






Land Rights and Agrarian Reform in Forest Areas: A Basis for Sustainable Development

Sutaryono¹, Rohmat Junarto^{1*}, Sukmo Pinuji¹, Jamaluddin Mahasari², Dian Aries Mujiburohman¹

¹ Sekolah Tinggi Pertanahan Nasional, Tata Bumi Street No.5 Yogyakarta 55293, Indonesia

² Faculty of Law, Universitas Tjut Nyak Dhien, Jambi Street No. 59 Medan 20123, Indonesia

Corresponding Author Email: rohmatjunarto@stpn.ac.id

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ABSTRACT

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Land use changes from forest to non-forest typically precede or follow human expansion in areas with forests. As the granting of legal land ownership is not allowed in forest areas, this raised issues about the justice of land access for people living in forest areas. This essay aims to investigate the procedure for enhancing community-owned and used forest areas' land ownership rights. The research was conducted in two villages in Bengkayang Regency, West Kalimantan, utilizing content analysis to discern community land use variations in forest areas. These variations may inform the allocation of land rights to the community and considerations related to forest area release to the community. The findings reveal that the complexity of land use and ownership in forest areas has given rise to conflict and disturbances, which are exacerbated by a lack of clarity in land administration and the legal system. In an effort to address this issue, the government has promulgated Presidential Regulation 88 of 2017 to govern the establishment of a Team for the Acceleration of Settlement of Land Tenure in Forest Areas (PPTKH), and Presidential Regulation 62 of 2023 to expedite the implementation of agrarian reform. However, this program faces various challenges, both from a juridical, geographical, socio-economic, and institutional perspective. One solution that can be implemented is to provide land ownership rights in forest areas, including land suitable for agriculture, residential areas, fishponds, social facilities, and farming on dry land. The use of these lands can be used as a basis for granting land ownership rights to the community.

1. INTRODUCTION

Governments in each country are competing to implement strategic projects that have a direct impact on equitable distribution and the economic strengthening of their people [1-4]. Indonesia has national strategic projects that can be leveraged to mitigate economic impacts, such as agrarian reform, social forestry, and the rejuvenation of community plantations [5-8]. Agrarian reform fundamentally provides programs that can solve the problem of poverty, especially for small rural people, farmers, planters, and fishermen [9]. Explicitly, the regulation of agrarian reform is in the order of legislation at the level of presidential regulation. Starting from Presidential Regulation No. 2 of 2015, Presidential Regulation No. 18 of 2020, Presidential Regulation No. 88 of 2017, Presidential Regulation No. 86 of 2018, and Presidential Regulation No. 62 of 2023. Through this legal foundation, the Indonesian people are not only given land as productive business capital but also business capital assistance, production facilities and infrastructure, marketing access, and business assistance [10].

Agrarian reform has three programs: asset legalization, land redistribution, and social forestry [11]. The details of each program are: first, the legalization of assets targeting uncertified transmigrant lands covering an area of 600,000

hectares and lands already under community control covering an area of 3.9 million hectares. Second, land redistribution targets agricultural land with expired rights to cultivate, 400,000 hectares of abandoned land, other state land, and lands derived from the release of 4.1 million hectares of forest area. Third, social forestry targets land in forest areas to be distributed to communities, covering an area of 12.7 million hectares. However, in the 20 years since this program was launched until early March 2023, the achievement of land redistribution has not shown significant results. This is because of the target of 4.5 million hectares of land distributed by the government to the community, of which only 2,81 million ha, or 68%, have been realized [12]. In addition, by the end of 2022, it will be clear that land certificates have been issued for the 99,487.68 hectares of agrarian reform objects (ARO) resources provided for as many as 36 decrees in 36 regencies. This shows that the determination of strategic agrarian reform projects by the government is constrained in their implementation. Despite the fact that many AROs are located in forests, the government claims that they were unsuccessful because they were not properly implemented.

The goal of agrarian reform in forested regions is laudable, but its implementation is complicated by the need to redraw boundaries and rescind protections for forested areas under the law. Even if land has been utilized and owned by the

community for a long time and is no longer wooded physically, exclusion requires a complicated administrative procedure involving many parties under Indonesian law [13]. The regulation mandated that the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency coordinate with the Center of Forest Area Stabilization on the implementation of inventory and verification (Inver) of ARO.

Bengkayang Regency is one of the provinces in West Kalimantan that has been given special attention for its work on agrarian reform [14]. According to preliminary statistics, Bengkayang Regency has a total forest area of 2,303.97 hectares, of which 29,433 hectares have the potential to become ARO targets because they are populated by local people [15]. Therefore, a study to identify the typology of land use in forest areas that has been utilized by the community is important to implement. This research will fill that void and come up with new approaches for dealing with the obstacles to agrarian reform in wooded regions.

