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The Participatory Mapping as Soft-Territorialization Discipline Practice of The Karen People in The Thailand Highlands

Agung Wicaksono
Faculty of Cultural Sciences, Universitas Gadjah Mada,
Jl. Nusantara 1, Bulaksumur Yogyakarta, Indonesia
Corresponding Author: agungwicaksono1987@ugm.ac.id

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Abstract: Territorialization is an important element for the authorities to control both natural and human resources. Although the territorialization in Thailand has been started since the 1930s, but until the 2000s, the expected results are still far from satisfactory. One of the fundamental issues is the overlap of land claims, especially between the Royal Forestry Department (RFD) and the Karen people. In the midst of this cold war, the local government (TAO) is working with non-governmental organizations to encourage the implementation of participatory mapping. In this case, land cleared after 2014 must be submitted to the RFD for reforestation. Surprisingly, the program was a great success. This article seeks to explain why participatory mapping was a great success even though the program limited or even reduced Karen people's access to farmland. Based on ethnographic research and combined with map analysis, this study found that successful participatory mapping due to the presence of new, effective satellite-based surveillance instruments linked to the presence of relatively affluent farming households.
Keywords: Karen, participatory mapping, shifting cultivation, smooth territorialization, territorialization.

INTRODUCTION

In many Southeast Asian countries, the area of forest is significant. In Thailand, forest areas cover about half of the country's area (Hall et al., 2011). In general, the determination of areas that become forest and non-forest areas is often carried out by the authorities arbitrarily (Vandergeest and Peluso, 2015). The implication is that the making of the boundary becomes an endless source of conflict due to the simplification of the complexity of the problem through administrative categorization, differences in the priorities of the actors involved, and differences in understanding and use of forest areas between authorities and local residents. Socio-historically, the highland landscape of northwestern Thailand has become a frictional arena because forest area is not only a place to live but also a source of livelihood for the Karen people through shifting cultivation activities.

The cultivation system is carried out by clearing forests, either primary or secondary, by cutting down large trees and cutting bushes, as well as drying and burning them. Land that has been cleared is then planted for certain time, between one and three years, before being plowed back to restore the soil's natural fertility. Although some argue that shifting cultivation is an agricultural system that is not only labor-saving, but also environmentally friendly (Geertz, 1963; Nakano, 1978), others argue that extensive farming practices also

result in ecological problems (Seavoy 1973). In Thailand, this narrative originates from conservative (Walker and Farrelly, 2008). At this point, efforts to defend forests and their biodiversity through territorialization, including in Thailand, are justified.

In Southeast Asia, shifting cultivation pacification through territorialization is quite massive (Chan et al., 2021). In Thailand, Karen people became one of the ethnic groups that tried to resist the territorialization and discourse of scientific forest management. Karen people do not want to be seen as forest destroyers. They said that the narrative from the RFD (Royal Forestry Department) tends to be rash and biased because it equates to the practice of shifting cultivation (*rai luen loi*) and rotational cultivation (*rai mun wian*) (Santasombat, 2004). Although the discourse was able to match the one-sided discourse of the RFD regarding top-down forest management, territorialization remains an unresolved issue.

The chaotic conflict between the Karen people and the RFD that has heated up since the 1960s has prompted the local government (Tambon Administrative Organization, or TAO) to carry out participatory mapping. This mapping was not designed to recognize all tenure claims made by the Karen people. TAO will only recognize land cleared before 2002 in the form of a certificate. If the fields were cleared between 2002 and 2014, they could obtain a certificate on the condition that each plot must be planted with at least 20 trees such as teak. However, if the fields are cleared after 2014, then the land must be reforested. Participatory mapping can be interpreted as an effort to re-territorialize, which is the creation of "new" boundaries between forest and non-forest areas. Non-forest areas, in this perspective, are areas that were cleared for agricultural activities before 2014 and vice versa. Violation of this "new boundary" has not only formal legal consequences but also social and cultural consequences as it results from an agreement between farmers and TAO.

Surprisingly, the success rate of this program is so high, both measured by the level of community participation and the area covered. Based on this paradox, this study raises one fundamental question, why did participatory mapping achieve such great success even though this program clearly limited or even reduced their access to agricultural land? The success of participatory mapping can be attributed to its function, although politically ambivalent, as an instrument capable of providing alternative solutions to geospatial problems (Bauer, 2009; Cronkleton et al., 2010). Another argument that can also be used to justify the success of participatory mapping is its ability to counter official maps made by the government or top-down territorial policies (Dewi, 2016).

Both of the ideas tend to emphasize the participatory mapping function from the perspective of the subjects. In contrast to the two study groups, this study argues that participatory mapping can also be an instrument of discipline for the subjects. This is because the program relies on a surveillance system similar to a panoptic structure via satellite. Faced with this kind of situation, the positive response of the Karen people to

participatory mapping must be seen as their long negotiation over the more effective territorialization and monitoring instruments owned by the state. Therefore, participatory mapping can be declared as soft-territorialization because it is carried out without involving violence. In addition, the lack of resistance that leads to violence is because their subsistence limit can be maintained or to a certain degree increased, and there is continuous migration so that social pressure on resources can be suppressed as well as the economic conditions are relatively prosperous. This conceptualization also distinguishes this study from the study conducted by Putra (2020).

