indeed, despite these sexist elements of local education, it does seem to have granted Kenyah girls in particular a way forward in a context where their traditions are being disrupted by external events. Girls, more than boys, in both study communities have continued their educations and a fair number have obtained more prestigious jobs (e.g. office work in the oil palm company locally, government official, or policewomen elsewhere).

The third outside influence, religion, has been an important component of community life and has been intimately connected with issues of conflict and equity. In 1940, the first Christian missionary came to Long Ampung, though people had already been exposed to Christian ideas by men coming home from expeditions. The aforementioned Pelibut, a commoner (*Panyen*), drew on Christianity, democracy and nationalism to support his narrative, later widely accepted, that *Paren* and *Panyen* should be treated equally (see Colfer with

Dudley 1993, for a fuller religious history). In time, whole longhouses converted to Protestantism or Catholicism; and this differentiation was replicated in Long Segar, as inhabitants of Catholic longhouses (which included more *Paren*) settled away from the river and the inhabitants of Protestant longhouses (mostly *Panyen*), who had come earlier, settled on the shore of the Telen River.

Both churches have strong influence within the community and the Kenyah are serious about their religion (which in the 1970s still retained many animist beliefs). The assistant preacher at the local Protestant church, a non-Kenyah Dayak, is a good example. Before consenting to be interviewed, she phoned her husband (also non-Kenyah Dayak) to ask if he'd prefer to do or participate in the interview. When he declined, she began by affirming that the Bible says the man is the head of the household and has the right and responsibility to lead. She has a master's in theology and her husband, the head preacher, only graduated from high school. Further, she is the elder by three years (which should grant her some additional authority, within the Kenyah system). Her dilemma - whether she should follow when she feels more qualified and able to lead - is evident. She maligned herself for her 'egoism' in thinking she knows better sometimes. The message Colfer got from her was consistent with ones she had heard decades before in Long Segar's Protestant church: Protestant missionaries, who came from middle America with American stereotypes about mid-20<sup>th</sup> Century gender roles, preached these as part of the gospel.

A fourth institution, industry, has also been a factor in Long Segar life since the mid-1970s, when the timber companies arrived. Georgia Pacific, the American company in whose timber concession Long Segar was located, and later Kiani Lestari, the company that took over from Georgia Pacific, hired only men, mostly strong men at the peak of their strength, to log. In 1979-80 about 5-7 men were engaged in this work, under conditions Colfer considered oppressive. It was dangerous, exhausting work; pay was theoretically based on cubic meters cut, but loggers did not know how to compute cubic meters from a log, so had simply to accept the pay they were offered (they suspected, unfairly). These loggers were maligned by the company as lazy, abandoning their logging jobs to return home whenever the agricultural cycle required their presence; and this provided the excuse to bring in most workers from Java. Colfer heard

<sup>16</sup> Remote Indonesian communities often have teachers brought in from outside, due to the absence of qualified local individuals. However, there are many Kenyah who have now been educated. Possibly these Bugis teachers are holdovers from a previous time, when indeed there were few qualified Kenyah; or it may have resulted from a biased selection process.

<sup>17</sup> When asked why this is so, people tended to emphasize the older boys' interest in earning money and the fact that school does not make use of their physical strength, a trait generally admired in Kenyah boys.

similar complaints levied by Malaysians about local workers, along with praise for Indonesian Dayaks (too far from home to disappear at harvest time) as hard workers (see Lumenta 2011, for a historical analysis of Kenyah-Malaysian work relations). Local Long Segar leaders, men, were given salaries by the company in order to maintain good relations.

The relations between the company's men and the Kenyah are reminiscent of the situation described by Paulson (2017) for South America. She calls us to,

...examine hierarchies of power and value among differently positioned masculinities. The grueling labor conditions that rural men endure and the unfair exchanges to which they submit in both product and labor markets are not simple functions of supply and demand – far from it. They are socially constituted and symbolically justified via intersections of gender, spatial and ethno-racial systems that attribute lower value to rural indigenous masculinities relative to more privileged masculine identities. (272)

Corporate masculinities, replicated within various groups of outsiders, differ from Kenyah masculinities, with the former having had the upper hand in many interchanges. But Kenyah men's valuing of independence and awareness of such inequities contribute to their comparative disinterest in working as laborers (*buruh tani*) within the corporate setting.

