

Safeguarding Indigenous Rights and Territories: Integrating Dayak Ngaju Wisdom in Peatland Ecosystem Management

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Abstract

In Indonesia, the legal system heavily favors state ownership of land, leading to the marginalization of Indigenous peoples and their traditional land management practices. The prioritization of economic development over environmental and cultural conservation has resulted in a limited understanding of the value of the peatland ecosystem for Indigenous Dayak communities, leading to inappropriate and ineffective peatland management policies. To address these challenges, this research adopts a descriptive qualitative approach, utilizing a cross-sectional research design that includes in-depth interviews and literature study to gather and analyze data from Indigenous Dayak Ngaju communities in Tumbang Nusa and Pilang villages, Pulang Pisau regency, Central Kalimantan province. The study uncovers that the Indigenous Dayak Ngaju community has established a zonation system for peatland use, comprising separate areas for settlement, farming, and forest protection (Pukung Pahewan). The creation of specific policies for managing sacred areas is crucial to preserving Indigenous values and practices. Moreover, the absence of free, prior, and informed consent in certain policies and programs, such as the Mega Rice project, Food Estate program, and Zero-burning policy, has caused social conflicts within the Indigenous Dayak community, leading to the destruction of their livelihoods. Despite existing laws in Indonesia that acknowledge the rights of Indigenous peoples and safeguard their customary lands, the implementation and enforcement of these laws have proven weak and inconsistent.

1. INTRODUCTION

The legal system in Indonesia ensures the protection of the rights of Indigenous people, including the Indigenous Dayak Ngaju community.¹ They

¹ See Mohammad Jamin et al, "Legal Protection of Indigenous Community in Protected Forest Areas Based Forest City," *Bestuur* 10, (2022): 198-212; and Yanarita et al, "Development of the Dayak Ngaju Community Forest in the Forest and Peatland Area, Central Kalimantan, Indonesia," *Environmental Science, Toxicology and Food Technology* 8, no. 3 (2014): 40-47. Yanarita characterizes Dayak Ngaju as indigenous communities residing in the Central Kalimantan province. In both literature and everyday language, Dayak Ngaju are often referred to as an "indigenous community," "tribe," or "subtribe."

are guaranteed full involvement in decision-making and sustainable management of the ecosystem in their territory. However, the lack of empowerment and ineffective implementation of these standards hinder the Indigenous communities ability to fully leverage their knowledge, values, and wisdom in peatland management.²

It is crucial to highlight that the Dayak people are Indigenous people of Kalimantan island, where Indonesia's new capital is planned to be relocated.³ With over 400 subtribes, each having its unique traditional system of land and natural resource management, the Dayak community possesses valuable insights and practices.⁴ Dayak community is categorized or grouped based on their dwellings in watersheds, such as the Kapuas, Katingans, Seruyan, and Barito river. Dayak people who live in the upper river in Central Kalimantan Province is called Dayak Ngaju.⁵

Dayak Ngaju heavily relies on the peatland ecosystem in which they live.⁶ Traditionally, they have utilized the peat swamp forests for various small-scale activities such as timber harvesting, gathering food and medicinal plants, and obtaining clean water. As forest-dwelling people, the environment has played a significant role in shaping their culture and way of life, with the peatlands deeply intertwined with the customs and traditions of the Indigenous Dayak people.⁷

Although Law No. 32 of 2009 concerning Environmental Protection and Management promotes participatory principles in environmental conservation and management, with an emphasis on the value of local

Although these terms may hold distinct legal and anthropological connotations, this paper employs them interchangeably in a general sense to represent a community known as the Dayak Ngaju that inhabit an upper stream in Central Kalimantan Province, united by collective ancestral connections to the land and natural resources, and steadfastly maintain the traditions passed down through generations.

² See Gusniarjo Mokodompit et al, "Ensuring the Rights of Indigenous Peoples: International Legal Standards and National Implementation," *The East Journal Law and Human Rights* 1, no. 3 (2023): 127–136; Myrna A. Safitri, "Dividing the Land: Legal Gaps in the Recognition of Customary Land in Indonesian Forest Areas," *Third World Studies* 30, no. 2 (2015): 31-45.

³ Purnama Julia Utami and Sri Musrifah, "The Political Dynamic of Dayak Elite on Relocating Capital to Kalimantan Island," *Konfrontasi: Jurnal Kultural, Ekonomi dan Perubahan Sosial* 8, no. 4 (2021): 364-373.

⁴ See Janes Sinaga, Juita Lusiana Sinambela, and Reviandari Widyatiningtyas, "Social Solidarity: Getting to Know the Uniqueness and Cultural Appeal of Traditional Dayak Tribes," *East Asian Journal of Multidisciplinary Research* 2, no. 4 (2023): 1661-1674; Crevello S, "Dayak Land Use Systems and Indigenous Knowledge," *Human Ecology* 16, no. 1 (2004): 69-73.