METHODS

This research was conducted in Tumbang Paku, a hamlet located in the highlands of northwestern Thailand, about 171 km from Chiang Mai, and 700 km from Bangkok. According to oral history, this hamlet was built around the early 20th century. Four migrant families from the west of the village cleared a forest area close to the river. They then combined rice farming with dry land. Rice farming can be maintained in stable production throughout the year while maintaining dryland agricultural production is achieved by shifting cultivation. Currently, shifting cultivation is replaced by rotational cultivation or even permanent fields. In 2019, the hamlet of Tumbang Paku was inhabited by around 60 households.

During the stay in Tumbang Paku, various community groups, namely farmers, non-governmental organizations (NGOs), church representatives, village committees, and the district government were interviewed. Interviews with farmers focused on the economic conditions of their households, both from the agricultural and non-agricultural sectors, as well as the issue of participatory mapping. Interviews with non-governmental organizations, church representatives, village committees, and district governments focused on participatory mapping discourses. The questions given to the second group were related to the background, process, friction, and the benefits of participatory mapping, both real and expected. Interviews conducted with these four social groups were much smoother than with farmer groups. This is not simply a matter of the ability to express ideas. For the second group, participatory mapping was presented as a temporary technical problem for farmers. It was presented as a historical social, economic, and cultural relationship that was much more complicated.

Methodologically, this study has three limitations which have been partially addressed. First, this study does not address the political aspects that seem to have had a significant influence in the last two decades. Second, the study was conducted for a limited time of approximately four weeks, conducted by the principal investigator (2 weeks) and two research assistants (4 weeks). However, the aggregated data from the three researchers are comprehensive that they can be used to provide adequate explanations. The third is the

language barrier. This problem was solved with the help of two local translators from Chiang Mai University.

RESULTS AND DISCUSSION

Chaotic Crossing of Forest Boundaries, Effective Monitoring, and Changes in the Economy of Karen People

Although the forest is often considered a haunted, dangerous and wild area, the authorities, from pre- to post-colonial, have always tried to control it. Initially, this control was imposed on a few species only (Vandergeest and Peluso, 2015). In the next phase, more effective enforcement of control and avoiding claims from other authorities prompted them to territorialize by designating lands not cultivated by individuals or households as forests (Vandergest, 1996). Territorialization can be defined as an attempt by the state to control people and their actions through the creation of boundaries in a geographical space so as to prohibit certain categories of individuals from this space, and regulate other categories of individuals. (Vandergeest, 1996). Territorialization can also be seen as a disciplinary practice aimed at determining the rules in forest areas (Santasombat, 2004).

The Vandergeest study (1996) showed that the implementation of territorialisation in Thailand did not go smoothly. Although formal territorial claims to forests have been made since the 1930s, *de facto* implementation began only in the 1960s (Vandergeest, 1996). To facilitate the territorialization process, RFD even labeled the practice of shifting cultivation (*rai luan loi*) carried out by the Karen people as a cause of serious forest destruction (Santasombat, 2004). However, this discourse was opposed by the Karen people by claiming that they were the natural children of the forest (*Khon pga* k'nyau') who were able to manage the forest well through rotational cultivation *rai mun wian* (Santasombat, 2004).

Theoretically, environmentally friendly farming practices such as *rai mun wian* can be carried out. However, its stability faces serious challenges as the population continues to grow. The increase in population presents two issues, the increasing need for food and arable land. The first issue can be overcome by agricultural intensification. Meanwhile, the second issue, as a consequence of the increase in household units, can only be overcome by clearing new land in forests or agricultural extensification. Therefore, it is not surprising that primary forest clearing for farms was still quite rampant until the 2000s. Apart from conflicts of interest with other departments (Vandergeest,1996), this concession is also made by the absence of effective oversight instruments. So far, forest area surveillance has been carried out conventionally by land patrols and, in very low intensity, air patrols, both of which can be easily anticipated by cultivators.

Such a configuration changes when the technology, in this case the satellite, begins to be used. With satellites, forest landscapes that were imagined as areas that were previously invisible become truly visible, meaning they are clearly visible so that they are easier to

monitor. Presumably, this new configuration resembles a panoptic building structure that becomes one of the backrest of modern power (Foucault, 2008). Panoptikon is an architectural building consisting of two main parts; a building with a circular shape at the edge, and a tower in the middle (Foucault, 2008). The building on the edge consists of detention rooms with two large windows on the inside and outside so that light can easily penetrate the spaces (Foucault, 2008). Such an architectural building allows the watchers inside the tower to watch all the movements of the people inside the detention rooms and, at the same time, the second party cannot see anything into the tower due to the backlight effect (Foucault, 2008).

The impact of Panoptikon is to present on the prisoners a permanent awareness and visibility that guarantees the functioning of power (Foucault, 2008). As a surveillance system, Panoptikon can evolve into an increasingly sophisticated surveillance model such as satellites (Simon, 2005). The use of satellites to monitor forest areas gives the impression to residents. Geospatially, cultivation activities in forest areas can be easily monitored. Resembling a Panoptikon structure, satellites play the role of central towers, and land areas as detention rooms, while farmers are positioned as a constantly watched subject. This feeling of constant surveillance is created by the awareness of the existence of a hypothetical orbiting satellite. However, they do not have the ability to verify whether the satellite is being operated to monitor them or not.