Most logging had stopped by the early 1990s, followed by development of the 53,000 ha *Acacia mangium* plantation (also run by the related Kiani Hutan Lestari beginning in 1990) on the old Georgia Pacific concession; Colfer saw the results in 1999 and 2001, of this plantation's burning in the 1997–98 fires (see Colfer 2008, Chapters 14 and 15 for the impacts of these fires). Many observers considered the plantations to play an exacerbating role in the devastation caused by the fires. The increasingly destructive El Niño fires were widely thought to be related to the drying of the area resulting from loss of the rainforest.

Attempts were being made then both by HTI officials and the government's extension service, again with Kenyah men as go-betweens, to encourage local communities – including the transmigration program some kilometers north in Wahau – to plant fast-growing trees. One young Protestant Kenyah leader had begun building on an

existing cluster of Long Segar rice fields, to start a new community, Pantun (or Kilo 6), between Long Segar and the Wahau Transmigration area. By the mid-1990s, he was helping to promulgate a plan involving 10 ha of land for each family, to be planted 1 ha/year to rice, subsequently planted to Acacia or another fast-growing species. Eventually the idea was to have all 10 ha in trees (which seemed even at the time to provide insufficient income for subsistence). In the interim, Pantun inhabitants were pretending that a 5-year rotation on extremely poor soils was sufficient; 10-15 years had previously been estimated as the minimum necessary for rotation. The Kenyah justified this misrepresentation by their perception that this was the most land per family that government officials were likely to find acceptable. On a 1995 visit, the women of Pantun gathered around Colfer, complaining that their fields were full of weeds, far more than with their traditionally longer rotation (Colfer et al. 1997). Nor were they happy with the plan to abandon rice production.

Colfer came away from the 1995 visit disheartened, writing then:

I realized that the broader national, even international disdain for their [swidden] system had truly penetrated to Long Segar. The people in this new community, led by an intelligent and youthful leader who could communicate effectively with the company personnel, had finally capitulated. For years they had held out against the combination of logging companies, transmigration and plantation projects competing for their land against a long-term concerted attack on the rationality and integrity of their system of forest management. Now-after years of external pressure - they were rejecting the genuine, ecological wisdom inherent in their indigenous system and accepting advice that was already and obviously adversely affecting their environment. The death blow was the industrial timber estates. (Colfer et al. 1997, 160)

Colfer acknowledges having been overly pessimistic in her assessments over the years. At various times she has predicted loss of gender equity (most discussed in Colfer 2008),

- due to the uptake of chainsaws and outboard motors (fearing women's reduced efficiency vis-àvis men);
- due to the increasing sale of rice and use of money (to which men had greater access than women);

- due to the permanent nature of plantations and resulting land losses (adversely affecting their swidden production and related prestige);
- due to the influx of ethnic groups with more gender discriminatory attitudes; and
- due to institutions like the government, the church and the school (with their discriminatory narratives and practices).

Yet, nothing so dire, with regard to gender equity, appears to have occurred.

The current oil palm industry can serve a similarly disenfranchising function, as it does in other places (see Li 2015 on oil palm in West Kalimantan). The first two decades of the 21st century have seen the loss of Kalimantan's old growth in accessible areas18 and the transformation of agriculture from smallholder plots, in which women and men both had important voices, to large-scale monoculture of oil palm, managed most consistently by corporate men of other ethnic groups and different values. In 2019, the Kenyah did not express the view that the oil palm industry was explicitly genderinequitable. Men and women were said to be paid the same (low) wages for such fieldwork there; and office work was apparently available to either men or women, depending on qualifications (which suggests an advantage for women, on average). However, as women were considered the primary workers among the Kenyah, the insecure and low-paid fieldwork jobs were also mainly taken up by women. In West Kalimantan, Li (2015) documents deliberate preferences among oil palm companies to recruit land-poor women, in particular, for lower-paid casual jobs. However, it should be noted that among the Kutai community (Kernyanyan, adjacent to Long Segar), both women and men were involved in such work.

