Jurnal Belantara Vol. 8, No.1, March (86-104)
DOI: 10.29303/jbl.v8i1.1082

E-ISSN 2614-3453
P-ISSN 2614-7238

COMMUNITY PERSPECTIVE ON FOREST CONDITION (CASE STUDY IN KTH TALANG PONIJAN AND SIDODADI I)

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Received: 29/11/2024, Revised: 22/01/2025, Approved: 02/02/2025

ABSTRACT

The sustainability of forest functions is closely related to the perspective of the communities living around it. This study aims to analyze community perspectives on forest conditions in KTH Talang Ponijan and Sidodadi I. Data was collected using a qualitative approach through in-depth interviews, participant observation, and documentation studies. The collected data were analyzed descriptively qualitatively. The results of the research show that there are still differences between the community's views and their behavior towards community forest management (HKm). Most of the people in KTH Talang Ponijan and Sidodadi I utilize HKm land to improve their welfare. However, conditions in the field reveal that there are still illegal practices such as logging, poaching, opening up new land for cultivation, and unsustainable land management which of course threatens the balance of nature and worsens forest conditions. The government is expected to provide environmental education programs and facilitate training or guidance to strengthen community capacity to manage and utilize forests wisely.

Keywords: *Agroforestry; farmer groups; community forest; monoculture coffee; community perspective.*

INTRODUCTION

The existence of forests as a support for life plays an important role in every aspect, both ecological, economic and socio-cultural (Widodo dan Sidik, 2020). The main service provided by forests is the provision of biodiversity which in turn supports other ecosystem services (Fontbonne dan Eyvindson, 2023). Approximately 80% of the world's population in developing countries depend on forest products for health and nutrition (FAO, 2022). Human dependence on forests refers to things provided by forests such as food, fuel, income and employment opportunities, regulation of ecosystem services, and cultural values (Plieninger *et al*., 2022). The function of forests is large from an economic perspective, massive exploitation by humans of forests (Hidayat *et al*., 2020). This was triggered by the fulfillment of human needs due to the increase in population globally (Ismail *et al*., 2019). Furthermore, the existence of biodiversity is also increasingly

threatened due to the many anthropogenic activities in the forest (Febryano *et al*., 2024). Forest damage is a major problem caused by deforestation, forest encroachment, and land conversion for agriculture and plantations (Akhmaddian, 2016). Forests that are under intense pressure result in an imbalance in their functions. The ecological and socio-cultural functions of forests receive less attention, while the economic functions of forests become more dominant (Prayitno dan Ichsan, 2021). Forest damage has an impact on the threat to plant and wildlife species in the forest and the level of community welfare (Nakita dan Najicha, 2022).

The interactions between humans and forests are complex and varied. interactions depend on the type of forest, the level of access to the forest, the benefits provided to humans, and the different types of humans (Newton *et al*., 2022). Interaction between humans and forests has existed for a long time. Some people fulfill their living needs and maintain their existence through utilizing forest resources (Helida, 2021). Some of its forms are land use, plants and wildlife (Hastari dan Yulianti, 2018). People use it for traditional medicine (Dina *et al*., 2020), food source, mystical, ritual, artistic value (Rusmiati *et al.*, 2018; Supiandi *et al*., 2021.), economic needs, and hobbies (Iswandaru *et al.,* 2022). Humans have different perspectives and behavior towards the condition and use of forests in their environment (Wijayanti *et al*., 2016). The perspective of the community around the forest is built on traditions or habits that are seen and carried out every day (Garsetiasih, 2015). Local communities' negative or positive attitudes towards forests and forest management will have an impact on their conservation contributions and participation in forest governance (Lucungu *et al*., 2022).

Communities have a reference for understanding how to interact with nature and the environment through perspectives, local knowledge, beliefs and land management techniques (Darmawan *et al.,* 2024). Community knowledge and perspectives regarding the existence of forests and the role of biodiversity in ecosystems are obtained from daily experiences (Asri dan Yanuwiadi, 2015). Community knowledge and understanding of forest conditions is an important factor that influences community views regarding forest conservation efforts (Febryano *et al.,* 2015; Permata *et al*., 2021). However, forest fragmentation, encroachment and over-exploitation encourage increased interaction between humans and their environment which often leads to conflict (Martin dan Almas, 2022).

The rise of deforestation around forest areas is an inhibiting factor in preserving forests and biodiversity. This happens because most forest areas are directly adjacent to community settlements. Community perspectives on forest conservation are developed from the experiences, imitation and observations of local communities (Mavhura dan Mushure, 2019). Local communities are at the forefront of solving deforestation problems by involve them in forest management programs (Kaskoyo *et al*., 2017). Therefore, the relationship between humans and forests can help decision makers develop explicit conservation and sustainable development policy indicators to determine priority regional targets (Newton *et al.,* 2020). The aim of this study was to analyze community perspectives on forest conditions in KTH Talang Ponijan and Sidodadi I.

