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Landscape and livelihood changes in Sabah, Malaysia

Development in Kampung Gaman*

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Key messages

- Land is at the center of socioeconomic activities in Kampung Gaman. Customary practices and investments in land, such as paddy farming, established fallow lands, a cemetery and fruit trees convey the land rights of the community.
- In Sabah, unless a plot of land is warranted a physical deed, the land is considered as state land. Customary lands can be confiscated if the owner does not acquire his or her right to the native title (Dayang Norwana et al. 2011).
- Yet, the allocation of available lands tends to favor commercial development instead of acknowledging the customary rights of the communities (Sabah Lands and Surveys Department 2010; Colchester et al. 2013). Consequently, the land is often 'developed' without the community's consent.
- This study looks at multiple development interventions in Kampung Gaman (i.e. public facilities, agriculture and forest conservation) and analyzes their impact on community land ownership, landscape and land use change, and livelihoods.
- We found that development interventions might bring 'economic' development, but at the same time may see the community dispossessed of its lands. Thus, an effective form of Free, Prior and Informed Consent (FPIC) is crucial in enforcing a community's rights and encouraging a system that ensures a community's involvement.

Introduction

Even though Malaysia recorded a decreasing poverty rate from 49% to 4% between 1970 and 2009, overall rates of poverty in rural areas are higher than those in urban areas (Ngah 2009; Economic Planning Unit 2015), with Sabah and Sarawak in worse condition than Peninsular Malaysia. While rural areas in Peninsular Malaysia experienced an increase in the percentage of households with access to piped water from 42% to 90%, the percentage for both Sabah and Sarawak was 59% from 1980 to 2009. In terms of electricity, almost 99.5% of total households in rural areas in Peninsular Malaysia have access to electricity while in Sabah and Sarawak, the percentage is 77% and 67%, respectively (Ngah 2012). Construction of infrastructure (roads, public facilities, housing) is considered a first step in rural community development (Fadzil et al. 2016), leading to improvements in education and providing employment opportunities that support the nation's economic expansion (Kapur 2019). The government plays a dominant role in the development of rural communities (Wee et al. 2013), promoting economic growth but also often ignoring possible unintended consequences. This study explores the impact of several development interventions in Kampung Gaman on the community's livelihood and well-being. We specifically look at three streams of interventions: public facilities for better education and health, agriculture development to drive economic growth and forest protection to improve the environment.

This brief is based on findings from fieldwork conducted in July 2019 in a village in the district of Tongod, Sabah. Primary data were collected through interviews with 41 households that were willing to participate, selected using random household sampling and through focus group discussions (FGDs). The questionnaire for the household survey consisted of several sections to gather in-depth information on the community's land use, dependency on the land and the community livelihood. Meanwhile, the FGD questions focused more on the community landscape as a whole and the community's land uses by identifying their main activities related to the land. Both the household survey and the FGD questions were adapted from the CIFOR–ASEAN–Swiss Partnership on Social

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Forestry and Climate Change (ASFCC) project (CIFOR 2020). The FGDs were conducted by dividing the participants into three groups: men, women and youth. Eleven women, 13 men and 6 youths, aged between 13 and 30 years old were involved in the FGD sessions. The focus of the discussions was on the development interventions in the village and the impact on community livelihoods. Secondary data were from both the published and unpublished literature. A qualitative analysis was carried out on the data extracted from the household surveys and FGDs.

Land ownerships

The study village is an old Sungai Rumanau settlement established some 300 years ago, around 1720. The majority of the villagers are rice farmers supplementing their needs with wild meat and wild vegetables from the Gaman Forest Reserve adjacent to the village. In 1990, a palm oil plantation was established nearby, providing employment for some of the villagers. Overall, land is the center of socioeconomic activities. Ownership of land here is still regulated through customary practices, where investment in terms of capital, labor and time conveys rights to the land. Specific natural features such as rivers and ridges function as land boundaries. However, the government imposed a law stating that a plot of land needs a physical deed. Under the Land Law of 1953, local communities can secure their land rights through native title if they can prove ownership through several categories of land use (Doolittle 2001). Without native title, customary lands might be confiscated by the state (Dayang Norwana et al. 2011). As state land, anyone can apply for the right to use the land (Lunkapis 2015). Consequently, the land is often 'developed' without the community's consent.