Today, Kenyah women expect and are expected to perform more domestic tasks than men (the 1979–80 pattern appears to hold, with women doing more of the cooking, childcare and hygiene, Colfer 2008, 159–60). Kenyah men are more

involved in these tasks than is usual elsewhere, but women still predominate. All of these domestic tasks are more time-consuming, routine and necessarily responsive, though less physically demanding and dangerous than tasks 'assigned' to men. The flexibility of oil palm fieldwork jobs offsets their low pay and insecurity, from most women's perspectives. If they are busy with other tasks, they can opt out; if they need money, they can opt in – both 'freely' (the inequity of this exemplifies a dilemma identified decades ago for women in Mexico: Arizpe 1977, Arizpe and Aranda 1981; see Li 2015 and Elmhirst et al. 2016 for the downsides of this 'bargain with the devil'). Colfer observed this same 'bargain' among men working as loggers for the timber companies, in the 1970s and 80s.

These four institutions (government, education, religion and industry) have been present for decades, though their strength is greater now that there is more interaction between them and the Kenyah. Despite shifting gender divisions of labor, and the probability of strengthened male-dominance in public decision making through greater exposure to outsiders, interaction between men and women remains remarkably egalitarian. Men and women continued generally to determine their own activities, perspectives and behavior without interference from their spouses, parents and children, except insofar as particular tasks required leadership (also not gendered or even entirely dependent on age, with children sometimes telling their elders what to do). Women freely spoke up if they disagreed with their husband, father or sons. As before, Colfer saw men performing the jobs women more typically do, and vice versa. Men carried children around, just as women did if the children so sought. Men cooked less frequently than women, but still often enough to demonstrate the lack of stigma. Women had taken up motorcycle riding, cell phones and use of Facebook as enthusiastically as men; and they continued to involve themselves consistently in agricultural activities, both small-scale and large. There remained no concern about men and women working together, as they did routinely. Colfer saw many couples together, youths of both sexes working side by side; and the same general civility between husbands and wives and among women and men friends, as she had seen in earlier times. Neither men nor women were prone to bossing others around, except in conditions where the task so required; and the bossing went either way.

<sup>18</sup> In 1995, Colfer wrote, "My earlier prediction that East Kalimantan might come to resemble West Kalimantan's thousands of hectares of rubber and oil palm was off a bit. I had the wrong species." (Colfer et al. 1997, 160.) Fast-growing trees for pulp and paper seemed likely to be East Kalimantan's forest cover at that time.

# 7 Reflecting on rural transformation

Among men (as well as women), Colfer recognized some sadness about losses due to landscape changes underway or recently experienced. Several people reminisced about the previously clean water in the rivers, the peace of relaxing on the shore, the coolness of the deep forest. Although old men occasionally reminisced nostalgically about headhunting and expeditions, these were not preoccupations that saddened them on a daily basis. Some women also expressed sadness about the loss of the materials and skills needed to dye and weave the beautiful Kenyah baskets. Some traditional skills of both genders (e.g. weaving elaborately designed mats, by women; or carving of beautifully decorated knife sheaths, by men), are indeed being lost. Those with the skills are dying off, the young are busy in school and no nearby forests can supply the raw materials anyway.

At the same time, both men and women were looking ahead with optimism. Both communities retain an interest in maintaining their culture, most visibly in the forms of music, dance and visual arts. Long Anai was declared a national 'Culture Village' (Desa Kebudayaan) in 2005, though the people had already earlier considered building a longhouse and inviting tourists to watch their dancing and listen to their music. There are regular videos of Kenyah dancing and music on Facebook, posted by Kenyah from all over the province. The newfound interests in Long Anai of both boys and girls in furthering their educations is indicative of a recognition that new livelihood paths will likely be necessary. Men's attitudes toward education had also become more enthusiastic than previously. The recent emphasis on the development of rubber (as Elmhirst et al. 2016 found) and now oil palm (Elmhirst et al. 2017b; Colfer 2021) reflect similar awareness in Long Segar.

In addition, the material standard of living in both communities has risen considerably, consistent with the broader findings of Santika et al. (2019) for East Kalimantan overall.<sup>19</sup> The roads in both towns were paved, in Long Segar by one of the oil palm companies. Some homes have refrigerators, TVs, even a few small washing machines. As Elmhirst et al. (2016) found, having a motorcycle is now considered a necessity. And women are seen driving them almost as often as men. Young people who have found good jobs in cities come home bearing gifts, repairing homes, contributing to rural livelihoods.