⁵ Linggua Sanjaya Usop and Indra Perdana, "Ritual Hinting Pali as Resistance of the Dayak Ngaju Community (Case Study of Expansion of Large-Scaled Palm Oil Company to Ecology, Dayak Ngaju Community)," *Lakhomi Journal Scientific Journal of Culture* 2, no. 2 (2021): 73-81.

⁶ Yanarita et al, *loc.cit.*

⁷ Hergoualc'h Kristell et al, "Managing Peatlands in Indonesia: Challenges and Opportunities for Local and Global Communities," *Policy Brief* no. 205 (2018): 1-8.

knowledge, there is still a need for further action to actively involve Indigenous peoples, particularly the Dayak community, in the management of peatland ecosystem.⁸ This necessity arises from the historical context prior to the Constitutional Court Decision No. 35/PUU-X/2012, where the legal framework in Indonesia did not recognize community ownership of forested land as previously stated in the Law No. 41 of 1999 concerning Forestry (Forestry Law).⁹ According to the Forestry Law, country's forests are categorized as state forest and private forest. The law declares that any forestlands in Indonesia without private entitlements are considered state forestlands. Unfortunately, the implementation of forest-protection actions in the past often excluded local communities, resulting in no tangible benefits for them.¹⁰ This lack of recognition resulted in conflicts between government-designated zones and areas acknowledged under Customary Law.

Recognizing the rights of Indigenous peoples, including the Dayak community, to govern their natural resources has long been a demand.¹¹ The recognition of customary forests as distinct from state forests, as stated in the Constitutional Court ruling, marked a significant change.¹² However, several studies examining the limitations and challenges associated with the implementation of the Constitutional Court Decision No. 35/PUU-X/2012 have identified several important points. Firstly, little power has been transferred in favor of Indigenous people, as the state retains full authority in determining the procedure of customary forest recognition. Secondly, the recognition of Indigenous communities has been hindered by concerns of maintaining national integration and the complex articulation of Indigenous identity due to historical and post-colonial dynamics. Additionally, the absence of an Indigenous peoples' rights law has been a common reason for many local governments to avoid recognizing Indigenous territories.¹³

⁸ See I Dewa Made Suartha, Hervina Puspitosari, and Bagus Hermanto, "Reconstruction Communal Rights Registration In Encouraging Indonesia Environmental Protection," *International Journal of Advanced Science and Tehnology* 29, no. 3 (2020): 1277-1293; Saritha Kittie Uda, Greetje Schoutenc and Lars Hein, "The Institutional Fit of Peatland Governance in Indonesia," *Land Use Policy* 99 (2020): 103300; and Law No. 32 of 2009 concerning Environment Protection and Management, Art. 2.

⁹ Safitri, *op.cit.*, 46.

¹⁰ See Kosuke Mizuno, Motoko S. Fujita, and Shuichi Kawai. *Catastrophe & Regeneration in Indonesia's Peatlands: Ecology, Economi & Society* (Kyoto: NUS press, 2016), 19-35; and Law No. 41 of 1999 concerning Forestry, Art. 4.

¹¹ Candra Perbawati et al, "Legal Discourse on Customary Forest Determination Progressive Law Based," *Fiat Justisia: Jurnal Ilmu Hukum* 17, no. 1 (2023): 17-30.

¹² Syaiful Rachman, Mansyur Nawawi, and Basrun Umanailo, "Judicial Review of the Constitutional Court Decision No. 35/PUUX/2012 About the Existence of Community Customary Forests," *Journal of Education, Humaniora and Social Sciences* 3, no. 3 (2021): 823-828.

¹³ See Safitri, *loc.cit*; and Hunggul Y. S. H Nugroho, Andrew Skidmore, and Yousif A. Hussin, "Verifying Indigenous Based-Claims to Forest Rights Using Image Interpretation and Spatial Analysis: a Case Study in Gunung Lumut Protection Forest, East Kalimantan, Indonesia," *GeoJournal* 87, (2022): 403-421.

The Mega Rice Project, initiated in 1995 by President Soeharto in Central Kalimantan, aimed to enhance food security but neglected the active involvement of Indigenous Dayak communities.¹⁴ The project involved extensive drainage canal construction, deforestation, and the introduction of Javanese transmigrants using unfamiliar farming methods, causing irreparable damage to the peatland and local communities. Similarly, the Food Estate project, characterized by intensive modern farming, fails to consider the Indigenous Dayak Ngaju Wisdom in agricultural practices and community land management.¹⁵ This constitutes a violation of Indigenous Dayak people's rights as clearly recognized in the Article 18B (2) of the 1945 Constitution of the Republic of Indonesia and Law No. 39 of 1999 concerning Human Rights.¹⁶