In 2010, communal titles were introduced. The objective of communal title was to solve a community's large numbers of applications for their ancestral lands and to provide the community with collective land ownership and access to land tenure. Communal title is under the jurisdiction of the Sabah Lands and Surveys Department. The approval of communal title is under the authority of Sabah's Chief Minister in accordance with Section 76 of the Sabah Land Ordinance. It is monitored by the District Assistant Collector of Land Revenue, who has the power to eliminate, to replace or to add beneficiaries to the land grant (Sabah Lands and Surveys Department 2010). However, communal title is given with restrictions on selling or using the land as collateral and on the condition that the land is 'developed'. The development of land was mostly understood as conversion to commodity crop plantations. Lands were placed under joint venture for agricultural development (oil palm), and community rights over the lands were reduced to community members being merely beneficiaries within the joint venture arrangements. In 2018, communal title was replaced with native title (NT) and will be distributed to the individuals listed as beneficiaries on the communal title. This initiative was aimed to address any overlapping claims (Bernama 2018). In the following year, the Sabah government revoked 48 communal titles and replaced them with native titles received by 829 individuals, originating from villages in Keningau and Tambunan (Dzulkifli 2019). However, each individual listed as the beneficiary on the Kampung Gaman Communal Title is yet to be presented with his or her own respective native title.

Development interventions

In our study village, development interventions can be categorized into three types, as shown in Table 1: agricultural developments, development for forest conservation and infrastructural development. The table shows the initiator of each development and changes in terms of land ownership, land use and landscape changes, and livelihoods.

Agricultural developments

Two main interventions were implemented in the area: an oil palm plantation by a private company; and the introduction of rubber by the United Nations Development Programme (UNDP).

Oil palm plantations

Oil palm is not new in Sabah. In the early 1980s, Sabah began converting large areas of land for oil palm plantations. In 2012, it was estimated the oil palm planted in Sabah peaked at 1.5 million ha (Colchester et al. 2013). As shown in Table 1, oil palm plantations are seen as both positive and negative. The oil palm plantation offered employment, although mainly as unskilled labor such as estate security or grass mowing. The survey results show that 22% of the villagers are employed by oil palm plantations, thereby contributing a significant source of income to the community. By earning income, the community's ability to purchase food from outside sources increases.

Expansion of oil palm involves an important land use change, as plantations have replaced traditional swidden farming and forest gardens (Figure 1). There are a few established oil plantations in Gaman, including an oil palm plantation established by the community through a joint venture with a private company. However, not all plantations were established with the free, prior and informed consent of the local community. Tanak (not a real name), for example, claimed his ancestral land was occupied by one of these plantations in 2016. He said, *"They planted oil palm on my 30 acres of land without my permission. When I objected, they said they have a permit from the state. I was asked to present my permit but my proof of ownership was only my ancestral grave and paddy. No compensation was given to me"* (personal communication from Tanak, 2019). Although there are no official boundary markers or references, the local people know their land boundaries. Fallow land, fruit trees or burial sites often mark these boundaries.

Tanak's experiences portray the injustice issues around native land disputes that often arise as land is taken over by corporations and government. Even though it is recognized

Table 1. Type of development, development projects, type of change and their impact on the local community in Kampung Gaman, Tongod.

Type of Development	Development Project	Developer	Type of Change		Impact
Agricultural development	1. Oil palm plantation	Private company	Land ownership	State land to communal land	• Communal ownership over land legally recognized but land use then converted to oil palm • Less land available for small farmers
			Landscape and land use change	Paddy, fruit trees to oil palm plantation	• Planting less paddy and fewer fruit trees
			Livelihood	Farmers to estate employees, Clean river to polluted river	• Increased cash earning and job opportunities • Increased ability to purchase food • Lack of clean water sources
	2. Rubber Tree Plantation Program	Government	Landscape and land use change	Mixed crops to monoculture	• Planting of more cash crops than paddy
			Livelihood	Rubber farming increase	• Increased sources of income • Increased ability to purchase food
Forest conservation	3. Sungai Gaman Forest Reserve Gazettement	Government	Land ownership	Community land to forest reserve	• Loss of access to ancestral land • Loss of access to harvest forest products
			Landscape and land use change	No farming practices, swidden cultivation stopped	• Decreased availability of land to be cultivated • Increased Total Protected Area (TPA)
Infrastructure development	4. Road construction	Government	Landscape and land use change	Land for cultivation to land for construction	• Decreased area of land to be cultivated • Improved access for logging companies
			Livelihood	Access in and out of the village	• Enabling migration and marketing of village produces
	5. Tele communication substation	Government	Livelihood	Improved network coverage	• Improved communication via internet and telephone
	6. School	Government	Livelihood	Access to education	• 80% of children under 13 years old attend Gaman Primary School
	7. Clinic	Government	Livelihood	Access to medication	• Increased availability of medication and medical supplies
	8. Community learning center	Non-government agency	Livelihood	Learning new skills	• Upgraded community skills: handicraft making and communication skills