It is clear that Kenyah 'culture' is and has been very adaptable. Indeed, the Dayaks of Borneo have long had a very opportunistic approach to their livelihoods (Vayda et al. 1980, Dove 2011). Historically they have been willing to take up new challenges when their traditional approaches have failed or proved less profitable than new opportunities. But such challenges for the Kenyah have been complements to rice production, considered so central to their identities and to women's profession. Whereas previously, the people of Long Segar spoke of rice cultivation as central to their way of life (and in fact couldn't imagine life without it), now they speak of a two-pronged approach: rice field and garden/orchard, uma and kebun/banit. In the past the central core of rice production was supplemented by additional crops planted in rice fields and in small kebun, in the village and in the forest and by the gathering of wild produce - none of which was marked in terms of gender symbolism. Now, kebun are gaining ground as symbolic of more men's domain than

<sup>19</sup> These authors conclude, however, "We found an overall increase in basic, physical and financial indicators of wellbeing between 2000 and 2014, both in villages with oil palm plantation developments and those without such developments across Kalimantan... Conversely, there was an overall decline in social and environmental measures of well-being..." (211). They further note that those with oil palm development showed slower increases in the first measures and faster declines in the latter.

women's, and tend to be seen as almost comparable in importance to rice production (a pattern also visible in West Kalimantan among the Kantu' who were growing rubber (Dove 1993, or Dove 2011, more broadly). At the same time, if current trends continue, there will be no land for future generations to grow rice, particularly recognizing that the soils require a rotation of 10–15 years for sustainable production.

*Kebun* are important for income generation and as evidence of rights to land (despite the governmental view that this land is part of the forest estate and thus under GOI management). In some cases, kebun also have a role in strengthening people's (weak) bargaining position with oil palm companies (where companies continue to want to cultivate more land, as is the case in these two communities). Kebun ownership and management are seen to grant the men an independence closer to what they enjoyed previously - even with the close links necessitated by community dependence on company infrastructure – than would work as a wage laborer. Men's traditional interest in expedition making has given way to a concern to remain near their home villages in case their strength is needed to protect their lands from further incursions by outside actors (currently, oil palm and mining companies). Interestingly then, while the expansion of oil palm in West Kalimantan was found to push local men to migrate in search of livelihood opportunities (Li 2015), the increased pressure on land in Long Anai and Long Segar has instead incentivized men to remain present in the communities. Though not evident at this moment, the potentially increasing association of Kenyah masculinities with the role of 'protector of the land', in combination with the patriarchal household relations perpetrated by the various external institutions, may come to challenge equity within households.

Our study finds that women have been and remain deeply involved in agriculture, though the nature of their involvement is shifting. While maintaining their interest in rice production, women have had to change the balance of their time allocation. Besides rice production and supporting their husbands in making the *kebun*, women are now increasingly involved in wage labor in plantation agriculture. On one hand, flexible plantation labor offers opportunities to women (and men) to complement other labor engagements and earn additional income. However, if left unchecked,

current trends may be forcing them out of independent production. This may possibly [but not inevitably] result in a corporate masculinization of agriculture, through the invisibilization of women in decision-making processes and the relegation of women to low-paid casual labor (see Li 2015; Sijapati Basnett et al. 2016). Production for a world market could take over from subsistence farming and self-provisioning, and the freedom to manage one's own farm could give way to structured, oppressive and unprofitable wage labor. In India, for instance, Pattnaik et al. (2018) found an increased female share in agricultural labor had resulted from the diminished viability of small-scale agriculture, pushing men to out-migrate while women were overrepresented among casual laborers. Instead of feminization of agriculture, the authors instead refer to a 'feminization of agrarian distress'. Regarding women's labor on the *kebun*, Sijapati Basnett et al. (2016) have noted that as personnel working for oil palm outgrower schemes in Indonesia tend to sign contracts with the male head-of-household while premising production quotas on labor contributions of the whole family, women risk being relegated to "...'shadow workers' with limited entitlements to wages and benefits of formal employment" (Sijapati Basnett et al. 2016, 3). Hence, while the kebun undoubtedly plays a key role in the adaptive strategies of the Kenyah, attention needs to be paid to the ways in which demands on women's labor may potentially shape and/or limit the adaptive strategies available to them.

