Cultural Values and Behaviors of the Dayak and Malay Communities in the Social Forestry Program in Kapuas Hulu, West Kalimantan

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Abstract
This article explores the cultural values and behaviors of the Dayak and Malay communities in supporting the Social Forestry Program in the Northern Kapuas Hulu Forest Management Unit (FMU), Kapuas Hulu District, West Kalimantan. The research aims to understand the cultural values and behaviors of the Dayak and Malay communities that can significantly contribute to the success of the social forestry program. The research method involves literature review and in-depth interviews with traditional community figures and experts in community engagement. The study was conducted under the Foreign Grant Project from the Asian Development Bank (ADB) to the Ministry of Environment and Forestry. Data for the research was collected from 2021 to 2022. The main findings of this research include the necessity of high respect for the Dayak community's ancestors and an understanding of the key role of traditional figures in determining the program's success. The results of the social forestry program applications in three villages in Northern Kapuas Hulu FMU, including three schemes: Customary Forest, Village Forest, and Conservation Partnership, were approved covering a total of 16,031 Ha and benefiting 729 indigenous family households, including 228 women. The conclusion of this research highlights the importance of aligning social forestry schemes with community preferences and gaining full support from the Chief of the Adat. Intensive consultation processes are required to obtain community support, while a deep understanding of local culture and interaction with forest resources is crucial for success.
Keywords: indigenous peoples, social forestry, local culture, dayak, malay

1. Introduction

1.1 Background

Social forestry has become a crucial solution in the efforts to preserve forests and ensure environmental sustainability, particularly in Kapuas Hulu District, West Kalimantan. In this context, the Dayak community, as holders of rich cultural values and traditions, plays a significant role in supporting and determining the success of the Social Forestry Program in the Northern Kapuas Hulu Forest Management Unit (FMU).

This research is conducted with the primary aim of exploring and understanding the cultural values and behaviors of the Dayak and Malay communities that are the main drivers of the success of the social forestry program. In this context, the research focuses on the Forest Investment Program-1 (FIP-1) funded by the Asian Development Bank (ADB) received by the Ministry of Environment and Forestry (MOEF) as a concrete effort to implement social forestry in the region.

The research method involves in-depth literature review and intensive interviews with traditional community figures and experts in community engagement. Data collection was carried out from 2021 to 2022, with a focus on three villages in Northern Kapuas Hulu FMU. The three proposed social forestry schemes, namely Customary Forest, Village Forest, and Conservation Partnership, are the main focus of this research. The main findings highlight the importance of high respect for the ancestral values of the Dayak and Malay communities. A profound understanding of the key role of traditional figures is crucial for program success, while the approval of social forestry scheme applications covers a total area of 16,031 Ha, providing tangible benefits to 729 indigenous family households, including 228 women.

Thus, a deep understanding of the cultural values and behaviors of the Dayak community is key to formulating and implementing a sustainable and positively impactful social forestry program for the environment and the local community's life. This research provides a strong foundation for understanding the dynamics of the relationship between local culture, community participation, and the sustainability of social forestry programs in Kapuas Hulu, West Kalimantan.

1.2 Research Objectives

This research is conducted to address the following questions:

1. What valuable local knowledge and cultural values exist in the research village communities that can support sustainable forest management practices and provide economic benefits to the indigenous community?

2. How can Social Forestry, as a national program, enhance the role of indigenous communities with their culture and local knowledge to improve the institutional capacity of indigenous communities through legal support and granting access for communities to manage forest land legally for an extended period?
3. With the implementation of the social forestry program, can traditional community behavior in forest utilization be maintained if local knowledge aligns with sustainable forest management practices, or can it alter community behavior to align with sustainable forest management practices according to formal regulations in Indonesia?

2. Theory Foundation

2.1 Social Forestry

Indonesia started to implement a Social Forestry Program in 2007 with the main objective is to involve local community in the forest management. Social Forestry program provide legal access for local community and indigenous people groups to manage forest area. Under the respective laws and regulation, Social Forestry has become key program to strengthen community groups in forest management and in turn, improve their livelihood. In the Indonesian Government Regulation No. 23 of 2021 on Forest Management (Article 1) and Ministerial Regulation No. 9 of 2021, as a derivative of the aforementioned government regulation, it is stated that Social Forestry is a sustainable forest management system implemented in state forest areas or Customary Forest/Adat Forest managed by Local Communities or Indigenous Communities as the main actors to improve their welfare, environmental balance, and socio-cultural dynamics in the form of Village Forest, Community Forest, Plantation Forest, Customary Forest, and Forestry Partnerships. The definitions of each Social Forestry scheme are presented as follows:

1. Village Forest (Hutan Desa or HD) is an area of forest that has not been granted a permit, managed by a village, and utilized for the village's welfare. The Management Approval for Village Forest is legal access granted by the Minister to the Village Institution to manage and/or utilize the forest in Protected Forest and/or Production Forest areas.