Initially, the presence of this new surveillance system was unknown to farmers. They experience that it is easier for RFD to take action against various efforts to clear primary forest. The implication is that those who are deemed to have violated forest boundaries can be easily arrested. Facing increasingly heated tenure issues, TAO in collaboration with Raks Thai foundation offers a solution through participatory mapping (Putra, 2020). It is hoped that this instrument can be a tool for advocacy for local communities, identifying their rights, and conflict resolution (Di Gessa et al..,2009).

Before the mapping was carried out, TAO explained that currently monitoring forest areas is carried out by satellite so that RFD can take action on forest clearing easily. Participatory mapping seeks to give recognition to the claims to land plots of the Karen people who have historically inhabited this area. In this mapping, villagers are assisted by village officials and volunteers to map their land plots, both those that are being worked on and those that are left over. However, only plots cleared before 2002 can gain full recognition from TAO. For plots cleared after 2002 to 2014, recognition is given if they are willing to leave at least 20 timber trees per hectare. Meanwhile, plots cleared after 2014 must be reforested. As this area is located in a forest area, TAO's recognition of land cleared before 2014 is manifested in the form of a written statement (NS2) whereby land transfers can only be made through inheritance (Burns 2004). In addition to NS2, there are also NS3 and NS4 which have stronger legal force. NS3 is a certificate that states the use rights recognized by

the land registry are managed by the district land office. Although it can be traded, the value and legal force of this certificate are rather weak because it is not recorded in the cadastral map. In addition, recognition by the administrative level is also low. NS4S is a certificate of ownership with the most powerful legal force. This certificate is issued by the provincial land office after the land is surveyed and then included in the cadaster map.

In the spirit of providing recognition of the tenurial rights of local communities, participatory mapping is also loaded with territorial interests as expressed by Mr. Nao, representative of the TAO:

> *"The main aim of this program (participatory mapping) is to stop the forest loss, and people are now aware about this (aim) and know already that if they do (forest encroachment), they will get monitoring."*

Following the explanations of Mr. Nao that geospatially, TAO's partial acknowledgment of claims submitted by villagers is an effort to enforce "new boundaries" between forest and non-forest areas (fields, fallow lands, or settlements). In other words, participatory mapping is a soft-territorialization. Instead of using force and coercion, boundary enforcement is carried out on the basis of the subjects' willingness to disclose their geospatial claims.

As an embodiment of power relations, soft-territorialization that emerged in the form of participatory mapping also faced various resistances from the Karen people. Resistance is based on various motives, carried out in various ways, and pumped by various purposes. However, this resistance did not explode into a systemic movement against RFD because there are various socio-economic factors that serve to reduce the adverse effects of "reterritorialization", namely: the small composition of smallholders, high migration flows to cities, and increasingly equitable prosperity.

The Success of Participatory Mapping

Shifting cultivation activities have been going on since they started settlements in the area. However, on official maps, most of the area cultivated as fields is classified as forest area (Hall et al., 2011; Putra, 2020). Endless tenure conflicts are a consequence of the blurring of the boundaries of a region. Although forest landscapes began to be seriously defined and demarcated in the 1960s, overlapping claims have remained a serious problem until recently. Many villagers receive repressive measures for farming in areas designated as state forests. In the midst of this seemingly dead-end problem, the district government (TAO) accepted suggestions from non-governmental organizations to initiate participatory mapping in an effort to protect the Karen people's access to land (Putra, 2020).

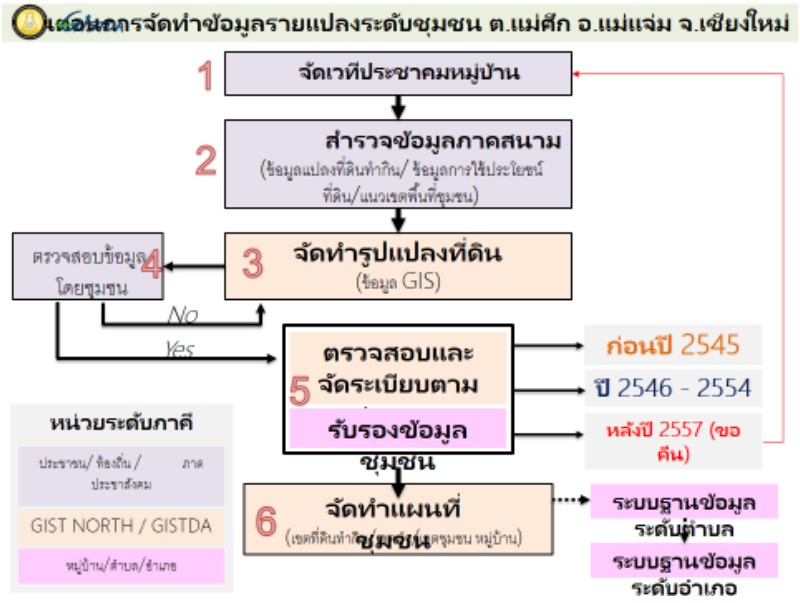

Figure Explanation:
1. Meetings of mapping implementers (villages) with villagers (dissemination of participatory mapping programs). 2. Conduct field surveys (using GPS, making points for tilled land and marking the owner). 3. Analyze the data and create a preliminary map (cover area). 4. Checking by villagers (if there is an error in data collection, return to number 3). 5. Re-check and confirm with the regional administrator of the subdistrict (If the land was cleared before 2002, then government employees confirm (allow) the use of the land. Between 2003 and 2013, permission was granted if there were tree. After 2014, it must be reforested (see Putra 2020). 6. Create a map that serve as a reference map.