METHOD

This research was conducted in October-December 2024 in the Batutegi Forest Management Unit (KPH) area managed by KTH Talang Ponijan, Sirna Galih Village, Ulu Belu District and KTH Sidodadi I Sinar Jawa Village, Air Naningan District, Tanggamus Regency, Lampung Province. The research location was chosen because it is the KPH Batutegi work area which is geographically close but has different land cover. The method used is a qualitative approach. Data were obtained through in-depth interviews, participant observation, and documentation studies. Key informants were selected purposively, namely the management of the farmer groups, community leaders, and coffee farmers. The data obtained from in-depth interviews were then processed by making data transcripts, coding, data categorization, temporary conclusions, triangulation, and final conclusions. The data were analyzed using qualitative descriptive so that the results obtained describe the condition of the forest in KTH Talang Ponijan and Sidodadi I, Tanggamus Regency, Lampung Province.

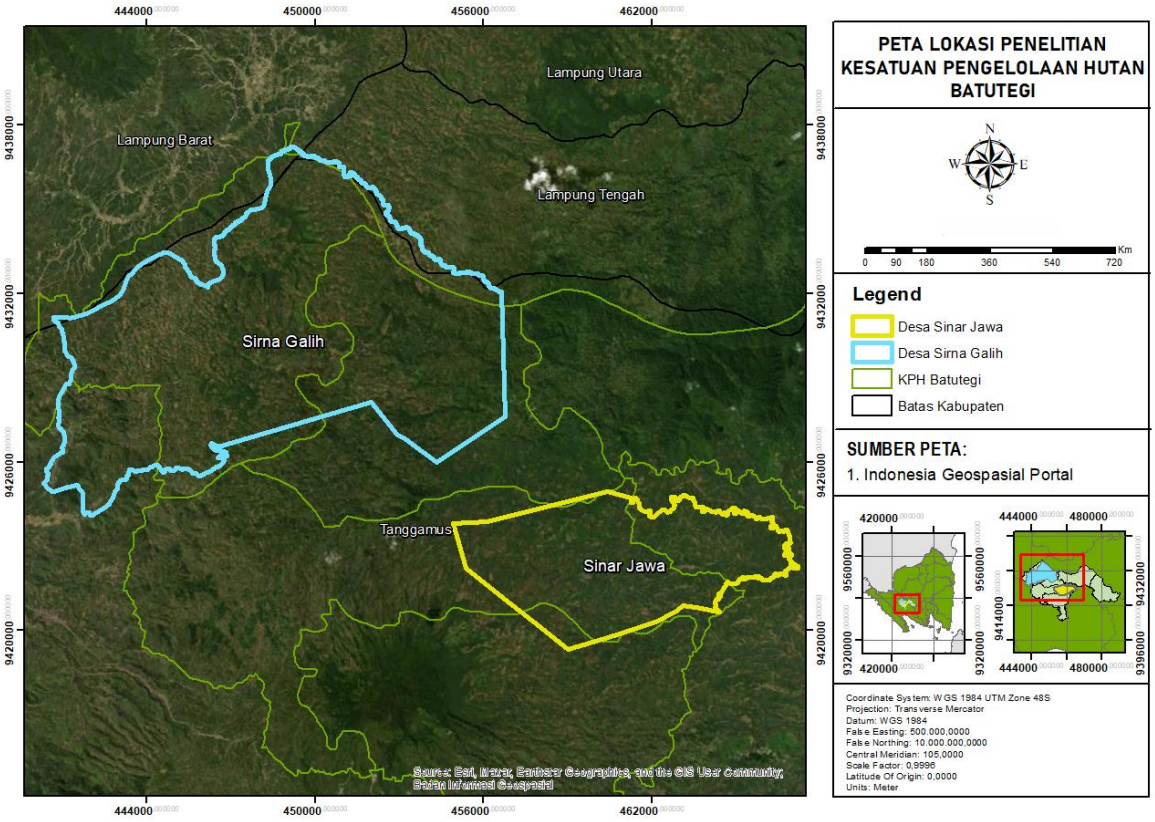

Figure 1. *Research Location Map*

RESULTS AND DISCUSSION

A. Forest Conditions in KTH Talang Ponijan

The Talang Ponijan Forest Farmer Group (KTH) is located in Sirna Galih Village, Ulu Belu District, Tanggamus Regency. Most of the community are members of a farmer group, namely Gapoktan Wana Jaya. Gapoktan Wana Jaya manages a HKm work area of 1507 hectares in part of the Ulu Semong Resort Protected Forest Area Register 39 North Kota Agung and has a total of 801 members divided into 13 forest farmer groups (KTH). The legal basis for the farmer groups that are members of this gapoktan is in the form of the Surat Keputusan Menteri Kehutanan Republik

Indonesia No. SK.82/Menhut-II/2014 concerning the Determination of Community Forest Work Areas in Protected Forest Areas in Tanggamus Regency, Lampung Province and Surat Keputusan Bupati Tanggamus No. B.471/34/II/2014 concerning IUPHKm in the name of Gapoktan Wana Jaya, Ulu Belu District, Tanggamus Regency. In the decree, IUPHKm holders have rights and obligations that must be complied with (Table 1).