2. Community Forest (Hutan Kemasyarakatan or HKm) is a forest area primarily used to empower the community. The Management Approval for Community Forest is legal access granted by the Minister to individuals, farmer groups, associations of forest farmer groups, or local community cooperatives to manage and/or utilize the forest in Protected Forest and/or Production Forest areas.

3. People's Plantation Forest (Hutan Tanaman Rakyat or HTR) is a plantation forest in the Production Forest developed by community groups to enhance the potential and quality of the Production Forest by applying silviculture systems to ensure the sustainability of forest resources. The Management Approval for People's Plantation Forest is legal access granted by the Minister to forest farmer groups, associations of forest farmer groups, forest farmer cooperatives, forestry professionals, or individuals to utilize forest products such as wood and its by-products in Production Forest areas.

4. Forestry Partnership is a partnership approval given to Forest Utilization Permit holders or holders of permits for the use of forest areas with partners/the community to utilize the forest in Protected Forest or Production Forest areas. Conservation Partnership is a collaboration between the head of the conservation area management unit or business permit holders in conservation areas with local community groups.
5. Customary Forest Area is located in state forest areas that have not obtained legal permits, but the area has been designated by the regent/mayor. Customary Area is ancestral land consisting of land, water, and/or waters along with the natural resources on it with specific boundaries, owned, utilized, and preserved through generations for sustainable fulfillment of the needs of the community acquired through inheritance from their ancestors or claims of ownership in the form of customary land or Customary Forest.

2.2 Community Empowerment

Conceptually, community empowerment can be defined as an idea in economic development that encompasses social values. This concept reflects a new approach to the development, focusing on humans, using participatory approaches, empowering, and sustainable. Creative economy becomes a crucial element in empowering the community's economy because it has been proven that creative economic empowerment programs can improve the community's economic conditions (Habib, 2021). Robert Chambers (as cited by Sutarto, 2018) states that community empowerment is a concept of economic development that includes social values. This paradigm represents a new approach that places humans as central actors, involves participation, empowerment, and sustainability. This concept is broader than just meeting basic needs or providing safety nets to prevent further poverty. Empowerment means giving or enhancing power to disadvantaged or less fortunate communities. According to Jim Ife as quoted by Sutarto (2018), empowerment aims to enhance the strength of disadvantaged groups. Empowerment is an effort to enhance the dignity and position of the community; in other words, empowerment means providing abilities and independence to the community. In this context, efforts to empower the community must be carried out with the following principles (Sutarto, 2018):

1. Create an environment or atmosphere that allows the potential of the community to develop;
2. Strengthen the potential or strengths possessed by the community by providing support for opportunities that allow the community's potential or strengths to become resources for their social life;
3. Empowerment not only involves strengthening individual members of the community but also strengthening at the collective level;
4. Increase community participation in decision-making related to empowerment, cultivation, and democratic experience; and
5. Empowerment also includes protection, ensuring equality in competition and even distribution of development.

Thus, empowering community living in and around forest area through a social forestry program is a very strategic approach (Constantino et al., 2012 and Royer, et al., 2018).

2.3 Human Ecology

Research on human ecology can be explored through various perspectives, including biology, anthropology, sociology, and even history. The historical approach in the study of human ecology is a relatively new branch. The use of a historical approach in human ecology began in the 1960s and gained popularity in the 1970s. The historical ecology approach brings several
benefits, such as serving as a tool to understand the history of human-environment interactions, providing guidance to policymakers in formulating environmental policies, and integrating ecology and nature conservation into a broader and interdisciplinary framework (Mutawally and Mahzuni, 2023).

According to Purnaweni (2022), Human Ecology is an effort to understand the mutually influential interaction between living organisms, both plants and animals, with their environment through a series of research and ecological studies. In addition, this field also develops to explore the impact of interactions between humans and their environment. The two main aspects that are the primary focus of human ecology are: (1) Research related to the forms and evolution of communities, and (2) Studies on the development of societies and their interactions with the environment as a whole. This statement confirms that the Social Forestry, a forest management scheme, that is built upon a mutual interaction between human and forest resources.

2.4 Tenurial System
Communities living in the three research villages are considered indigenous peoples (KLHK and ADB, 2022). Especially in the village of Batu Lintang, which has obtained approval for the Menoa Sungai Utik Customary Forest in 2020. Granting the status of indigenous communities also affirms the existence of customary territories, which formally legalized by the regency/city government. Indigenous people and their customary territories have a tenurial system that has been in place for generations as a cultural system agreed upon to regulate ownership/possession rights, the transfer of land rights, and what is allowed or not allowed on that customary land.

In customary law literature, or ulayat rights (Indonesian term), also known as beschikkingsrecht (Dutch term), are considered the highest rights in a customary legal society. The customary legal community can be a tribe, a group of villages, or generally a single village but is never owned by a single individual (van Vollenhoven, 1975, cited in Guntur et al., 2015). Ulayat rights include civil law elements related to joint rights to land ownership, while public law elements relate to duties and authorities in managing, regulating, and leading the use, possession, and maintenance of the land (Harsono, 1987, cited in Guntur et al., 2015).