under native customary rights of land (Section 15 of Sabah Land Ordinance 1930), in practice, ancestral land is not acknowledged (Sabah Lands and Surveys Department 2010; Nuar and Lunkapis 2019). As mentioned, the communities have the option to apply for communal title. In 2010, Gaman received 308 ha of lands allocated for the community, whereby each household received 2 ha (Sabah Lands and Surveys Department 2010). Within the communal title, communities were given an allocation of lands named as one delegate from each household, recognized as the beneficiary. However, individual allocations as part of the communal title are also not alienable and not allowed to be used as collateral.

Figure 1. Oil palm plantation in Kampung Gaman (photo by Nasiri Sabiah, 2019).

Figure 2. The Gaman River's current state (photo by Nasiri Sabiah, 2019).

The community then entered a joint venture with a private company to establish an oil palm plantation. The company will cover the cost of labor to plant oil palm including the seedlings and provide landowners with a monthly loan of 500 Malaysian ringgit until the oil palm becomes profitable. Once the oil palm is harvested, profits will be divided into 65% for the landowners and 35% for the company. However, the community must repay the monthly loans they received. Not all community members were happy with this arrangement. Some of the respondents in the survey complained that they were coerced into agreeing to the project or their name would be removed as a beneficiary. They were also concerned about the loss of autonomy in planting their land with preferred crops or using the land as collateral for loans. Although the prime objective of communal title is to provide the community with ownership of their land, agricultural developments 'preferred' by the authorities such as mono-cropping require an intensive injection of capital to purchase agricultural inputs. Lack of financial capital limits a community's capacity to develop land independently. This forced people to accept joint venture options with big corporations, and thereby to lose control over the land use.

The abolishment of communal title and introduction of native title initiated by the Sabah government in 2018 has not yet been enacted for the people of Gaman. This change would entitle them to the full bundle of rights such as the right of possession, control and exclusion (Kenton 2019). Furthermore, the individual title can protect native people's rights over ancestral land and exclude the possibility of overlapping ownership (Jiffar 2018).

Oil palm development has other unintended consequences as well. In this particular case, the oil palm estate does not have an efficient waste management system. The waste is usually discarded into the nearby river, causing pollution of the village's water source (Figure 2). The chemical runoff from fertilizers and pesticides can cause health issues (Haseena et al. 2017). Although there were no fatalities recorded in Gaman caused by this pollution, it resulted in a lack of clean water, especially during the dry season. The impacts of polluted water and biodiversity loss caused by oil palm plantations need to be addressed. Based on an International Union for Conservation of Nature (IUCN) report, oil palm caused 50% of the deforestation in Borneo between 2005 and 2015 (Meijaard et al. 2018). Oil palm plantations must comply with the Roundtable on Sustainable Palm Oil (RSPO) and Malaysian Sustainable Palm Oil (MSPO) principles to ensure that the oil palm plantation production is carried out in a sustainable manner. Although 62.3% of oil palm plantations have been certified nationwide, only 11.6% of oil palm plantations in Sabah are MSPO certified (The Sun 2020).

Rubber

According to the survey, 53.66% of the community in Gaman was involved in rubber (Figure 3) as part of a Community-Based Agroforestry initiative. The agroforestry scheme was supported by the United Nations Development Programme (UNDP), with the objectives of reducing forestland encroachment while improving the community's livelihood (Sabah Forestry Department 2006; Yahya 2019). It was established to support the United Nations Millennium Development Goals, particularly in environmental sustainability (Sanderson and Hugh 2015). Phase 1 began in 2007 and Phase 2 in 2014. Rubber was chosen as it is a favorable commercial crop, its latex can be dried and kept for an extended time, and it can be sold at one's convenience (Toh and Grace 2005). The introduction of rubber also aligned with the policies implemented by the Sabah Rubber Industry Board, which is to increase smallholder productivity and income through a rubber settlement scheme (Sabah Rubber Industry Board 2013). A case study in Pitas, Sabah, Malaysia found that smallholders' income increased, simultaneously reducing the poverty rate among the community when they ventured into rubber plantations (Kodoh et al. 2016).