Women's shifting and diversified labor roles also signal another important change: Before, women were able to enhance their status within a community by showing their hard work and productivity in rice production. Now their time is split in at least three productive ways: between being an independent farmer (*peladang*, a swiddener); helping husbands on their *kebun*; and being a wage laborer (*buruh tani*) – the last having no positive gendered value, and no enhanced prestige within the community. Hence, attention should be paid to the role that rice production continues to play in influencing Kenyah women's identities and status over time.

At the same time, women's continuing commitment to education is of particular interest, as it is a well-worn path to higher incomes and more respect. Globally, it is also a well-established pathway out of agriculture. The fact that this interest has been supported fully by community members — both

men and women – is also of interest. Whereas women remain the more enthusiastic seekers of further education in Long Segar, this has changed in Long Anai, where men too now seek to continue their education. While education has become the main avenue available to Kenyah women to maintain their autonomy and active involvement in decision making and production, it is however also one of those very forces replicating and propounding gender inequities through its dominant discourses. On the pessimistic side, then, this could result in increased acceptance of a submissive, domestic role by women; or it could mean women's co-optation in processes that reduce their own autonomy and decision making and that of other women – as seems to have happened with the Dayak church women in both communities (the two I met were not Kenyah, however). Such changes *could* mean women's withdrawal from agricultural production should they accept the 'housewifely' ideal ('*ibu rumah tangga*') of the Indonesian state, the schools and the churches. Indeed, previous studies have suggested that marriage and number of dependent children are the strongest predictors of (especially) younger women's labor force participation in Indonesia (Comola and de Mello 2012; Cepeda 2013).

Colfer has published similar worries before, as noted above, based on research in the 1980s and 90s (e.g. Part III in Colfer 2008); and she revised her worries in the mid-2000s, concluding that, "my fears about women's status...do not seem to have come to pass" (343). Although this 2019

research shows a continuation of the desirable (relatively equitable) day-to-day gender relations of Kenyah men and women, again she feels some anxiety. The forces outlined above that reinforce or prescribe men's dominance, have grown stronger, via increased interaction between the Kenyah and those propounding such views. Yet despite the growing prevalence and intensity of such forces, interactions between Kenyah women and men appear to continue to be characterized by routine mutual respect. The restructuring of labor has undoubtedly had a differentiated impact on women and men, with women's time increasingly split between rice production, plantation work, the kebun and the home. However, despite the changing labor roles, Kenyah women and men did not express grievances of increased inequalities between genders. Similarly, the increasing demand on male representation of both the household and community in public decision making did not appear to have translated into more inequitable decision making within the household. The combination of muting of gender differentiation and the flexibility in allocation of tasks between men and women may well have been crucial in the comparatively non-traumatic adjustments the Kenyah have made, as their landscapes have been so drastically changed. As argued elsewhere about the Tolaki of Southeast Sulawesi (Colfer et al. 2015), it is critical to learn from these comparatively equitable gender systems, as they may well hold keys to the sort of resilience and adaptability we know we need more than ever, in the face of climate change and crises like COVID-19.

## 8 Conclusions

This study set out to illustrate and understand how the ongoing processes of rural transformation are influencing women's and men's labor and broader gender relations among the Kenyah. It has found that various changes in the landscape, driven in large part by agribusiness expansion and increasing land scarcity, have influenced the nature of women's and men's labor in a number of ways. For men, the increased pressure on land, in combination with a diminished demand for logging labor, has reduced male seasonal migration and increased emphasis on orchards (kebun). The kebun are perceived to strengthen land rights vis-à-vis external pressures while partially and potentially making up for foregone logging income. For women, the diminishing viability of rice production, in combination with increasing labor demand both within the households as well as on plantations, has meant that their time is increasingly split between rice fields, the families' kebun, casual plantation work and household reproductive work. At the same time, younger women in particular are pursuing education – with a good number of them obtaining non-agricultural jobs. In this sociocultural context, the reallocation of men's and women's labor signals some potential shifts, as circular migration and rice production, central to traditional gendered identities in the Kenyah community, are on the decline.

Interestingly, due to the conventionally limited gender differences among the Kenyah, the changes in gendered labor allocation do not appear to have significantly influenced the quality of relations between men and women. However, our study identifies a number of external forces, perpetuated by public policy, the education system, religious institutions and industry, which tend to promote patriarchal and heteronormative gender relations. This is done especially through emphasizing the man as the head and representative of the household, while more 'housewifely' notions of femininity are put forth to women.