2.5 Culture and Local Knowledge
Culture and local knowledge are local wisdom that becomes the identity of ethnic groups in Indonesia, including the Malays and Dayaks. In West Kalimantan, Malay and Dayak cultures coexist harmoniously and interact with nature. These cultures, knowledge, and local wisdom are valuable cultures. Values are something that has worth and serves as a reference in life (Aslan, 2017). Values give meaning to life and influence human behavior. According to William, values are "...what is desired, good or bad, beautiful or ugly." Meanwhile, Light, Keller & Colhoun define values as "general ideas that people share about what is good or bad, desired or not desired. Values go beyond specific situations..." The values held by an individual tend to shape their overall lifestyle" (Aslan, 2017). Among these values, local wisdom is part of the culture inherited from ancestors and is a heritage for future generations, functioning as control over community behavior. These values, considered as instruments of social control, are also regarded
as religious values that provide guidelines for human life. Values that are inconsistent with religious values are considered disrespectful by the community.

Etymologically, "wisdom" refers to a person's ability to use their intellect in facing an event, object, or situation. Meanwhile, "local" refers to events that occur in a specific area. Local wisdom is a positive human mindset related to nature and the environment, derived from traditions, religious values, and advice from ancestors that have been shaped by the local community. This heritage serves as a control tool in society, is institutionalized, and is part of the culture (Ermawi, 2009). Social forestry is in fact, built based on local knowledge of community. How they respect land and forest, how they regulate their schedule to interact with forest resource, and how they ensure that forest will still exist for their next generation, become foundation in the development of social forestry management plan (Wartiningsih, et al., 2020).

3. Method
This research adopts a case study approach (Mundir, 2013) to deeply understand the cultural values and behaviors of the Dayak and Malay communities in supporting the Social Forestry Program in the North Kapuas Hulu Forest Management Area (FMU) in West Kalimantan (MOEF and ADB, 2022). The case study approach was chosen because it allows the researcher to investigate contemporary phenomena in real-life contexts, explore in-depth qualitative information, and understand the cultural role in the community's interaction with their environment (Rahardjo, 2017).

3.1 Stages of the Case Study Method
The following stages are applied during the study:

1. Case Selection: Cases are carefully selected, focusing on three villages in North Kapuas Hulu that implement the Social Forestry Program with the schemes of Customary Forest, Village Forest, and Conservation Partnership.

2. Research Design: The research design is developed to gain a comprehensive understanding of the cultural values and behaviors of the Dayak community. It includes literature review, in-depth interviews, and participatory observation.

3. Identification and Selection of Informants: Key informants are selected from community leaders and experts involved in community engagement, possessing in-depth understanding of the cultural values and behaviors of the Dayak and Malay communities.

4. Data Collection: Data is collected through in-depth interviews, participatory observation, and analysis of documents related to the Social Forestry Program. In-depth interviews are conducted to obtain direct insights from key informants.

5. Data Analysis: Data is analyzed qualitatively, using an inductive approach to identify patterns, themes, and relationships emerging from the cultural values and behaviors of the Dayak and Malay communities.

3.2 Data Requirements
1. Qualitative Data: In-depth information about the cultural values, traditions, and behaviors of
the Dayak and Malay communities related to forests and the environment.

2. Documented Data: Documents related to the Social Forestry Program, policies, and relevant records that support the understanding of the context and implementation of the program.

3. In-depth Interviews: Obtaining direct perspectives and understanding from community leaders and experts involved in community engagement.

This research aims to enhance the accuracy of research findings by emphasizing precision, data triangulation, and continuous reflection on the researcher's subjectivity in interpreting findings (Denzin and Lincoln, 2018). Through the case study approach (Mundir, 2013), it is expected that this research will make a significant contribution to understanding the relationship between the cultural values of the Dayak and Malay communities and the success of the Social Forestry Program in Kapuas Hulu, West Kalimantan.

4. Results

4.1 Socio-Economic and Cultural Condition

4.1.1 Demographic Overview

The population in the three villages of North Kapuas Hulu Forest Management Unit (FMU), Kapuas Hulu Regency, amounts to 2,240 people, covering an area of 207,539 hectares. Tanjung Lasa Village has the largest population with 838 people, while Batu Lintang Village has the smallest population (647 people). Tanjung Lasa is the largest village in terms of area (175,915 Ha), with a significant portion falling within the Betung Kerihun Danau Sentarum National Park, Kapuas Hulu Regency (MOEF and ADB, 2022).

4.1.2 Socio-Cultural Aspects

The cultural composition of the three research villages is a mix of Malay and Dayak ethnicities. In Nanga Lauk Village, the majority are Malay, in Batu Lintang Village, the majority are Dayak Iban, and in Tanjung Lasa, there is a balanced composition of Dayak Taman, Dayak Bukat, and Malay. Each village has customary institutions, namely the village chief and the village head. These customary institutions play a crucial role in governing the lives of the villagers. An ancestral cultural tradition that persists annually is the Gawai ceremony, expressing gratitude for abundant harvests, usually spanning three days and nights (MOEF and ADB, 2022).