This study is different from previous research. This research was carried out to depict the reality at the site level, focusing on the many dynamics, obstacles, and recommendations to address community land tenure in state forests from the perspective of these complex legislative and institutional frameworks. Communities have laid claim to enormous tracts of land in state forests; thus, a more complete picture is necessary to resolve issues of asset security and ease of access. Indeed, existing research on agrarian reform in state forests tends to concentrate on institutional aspects [16], and a more in-depth investigation of the policies and implementation of agrarian reform in state forests, as summarized above [17]. Studies [18-20] and others detail the difficulties of putting these complicated changes into practice. Even though the settlement of land tenure in forest areas, or PPTKH, is a crucial reform, it is implemented with significantly less scrutiny than other policies, especially at the site level. The findings of this study should inspire further investigation into the operational ramifications of a rule as consequential as that which governs community access to state forests. The goal of this study is to investigate the procedure for increasing land ownership rights

in forest areas that the community has used and held under the PPTKH program. Facilitating the attainment of secure land tenure for local communities is the overarching objective.

2. METHODS

This research used the triangle research method [21]. Researchers employ the process of data triangle research to gather and examine data from many sources, employing a range of methodologies and ideas. The objective is to authenticate the findings and mitigate the potential bias that may occur from relying just on one methodology or source. This study's data is classified into primary data and secondary data. Primary data comes from informant interviews, image interpretation, and field observations, whereas secondary data comes from publications, journals, books, and legal rules accessed online or in print copies. This triangle research method is used to validate data collected from the same source using multiple techniques. For example, data gathered through observations is subsequently validated through interviews. An observation was conducted to identify common land uses and possessions in the forest area that have been utilized by the community. Authenticated data is analyzed using quantitative and qualitative methods related to the distribution of land use and ownership, subjects, and responses from various stakeholders.

A sample population was used using the case study method when the sample area was chosen because of its specific character in implementing agrarian reform. Regency Bengkayang was chosen as the population sample since it has 2,300,97 hectares of forest area that have been proposed as ARO and 5,500 hectares of forest area that have been proposed to be released using the PPTKH scheme. Suka Bangun Village, Sungai Betung District and Tiga Berkat Village, Lumar District are two of 2,673 villages in West Kalimantan located inside a forest area and are identified as ARO according to the map published by the Ministry of Environment and Forestry (the MoEF) (Figure 1).

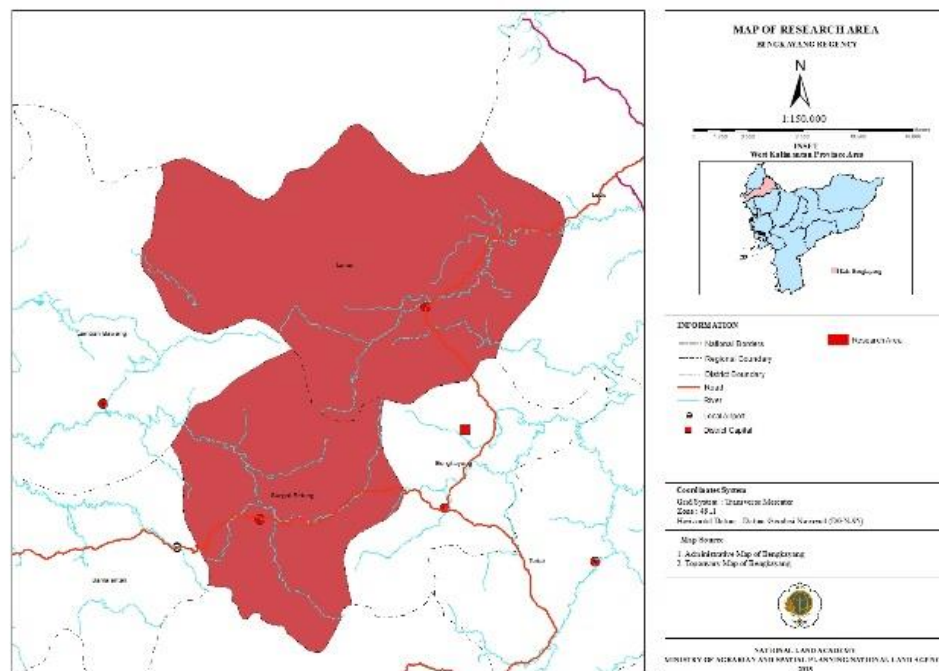


Figure 1. Map of research area

3. RESULT AND DISCUSSION

Human expansion into forest areas has gone on for a long time. The first period of deforestation was mostly forced by massive agricultural expansion and forest product extraction [22]. Turning to the 20th century, this trend changed when population growth rapidly increased, resulting in the need for more spaces for living, economic activities, and other land-based needs [22]. As in Indonesia, the Ministry of Forestry (the MoF) claimed that approximately 63% of the total area of Indonesia is forest. However, approximately 40–60 million people live in forest areas and undertake farming activities inside the forest area or its perimeter [23]. The MoF also counted that of the total of 75,000 villages in Indonesia, 25,836 are located in forest areas, with approximately 50 million farmers living in or within the boundaries of forest areas. Nonetheless, according to national law, it is difficult to issue a land certificate for already-occupied land inside a forest area, triggering conflicts and disputes regarding land use, utilization, and possession rights. In general, land possession inside a forest area is usually related to the use and utilization of the land. Land possession is defined as a series of authorities, responsibilities, and/or prohibitions and limitations imposed on the holder of the right to act based on his or her possession of the land. In the legal system, the term is known as the right to possess the land, with the authorities not limited to utilizing it or using it as a mortgage [24]. It is not only limited to physically possessing it but also includes the right to lease, or in a condition when the land is occupied by another party without any recognized or legal right.