Table 1. *Rights and obligations of IUPHKm holders*

Rights	Obligation
Receive facilities in the form of strengthening group institutions.	Conduct group work area boundaries.
Carry out environmental service utilization activities.	Arrange a work plan.
Carry out area use activities.	Carry out planting, maintenance and security.
Carry out activities to collect non-timber forest products (NTFPs).	Not logging in forest areas
	Pay permit fees and forest resource provisions for non-timber forest products and environmental services according to provisions.
	Submit reports on HKm utilization activities to the permit provider.

Based on the SK Bupati Tanggamus No. B.471/34/II/2014, IUPHKm holders who do not fulfill their obligations will be subject to sanctions in accordance with applicable regulations. IUPHKm is deleted if (1) the permit period has expired, (2) the permit is revoked as a sanction imposed on the permit holder, (3) the permit is handed back by the permit holder with a written statement to the permit giver before the permit period expires, (4) before permission is removed, first audited by the permission giver. The Talang Ponijan community, which is part of Gapoktan Wana Jaya, was given a business permit to utilize HKm for 35 years after the decision to manage the forest area in the area was made.

Most of the Talang Ponijan community utilizes HKm land to fulfill their daily needs. Community activities in managing land are influenced by their perspective and behavior towards forest conditions. The community's view of the forest is influenced by their experience in land management. The Talang Ponijan community has had quite a long interaction with the forest around them. The use of HKm land in the forest area is increasingly facilitated by the entry of electricity into their area (Figure 2). With access to electricity, the community should have a greater opportunity to develop various economic activities that are more efficient and productive. However, the presence of electricity also brings new challenges in the management of HKm land. Easy access to energy can encourage more intensive opening of new land, which has the potential to disrupt the balance of the forest ecosystem if not managed properly.

Figure 2. *Existence of electricity access in Talang Ponijan*

The community claims to have implemented sustainable agricultural practices while still prioritizing environmental sustainability aspects. However, this has not been fully realized. In its implementation, there is still a discrepancy between community statements and factual conditions in the field (Table 2).

Table 2. *Gap between statements and field facts in KTH Talang Ponijan*

Statement	Fact
Community doesn't carry out illegal logging in forest areas.	Illegal logging practices are still occurring in the area. The presence of felled trees is an indication that illegal practices that are detrimental to the forest are still ongoing. Tree cutting is deliberately done to stop the growth of trees in a standing position.
Farmers still lack creativity in managing land in the hills.	The monoculture coffee system in the hills has left the hilltops bare and vulnerable to soil erosion and landslides. This practice indicates that this farming system is unsustainable and can damage the environment in the long term.
Communities are required to plant tall canopy trees such as kayu afrika (*Maesopsis eminii*) every two years to maintain forest sustainability.	Large trees are not widely seen in the area, especially in coffee monoculture. Although the community claims to be obliged to plant tall canopy trees such as African wood every two years, the reality on the ground shows that there are only a few large trees that may have been planted long ago. This raises questions about the consistency and seriousness in implementing their commitment to reforestation and forest conservation.
Opening of new cultivated land no longer occurs.	Although the HKm program has been implemented, the practice of clearing new land is still ongoing. The incident was located in a protected forest. The community also admitted that they had purchased managed land with a compensation system to use as a coffee plantation.

Communities implement agroforestry systems to increase income.	The agroforestry system with intercropping techniques has been applied to some of their cultivated land. However, tall canopy trees and MPTs have not been widely found. According to farmers, planting MPTs is rarely successful because it is not suitable for the environmental conditions of the area.

The institutional structure of the Gapoktan Wana Jaya group consists of the head of the gapoktan, secretary, treasurer, and business sections in the management of HKm. The preparation of work plans, monitoring, and evaluation of HKm management is carried out in each KTH. However, it is not done regularly because there is no monitoring established in writing. In accordance with SK Bupati Tanggamus No. B.471/34/II/2014, the Wana Jaya Farmer Group (Gapoktan) has the obligation to: "submit reports on the utilization activities of HKm to the permit issuer." However, the reporting of HKm utilization activities to the permit issuer has not yet been fully realized. Gapoktan Wana Jaya has not yet been registered in the official GOKUPS system. GOKUPS is an electronic information system owned by the Ministry of Forestry to monitor the development and achievements of programs based on the annual work plans prepared by permit holders (Iskar *et al*., 2024). Information related to forest management activities carried out by Gapoktan Wana Jaya is not officially documented in the system, making monitoring and evaluation of forest land utilization less effective. This can lead to gaps in the implementation of the HKm program and create difficulties in ensuring sustainability and compliance with the established regulations. Gapoktan Wana Jaya needs to immediately register its business group in the GOKUPS system and update the data periodically. Thus, activity reporting can be conducted more transparently and accurately, also allowing permit issuers to carry out better supervision and evaluation. In addition, this data integration can also help in identifying problems and formulating more precise solutions in the management of community forests.