4.1.3 Livelihoods of the Community

The majority of the population engages in farming, rubber tapping, and livestock rearing. In Nanga Lauk, due to its swampy terrain, some work as fishermen. These occupations are often passed down from parents to children. Parents with sizable land pass it down to their children, who then become responsible for their parents' well-being in their later years. In addition to farming and gardening, other livelihoods in the village include running small shops (selling groceries, daily necessities, and food), and operating automotive repair workshops (MOEF and ADB, 2022).

Generally, the villages or residential areas where activities are planned are quiet during daylight hours because adults go to work in the fields, rubber plantations, fishing, hunting, or collecting wood for house construction. They leave in the morning and return in the evening. During
crucial fieldwork periods, almost every household stays overnight in makeshift huts they build in the fields (MOEF and ADB, 2022).

Land use by the community follows the shifting cultivation method, often known as the six steps method (clearing, felling, burning, planting, weeding, and harvesting). Land is opened by shifting from one place to another and from year to year. They occasionally returning to the original location, constituting the slash-and-burn cultivation cycle. Shifting farmers rotate their cultivation activities every four-five years on land they claim as customary rights (MOEF and ADB, 2022).

4.1.4 Forest Cover
The predominant forest cover in Tanjung Lasa Village is forest, especially in the northern part of the village that falls within the Betung Kerihun Danau Sentarum National Park. In Nanga Lauk Village, the forest consists of secondary swamp forest. In Batu Lintang Village, 65% of the entire village area is forested. This forested area has been designated as the Menoa Sungai Utik Customary Forest. Customary Forest is one of the Social Forestry schemes, granting legal access to the community for sustainable forest management (MOEF and ADB, 2022).

4.1.5 Community Income
The average income of the studied villages is Rp. 26 million (USD 1,800) per household per year. Income is measured using the household expenditure approach per month. Additionally, income is calculated from farming, hunting, rattan/craft businesses, fisheries in Nanga Lauk Village, and some community members working in government or the service sector (MOEF and ADB, 2022).

4.1.6 Land Tenure
In general, the community manages land through ownership (managing their own land), as laborers (managing other people’s land), and land tenure with a profit-sharing arrangement. The land area managed by the community ranges from 1 to 5 hectares, with some villagers claiming more than 10 hectares. Over 90% of the population owns their land and houses. Some people in the three villages stated that they live in their parents’ houses (average of 15%). Most of the houses are permanent structures (over 90%). In addition to opening land, the community also collects non-timber forest products such as honey, rattan, and fruits. Most of the collected honey is sold to traders/collectors in the village (MOEF and ADB, 2022).

4.1.7 Water Source
Communities in the three villages vary in their water sources for household use, with the majority obtaining water from rain and rivers. In addition to bathing/cleaning purposes, rainwater is also used for cooking/drinking. Most of the community already has their own toilets. However, many still use the river as a place for defecation (average of 75%). People in the three villages still dispose of wastewater and garbage indiscriminately (MOEF and ADB, 2022).
4.1.8 Conflict and Resolution
Most conflicts or issues are resolved through the village government, especially if they involve disputes among villagers or with residents from other villages (21%). The role of community leaders is crucial, with 18% of respondents stating that conflict resolution involves mediation by community/customary leaders. Most of the community understands that the village or the land they cultivate is state-owned forest land (60%), while the rest are unaware that the land they work on is state-owned forest land.

4.2 Social Forestry in Three Study Villages
The process of facilitating Social Forestry Approval was carried out intensively, involving the West Kalimantan Social Forestry Working Group, the North Kapuas Hulu Forest Management Unit (FMU), and the Social Forestry and Environmental Partnership Office (BPSKL) for the Kalimantan region. The Social Forestry approval process can be summarized as follows (MOEF and ADB, 2022):
1. Initial Consultation: The purpose of this consultation is to obtain community approval for the social forestry program. During the consultation, the applicant outlines the framework, regulations, potential impacts on the community's culture, and economic activities in the village.
2. Participatory Mapping: The selection of suitable areas for social forestry involves participatory geographic information system (GIS) mapping activities. This ensures that the selected area is clear of conflicts with other administrative boundaries and does not overlap with private sector concessions. Participatory mapping involves neighboring village communities, community groups, and individuals who have managed forest areas. The participatory agreement on the boundaries of social forestry management areas is documented in minutes and easily understandable boundary sketches.
3. Establishment of Social Forestry Institutions: The second consultation aims to reach an agreement on how the community will self-organize to implement the social forestry agreement. An overview of social forestry institutions is provided within the government regulations. With the consensus of the assembly participants, the social forestry organizational structure is endorsed through the Village Head's Decree, witnessed by community/customary leaders.
4. Identification of Potential Commodities: Some successful identified flagship commodities in the research villages include stink beans (*Parkia speciosa*), dogfruit (*Archidendron pauciflorum*), durian (*Durio zibethinus*), rubber (*Hevea brasiliensis*), coffee (*Coffea* sp.), lemongrass, vegetables, black pepper (*Piper nigrum*), honey, fish, and handicrafts. Communities can choose preferred commodities for development and propose new types based on village conditions and market demand.
6. Verification: After confirming the completeness of administrative documents, the MOEF team, the Social Forestry and Environmental Partnership Office, the West Kalimantan Social Forestry Working Group, and FMU staff conduct technical verification (field checks, interviews with local communities, and community leaders).