Human expansion in forest areas is always preceded by or accompanied by the change of land use from forest to non-forest, mainly agriculture and plantations [25]. In Indonesia, these activities can occur legally or illegally and be implemented by the state or the community. The government has divided the right to manage forest areas into 4 categories: conservation forest, protection forest, limited production forest, and conversion production forest. According to Indonesian law, if a party or community intends to cultivate the forest, they should get a permit from the government, and approval will be given according to the type of forest. However, in reality, human expansion has changed the forest, and people have started to utilize the land inside the forest and its perimeter for their activities, including settlement, agriculture, grazing, and plantations. Not only individual utilization, but other parties such as the Customary Law Community, village government, legal and social organizations, and government agencies also set up land-based activities in the area [26]. This condition, however, triggers conflicts between forest management authorities and the communities, which have been crucial issues in Indonesia [27].

While the land administration system in Indonesia is only applicable in non-forest areas (that cover only 37% of the total area of Indonesia), attempts to resolve conflicts and disputes related to land utilization and possession in forest areas should be handled in a robust manner. However, Safitri [26] mentioned that land administration in Indonesia has the nature of dualism, when the government acknowledges the existence of Customary rights and community rights to land but at the same time states that all land is under the jurisdiction of the state. On forest area, the government interprets that forest area as state forest area, whereas according to Law No. 41/1999 on

Forestry, forest area consists of state forest and non-state forest. This interpretation made it impossible to publish rights of land, individually or communally, in forest areas. This conception implies the prohibition of publishing land certificates inside forest areas without any permission from the MoF to release the area from forest jurisdiction.

In 2017, the President enacted Presidential Regulation No. 88 of 2017 to emphasize the creation of an Acceleration Team on PPTHK (the Settlement of Land Possession within Forest Area), chaired by the Coordinator Ministries on Economic. In performing their duties, the chairperson coordinates with related ministries and agencies, local government, academics, and another related stakeholder. One of the duties of this team is to carry out inventory and verification of PTKH (Inver PPTKH). Essentially, agrarian reform is an activity of re-arrangement of the structure of ownership, possession, use, and utilization of land for the sake of small farmers, tenant farmers, and landless farmers, giving the idea that land is for those who cultivate the land [28].

Agrarian reform has been on the agenda of the government, as stated in the National Development Plan for 2014–2019. In order to improve the welfare and quality of life of the citizens, the government plans to provide 9 million hectares of land as ARO (4,5 million hectares were certificated land, and the other 4,5 million were redistributed land from abandoned land, ex-cultivation rights, and ex-forest areas). This arrangement is then called the main point of agrarian reform. The new policy related to agrarian reform in forest areas, as mandated by Presidential Regulation No. 88 of 2017, can be implemented in four ways: (1) revising forest boundaries; (2) swapping forest areas with other non-forest areas; (3) access to manage forest areas through a social forestry scheme; and (4) resettling the community that lives inside forest areas. In revised forest area boundaries, it is required that at least 30% of the total area in a province remain forest; the area should have been possessed for at least 20 years and not be a conservation area. If the requirements cannot be met, then the area will be designated as social forestry. Nonetheless, other schemes, such as forest swaps and resettlement, have not yet been regulated by the decree.

3.1 The typology of land use and possession in forest areas

The result of identification and verification (Inver) conducted by BPKH of West Kalimantan shows that there are 3 types of land use in forest areas, which are: (1) cultivated land for rice fields and fish ponds; (2) settlement areas with social and public facilities; and (3) dryland agriculture. The total area of the forest that has been cultivated by the community covers an area of 5,468,64 hectares. Nonetheless, some village heads stated that the actual area is smaller than what was released by the MoEF. As an example, according to the map released by the MoEF, in Suka Bangun, the area of inver was spotted in only 2 locations, but in actuality, all Suka Bangun Village were located inside the forest area. These two spots were located in Sengkabang Hamlet (covering 289 hectares of habitation area, agriculture, social and public services, and 50 hectares of paddy fields). The second spot is located on Sebawak Hamlet, covering an area of 161 hectares (agriculture and plantation area). An indicative map of ARO published by BPKH in Tiga Berkat Village and Suka Bangun Village is shown in Figures 2 and 3.

3.2 The history of land use and possession in forest areas

The regulations and the state's claims to forest areas in West Kalimantan were changed several times. At first, the area was appointed through an Agreement of Forest Use in 1982, covering an area of 9.204.375 hectares (the Decree of the Ministry of Forestry No. 757 of 1982). In 2000, this decree was replaced by the Decree of the Ministry of Forestry No.

259 of 2000, and the area was revised to 9.178.760 hectares. Then, in 2013, the Decree of the Ministry of Forestry No. 936 of 2013 changed the forest area significantly, to only 8.355.597 hectares. This area continuously changed until 2014, when the Ministry of Forestry, through Decree No. 733 of 2014, stated that the forest area in West Kalimantan covered an area of 8.389.600 hectares.