While these forces have certainly grown incrementally stronger over the past decades, the relatively equitable Kenyah gender system has so far shown considerable 'stickiness' in resisting oppressive gender hierarchies. We suspect that the combination of muting of gender differentiation, routine mutual respect between the genders, and flexibility in allocation of tasks between men and women, has been crucial in the comparatively non-traumatic adjustments the Kenyah have made, their *resilience*, as their landscapes have been changed so utterly through the decisions of the more powerful. The people appear to have altered their gendered division of labor without any major effect on ideas about gender relations.

Our study highlights five key aspects to be considered in studies on gender and agrarian transformations: First, it demonstrates how multiple environmental and socioeconomic changes within the landscape interact in shaping the division and nature of women's and men's labor. Second, it suggests that the influence of such changes must be assessed in each locale to determine whether or not there are further potentially far-reaching effects on gender identities. Third, it demonstrates that such dynamics must be analyzed in the broader social, economic and cultural context. This necessitates understanding the local sociocultural context as well as looking beyond conventional landscape-actors to a broader set of stakeholders, including, for example, the church and the education system. Fourth, and relatedly, the role that various features of customary systems play in resisting and mediating the diffusion and penetration of mainstream patriarchal norms and relations merits more attention in both academic and policy spheres. Fifth, gaining such understanding takes time. We need to develop institutional cultures that recognize this need and allow the necessary time; and ones that prepare fieldworkers with the skills to look at local cultures holistically and analyze what will and won't work in a particular setting. This means going beyond the use of standardized surveys and requires skills in qualitative methods.

## References

- Appell G. 1991. Individuation of the drives of sex and aggression in the linguistic and behavioral repertoire of the Rungus. *In* Sutlive V and Appell G, eds. *Female and Male in Borneo: Contributions and Challenges to Gender Studies*. Williamsburg, VA: Borneo Research Council. 57–120.
- Arizpe L. 1977. Women in the informal labor sector: The case of Mexico City. *Signs 3* (1):25–37.
- Arizpe L and Aranda J. 1981. The 'comparative advantages' of women's disadvantages:

  Women workers in the strawberry export agribusiness in Mexico. *Signs* 7 (2):453–473.
- Atkinson J and Errington S, eds. 1990. *Power and Difference: Gender in Island Southeast Asia*. Stanford, CA: Stanford University Press.
- Ardener, E. 1975. Belief and the problem of women. *In* Ardener S, ed. *Perceiving Women*. London: Malaby Press. 1–17.
- BPS 2018. National Labor Survey. National Bureau of Statistics. Government of Indonesia.
- BPS 2008. National Labor Survey. National Bureau of Statistics. Government of Indonesia.
- Brenner S. 1995. Why women rule the roost: Rethinking Javanese ideologies of gender and self-control. *In* Ong A and Peletz M, eds. *Bewitching Women, Pious Men: Gender* and Body Politics in Southeast Asia. Berkeley: University of California Press. 19–50.
- Colfer C. 2021. *Masculinities in Forests:* Representations of Diversity. London: Earthscan/Routledge.
- Colfer C. 2008. The Longhouse of the Tarsier: Changing Landscapes, Gender and Well Being in Borneo. Appell G and Sutlive V, eds. Vol. 10. Borneo Research Council Monograph Series. Phillips, Maine: Borneo Research Council, in cooperation with CIFOR and UNESCO.
- Colfer C. 1985. Female status and action in two Dayak communities. *In* Goodman M, ed.

- Women in Asia and the Pacific: Toward an East-West Dialogue. Honolulu: University of Hawaii Press. 183–214.
- Colfer C, Achdiawan R, Roshetko J, Mulyoutami E, Yuliani EL, Mulyana A, Moeliono M, Adnan H and Erni. 2015. The balance of power in household decision-making: Encouraging news on gender in Southern Sulawesi. *World Development* 76:147–164.
- Colfer C, Dennis R and Applegate G. 2000. Site 8: Long Segar, East Kalimantan Province, Indonesia. *In The Underlying Causes and Impacts of Fires in South-east Asia*. Bogor, Indonesia: CIFOR/ICRAF.
- Colfer C with Dudley R. 1993. Shifting cultivators of Indonesia: Managers or marauders of the forest? Rice production and forest use among the Uma' Jalan of East Kalimantan. Community Forestry Case Study Series 6. Rome: Food and Agriculture Organization of the United Nations.
- Colfer C, Peluso NL and Chung Chin S. 1997.