7. Social Forestry Approval: Social Forestry approval is an agreement between the government and the community group to manage the forest area according to the terms and conditions specified in the agreement. The community group has legal access to manage the forest for 35 years, extendable as needed and with MOEF approval.

8. Operationalization of Social Forestry: The social forestry group will develop a management plan based on business opportunities identified by the community group during the proposal preparation. The government provides assistance to newly formed village institutions through the social forestry working group at the provincial level. Local NGOs or other entities can facilitate the development and implementation of the social forestry business plan.

Through the extensive process of preparation, proposal drafting, verification, and the Social Forestry approval process, the outcomes in the three research villages are presented as follows (MOEF and ADB, 2022):

4.2.1 Menoa Sungai Utik Customary Forest, Batu Lintang Village

The Social Forestry Group of Menoa Sungai Utik Customary Forest obtained approval in 2020 through Decree Number SK.3238/MENLHK-PSKL/PKTHA/PSL. l/ 5/2020 covering an area of 9,480 hectares. Three Social Forestry Enterprise Groups were formed, namely Tourism Groups with the potential of primary forests that attract cultural tourism in traditional longhouses, Non-Wood Forest Product (NTFPs) groups with potential products such as honey, rattan, and handicrafts, and Agroforestry Groups cultivating commodities such as stink beans, dogfruit, and fruits.

Menoa Sungai Utik Customary Forest has developed a Social Forestry Management Plan and Social Forestry Enterprise Group Plan, as well as an Annual Work Plan, which have been approved by the North Kapuas Hulu Forest Management Unit (FMU). The tourism business has been operational, especially for cultural tourism in traditional longhouses. The handicraft and NTFPs product businesses have started but legal business units are yet to be formed. The agroforestry business unit is still pending establishment, although crops like stink beans, dogfruit, and fruits have economic potential to enhance community livelihoods.

The Menoa Sungai Utik Customary Forest Group also received support from the People Resources and Conservation Foundation (PRCF) and the Indigenous Peoples Alliance of the Archipelago (AMAN) for the development of a forest carbon environmental services initiative. The funding program initiated by the Rimba Collective Project, facilitated by Lestari Capital, provides economic opportunities for sustainable forest management.
With this existing potential, Menoa Sungai Utik Customary Forest could be categorized as "silver" or "gold". However, external support is needed to meet the completeness requirements for business development that must be input into the national GoKUPS information system.

4.2.2 Lauk Bersatu Village Forest

The Lauk Bersatu Village Forest in Nanga Lauk Village received forest management approval through Decree SK. 685/Menlhk-PSKL/PKPS/PSL.0/2/2017, covering a managed area of 1,429 hectares. Lauk United Village Forest comprises five Social Forestry Enterprise Groups: Honey Group, Fish Group, Rubber Group, Rattan Group, and Ecotourism Group.

Nanga Lauk Village is renowned as a producer of quality honey in Kapuas Hulu. The natural honey business has become a primary source of income for some residents, formalized under the Honey Group. This formalization allows them to strengthen their honey-related activities. Honey products from Nanga Lauk Village are sold in packaged forms to various regions, both within the district, province, and even nationally.

Due to abundant rivers and wet peatland, freshwater fish is also a major livelihood for the community. Fishermen formed the Fish Group, and their catch is sold as fresh or salted fish. The people of Nanga Lauk also cultivate and harvest rubber from their agroforestry land. Recognizing significant business opportunities, these rubber farmers formed the Rubber Group. With assistance from PRCF, they established collaborations with PT New Kalbar Processors, a rubber processing company in West Kalimantan. The company provided training to ensure the rubber met their standards.

The Lauk Bersatu Village Forest has abundant natural rattan, harvested by locals for handicraft production. This potential was utilized by the Lauk Bersatu Village Forest Management Institution to establish the Rattan Group. Artisans received training in crafting woven products from PRCF, which were then sold to the community. Finally, the Lauk United Village Forest Social Forestry Group also has ecotourism potential with its pristine lakes, rivers, and forests for educational ecotourism. Some of the Ecotourism Group members received training from PRCF to become tour guides, adding value to the community.

The Lauk Bersatu Village Forest Social Forestry Group has also developed workplans and is registered in the GoKUPS application at the Ministry of Environment and Forestry. With its potential and completeness, Lauk Bersatu Village Forest is categorized as "platinum".