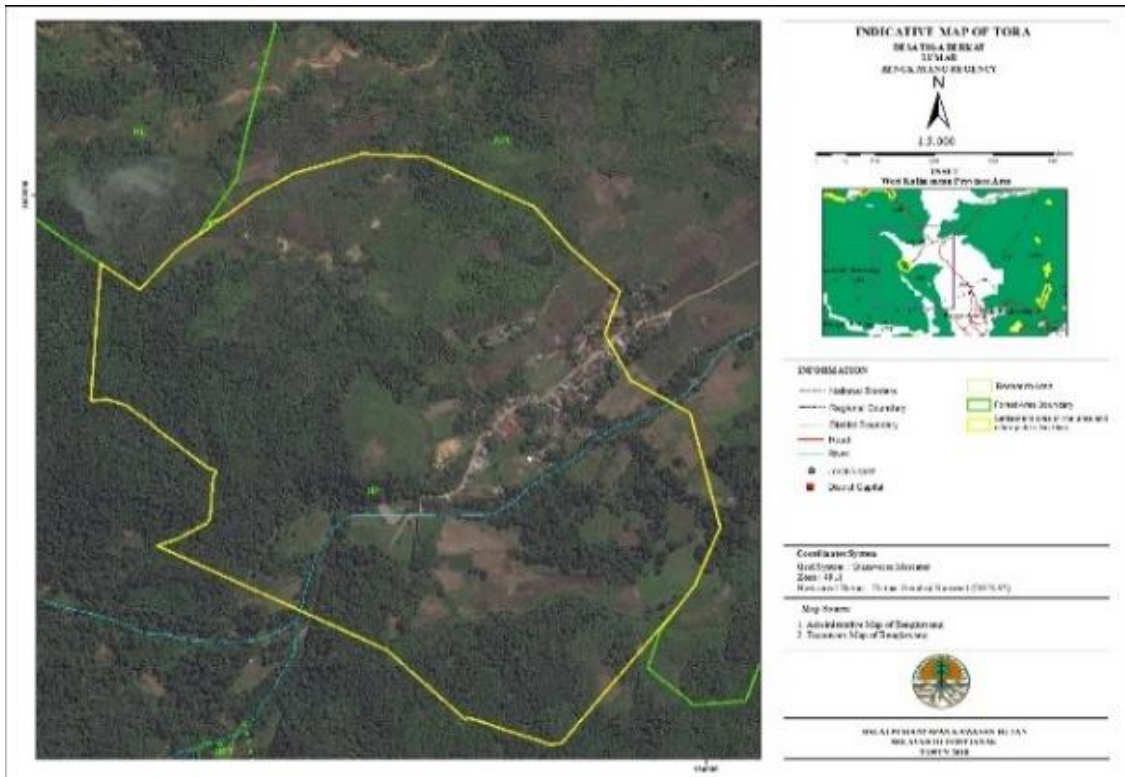


Figure 2. Indicative map of ARO in Tiga Berkat Village

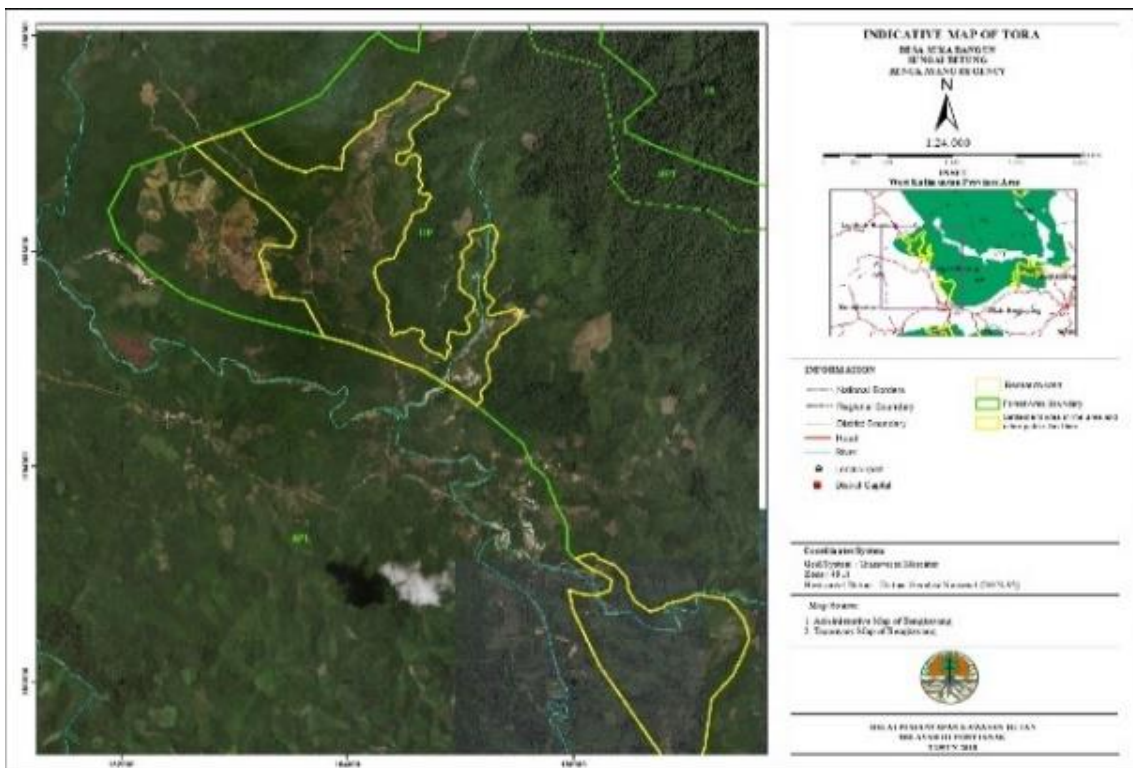


Figure 3. Indicative map of ARO in Suka Bangun Village

This research also confirmed that the typology of land possession in forest areas was divided into six categories, as Safitri [26] identified. The classes include (1) customary law community; (2) villages; (3) individual possession, with and without legal right; (4) legal organization; (5) social organization; and (6) government institutions.