Figure 1. Participatory mapping process
Source: Mae Cham district office

The process of implementing participatory mapping, as shown in the chart above, appears to be systematic and democratic. However, if observed, the recognition given is limited because if the land was cleared after 2014, then the area must be reforested as indicated by point number five. If the fields were cleared between 2002 and 2014, they obtain a certificate on the condition that each plot must be planted with at least 20 trees. TAO will recognize land cleared before 2002 in the form of a certificate. Although it is based on a noble spirit by providing semi-legal guarantees on the land that is managed, the success of participatory mapping cannot be separated from the functioning of modern power. People who are not interested in or reject mapping, whatever their argument base, will not be forced to participate in this program. Presentations by the implementing committee are the risks they may accept because they are reluctant to participate in the mapping, which are the absence of agricultural subsidies and the absence of land certificates.

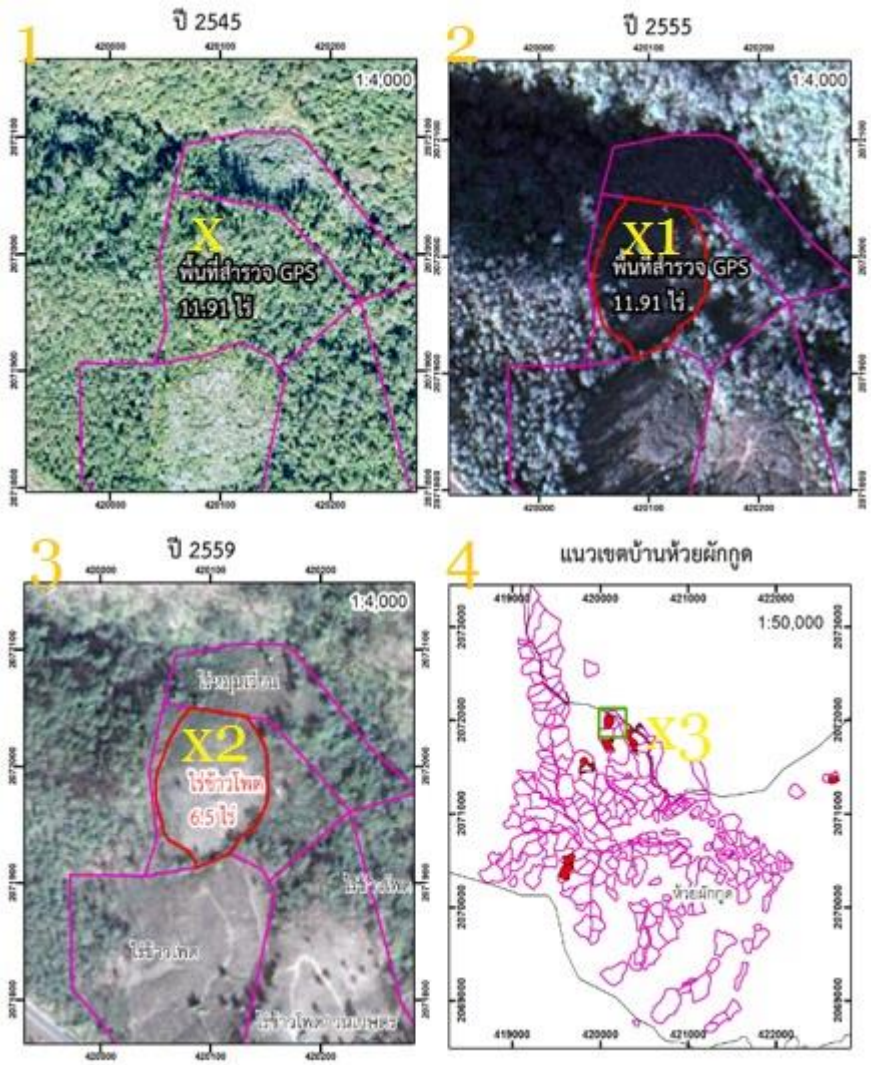

Figure 2. Changes in land use
Source: TAO

At this point, modern power not only works through prosperity issues (see Putra, 2020), but also through panoptisism. Mr Nao explained that the organizing committee would show that the surveillance carried out via satellite was very effective so that there would be no more gaps for cultivators to clear new land without RFD oversight. Such supervision facilitates further action, whether for patrolling, arresting, or imprisoning. Extra tight control can be shown by map 1. "X" is a plot of land with an area of 11,91 rai or about 19.1 hectares that is photographed using satellite. In 2002, this area was still primary forest. In 2012, this field turned into a secondary forest. In 2016, this field was converted to corn plantations while the surrounding plots have also undergone a change in function, from forest to agricultural area. The surveillance mode via satellite does not allow for covert clearing of primary forest because all geospatial activities in forest areas have been recorded by satellite.