Through the agroforestry project, each individual was allocated 1 ha to plant rubber and was supplied with rubber seedlings. They also received training in planting and harvesting rubber.

Figure 3. UNDP rubber plantation project near Kampung Gaman (photo by Nasiri Sabiah, 2019).

They only practiced mono-crop planting on designated land. Most survey respondents mentioned they were able to generate income to purchase rice and other necessities. This was also the case in a study in Cambodia where the community stopped planting other crops after they had planted rubber as it brings the community sufficient income for their livelihood (Dararath et al. 2011). Furthermore, despite the fluctuating market price for rubber, the community said they were able to generate up to 400 Malaysian ringgit per month (around 92 USD as at March 2020).

Forest conservation

In 1984, the Sabah Forest Department initiated the gazettement of 8335 ha at Sungai. Gaman Forest Reserve under Class II Forest Reserve is part of the forested area traditionally used as a source of non-timber forest products. As stated by the Sabah Forest Enactment, the forest reserve is meant to protect forests and reduce forest degradation; thus, the enactment means only restricted access to the forest reserve is allowed unless prior approval is obtained from the government (State of Sabah 2020). The law of the Sabah Forest Enactment 1968 states: "no land clearing, cultivation or grazing shall be committed in the forest reserve area" (State of Sabah 2019). Meanwhile the community claimed these lands based on historical rights long before the gazettement as a forest reserve, although their claims were not acknowledged. The community's traditional practices of shifting cultivation and clearing lands for agricultural activities, hunting and collecting forest products for daily use were considered harmful to the forest. Regulations and restrictions posed by the state have made all these traditional practices illegal (Lunkapis 2015). Despite the numerous international policies adopted by Malaysia, this highlights the need to prioritize the indigenous people (Sanderson and Hugh 2015). For instance, the United Nations Declaration on the Rights of Indigenous People (UNDRIP) urges that we respect those traditions and ways of life of indigenous people that benefit sustainability. The community way of life has always focused on farming practices, clearing land for paddy, gathering forest products and planting fruit trees. Thus, communities were very dissatisfied with the restrictions on entering the forest reserve. When asked whether the community supported the forest gazettement, Gambit (not a real name) said, *"We have cultivated the lands since our elders settled here long before the forest belonged to the state. We feel we have the right to access these lands even when the state classified it as a forest reserve,"* (personal communication from Gambit, 2019). Consequently, in 2017, the state government planned to allocate 3000 ha from the forest reserve for village purposes while the remaining 5335 ha was reclassified as Forest Reserve Class I, as the area was identified as having high conservation value (KePKAS 2019). The excision of part of the forest reserve for village purposes is considered as a win–win situation with the reclassification of part of the forest under Class I as a Totally Protected Area (TPA) (KePKAS 2019). However, the community seems to not be aware of this as no respondents shared any knowledge of the 3000 ha allocation of lands. However, the community seems to not be aware of this as no respondents shared any knowledge of the 3000 ha allocation of lands. Until now, the 3000 ha excision of land has not been materialized yet.

The agroforestry project was allocated 340 ha of logged land from the 8355 ha of Sungai Gaman Forest Reserve for rubber plantations (Sario 2008). While the government had already dedicated 340 ha for the community to establish a rubber plantation as a mitigation strategy to address land encroachment, community dissatisfaction persists due to its overlap with traditional land ownership within the forest land. Therefore, effective land management needs to be applied to address the conflict and reach a settlement that benefits both parties (Yahya 2019).

Infrastructure development

Development aimed at improving community welfare often leads to unintended consequences. The gazettement of the forest reserve, intended to provide better environmental protection, has constrained access to forest resources and land for cultivation. Oil palm introduced for economic growth has claimed the community's traditionally used land, and while offering employment, the direct benefits are typically overshadowed by unintended environmental problems that affect the well-being of the local community.

The majority of respondents, on the other hand, consider infrastructure development as unreservedly beneficial. The Gaman infrastructure development of roads, healthcare facilities, telecommunication substation and education facilities (Figure 4) has meant the community has experience rapid livelihood change. Healthcare and education facilities facilitate access to a better quality of life. In Gaman, almost 80% of the children less than 13 years old are currently enrolled at the Gaman Primary School while the other 20% are in kindergarten. The construction of roads in Gaman contributed to better access to market so that community members could trade their produce. It also gave

Figure 4. The Gaman Primary School (left) and Clinic (right) (photo by Amirah Liyana, 2019).

better access to the labor market, leading to economic growth. Road infrastructure is vital in improving accessibility and driving economic growth in rural areas (Manggat et al. 2018). Limited availability of land and improved accessibility also facilitate migration. Thus, youths typically migrate out to pursue their studies, and/or to seek better employment. A study conducted by the OECD confirms that better education translates to better skill levels, leading to an increased chance of being offered a job (OECD 2012). However, some participants in the women's and men's FGDs mentioned that the road construction also facilitated the logging company's access to the Gaman forest reserves, damaging the community's paddy fields, farms and their water source.