The community's knowledge of government policies regarding the prohibition of logging in protected forest areas supports forest management. Based on the SK Bupati Tanggamus No. B.471/34/II/2014 regarding IUPHKm, Gapoktan Wana Jaya has the obligation to "not cut down trees within the forest area." This obligation not only helps improve the environment but also provides natural habitats for various species of wildlife. By planting trees that serve as forest protectors, the community plays an active role in creating a more balanced ecosystem. Based on the results of interviews with the community, logging is no longer being carried out. However, the reality on the ground shows a different condition. There are still traces of destructive activities, such as trees that have been felled in the KTH Talang Ponijan area (Figure 3). The tree cuts are an indication that there are still efforts to log in the forest area to reduce the dominant trees. This fact shows that there is a discrepancy between the statements of the community and the actual practices occurring on the ground. Although there are rules and commitments to stop illegal logging, the lack of supervision and strict law enforcement allows this practice to continue. This condition can pose a serious threat to the preservation of forests and their ecosystems.

Figure 3. *Tree pruning in KTH Talang Ponijan*

Most of the HKm land they manage has been converted into coffee plantation land. Coffee-based land management has become the primary choice because it is considered to support the local economy and create job opportunities. Sloped land such as hillsides has also been converted into monoculture coffee (Figure 4). This causes the tops of the hills to become bald due to soil erosion from surface erosion. Texture, structure, and land management practices also influence erosion vulnerability (Lumbantoruan *et al*., 2021). The conversion of land into an open coffee planting system (clean weeded) with monoculture is the main factor causing the reduction of water availability in the downstream part of the river and the loss of the protective role and function of the river basin (Sainudin *et al*., 2016). According to farmers, one of the causes of the erosion is the lack of creativity in land management. To address this issue, they implemented an agroforestry system. The agroforestry developed by the farmers involves combining coffee and pepper, where the dominant stand is coffee (*Coffea* sp.) and lada (*Piper nigrum*) is trained on gamal (*Gliricidia sepium*) as a trellis. The rows of plants are arranged such that every two rows of coffee are interspersed with one row of pepper. In addition, an agroforestry type has also been developed with various plants including the dominant coffee (*Coffea* sp.), lada (*Piper nigrum*), gamal (*Gliricidia sepium*), durian (*Durio zibethinus*), alpukat (*Persea americana*), pala (*Myristica fragrans*), kemiri (*Aleurites moluccana*), and pisang (*Musa paradisiaca*). Based on the field conditions, most of the land is only dominated by coffee. Not many forest trees have been planted yet. According to the farmers, they do not make much use of fruit trees or forest trees because they are considered unsuitable for the land conditions there and can reduce coffee production. Coffee cultivation on slopes can increase the risk of landslides due to land-use changes (Jamalludin *et al*., 2021). The lack of diversity in tall canopy trees raises concerns about landslides. However, the implementation of agroforestry systems, if managed well, can increase land productivity and improve the environmental ecosystem (Prasmatiwi *et al*., 2023). Economic pressure can drive farmers to prioritize short-term profits over long-term sustainability. This causes them to choose practices that are economically profitable but not sustainable.

Figure 4. *Coffee plantation on sloped land*

The community has knowledge and understanding regarding the boundaries of managed areas within the HKm region. They have come to know the term "persil" to describe the boundaries of their management rights. The land boundaries between farmer members use pinang (*Areca catechu*) and andong (*Cordyline fruticosa*), while the land boundaries between KTH are determined by natural features such as river flows and also pinang (*Areca catechu*). This is in accordance with the SK Bupati Tanggamus No. B.471/34/II/2014 regarding the IUPHKm of Gapoktan Wana Jaya, which states "to organize the boundaries of the group's work area." In line with (Larasati *et al*., 2021) that the presence of clear territorial boundaries facilitates farmers in claiming the areas that are their responsibility. Therefore, it can minimize the occurrence of conflicts among farmer members. The utilization of environmental services is not developed in this area because, according to the community, it is less suitable for the natural conditions and its less strategic location. Meanwhile, the utilization of Non-Timber Forest Products (NTFP) has already been widely practiced by the community, such as candlenut, pepper, bananas, and coffee, which can certainly increase their income. This opens up opportunities to start new ventures, considering that from an economic standpoint, it can improve their welfare.