The various data are then analyzed using GIS so that detailed information regarding activity, date, and area is clearly recorded. The last stage is the creation of participatory maps used by local governments to issue NS2 documents. The results of this program are impressive because, as Figure 4 shows, the participatory map produced is so comprehensive. If we provide a critical analysis of the willingness of the subjects to be involved in the participatory mapping project, the main factor behind their willingness is not only limited recognition of tenure rights, but also the fear of a satellite-based panoptic monitoring system that creates forest areas, which were previously "less visible" to "highly visible". Increasingly effective monitoring makes it easier to control spatial activities in forest areas, making field expansion impossible without serious consequences, whether raids, arrests, or imprisonment.

For farmers who are constantly haunted by the specter of exclusion (Walker and Farrelly, 2008), participatory mapping is almost the only instrument that functions to recognize their land claims. This recognition can be used to enforce claims and to some degree, allow them to apply for subsidies or bank credit. In this situation, Pi Man, a farmer who is also a member of the village committee of Tumbang Paku, said that there was no better choice than to agree to participatory mapping. As the saying goes, *half a loaf is better than none*. With regard to those who rejected participatory mapping, he said:

> *"If you do not want to join the mapping, it is up to you. But if your farmland(s) is not in the map, we (village committee) cannot help you when you have a problem with the forest department."*

For the government, participatory mapping is a territorialization project that has reaped great success because it was carried out smoothly, at low social costs and more importantly, reforested some of the land that had been claimed by Karen farmers after 2014.

The Least Number of Farmers with Narrow Lands

Panoptisism provides a theoretical understanding that modern power operates through territorialization. Lilja & Vinthagen (2014) stated that each power presents resistance or strengthens the power relationship so that discipline carried out through participatory mapping also has the potential to produce resistance. Socially, the level of resistance is influenced by the magnitude of the threat at the subsistence limit of community. the greater the threat at the subsistence level, the greater the potential for resistance and vice versa. One of the benchmarks of subsistence for farming communities is the area of land accessed. As profit-sharing or maro systems are not common in this area, this section focuses on the area of land owned.

One of the main characteristics of agriculture in Southeast Asia is the lack of land for farmers because the agricultural sector is dominated by smallholders and farm laborers Ghee, 1989; White & Wiradi, 1989). This condition presents a fierce competition for land.

Reflecting on the case of Indonesia, land distribution in an area often varies, although in general the average land ownership of lowland farmers is much narrower than that of upland farmers (Hefner, 1999). Although more moderate, a similar pattern also happens in Thailand. The study of Rigg and Salamanca (2010) shows that the average land ownership per farmer household living in the two lowland villages is around 10.6 rai (17,000 m²). The case study presented by Hirsch (2010) indicates a more extreme case where in 2010 the area of arable land of the current generation ranged from 4 to 6 rai (6400–9600 m²). In northwestern highlands of Thailand, smallholder farmers are an odd phenomenon in very small numbers. This is possible because prior to participatory mapping, they were able to clear primary forest for land expansion. The distribution of land ownership from the village of Tumbang Karu, where Tumbang Paku is one of its hamlets, is shown by the following graph and table.

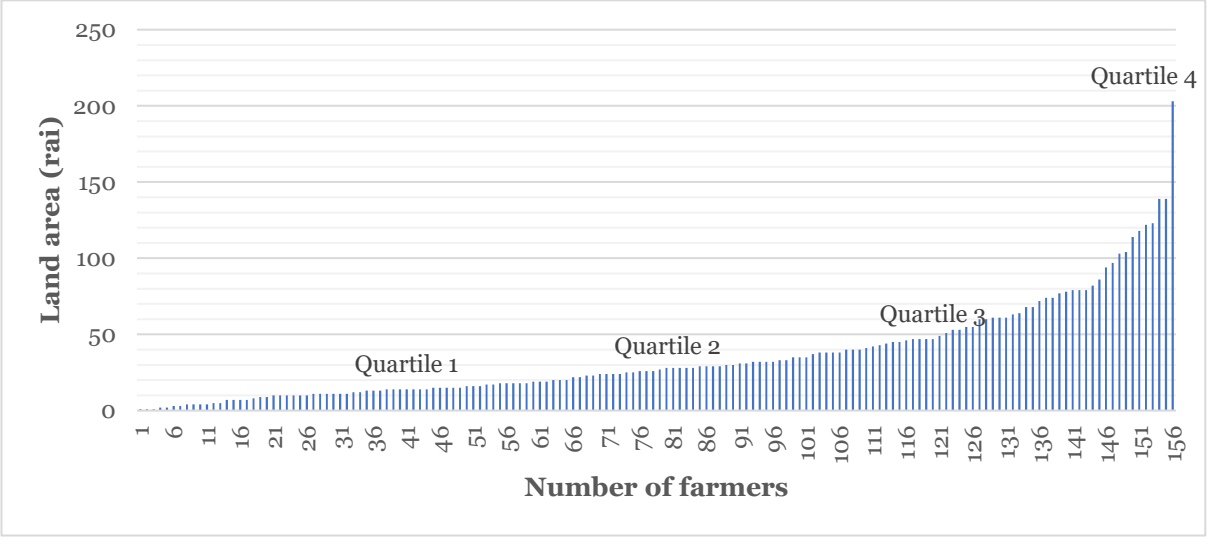

Figure 3. The distribution of land for Tumbang Paku Village
Source: Recapitulation of participatory mapping data of Tumbang Paku Village