4.2.3 Tanjung Lasa Village Forest

The Tanjung Lasa Village Forest Management Institution received the Village Forest Approval Letter from the Ministry of Environment and Forestry through Decree SK.8450/MENLHK-

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1 The Ministry of Environment and Forestry (MOEF) of the Government of Indonesia has established levels of independence for Social Forestry Groups (KUPS) with several categories. The first is the Blue category, indicating that they have recently obtained permits/rights for social forest management. Next is the Silver category, signifying that they have formulated a Business Work Plan and engaged in business activities. Following that is the Gold category, denoting groups that have established business units and marketed their products. Lastly, the Platinum category signifies that the KUPS has a broad market presence, both nationally and internationally. Visit the website: https://ppid.menlhk.go.id/siaran_pers/browse/1857
PSKL/PKPS/PSL.0/ 12/2021, covering an area of 4,996 hectares. Of this, 2,808 hectares are in protected forests, 1,200 hectares in limited production forests, and 988 hectares in production forests.

The Tanjung Lasa Village Forest Management Institution has formed three Groups: Agroforestry Group with commodities such as stink beans, dogfruit, durian, and other fruits; Clean Water Group with a bottled water business unit; and Production House Group with a unit for producing processed food such as shredded meat and cassava chips.

The Tanjung Lasa Village Forest Management Institution has also developed workplans and has obtained approval from the North Kapuas Hulu Forest Management Unit (FMU). By the end of 2022, Tanjung Lasa Village Forest Management Institution received facilitation for voluntary forest carbon business development under the CCB (Climate, Community, and Biodiversity) scheme from the Rimba Collective Program. The proposal under the CCB scheme was completed in early 2023.

Administratively, the Tanjung Lasa Village Forest Management Institution has sufficiently met the requirements. Business development for social forestry group has begun with the production of processed foods and bottled water. Tanjung Lasa Village Forest Management Institution can be categorized as "silver".¹

4.3 Culture and Local Knowledge of the Community
The Malay and Dayak communities possess crucial local cultures and knowledge that need to be integrated into the approved social forestry work plan by the Ministry of Environment and Forestry (MOEF). This local knowledge embodies conservation, protection, and sustainability values for future generations. In the operation of Social Forestry Enterprise Groups, these local values need to be enhanced and introduced with suitable land management approaches. This ensures that land productivity can increase without compromising opportunities for future generations to utilize forest resources.

According to Teezzi, Marchettini, and Rosini as cited by Hasbullah (2012), local wisdom is formed through traditional heritage and religion. For the community, "local wisdom can be found in the form of songs, proverbs, sasanti (incantations), advice, mottos, and ancient manuscripts that are integral to daily life". This behavior is reflected in the community's way of life that has endured for a considerable period (Hasbullah, 2012; Anwar et al., 2023). The summarized local wisdom of the Malay and Dayak communities includes the following points (Fajarini, 2014):

1. Malay (West Kalimantan): "Different ponds have different fish, where the land is stepped on, there the sky is upheld."
2. Dayak Kanayatri: "Fair with peers, heavenly introspection, relying on the Almighty"; Rumah Betang (unity and mutual respect); Handep habaring hurung (values of togetherness and mutual assistance); Betang (spirit of the longhouse).
3. Dayak Bekati: "Father's promise must be kept"; "Mother's promise must not be forgotten" (do not make promises lightly).
4.3.1 Taboos in Malay Custom
The Malay community has observed taboos and prohibitions since ancient times, believing that these restrictions can quell the community's curiosity. These prohibitions have become part of Malay customs, traditions passed down from generation to generation. The concept of customs in the Malay context encompasses several aspects, as explained by Via (2021) and Syahrir (2016):

a) customs as a habit to respect elders, b) customs specifically related to ceremonial practices, such as wedding ceremonies, c) customs related to environmental respect, enacted through established rituals, such as forests or ancestral heritage sites, d) customs as a form of punishment in society, e) customs as a series of behavioral rituals considered to have magical value, f) customs as an institutional system, such as family, religion, politics, culture, and so on (Ministry of Education, 1994 in Via, 2021).

4.3.2 Meaning of Forests and Ecological Functions for the Malay Community
Traditionally, the Malay community uses specific terms to classify various types of forests. The purpose of this classification is to ensure that different types of forests are utilized according to their respective functions and purposes. Knowledge about various forest environments serves as the basis for actions in the use and management of natural resources within. Some Malay terms related to forests include (Thamrin, 2014):

1. \textit{Rimba}: An area where they fulfill daily needs, including clothing, food, shelter, and locations for conducting ceremonies. In the rimba, activities such as gathering, collecting, and opening fields take place. All cultural activities are carried out in the rimba.

2. \textit{Sosab}: Abandoned fields where Malay people used to farm. Sosab still provides food sources such as tubers, bananas, and other short plants (medicinal plants).

3. \textit{Beluka}: A type of secondary forest dominated by shrubs. Large trees are scarce in this location as they have been cut down to clear land for cultivation in the past. Many non-timber forest product maintenance activities are carried out in this area.

4. \textit{Hutan Adat}: A forest area marked by dense and relatively intact vegetation, or primary forest. This area is considered by Malays as the residence of spirits. Excessive exploitation in this area can anger the spirits or deities residing there, resulting in curses such as disease outbreaks or disasters.