The opening of new cultivation land needs to be taken seriously after the issuance of the IUPHKm. Field observations revealed the opening of new land located within the protected forest (Figure 5). The community admits to having purchased managed land on the basis of compensation to be converted into coffee plantations. The practice of clearing new land for coffee plantations reflects economic pressure and a high demand for productive land. Although there are efforts to compensate for the opened land, this action still cannot replace the ecological functions of the lost protected forest. The clearing of this new land not only destroys the original vegetation that serves as an ecosystem buffer but also disrupts the habitats of wildlife living in the area. In the long term, the economic sustainability of the community can also be threatened if the land used for coffee plantations experiences degradation. In line with (Rahmandani *et al.,* 2021), the opening of forest land is often feared to cause changes in the nutrient cycle. IUPHKm is granted with a predetermined area limit, but no new cultivation land can be added for farmer groups (Novasari *et al*., 2020). This shows that despite strict regulations, the practice of opening new land still occurs, even in areas that should be protected. This condition indicates the need for stricter supervision and more rigorous law enforcement to prevent further forest damage.

Figure 5. *Opening of new cultivated land*

Based on SK Bupati Tanggamus No. B.471/34/II/2014 regarding IUPHKm, Gapoktan Wana Jaya has the obligation to: "carry out planting, maintenance, and protection." According to the community regarding the condition before the existence of HKm, trees that are detrimental to farmers, such as gmelina (*Gmelina* spp.) and sonokeling (*Dalbergia latifolia*), were not planted because if they became too dense, they would overshadow the coffee. Therefore, they plant kayu afrika (*Maesopsis eminii*) to help balance the environment. This step is considered to maintain ecosystem balance and prevent soil erosion, as well as provide additional benefits such as shade and habitat for wildlife. However, the reality is different. Only a few kayu afrika (*Maesopsis eminii)* can be seen around the forest area, which may have existed before the establishment of HKm (Figure 6). The planting of these tall canopy trees is not done consistently. This indicates that the commitment to the obligation of planting trees has not been fulfilled properly. This condition raises concerns about environmental sustainability with the ongoing risks of soil erosion and declining fertility. In line with the research (Sainudin *et al.,* 2016) regarding the development of HKm conditions in Lampung Province, it is noted that there are still management issues. One of the issues that occur is that the HKm land cover does not meet the established requirement of at least 400 tree trunks/ha. The forest ecosystem will remain vulnerable to damage and loss of biodiversity without more serious and systematic efforts in planting and maintaining trees.

The biodiversity of both plants and wildlife in forest areas can serve as a good indicator of ecosystem health. Based on the results of the vegetation analysis, the utilization of forest areas in KTH Talang Ponijan is divided into three land cover types: natural forest, monoculture, and agroforestry. In the agroforestry, coffee is dominant with filler plants including gamal (*Gliricidia sepium*), lada (*Piper nigrum*), gmelina (*Gmelina* sp.), alpukat (*Persea americana*), kemiri (*Aleurites moluccana*), nangka (*Artocarpus heterophyllus*), and kayu afrika (*Maesopsis eminii*). In the natural forest, it consists of large trees, undergrowth, and shrubs. The types of trees found are cemara (*Casuarina equisetifolia*), pasang (*Quercus* spp.), karet (*Hevea brasiliensis*), jabon merah (*Anthocephalus macrophyllus*), medang (*Litsea* sp.), suren (*Toona sureni*), and bendo *(Artocarpus elasticus*). In monoculture, it is dominated by coffee (*Coffea* spp.). Monoculture coffee fields are not much planted with filler plants, raising concerns about a decline in soil quality. Meanwhile, the presence of small mammals was also observed using traps set up in three forest cover areas in KTH Talang Ponijan. The results showed that only three species of mice were

found. According to the farmers, the presence of small mammals, especially rats, is rarely seen in the gardens, but squirrel species are still often observed. Other observed wildlife includes the siamang (*Symphalangus syndactylus*), wild boar (*Sus scrofa*), snakes, and birds, but their numbers are not significant. This is suspected to be caused by the decrease in food sources in the area. The decreased availability of food sources is suspected to be due to land conversion and anthropogenic activities (Annisa *et al*., 2023). The declining population of wildlife can also affect the entire food chain, where higher-level predators in the food chain may struggle to find sufficient prey. These conditions can reduce wildlife populations. Environmental changes indicate significant alterations in the ecosystem that can negatively impact biodiversity. The loss of certain species in the food chain can cause an imbalance in the ecosystem, and other species that depend on them are also affected.

Figure 6. *Kayu afrika* (*Maesopsis eminii*)

B. Forest Condition in KTH Sidodadi I

KTH Sidodadi I is located in Sinar Jawa Village, Air Naningan District, Tanggamus Regency. KTH Sidodadi I is part of a farmer group association called Gapoktan Sidodadi. Gapoktan Sidodadi manages an IUPHKm area of 2,306 hectares located in the Banjaran Resort Register 32 Bukit Rindingan Protected Forest Area. Gapoktan Sidodadi has 11 KTH with a total of 391 farmer households. The legal basis for the farmer groups that are part of this gapoktan is Surat Keputusan Menteri Kehutanan RI No. SK.682/Menhut-II/2013 concerning the Establishment of Community Forest Work Areas in Protected Forest Areas in Tanggamus Regency, Lampung Province, and SK Bupati Tanggamus No. B.464/34/II/2014 concerning IUPHKm in the name of Gapoktan Sidodadi, Air Naningan District, Tanggamus Regency. In the decree, the holder of the IUPHKm has rights and obligations that must be adhered to (Table 3).