A community learning center in Gaman initiated by a non-government organization aimed to build the community's skills in areas such as handicraft and other relevant activities. The communities select local youth to be trained as kindergarten teachers in the village. The telecommunication substation providing network coverage to the Gaman village is vital in facilitating communication with the outside world. This form of communication makes it easy for people to stay connected with family members who have migrated. By staying connected, the communities can keep in touch with distant family members, exchange information and keep updated with the latest news. It can encourage the community to play a role in exchanging information and ideas on economic, social, political and other issues faced in this rural area; these issues can be discussed as part of a public agenda, thereby connecting the community with other institutions (Ors 2008).

Recommendations

Our understanding of landscape changes in the Gaman community provides an opportunity to evaluate how land-based development interventions can affect land-based livelihoods in different ways. 'Development' has to take place within the context of the local community's broader well-being – which includes ownership over land and the development planning process, and agency to fully participate in potential development activities (e.g. community smallholder oil palm vs corporate-driven plantations) – and this is what would be considered as sustainable and equitable development. Recommendations to mitigate unintended adverse consequences of landscape changes to local community are as follows.

- Introduction of developments needs to consider and benefit all relevant parties and therefore requires a process to obtain Free, Prior and Informed Consent (FPIC). Even though FPIC has already been adopted in Sabah, often it only acts as a platform to disperse information to the community instead of as an approach to initiate discussions and allow the possibility for the community to be actively involved in the planning stages and give the option to reject a development project. Community members need to be given space to express their views when development is initiated. Allocation of ample time and facilitation needs to be part of the community approach to enable them to understand the potential and pitfalls of the proposed development. Hence, the state government must make it mandatory for all stakeholders to conduct effective FPIC procedures as part of development planning.

- Oil palm development involving communities needs to be carried out in a sustainable manner in line with Sabah's vision of ensuring all Sabah oil palm are certified by 2025. The government needs to enforce compliance with the certification scheme under the Roundtable on Sustainable Palm Oil (RSPO) and licensing by the Malaysian Oil Palm Industry (MPOB) as well as Good Agricultural Practice (GAP) RSPO promotes principles of management transparency, responsibility towards environments and natural resources and consideration of those who are affected by a plantation. As the MPOB has already made the licensing of oil palm plantation activities mandatory, all oil palm plantations must fulfill the specifications set by the MPOB. This is to ensure the oil palm industry is compliant with principles of sustainability.

- Despite the government's efforts in providing access to land through (1) excising part of a forest reserve for the people and (2) recognition of local rights to land, further support is needed in building capacity for the development

of land without depending on a third party. If communal title is indeed to be abolished for land, the native title to be received by an individual needs to include the full bundle of rights. Furthermore, the state government needs to increase community awareness about the benefit of forest reserves to increase awareness and acceptance of forest gazettement for the sake of conservation.

- Clarifications on land rights have to be precise before the state government consents to any developments taking place. This ensures that the community's right over its ancestral lands is honored, recognized and respected.

- The government and relevant agencies should play their roles to adjudicate over a local community's rights to its ancestral land. The excision of a part of a forest reserve by the state government is a way to honor the community's customary practices. The community should not be displaced when introducing development projects on its respective lands or should at least be adequately compensated as a last resort. The allocated communal title arrangements and the upcoming native title must be monitored to ensure there are benefits for the community and to avoid (1) the misuse of power and (2) the community's rights being abused by other parties.

- The Community-Based Agroforestry Scheme was effective in increasing community income by planting a commercial crop while maintaining forest cover. Similar schemes of social forestry might be a feasible option in the Gaman Forest Reserve to involve local communities in forest management to involve local communities in forest management such as paid jobs of climber cutting, border clearing, and gap planting.

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RESEARCH PROGRAM ON Forests, Trees and Agroforestry
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The CGIAR Research Program on Forests, Trees and Agroforestry (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, ICRAF, INBAR and TBI.

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