4.3.3 \textit{Tembawang}, the Lifesource Forest for the Dayak Community
The Dayak community heavily relies on interaction with the forest (\textit{tembawang}) to meet various needs, such as food sources, construction materials, traditional medicine, ceremonial practices, and crafts. Understanding all aspects related to the sustainability of tembawang management is crucial. \textit{Tembawang}, inherited generationally as communal or shared property, encompasses the entire forest area used as fields by the communities in Batu Lintang and Tanjung Lasa villages. \textit{Tembawang} management is regulated by customary law, where utilization access is not restricted but requires permission from customary leaders. Tembawang has critical functions and values, being part of the community's tradition, culture, and habits, while meeting economic needs and supporting conservation. The Dayak community has successfully managed tembawang, and there are opportunities to further enhance its management and potential. Sustainable tembawang...
management requires support from the government as policyholders and involves indigenous communities while strengthening traditional values and culture in various aspects (Aini et al., 2016).

According to Aini et al. (2016), tembawang in the culture of the Dayak community is collectively managed by the entire community, and its regulation is subject to customary law. The community's motivation in managing tembawang is to utilize and maintain the sustainability of communal forests (Lumangkun et al., 2012). To use tembawang, permission must be sought from customary leaders, such as the Patih, Head of the Hamlet/Longhouse Tuai, who acts as the executor of customary law. In the process of utilizing tembawang, there are written customary regulations that must be followed by the entire community; violations of these rules can result in customary sanctions or fines. Enforcement of customary sanctions and fines is carried out by customary leaders with the assistance of village officials and law enforcement. Customary law has a positive impact by acting as the last line of defense in maintaining the sustainability of tembawang in the future.

4.4 Operationalization of Social Forestry

In the three research village locations, various activities have been implemented through funding from ADB channelled to the MOEF. The purpose of these activities is to encourage village economic self-reliance, reduce pressure on the forest, and improve sustainable forest management practices. Land-based activities and livelihood improvement in the three research villages are presented in the following table:

<table>
<thead>
<tr>
<th>No.</th>
<th>Village</th>
<th>Land-Based Activities</th>
<th>Livelihood Improvement</th>
<th>Beneficiaries</th>
</tr>
</thead>
</table>
| 1   | Batu Lintang | • Agroforestry: 64 Ha (main crops: petai, jengkol, durian, rambutan, orange, coffee. Intercrops: medicinal plants, vegetables, grains)  
• Community based forest management (CBFM): 9,480 Ha  
• Forest fire patrols: 248 Ha | • Fish farming, training and development of handicraft businesses, beekeeping.  
• Carbon forest business development. | 338 Indigenous Community Households (108 women) |
| 2   | Tanjung Lasa | • Agroforestry: 88 Ha (the same main and intercrops as Batu Lintang)  
• CBFM: 4,996 Ha; Conservation Partnership: 125 Ha  
• Forest fire patrols: 584 Ha | • Fish farming, training and development of handicraft businesses, beekeeping, home production of processed foods and bottled water.  
• Carbon forest business development. | 288 Indigenous Community Households (92 women) |
| 3   | Nanga Lauk   | • Assisted Natural Regeneration (ANR): 1,000 Ha (development of non-timber forest product businesses, environmental services)  
• CBFM: 1,430 Ha  
• Forest fire patrols: 568 Ha | • Fish farming, training and development of handicraft businesses, beekeeping.  
• Carbon forest business development. | 103 Indigenous Community Households (28 women) |

Source: Social Safeguard Monitoring Report FIP-1 (2022)
In addition to the activities outlined in the table above, training sessions were also conducted, including: organizational development and budget planning, sustainable forest management, certification of technical personnel for non-timber forest product enterprises, forest planning, and the development of social forestry enterprises. Community groups were also encouraged to conduct benchmarking studies in various regions to observe success stories and apply them in their villages. The village's business activities were supported by the local government, including granting permits for the production of processed foods and bottled water, the sale of honey and handicrafts, and connecting community businesses with private companies as off-takers or through the North Kapuas Hulu FMU.

4.5 Learning Process and Behavioral Change
In general, the community expresses gratitude for being involved in various activities and receiving training from experts. They consider these opportunities as valuable learning experiences to enhance their local knowledge and practices in forest management and community economic development. The community in Nanga Lauk village has received extensive training related to economic improvement activities, such as fish farming, assisted natural regeneration, and carbon forest business development. The village also obtained approval for the Village Forest covering an area of 1,429 hectares. Training on the preparation of the Social Forestry Management Plan, improvement of Social Forestry Group organization, and the development of environmental services has generated significant enthusiasm among the community.

A summary of the implementation of activities and training is presented in Table 2 below. At least four theoretical groups were trained for both the community and village government officials: social forestry, sustainable forest management, environmental services, and processing of flagship commodities. These are crucial as they enable the community to improve their livelihoods through the application of learned theories and practices. In addition to training sessions, participants were provided with pocketbooks, guides, and printed training materials that could be accessed by the community at any time.