Table 3. *Rights and obligations of IUPHKm holders*

Rights	Obligation
Receive facilities in the form of strengthening group institutions.	Conduct group work area boundaries.
Carry out environmental service utilization activities.	Arrange a work plan.
Carry out area use activities.	Carry out planting, maintenance and security.
Carry out activities to collect non-timber forest products (NTFPs).	Not logging in forest areas
	Pay permit fees and forest resource provisions for non-timber forest products and environmental services according to provisions.
	Submit reports on HKm utilization activities to the permit provider.

Based on SK Bupati Tanggamus B.464/34/II/2014, IUPHKm holders who do not fulfill their obligations will be subject to sanctions in accordance with applicable regulations. IUPHKm is revoked if (1) the permit period has expired, (2) the permit is revoked as a sanction imposed on the permit holder, (3) the permit is returned by the permit holder with a written statement to the permit issuer before the permit period expires, (4) before the permit is revoked, it is first audited by the permit issuer. The KTH Sidodadi I community was granted a 35-year business permit for the utilization of HKm since the decision to manage the forest area in that region was established.

The land cover conditions in the area include mixed dryland agriculture, shrubs, and open land at an altitude of 500-1200 mdpl. Farmers manage the land by planting economically valuable crops that also serve as a balance for the forest ecosystem. The condition of the forest at this location is still dense with trees, dominated by mahoni (*Swietenia mahagoni*) (Figure 7). The condition of the forest in KTH Sidodadi I is inseparable from the historical series of forest land clearing. The chronology of the land clearing history is as follows:

a. Before 1990

Before the year 1990, the uninhabited forest area was deserted. The local community had free access to the forest without any supervision or control from the government. In that freedom, they often cut down large trees (illegal logging) and burn bushes to clear new land.

b. 1999-2002

During the period from 1999 to 2002, this area experienced severe forest damage due to rampant illegal logging activities. Illegal logging was carried out massively and uncontrollably, causing the loss of many large trees that play a crucial role in maintaining the balance of the forest ecosystem.

c. 2002-2003

During the period from 2002 to 2003, illegal logging activities began to show a decline. This is the result of various firm actions taken by the government to stop illegal logging activities that damage the forest ecosystem.

d. 2005-2006

During the period between 2005 and 2006, the government planted mahogany trees (*Swietenia mahagoni*). This step is part of the reforestation and restoration efforts for the forest that had previously been damaged due to illegal logging activities. This greening program also involves the active participation of the local community.

e. 2008-2009

During the period 2008-2009, the application and implementation of Hutan Kemasyarakatan (HKm) was carried out. Then, in 2014, the issuance of the IUPHKm to the Sidodadi Farmers

Group was made to manage the forest area in KTH Sidodadi I to sustainably manage the forest by applying conservation principles.

Figure 7. *Forest condition in KTH Sidodadi I*

Gapoktan Sidodadi has a management system consisting of the head of Gapoktan, secretary, treasurer, head of each KTH, and business sections in community forest management. In addition, to strengthen its institution, Gapoktan Sidodadi collaborates with various parties and forms a social forestry business group (KUPS). Some of the collaboration partners include the Kota Agung Utara (Korut) Consortium, Himbara, private companies through CSR programs, as well as various government agencies. This is in accordance with SK Bupati Tanggamus B.464/34/II/2014 on IUPHKm Gapoktan Sidodadi: “receive facilities in the form of group institutional strengthening”. This collaboration provides various benefits such as technical assistance, funding, provision of seedlings, and increasing the capacity of communities involved in forest management. Most of the communities have livelihoods as farmers. Gapoktan Sidodadi has a structured management plan and annual work plan that helps to maintain regularity and effectiveness of land management. This plan covers various aspects of forest management, ranging from planting, crop maintenance, forest conservation and protection activities, NTFP and environmental service utilization plans, to business development plans. However, in practice there is still a gap between the community's views and the conditions on the ground (Table 4).

Table 4. *Gap between statements and field facts in KTH Sidodadi*

Statement	Fact
The community preserves wildlife conservation.	The practice of illegal wildlife hunting, including birds, is still observed in the forest area. The location is suspected to be a route for illegal hunting practices. The hunters use rifles to capture wild animals.
Wildlife are not disturbed or chased away.	According to the farmers' confession, when the wildlife is deemed disruptive, they do not hesitate to shoot with a rifle.
The community does not engage in logging and is aware of the prohibition.	The presence of trees that have been ring-barked indicates the practice of tree destruction in the area.