  Beyond Slash and Burn: Building on Indigenous

  Management of Borneo's Tropical Rain Forests,

  Advances in Economic Botany. Vol. 11. Bronx,

  NY: New York Botanical Garden.
- de Brauw A, Li Q, Liu C, Rozelle S and Zhang L. 2008. Feminization of agriculture in China? Myths surrounding women's participation in farming. *The China Quarterly* 194: 327–348. doi:10.1017/S0305741008000404
- Dennis R and Colfer C. 2006. Impacts of the loss and degradation of lowland forest in 1983– 2000 in East Kutai District, East Kalimantan, Indonesia. *Singapore Journal of Tropical Geography* 27:30–48.
- Dove M. 2011. The Banana Tree at the Gate: A History of Marginal Peoples and Global Markets in Borneo. New Haven, CT: Yale University Press.
- Dove M. 1993. Smallholder rubber and swidden agriculture in Borneo: A sustainable adaptation to the ecology and economy

- of the tropical forest. *Economic Botany* 47(2):136–147.
- Elmhirst R. 2011. Migrant pathways to resource access in Lampung's political forest: Gender, citizenship and creative conjugality. *Geoforum* 42:173–183.
- Elmhirst R, Sijapati Basnett B, Siscawati M and Ekowati D. 2017a. *Gender Issues in Large Scale Land Acquisition: Insights from Oil Palm in Indonesia.* Washington, DC: Rights and Resources Initiative.
- Elmhirst R, Siscawati M, Sijapati Basnett B and Ekowati D. 2017b. Gender and generation in engagements with oil palm in East Kalimantan, Indonesia: Insights from feminist political ecology. *Journal of Peasant Societies*. doi: 10.1080/03066150.2017.1337002.
- Elmhirst R, Siscawati M and Colfer C. 2016.
  Revisiting gender and forestry in Long Segar,
  East Kalimantan: Oil palm and divided
  aspirations. In Colfer C, Sijapati Basnett
  B and Elias M, eds. Gender and Forestry:
  Climate Change, Tenure, Value Chains,
  and Emerging Issues. London: Earthscan/
  CIFOR. 300–317.
- Kabeer N. 2005. Gender equality and women's empowerment: A critical analysis of the third Millennium Development Goal. *Gender and Development* 13(1), 13–24.
- Keeler W. 1985. Villagers and the exemplary center in Java. *Indonesia* 39:111–140.
- Li T. 2015. Social impacts of oil palm in Indonesia: A gendered perspective from West Kalimantan. CIFOR Occasional Paper 124. 51.
- Lin C. 2008. Autonomy reconstituted: Social and gendered implications of resettlement on the Orang Asli of peninsular Malaysia. *In* Resurreccion B and Elmhirst R, eds. *Gender and Natural Resource Management: Livelihoods, Mobility and Interventions.* London: Earthscan. 109–126.
- Lumenta D. 2011. Moving in a hierarchized landscape: Changing border regimes in Central Kalimantan. *Wacana* 13 (1):121–145.
- Nightingale A. 2011. Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal. *Geoforum* 42 (2):153–162. doi: 10.1016/j.geoforum.2010.03.004.
- Novianti E, Fatma Sjoraida D and Perbawasari S. 2016. Patterns of communication of Sunda-Minang interethnic families in Bandung, Indonesia. *JISPO* 6 (1):23–41.