In both study areas, land utilization and possession inside forest areas have been ongoing since 1960. Most of it was utilized by local transmigrants, both local and from other islands such as Java. As a proof of possession, the head of the village issued a reference letter to the holders. As an example, the reference letter published by the Head of Banoa (Village Government) on May 29, 1962, as shown in Figure 4, was used as a legal document to prove the possession that was granted before the Ministry of Forestry established the Forest Boundary (there are two versions of the regulation: the Agreement of Forest Use, or TGHK, and the Decree of Forest Boundary). Therefore, in principle, all parcels holding those reference letters can be categorized as customary land and not as state land. This means that it is possible to release the area from forest to non-forest and distribute it to the holders.

All areas of ARO in Suka Bangun Village have long been possessed by the community as individual ownership, even though not legally acknowledged. This can be seen from the existence of settlement areas in the area and other public facilities such as mosques, football fields, and elementary school buildings that have existed for a long time. There are also legitimate, definitive administrative offices of the government in the area. State land was also utilized in the construction of a Mini-Elementary School, which was established to assist pupils from remote areas.

Moreover, there are also seven churches in the location, owned by legal organizations or religious foundations. There

are also public plantations for oil palm and pepper. According to the data of the Land Use Balance Map of Bengkayang Regency, the extent of the area is insignificant in number (released by the Regional Office of the National Land Agency of West Kalimantan in 2017), but on-field identification and satellite imagery interpretation show significant area coverage. The area observed is shown in Figure 5.

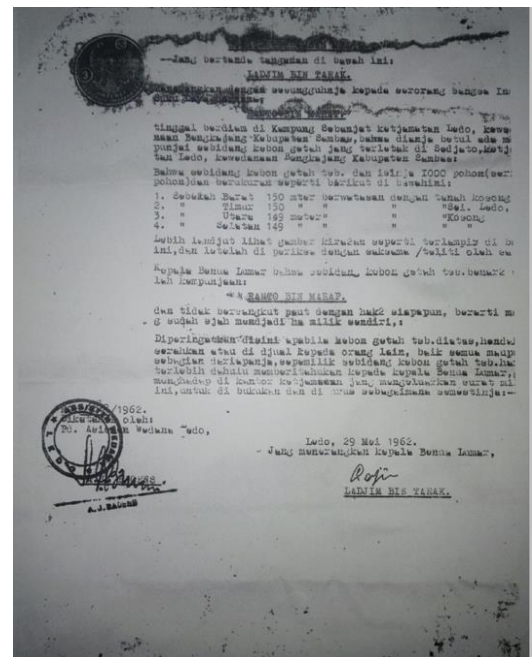


Figure 4. Example of a reference letter in Tiga Berkat Village as proof of possession by the community