	Tree stumps are seen around the monoculture coffee, indicating that the land is suspected to be converted into a coffee plantation.
The community is required to plant tall canopy trees.	The forest stand in that area is no longer natural, dominated by mahoni (*Swietenia mahagoni*). Most of the community plants mahoni as shade for coffee.

KTH Sidodadi area has a long history of land clearing. The unnatural forest stands in the KTH Sidodadi I area were caused by massive illegal logging at that time. This event has changed the structure of the forest. These illegal logging activities not only damage the sustainability of the forest ecosystem but also reduce biodiversity and cause environmental degradation. In an effort to restore forest conditions, the government has taken strategic steps involving the community to plant mahoni (*Swietenia mahagoni*). According to most farmers, the presence of mahogany trees is also utilized as shade for coffee. In addition, the dominant types of vegetation include candlenut (*Aleurites moluccana*), coffee (*Coffea* sp.), jengkol (*Archidendron pauciflorum*), durian *(Durio zibethinus*), pala (*Myristica fragrans*), karet (*Hevea brasiliensis*), and pisang (*Musa paradisiaca*). The implementation of the agroforestry system was chosen not only to improve the welfare of the community but also to maintain the balance of the ecosystem. This is in accordance with SK Bupati Tanggamus B.464/34/II/2014 regarding the rights of HKm permit holders: "conducting activities for area utilization and the collection of non-timber forest products (HHBK)." However, the presence of trees that have been lopped indicates that there are still practices of tree cutting in the KTH Sidodadi I area.

Trees pruning are seen around the monoculture coffee, suggesting that the land will be converted into a coffee plantation (Figure 8). This practice raises serious concerns regarding forest conservation and ecosystem sustainability. This activity contradicts the obligations of IUPHKm holders, namely: "not to conduct logging within forest areas." Illegal logging not only threatens the existence of large trees that are important for environmental balance but also destroys wildlife habitats. The absence of large trees can accelerate soil erosion, reduce soil fertility, and lower water quality. Furthermore, the conversion of forest land into monoculture coffee plantations reduces biodiversity, as the forests that previously served as habitats for various species of flora and fauna are replaced by homogeneous coffee plants. The conversion of land into monoculture coffee plantations has led to a decrease in water availability in the downstream areas of the river and the loss of the protective roles and functions of the river basin (Sainudin *et al*., 2016). In the long term, such practices harm the environment and local communities who depend on the sustainability of forest ecosystems for their livelihoods. Therefore, more serious and systematic efforts are needed to ensure that land management practices are carried out in a more sustainable manner, including stricter law enforcement against illegal logging and the implementation of agroforestry systems that maintain the balance between land productivity and the preservation of biodiversity, both wildlife and vegetation, in forest areas.

Figure 8. *Trees pruning in KTH Sidodadi I*

Based on the results of the vegetation analysis in three land cover types in KTH Sidodadi I, namely in natural forests, agroforestry, and monoculture coffee. In the natural forest, it consists of broadleaf mahoni (*Swietenia mahagoni*), gmelina (*Gmelina* sp.), jabon merah (*Anthocephalus macrophyllus*), kopi (*Coffea* sp.), and karet (*Hevea brasiliensis*). In agroforestry, it consists of coffee plants with shade trees such as mahoni (*Swietenia macrophylla*), gmelina (*Gmelina* sp.), durian (*Durio zibethinus*), meranti (*Shorea* sp.), gamal (*Gliricidia sepium*), and kakao (T*heobroma cacao*). Meanwhile, in monoculture, it is dominated by coffee with filler plants such as gamal (*Gliricidia sepium*) and lada (*Piper nigrum*). Meanwhile, the presence of small mammals was also observed using traps set up in three land cover areas in the KTH Sidodadi I forest region. However, the installation of the traps did not show any small mammals being caught. According to the farmers, the presence of small mammals, especially mice, is rarely seen in the forest or the fields. Wildlife that can still be seen in the KTH Sidodadi I forest area includes siamang (*Symphalangus syndactylus*), monyet ekor panjang (*Macaca fascicularis*), babi hutan (*Sus scrofa*), bajing (*Callosciurus notatus*), and birds, but their numbers are not many. This is likely due to the decreasing availability of food. The existing vegetation is suspected to be insufficient to provide their food source, and there is pressure from the surrounding communities.

The community considers the presence of some of these animals to be pests because they damage farmers' gardens. According to the farmers' confession, when wild animals such as monkeys, macaques, or wild boars are considered to disturb their crops. Farmers do not hesitate to shoot wild animals like monkeys with rifles if their presence severely damages their gardens. This action demonstrates that conflicts between humans and wildlife often result in losses. Using weapons as a solution to address wildlife disturbances can disrupt the balance of the ecosystem and threaten the existence of protected species. In addition, the indiscriminate use of firearms also poses safety risks to the surrounding community. The practice of illegal wildlife hunting, including birds, is still observed in the KTH Sidodadi I area, which is suspected to be a route for illegal hunting activities (Figure 9). Hunters usually use rifles to capture wildlife, which results in a decrease in the population of animals in the area. The existence of this poaching practice threatens the preservation of various species and can also disrupt the balance of the forest ecosystem. This condition highlights the need for stricter actions and tighter supervision to

address poaching. Local communities need to be empowered and educated about the importance of preserving biodiversity and the negative impacts of poaching.