Figure 3 shows the very varied distribution of land tenure of 156 households after the participatory mapping was carried out. Analysis per quartile leads to a clearer understanding. In the first quartile, the average managed land is 7.9 rai or 1.2 hectares. If 7.9 rai is used as the lower limit, then there are 17 households (11%) which are most likely to experience subsistence problems. The relatively narrow land area makes field rotation impossible so that soil fertility is drained more quickly due to being forced to produce throughout the year. Farmers can compensate by increasing the use of fertilizers although this also increases production costs and the risk of loss. The disparity between the first and second quartile is not very high. In this quartile, land tenure ranges from 14 rai (2.2 hectares) to 27 rai (4.3 ha). With this mastery, this group is able to rotate fields on a limited scale.

The disparity between the third quartile and the second quartile is not too high, but it is quite significant when compared to the first quartile. In the third quartile, land ownership ranges from 28 rai (4.5 ha) as the lower limit, to 47 rai (7.5 ha) as the upper limit. Judging from the number of plots and types of plants, this group is classified as prosperous because it can rotate fields without having to threaten its subsistence. Descriptive analysis shows that land area tends to be inversely proportional to its use so that the narrower the land owned, the more intensive the management and vice versa. Through this scheme, the natural fertility of agricultural land can be maintained without sacrificing household income. Land tenure in the fourth quartile is quite significant because it covers about 55% of the total land area mapped. This quartile is the group that most benefited from participatory mapping because with the grant of NS2, they can use the certificate to obtain government subsidies to stimulate agricultural production as well as implement a field rotation system.

Quantitatively, the participatory mapping program has had great success. However, a careful reading of the land tenure data leads us to the fact that there is a wide inequality of land ownership. This discrepancy can be seen from the comparison of aggregates of land control per quartile. Cumulatively, the total land control of 1, 2, 3, and 4 quartiles is 5%, 14%, 26% and 55% respectively so that farmers in 4 quartile control land 10 times from the first quartile, and almost 4 times from the second quartile. While visiting TAO's office with Viona, a freelance journalist from the UK, we discussed the future of these people with very small lands. Mr. Nao, as a representative from TAO said that small land cultivators can ask the village committee for consideration to clear the forest even though the possibility is very small. This issue does not seem to be taken seriously by the TAO as reflected in the following interview:

Viona	:	In 2019, there is a new (cleared) land (as shown in the map). How if he cleared more land (such as this case)?
Mr. Nao	:	If they *(RFD)* found new land, (and it is) beyond their *(TAO)* support, they *(*villagers*)* will be in trouble with the forest departement. TAO cannot help at all.

Mr. NAO's explanation indicated that the recognition of Karen's tenurial rights is determined by when the land is opened. As long as the forest was cleared before 2002, regardless of size, it will be recognized. Meanwhile, if forest clearing is carried out after 2014, no matter how narrow the *de facto* land area is, it will not receive recognition. Another consequence that accompanies this program is the unequal distribution of land ownership, but so far it has been blurred and appears clearly. However, the number of households owning land under subsistence is quite small. Most farmers, in de facto, have more land to meet subsistence needs prior to participatory mapping so that the level of resistance to the implementation of this program is not too great.

Education and the Wave of Urbanization

Since the 1970s, the wave of modernization has increasingly penetrated rural areas of Thailand. In addition to issues of citizenship and environmental conservation, the modernization of the frontier region is marked by the presence of school institutions. Although initially presenting ambivalence, the role of education has become increasingly crucial because it provides a door to enter the industrial sector in line with the rapid economic growth since the 1980s (Charoenloet, 2015). In fact, the residents of Tumbang Paku built an elementary school independently in 1984 because the available schools were too far from the village.

As the standard of education required to enter the industrial and service sectors increased, they began to send their children to advanced levels in more urban areas. Initially, only a few families could afford to send their children to school in the district city, Chiang Mai, or Bangkok. Along with improved infrastructure and better economic conditions, in 2019 most families were able to do so as the graph below shows.