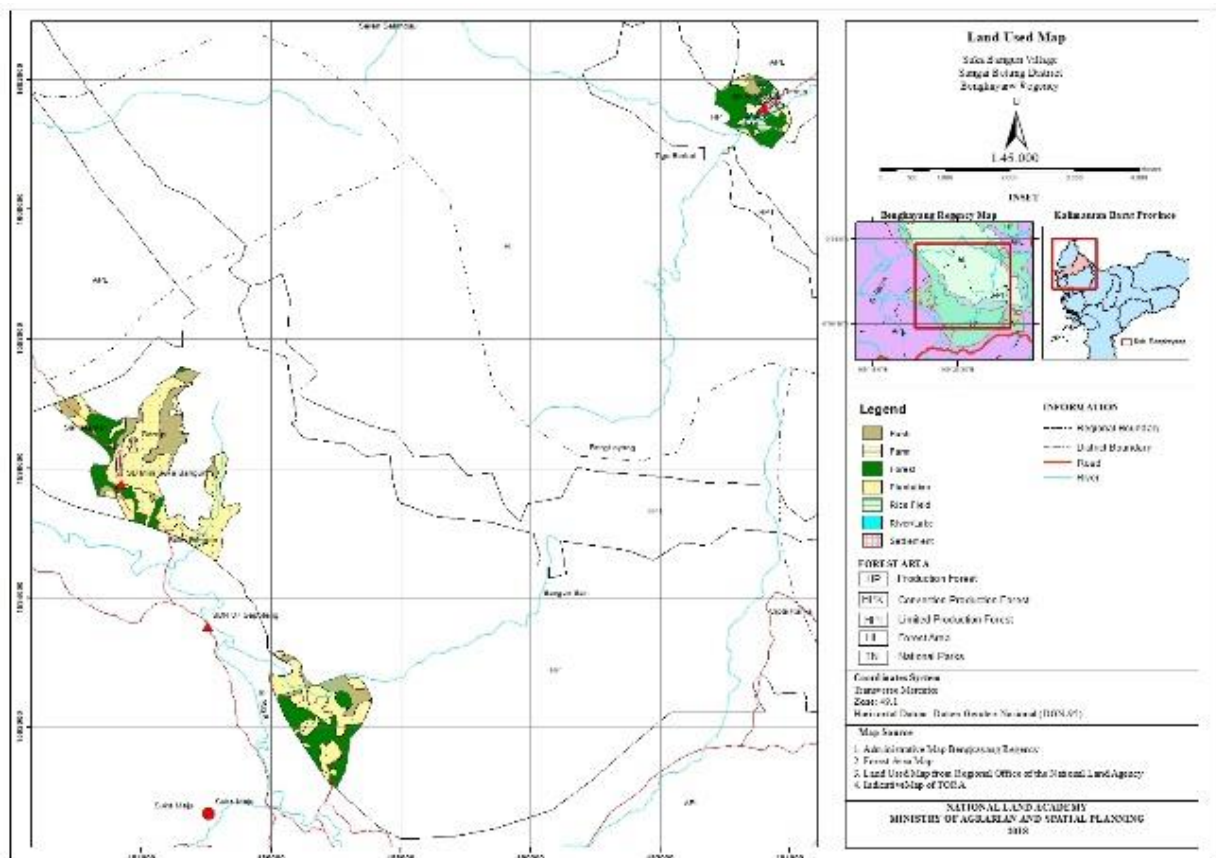


Figure 5. The typology of land use in the location of ARO in Suka Bangun and Tiga Berkat Village

Meanwhile, the condition is different in Tiga Berkat Village. In this area, the MoEF allocated 83 hectares of ARO in 2018, located in Dusun Madi. Based on the document, all of Madi Hamlet is located inside the forest, but in actuality, there are settlements that have been inhabited for generations, as proven by the document of land rights published in 1962. In this area, the lands were possessed individually and were used mostly for settlement, agriculture, and plantations. There were also other public and social facilities, such as churches, football fields, and elementary school buildings, possessed by religious foundations, social organizations, local governments, and village governments. Table 1 shows ARO's land use and forest ownership type in the research region.

Table 1. The typology of land use and possession of ARO

No.	Land Use	Possessed by
	Settlement	
1.	Agriculture/ Public Plantation	Community member
	Mixed Plantation	
2.	Church and Mosque	Social Agency
	Mini-Elementary School	
3.	State Elementary School	Local Government/ Village Government
	Field/ public facility	
4.	Forest and Water body	The State

3.3 The problems of land use and utilization in forest area

Even though the government has released indicative maps of ARO, some problems have been raised regarding land possession and utilization, which were followed by agrarian reform. Most possessions in the community were inherited from generations, either from local migrants or immigrants from outside the area. The observation shows that problems varied from juridical, geographical, and social-economic.

3.3.1 Juridical problem

In this aspect, most problems come from the uncertainty of what kind of right to possess for the community. Moreover, precedents related to land certification in Belimbing Village, a village next to Tiga Berkat Village, left bad experiences for the people. In 2009, a systematic land certification program was implemented in Belimbing Village, and the people enthusiastically registered for this program to certificate their land. Unfortunately, as the land was already being measured and the program was nearly finished, it was found that there were 20 parcels located inside the forest area, and the certificates cannot be published.

Other legal problems occurred when the forest boundary was unclear, specifically in protected forest areas (HL). Because the boundary was unclear, people started to cultivate land in this area, which was considered illegal. Consequently, they have to deal with some legal violence and being arrested, as happened in Suka Bangun Village. Based on these experiences, people feel skeptical about land administration programs held by the government, including agrarian reform, since, in their perception, all forest areas cannot be legally occupied and owned by the people.

3.3.2 Geographical problems

Problems related to geographical aspects include (1) an unclear boundary between forest and non-forest areas; (2) a difference in area between the ARO as stated in the map and existing forest that has been possessed by a community or

another party. Usually, the area indicated on the map is smaller than reality, and (3) most of the area of ARO has changed into a settlement.

3.3.3 Social economic problems

Problems related to social economics in forest areas include: First, limited infrastructure, such as roads, schools, or health facilities in the location of ARO, making it difficult for the people to live or to utilize the area for living. Field observations reveal that Suka Bangun Village is home to the following public facilities: places of worship, educational institutions (SD- Elementary School 12 Sengkabang, SD 10 Melakos, SD Sepoteng, SD 7 Sepoteng, SMP-Junior High School 3 Sungai Betung), and village offices. In Lumar District's Tiga Berkat Village, there is a sub-district office, a village office, a security office (Kompi Yonzipur 6), schools (SD 4 Doyot, SD 3 Lumar, SD 6 Madi, SD 7 Trans Mabak, SMP 1 Lumar, SMA 1 Lumar), places of worship (a church and a mosque), four shopping areas, recreation areas (Madi Tourism Water Dam and Batu Timah Waterfall), sports facilities, an agricultural extension center, and a cemetery;

Second, poverty and low quality of life. Residents of two villages had comparatively limited access to essential provisions, such as healthcare, according to identification results. The scarcity of health facilities and the restricted access to conventional markets serve as evidence for this. Furthermore, the remoteness of both villages from centers of economic development contributes to their deplorable living conditions and destitution. Suka Bangun Village is less developed than Tiga Berkat Village, which is one level more developed;

Third, distrust of the government regarding land tenure problems in forest areas, specifically based on precedent experiences and shown by protest actions by the community in forest areas. The advantages associated with the establishment of secure land ownership through the issuance of land certificates have been widely recognized as a fundamental catalyst for fostering regional economic growth. Nevertheless, the certification process for all land parcels in two communities remains incomplete.