Table 2. Knowledge and skills learned by the community

<table>
<thead>
<tr>
<th>Theory</th>
<th>Skills/Practices</th>
<th>Inherited Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Forestry</td>
<td>Participatory mapping and work plan development</td>
<td>Social Forestry Pocketbook</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participatory mapping training materials</td>
</tr>
<tr>
<td>Sustainable Forest</td>
<td>Agroforestry, ANR, and forest protection learning and practice</td>
<td>Agroforestry, ANR, and forest protection guides</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Services</td>
<td>Environmental services inventory, forest carbon, water services, and ecotourism</td>
<td>Environmental services training materials and related references</td>
</tr>
</tbody>
</table>

Source: Ministry of Environment and Forestry (MOEF) and ADB (2022)
The learning process was not confined to classroom training but involved fieldwork and practical tool applications. Technical guidance in agroforestry included field practices such as seed preparation, planting plot division, planting line creation, hole digging, planting techniques, maintenance and pest and disease control, grafting, and monitoring and measurement. For the assisted natural regeneration (ANR) activities, field practices included patrols, observation plot division, slash-and-burn trail creation, clearing natural seedlings from disturbances, monitoring, and reporting.

The implementation of activities and provided training is expected to change community behavior from traditional practices based on customs and traditions to adopting better practices founded on scientific studies, repetition, and consideration of potential risks. The envisioned behavioral changes are outlined in Table 3 below.

Table 3. Behavioral changes after receiving training and engaging in activities

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shifting cultivation with the cultivation of upland rice and vegetables</td>
<td>Continued shifting cultivation, but with the commitment to gradually reduce it and engage in agroforestry.</td>
</tr>
<tr>
<td>Individual land cultivation practices; occasional communal activities (planting, harvesting)</td>
<td>With the establishment of social forestry and organizational training, the community learned to organize and work towards common goals for community welfare.</td>
</tr>
<tr>
<td>Traditional planting/cultivation techniques</td>
<td>Through agroforestry and ANR technical guidance, the community learned conservation techniques, choosing superior seed types, and plant maintenance.</td>
</tr>
<tr>
<td>Fetching water from distant water sources</td>
<td>With the provision of clean water facilities in the village, the community can access clean water more easily, quickly, and locally.</td>
</tr>
<tr>
<td>Neglecting backyard land</td>
<td>The home garden program teaches how to utilize backyard land for vegetable production for family consumption and to enhance family income.</td>
</tr>
<tr>
<td>No commodity-based business units in the village</td>
<td>With the establishment of coffee processing houses, rubber, pepper, citronella, honey, fish, and bottled water processing, the community now has business units as part of the social forestry approval.</td>
</tr>
<tr>
<td>Protecting the forest to obtain non-timber forest products and wood for construction</td>
<td>Besides protecting the forest for the benefits of non-timber forest products (NTFP) and timber, the community hopes to benefit from forest carbon.</td>
</tr>
</tbody>
</table>

Source: Ministry of Environment and Forestry (MOEF) and ADB (2022)

Behavioral changes are fundamentally influenced by internal and external factors. Internal factors include elements such as age, income level, duration of residence in a place, level of
social interaction, education level, level of agricultural land ownership, and involvement with the forest. On the other hand, external factors include the level of interaction with officers and membership in farmer groups (Garnadi, 2004). According to research, the higher a person's knowledge about the forest, the more positive their attitudes and behaviors toward the forest. Such individuals have a better understanding of forest boundaries, the security tasks performed by managers, forest maintenance efforts, preservation, and the functions and benefits of the forest for life (Surati, 2014).

Behavioral change can also be triggered by positive influences or encouragement from community leaders or local champions (Suyadi et al., 2019). Another study states that local champions significantly impact the shifting cultivation behavior of communities living around forests. The positive impact resulting from the presence of local champions includes: (1) serving as intermediaries of external information to community groups, (2) interpreting and translating information so that it can be applied in the village context, (3) serving as an example followed by the surrounding community, (4) driving community group solidarity towards external changes, and (5) improving community norms (Van den Ban and Hawkins, 1999).

5. Conclusion

The conclusions drawn from this research are as follows:

1. Cultural values and behaviors of the Dayak and Malay communities play a crucial role in supporting the Social Forestry Program in Kapuas Hulu Regency, West Kalimantan.
2. The study highlights the importance of respecting ancestors and the role of traditional leaders in ensuring the success of the social forestry program.
3. The alignment of the social forestry scheme with the preferences and local cultural values of the community is a key factor in the program's success.
4. Three villages in the North Kapuas Hulu Forest Management Unit (FMU), namely Batu Lintang Village, Nanga Lauk Village, and Tanjung Lasa Village, have successfully obtained approval for the social forestry program under the schemes of Customary Forest, Village Forest, and Conservation Partnership.
5. The social forestry program in these villages has provided benefits to indigenous families and has the potential to enhance the local economy through the development of local commodities such as honey, rubber, rattan, fish, and ecotourism.

The last, a profound understanding of the cultural values and behaviors of the Dayak and Melayu communities, along with recognition of local wisdom, is key to designing and implementing sustainable social forestry programs that have a positive impact on local communities and the surrounding environment.

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