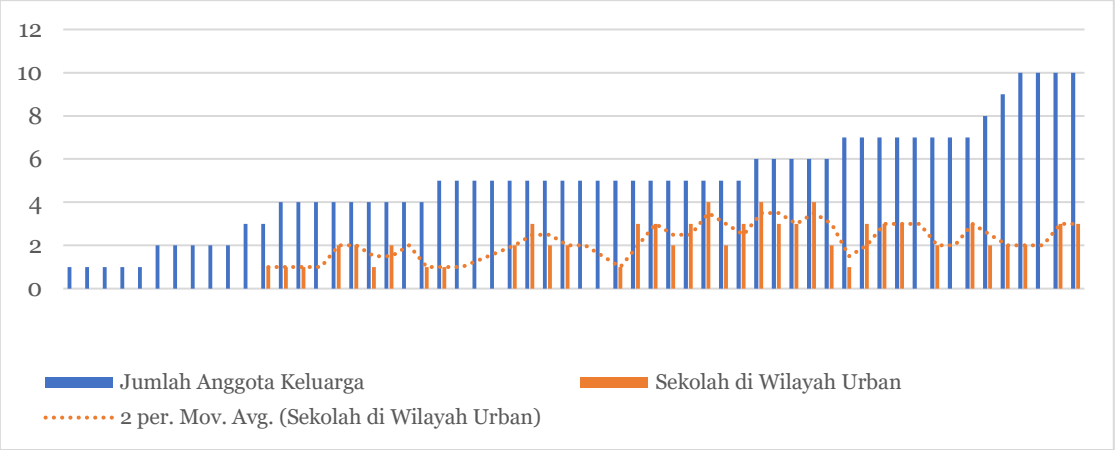

Figure 4. Number of education levels to urban areas

Source: Field research 2019 (n=59)

In aggregate, about 64% of a total of 59 households send their children to school in urban areas. For farmers, this investment costs a lot of money, so they try to reduce costs by using family networks or leaving their children with relatives who live in the city. If there are no relatives who can be asked for help, they try to find foster parents who are usually obtained through religious networks, the church. The amount of investment devoted to education illustrates how strong their aspirations are to provide provisions so that their children can have a good life in the city. Even in 2019, there were two young women from Tumbang Paku who were studying in China. They are Atoy and Fia. When I ran the research, both of them were in the village because of college holidays. Although the university waives tuition fees and provides dormitories, the costs for food and other

necessities reach 20 thousand baht per month. When I asked about their plans after finishing college, they both answered bluntly that they wanted to work in Bangkok.

The reluctance of the educated young generation to return to the village is often seen as oversimplifying. However, this aspiration is reasonable because there are only a few non-agricultural jobs available in the village, either as teachers or civil servant. Some them have worked in the city and have even chosen to build houses there without wanting to return to the village. One of the examples is Hankam family. He has five children who have all studied in the city. However, from the five children, only one person returned to the village and built a house so that he could take care of him when he was too old. The other four children were married and settled in Chiang Mai and only one of them wanted to return to the village when he grew old. This case seems to represent a common pattern in Tumbang Nail.

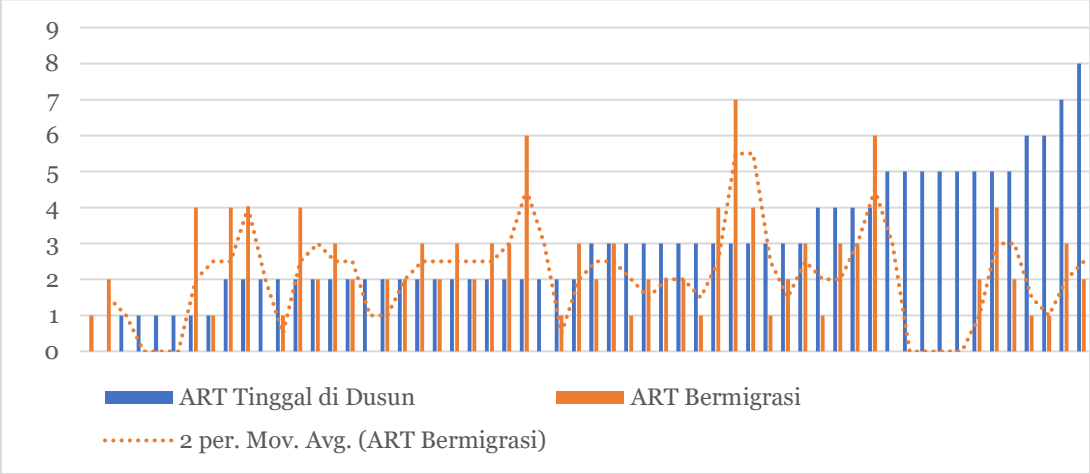

Figure 5. Number of household members living in the city
Source: Field research 2019 (n=59)

The average number of household members of the Tumbang Paku population is quite large, which is 4-9 although the distribution is not evenly distributed. Figure 5 shows a surprising social fact because of the 59 households, 47 (80%) have household members living in the city, either to study or work. In addition, there are also quite a number of families with a proportion where fewer household members live in the village than those who migrate. For those who have completed school, there is a strong urge to immediately work in the industrial or service sector in urban areas so that the burden of families in villages is reduced, as well as actively contributing to helping families by sending part of their wages.

Tumbang Paku presents social facts that are different from the general description of migration driven by the scarcity of agricultural land in rural areas (Zhu & Luo, 2010) or in a more contemporary issue, weather uncertainty that increases the vulnerability of agricultural businesses, thus encouraging farmers to diversify their jobs (Hunter et, al., 2013). The

data from the participatory mapping above shows that although land tenure is unequal, the number of farmers with small lands is very small. However, the aspiration to enter the industrial and service sectors in urban areas is very strong. This social process, unexpectedly, has drained most of the surplus population from the village, thus reducing the pressure on agricultural land. The low pressure on agricultural land makes resistance to participatory mapping less strong.