3.3.4 Institutional and human resources

Some problems related to institutional and human resources occurred at local, regional, and national levels, which are: (1) the absence of legal institutions to tackle PPTKH, including sufficient and responsible human resources; (2) the unclear position of local government as the leading sector of PPTKH, while an agrarian reform task force at district level has not been formed yet; (3) at provincial level, the Inver team formed by the Governor has not shown clear and effective collaboration; (4) at national level, the MoEF and the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) have not yet effectively collaborated to perform the agrarian reform agenda and social forestry.

3.3.5 Insufficient budgeted allocation

Unclear task division between responsible institutions at the operational level has consequences for insufficient budget allocation. In West Kalimantan, the Ministry of ATR/BPN has allocated funds for the program at the provincial level, but the funds were not available in other responsible institutions. At the operational level, land redistribution is the final stage of the PPTKH program, and budgeted allocation should be planned comprehensively among the involved stakeholders. In

2018, the Regional Office of ATR/BPN in West Kalimantan allocated funds to relocate 71.800 parcels. However, the MoEF, through BPKH, prioritized the release of forest areas that have been converted into settlements and social and public facilities.

BPKH, as part of the MoEF at the local level, is responsible for implementing Inver. Nonetheless, without sufficient funding, this program will not be implemented effectively. Available budget was allocated to disseminate an indicative map of ARO, but unfortunately, the mapping process itself also had no sufficient budget in the year concerned.

At village level, it is possible to allocate village budgets (APBDes) to support PPTKH with the approval of local government through related institutions (the Department of Community Empowerment or Village Development). However, there is no clear mechanism to allocate budgeted at village level to support PPTKH, which has consequences for the village's ability to allocate budget to support agrarian reform.

At the community level, the responsibility to develop a proposal to release forest area should be attached to some documents, and the compilation needs some expenses that should be covered by the village budget, but some community members objected to paying the expenses.

3.4 Alternatives of settlement of the problems of land use and possession in forest area

In West Kalimantan, the government has designated an area of ARO in an effort to resolve problems regarding land use and possession in forest areas through agrarian reform. The designated area was established through Decree of the Ministry of Environment and Forestry No. 6979/MenLHK/Setjen/Kum.1/12/17 dated December 29, 2017, resulting in indicative maps of the forest area allocated for ARO. The decree established seven districts as ARO in West Kalimantan, consisting of Kubu Raya, Kapuas Hulu, Sanggau, Landak, Ketapang, and Bengkayang. This decree is in line with the Decree of the Governor of West Kalimantan No. 792/DISHUT/2017 on the establishment of the INVER team to handle the problems of land use and possessions inside forest areas in West Kalimantan. During February and March 2018, the team performed an information dissemination program related to problem settlement and announced the area of ARO. Then, the Governor of West Kalimantan established the task force team for agrarian reform (GTRA) through Decree No. 175/BPN/2018 on March 12, 2018, followed up

by the Decree of the Head of Regional Office of the National Land Agency in West Kalimantan No. 50.1/KEP-61/III/2018, establishing the execution team for GTRA, on March 19.

The area of ARO in West Kalimantan covers an area of 67.511,84 hectares, located in 7 districts. In Bengkayang, there are 5.468,64 hectares of forest area allocated as ARO, located in 10 sub-districts and 40 villages. The method of resolving land use and possession issues in forest regions has been governed by Presidential Regulation No. 88 of 2017, which includes the pattern of problem resolution and its flowchart. Figure 6 depicts the work flow.

On May 7, 2018, the Coordinating Ministries of Economic Affairs, as coordinators of acceleration in the problems of land possession in forest areas, issued Regulation No. 3/2018 on the procedure of inventory and verification of land possession in forest areas. The regulation contains detailed procedures on how to settle the problems of land possession in forest areas as a guideline for the Inver team to execute the work. One of the responsibilities of the Inver team is to conduct information dissemination on PPTKH in every district. The team then formed the management team of PPTKH in each province and appointed a coordinator and execution team at the district level. The management team of PPTKH is comprised of employees of BPKH, Forestry Service at the local level, and the Regional Office of ATR/BPN, with the tasks of reviewing the proposals from the community, distributing them to the execution team, preparing related documents and correspondence needed, preparing the form, documenting the map, and preparing a report to the Governor. The team coordinator is responsible for handling coordination between the execution team and the Inver team. The execution team consists of 11 members from BPKH and is responsible for recording and reviewing the chronological events of land possession, ownership, use, and utilization in the forest area and verifying them on the field. The process began with a proposal submission from the community that has utilized the land in the forest area at certain times, based on the procedure in Presidential Regulation No. 88 of 2017. The proposal was submitted to the Head of Village and then submitted to the Inver team collectively. For the area that has been possessed by government agencies, social organizations, and the Adat community, the proposal was submitted directly to the customary team. When the community does not submit a proposal, the program will still be executed at the request of the Regent. Some of the normative procedures mentioned above have been implemented in West Kalimantan, which are:

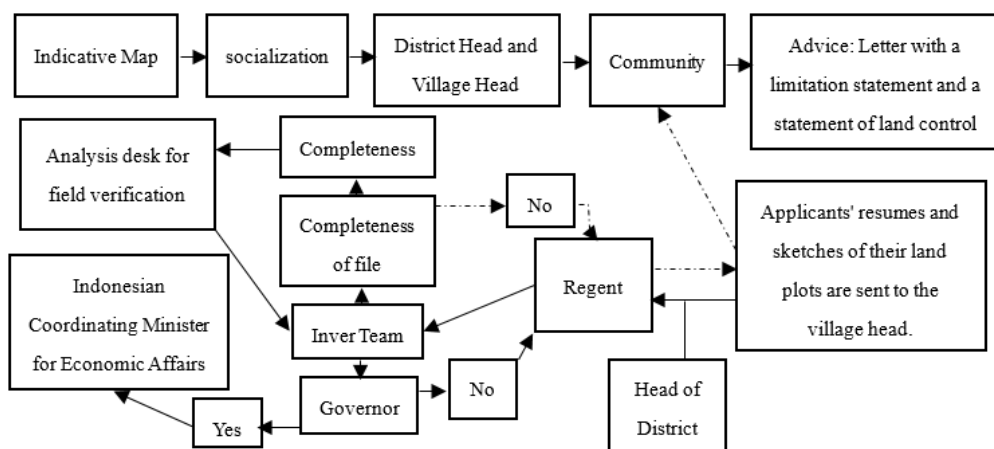


Figure 6. Problem-solving flowchart for land ownership issues in a forest area

1. The forming of Inver team, as stipulated with Governor's Decree on West Kalimantan;
2. Capacity building of technical staff through training in agrarian law at Brawijaya University and mapping the area using UAVs or drones;
3. Information dissemination at the province level;
4. Information dissemination at seven Regency, on:
 - a. The procedure to submit an application proposal;
 - b. Submitting an indicative map of ARO for each village;
 - c. Giving guidance on how to fill out the proposal form and make the sketch of land parcels.

The research found that the community did not respond enthusiastically to this agenda and tended to be pessimistic. Some of the Heads of Village in the study area responded that this program was hard to implement because: (1) almost all of the area is located in forest areas; (2) the proposal required detailed requirements that were considered complicated by the community; (3) it should be implemented bottom-up by the community involving local authority (RT-community organization); (4) the budget constraint to provide equipment such as GPS receivers to conduct participatory mapping should be fulfilled by the village itself; and (5) the required integrity pact stated that it is not allowed to charge the community for this project.

Based on those descriptions, the most suitable alternative to settle the problems of land possession in forest areas is to combine the implementation of Presidential Regulation No. 62 of 2023 with community involvement and village government on the implementation. Furthermore, it is imperative that the government enhance regulatory measures and improve the efficiency of integrating agrarian reform data by implementing the Bhumi GTRA system. The Bhumi-GTRA system functions as a framework to integrate access and asset management operations in accordance with the conceptual model of the Land Management Paradigm (LMP). In addition, it is imperative that the regional and central governments actively participate, with the President, Minister, Governor, and Regent/Mayor serving as Chairs of the Regional Agrarian Reform Task Force. In order to effectively execute tangible action plans, these governments should collaborate with relevant ministries and agencies.

4. CONCLUSIONS

A change in land use from forest to non-forest in Indonesia has coincided with the expansion of human activities in forest areas, particularly in the context of agriculture and plantations. Although the government has established various categories of forest management areas, in practice, there has been significant encroachment and land use by various parties, which in turn has led to conflicts with forest management authorities. One of the main problems is the dualistic land administration framework, which recognizes customary rights and community rights to land while at the same time emphasizing state recognition of all land, including forest areas. This situation creates obstacles to issuing land certificates in forest areas without permission from the Ministry of Forestry.

To overcome this problem, Presidential Regulation Number 88 of 2017 formed a Team for the Acceleration of Land Tenure Settlement in Forest Areas with the aim of resolving land use and control problems, and Presidential Regulation 62 of 2023 expedited the implementation of agrarian reform. Agrarian

reform is a key element in the government's agenda to provide land for small farmers and landless individuals. This new policy opens the door to various agrarian reform approaches, including revision of forest boundaries, exchange of forest land for non-forest land, social forestry schemes, and resettlement of communities living within forest areas.

Several typologies of land use and ownership in forest areas include customary law communities, villages, individuals, legal and social organizations, and government institutions with ownership claims that have existed for decades. The challenges of resolving land use and ownership issues in forest areas include juridical, geographical, socio-economic, institutional, and budgetary aspects. Uncertain land rights and land certification difficulties are frequently faced by local residents, while the boundaries between forest and non-forest areas are increasingly confusing. The government has designated areas for agrarian reform to address land ownership issues, but the process is complicated and lacks the involvement of the public, who are often skeptical of government initiatives. The right solution is to combine the implementation of Presidential Regulation No. 62 of 2023 with active participation from the community and village governments, as well as improving regulations and integrating agrarian reform data through the Bhumi-GTRA system. Effective collaboration between regional and central governments, ministries, and related institutions is also very necessary to implement a workable land reform plan.

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