- Ong A and Peletz M, eds. 1995. Bewitching Women, Pious Men: Gender and Body Politics in Southeast Asia. Berkeley, CA: University of California Press.
- Paulson S. 2017. Changing masculinities and femininities in the (re)production of Andean silvopastoral systems. *In* Colfer C, Elias M, Sijapati Basnett B and Stevens Hummel S, eds. *The Earthscan Reader on Gender and Forests*. London: Earthscan/Routledge. 163–280.
- Peletz M. 1995. Neither reasonable nor responsible: Contrasting representations of masculinity in a Malay society. *In* Ong A and Peletz M, eds. *Bewitching Women, Pious Men: Gender and Body Politics in Southeast Asia.* Berkeley, CA: University of California Press. 76–123.
- Porro R, Tiani AM, Tchikangwa B, Agung Sardjono M, Salim A, Colfer C and Brocklesby MA. 2001. Access to resources in forest-rich and forest-poor contexts. *In* Colfer C and Byron Y, eds. *People Managing Forest: The Links between Human Well Being and Sustainability.* Washington, DC: Resources for the Future and CIFOR. 250–273.
- Rao N. 2006. Land rights, gender equality and household food security: Exploring the conceptual links in the case of India. *Food Policy* 31: 180–193. https://doi.org/10.1016/j. foodpol.2005.10.006.
- Santika T, Wilson K, Budiharta S, Law E, Min Poh T, Ancrenaz M, Struebig M and Meijaard E. 2019. Does oil palm agriculture help alleviate poverty? A multidimensional counterfactual assessment of oil palm development in Indonesia. *World Development* 120:105–117.
- Schaner S and Das S. 2016. Female labor force participation in Asia: Indonesia country study. Manila: Asian Development Bank Economics Working Paper Series 474.
- Sijapati Basnett B, Gnych S and Anandi C. 2016. Transforming the Roundtable on Sustainable Palm Oil for greater gender equality and women's empowerment. *CIFOR Infobrief 166*. Bogor, Indonesia: CIFOR.
- Slavchevska V, Kaaria S and Taivalmaa SL. 2016. Feminization of Agriculture in the Context of Rural Transformations: What is the Evidence? Washington, DC: World Bank.
- Sutlive V, ed. 1991. Female and Male in Borneo: Contributions and Challenges to Gender Studies. Williamsburg, VA: Borneo Research Council, Inc.

ISBN 978-602-387-145-2 DOI: 10.17528/cifor/007858

*CIFOR Occasional Papers* contain research results that are significant to tropical forest issues. This content has been peer reviewed internally and externally.

This study set out to illustrate and understand how the ongoing processes of rural transformation are influencing women's and men's labor, and broader gender relations among the Kenyah. It examines the changes that have occurred in two Uma' Jalan Kenyah villages in East Kalimantan – based on previous long-term ethnographic research (beginning in 1979 and continuing periodically until 2004), ending with a Rapid Rural Appraisal visit in 2019. Various development efforts have altered these peoples' environment, from dense tropical rainforest in the 1970s, through extensive forest loss due successively to logging, industrial timber plantations and transmigration. Most recently oil palm plantations have flourished over much of the province (including the two study communities), prompting radical changes to people's agricultural practices. Here, we examine the implications of these changes for men's and women's lives, roles and interactions. The most surprising finding is the continuation of comparatively equitable gender dynamics among the Kenyah. This is in the face of narratives and policies – from education, government, business and religion – with seriously marginalizing gender implications, to which the people are increasingly exposed.



This research was carried out by CIFOR as part of the CGIAR Research Program on Forests, Trees and Agroforestry (FTA). FTA is the world's largest research for development program to enhance the role of forests, trees and agroforestry in sustainable development and food security and to address climate change. CIFOR leads FTA in partnership with Bioversity International, CATIE, CIRAD, INBAR, ICRAF and TBI.

FTA's work is supported by the CGIAR Trust Fund: cgiar.org/funders/



The CGIAR Research Program on Policies, Institutions, and Markets (PIM) leads action-oriented research to equip decisionmakers with the evidence required to develop food and agricultural policies that better serve the interests of poor producers and consumers, both men and women. PIM combines the resources of CGIAR centers and numerous international, regional, and national partners. The program is led by the International Food Policy Research Institute (IFPRI). www.pim.cgiar.org

cifor.org

forestsnews.cifor.org





#### Center for International Forestry Research (CIFOR)

CIFOR advances human well-being, equity and environmental integrity by conducting innovative research, developing partners' capacity, and actively engaging in dialogue with all stakeholders to inform policies and practices that affect forests and people. CIFOR is a CGIAR Research Center, and leads the CGIAR Research Program on Forests, Trees and Agroforestry (FTA). Our headquarters are in Bogor, Indonesia, with offices in Nairobi, Kenya; Yaounde, Cameroon; Lima, Peru and Bonn, Germany.