Thailand's Prosperous Farmers

In Southeast Asia, Thailand is an agricultural country where the economic conditions of the farmers are quite moderate. This achievement is the result of agricultural development that has been carried out since the 1970s, with the policy of "embracing farmers" so that they are not tempted by the communist movement (Walker, 2012). Various supports and protections in the agricultural sector are carried out so as to produce middle-income farmers. Official government economic survey data in 2010 showed that, leaving aside urban and rural area differences, the annual income per household per year of the Thai population was 224,000 baht or about 107 million rupiah (Walker, 2012).

A further rural-urban comparison shows that the average income for rural areas is around 172,000 baht, lower than the national standard. The difference becomes clearer when viewed geographically. Walker (2012) presents four categories of rural areas of Thailand, namely central, northern, northwestern, and southern. Farmers in the central have the highest income, 187,000 baht per year per family. While the southern, northeastern, and northern are 175,000, 166,000, and 156,000 baht (Walker, 2012). Referring to this distribution, the Tumbang Paku hamlet, which is geographically located in the northern region, has the lowest average income in Thailand. However, the data should be read more carefully because it is likely that the low cost of living in the northern regions makes them more economically resilient than other regions.

Table 1. Average income as a percentage of the poverty line by income decile and region

No	Central	Northern	Northeastern	Southern
1	91	66	61	77
2	149	112	95	136
3	192	143	122	180
4	233	173	147	227
5	278	207	176	281
6	335	248	211	351
7	407	303	257	433
8	502	393	328	560
9	678	552	487	785
10	1471	1335	1154	1685

Source: National Statistical Office (Walker 2012)

Table 1 shows that although the average income of households inhabiting the northern part of Thailand is lowest, this region is not the center of poverty. The number of poor households and slightly above the poverty line in the northern region is no more than 30% of the total population. Meanwhile, in the northeastern part of the country, the number of landless farmers is relatively larger, accounting for 40% of the total households. I witnessed the relatively prosperous condition of the northern community from Tumbang Paku village where almost all the villagers' houses were built with solid teak wood and equipped with televisions, cell phones, or refrigerators. In addition, the number of households that own a car is also quite a lot.

It is very difficult to examine the social hierarchy in this village because almost all households have more or less the same character. When I asked *Pi Na, my landlady,* to do an assessment of the economic hierarchy of the population, she was very hesitant. Although these doubts can be interpreted as a reluctance to express personal arguments, they may also occur due to the gap between economic and residents. According to Pi Na, the only households that can be classified as poor are migrants from Myanmar who do not have land and access to government assistance. This opinion is slightly different from the Pastor. In regards with the village economy and the issue of distribution of wealth, he said that there were five households that could be classified as poor. Pastor's statement is more realistic considering that within the scope of the village, there are about 10% of families whose agricultural land area is less than 10 rai.

The low level of poverty in the village's attempt to expand agricultural land into forest areas on the grounds of meeting a minimum standard of living less relevant, at least for the majority of the population. Given that the agricultural sector is not the only source of income, the economic condition of most households here are sufficient. The relatively affluent condition of most smallholders, combined with the small number of smallholders and high levels of migration, explains the weak resistance to participatory mapping.

CONCLUSION

Politically and economically, the ruling class always tries to enforce their territorial claims. However, making claims and effectively enforcing controls are two different issues. Claims can be made arbitrarily, while exercising effective control requires great political and economic power (Semedi, 2013). From the case of Thailand, we can see that since the early 20th century, claims to forest areas have attempted to be enforced through territorialization. However, some of the forest areas are inhabited because they have become an integral part of the farming activities of the Karen people. This is where a conflict of interest occurs because the RFD's efforts to territorialize are contrary to the subsistence interests of the Karen people.

This issue has prompted the local government (TAO) to work with non-governmental organizations to provide an alternative solution, which is participatory mapping. In principle, participatory mapping seeks to reveal important spatial information from the perspective of local communities and seeks to recognize it. However, not all land claims are recognized. Fields cleared after 2014 had to be reforested so that participatory mapping not only caused some residents to lose access to land, but also the creation of new territorial boundaries based on the volunteerism of the subjects (Karen people). Therefore, participatory mapping can be conceptualized as soft-territorialization. Territorialization subtly reaps great success.

According to TAO, this is because residents will get a certificate (NS2) so they can access various government credits and subsidies. However, the explanation is less sensitive to changes in the disciplinary instruments used. The use of satellites has enabled very comprehensive surveillance so that various spatial activities in the forest that were previously invisible, have become completely visible. The supervision of this panoptic model creates a feeling of being monitored. For farmers, the clearing of new forests to farms will only bring further losses. At this point, participatory mapping is the best option they can take.

Apart from the satellite-operated panoptic surveillance system, another factor that has made participatory mapping programs widely accepted is the fact that most villagers have sufficient land to cover subsistence. Pressure on land is also reduced due to the high flow of urbanization which is rather evenly distributed in each household of the Tumbang Paku farmer. Apart from these two factors, participatory mapping also went relatively smoothly because the economic conditions of most of the villagers were relatively prosperous, so the incentives to clear forest areas were much smaller than the incentives.

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