Figure 9. *Illegal hunting practices*

Although there are still deviations from the applicable regulations in its implementation, KTH Sidodadi I is one of the farmer groups that still strives to prioritize environmental sustainability in its forest management. This can be seen from the condition of the forest with dense stands, even though they do not show natural stands. This is part of the community's efforts to balance the forest ecosystem due to past events. Just like KTH Talang Ponijan, the community members of KTH Sidodadi I already understand the boundaries of land management areas within the HKm region. The boundaries between KTH areas use pinang (*Areca catechu*) and andong (*Cordyline fruticosa*), while the boundaries between KTH areas are determined by natural features such as river flows and also pinang (*Areca catechu*). This is in accordance with SK Bupati Tanggamus B.464/34/II/2014 regarding the obligation of IUPHKm Gapoktan Sidodadi, which states "to establish clear boundaries for the group's work area". Clear boundary delineation is very important to avoid conflicts between farmer groups.

The utilization of non-timber forest products has been carried out optimally and has produced high-value economic products such as candlenut, coffee, nutmeg, jengkol, and bananas. The submission of the HKm utilization activity report has been carried out by Gapoktan Sidodadi in accordance with the obligation of the IUPHKm holder: "to submit the HKm utilization activity report to the permit issuer." This is evident in the official GOKUPS system of the Ministry of Forestry, which displays updated data related to HHBK products generated from the utilization of HKm. With the significant potential of non-timber forest products produced, the processing is still done simply in the form of raw goods for sale in the market. Marketing is still directed towards middlemen at the village level, because farmers want to sell their commodities quickly, so there has been no further processing. Members of the Sidodadi Farmers' Group hope for training in processing harvested commodities into semi-finished goods or ready-to-use products for consumers. The utilization of environmental services from the management of HKm land can also be developed. The potential for tourism services in the form of waterfalls and hot spring baths located in the Sidodadi farmer group area has been identified. Based on interviews with the

gapoktan administrators, the community wants to develop the potential of these environmental services. Meanwhile, according to the community, the payment of fees for permits and forest resource provision for non-timber forest products and environmental services has been routinely carried out. This is an obligation that must be fulfilled by the community or parties utilizing the resources in accordance with the applicable regulations. This is in accordance with the rights of IUPHKm holders, namely: "conducting environmental service utilization activities" and the obligation "to pay fees for permits and forest resource provisions for non-timber forest products and environmental services as per regulations." However, this potential has not been fully developed due to several factors, including: (1) The group's capital is not yet strong enough to build tourist attractions; (2) The human resource capacity is still minimal in terms of developing sustainable tourist sites; (3) The establishment of KUPS (Kelompok Usaha Pehutanan Sosial) that operate in the field of ecotourism management has not yet occurred. Therefore, collaboration among parties such as the government, NGOs, communities, and research institutions is very important to create effective strategies for wise forest management, resulting in sustainable forests and improved community welfare. Thus, the main objectives of HKm management for community welfare and forest sustainability can be achieved.

CONCLUSIONS

The condition of the forest in the KTH Talang Ponijan and Sidodadi I areas differs both physically and in the community's perspective on the management of HKm. The community in KTH Talang Ponijan tends to manage HKm land with a focus on the economic functions of the forest. Some members of the community are still involved in logging, the application of unsustainable monoculture, and clearing new land in protected forest areas. Meanwhile, the KTH Sidodadi I community is more focused on utilizing HKm land, accompanied by conservation and forest protection programs. However, there are still behaviors that are contrary to the applicable regulations. Indications of illegal practices such as logging and poaching still occur. The government is expected to facilitate regular training and mentoring programs related to wise forest management. Some recommendations that can be taken to improve more sustainable forest management practices include (1) increasing supervision and stricter law enforcement against law violators; (2) participatory management to address forest disturbances; (3) soil and water conservation techniques; (4) training in processing harvested commodities into semi-finished goods or ready-to-use products for consumers; (5) collaboration among parties and support for the development of nature-based tourism.

ACKNOWLEDGEMENT

Thanks to PT Nestlé Indonesia for providing funding for this research. This research is in collaboration with the Institute for Research and Community Service of the University of Lampung 2024 with the topic “Aspects of Land Monitoring and Biodiversity in The Land Rehabilitation Program for Catchment Area in KPH Batutegi” (in supporting Reduce Carbon Footprint Program of PT Nestlé Indonesia).

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