The peatland land use change in Kalimantan, particularly for agricultural purposes such as monoculture production of palm oil and rice, has often disregarded the valuable knowledge and wisdom of Indigenous communities.¹⁷ This disregard has led to significant consequences, including the degradation of ecosystems, socio-economic conflicts, and land disputes. The shift towards monoculture plantations, particularly palm oil and rice, has disrupted the delicate balance of peatland ecosystems, resulting in the loss of biodiversity and the destruction of natural habitats.¹⁸ The traditional knowledge held by Indigenous peoples, which encompasses sustainable land management practices and a deep understanding of the ecological intricacies of the region, has been marginalized and ignored.¹⁹ As a result, the degradation of peatlands has not only had ecological implications but has also caused socio-economic conflicts as indigenous communities, whose livelihoods and cultural heritage are closely tied to the land, are marginalized and deprived of their rights. Additionally, the neglect of indigenous land rights has fueled land conflicts, further exacerbating tensions and instability in the region.²⁰ Recognizing and incorporating the knowledge and rights of Indigenous peoples is crucial for addressing these

¹⁴ Jenny Goldstein, "Carbon Bomb: Indonesia's Failed Mega Rice Project," *Environment and Society Portal, Arcadia*, no.6 (2016): 1.

¹⁵ See Petter Aldhous, "Land Remediation: Borneo is Burning," *Nature* 432, (2004):144-146; and J.H.M Wösten et al, "Peat-water Interrelationships in a Tropical Peatland Ecosystem in Southeast Asia," *Catena* 73, no. 2 (2008): 212-224.

¹⁶ See The 1945 Constitution of the Republic of Indonesia, Art. 18B (2); and Law No. 39 of 1999 concerning Human Rights, Art. 6.

¹⁷ Uda, Schouten, and Hein, *loc.cit.*

¹⁸ See Aldhous, *loc.cit.* and Goldstein, *op.cit.*,8.

¹⁹ Nugroho, Skidmore, and Hussin, *loc.cit.*

²⁰ Yaghoob Jafari et al, "Risks and Opportunities from Key Importers Pushing for Sustainability: the Case of Indonesian Palm Oil," *Agricultural and Food Economics* 5, no. 1 (2017): 1-16.

issues, promoting sustainable land use practices, and fostering a harmonious coexistence between agriculture and the environment.²¹

Understanding the significance of the peatland ecosystem to develop effective management strategies requires acknowledging people's values, perceptions, and traditional knowledge systems.²² The Indigenous Dayak people possess valuable traditional knowledge that provides a holistic understanding of the peatland ecosystem. The profound connectedness of indigenous people with nature and their wisdom have been highlighted as a vital aspect of the sustainable management of socio-ecological systems. By involving and valuing the knowledge and perspectives of Indigenous communities, a more inclusive and participatory approach to peatland conservation can be developed.²³

The present paper builds upon previous studies exploring the topic of indigenous land management and environmental justice. Boag (2016) conducted a comparative study on Australia and Indonesia, providing insights into the benefits and limitations of different policy strategies for Indigenous peoples in the Asian-Pacific region.²⁴ Jamin et al (2022) analyzed the protection of customary law communities in urban forest-based protected forest areas designated as the National Capital, recommending the inclusion of legal protection provisions for Indigenous Peoples in the Law on the State Capital.²⁵ Furthermore, Belliera and Preaud (2011) examined the transformative effects of recognizing Indigenous peoples globally, exploring various local contexts and strategies and uncovering transnational links and differences.²⁶ These studies contribute valuable perspectives to the understanding of Indigenous land management and the pursuit of environmental justice for Indigenous communities worldwide. This research aims to explore the values, cultural significance, and traditional practices held by the Indigenous Dayak communities regarding the peatland ecosystem. By understanding their perspectives, this study seeks to develop a comprehensive legal framework that actively involves and appreciates the

²¹ Saritha Kittie Uda, Lars Hein, and Elham Sumarga, "Towards Sustainable Management of Indonesian Tropical Peatlands," *Wetlands Ecology and Management* 25 (2017): 683-701.

²² Zulkifli B. Lubis, "Social Mapping of Access to Peat Swamp Forest and Peatland Resources". *Indonesia-Australia Forest Carbon Partnership*, (2013): 15-20.

²³ Kamaljit Sangha, "Global Importance of Indigenous and Local Communities' Managed Lands: Building a Case for Stewardship Schemes," *Sustainability* 12, no. 19 (2020): 1-5.

²⁴ Mohammad Jamin et al, "Legal Protection of Indigenous Community in Protected Forest Areas Based Forest City," *Bestuur* 10, no. 2 (2012): 198-212.

²⁵ Carly Boag, "A Comparative Study of The Legal Frameworks Facilitating Indigenous Land Management in Postcolonial Societies: Indigenous Australia and Indonesian Adat Law," *Brawijaya Law Journal* 3, no. 2 (2016): 125-150.

²⁶ Irène Bellier and Martin Préaud, "Emerging Issues in Indigenous Rights: Transformative Effects of the Recognition of Indigenous Peoples," *The International Journal of Human Rights* 16, no. 3 (2012): 474-488.

values of local communities in ecosystem management, fostering ownership, responsibility, and stewardship. Ultimately, the goal is to establish effective and sustainable conservation strategies aligned with the aspirations and priorities of the Indigenous Dayak people, ensuring the long-term protection and well-being of both the peatlands and the Indigenous communities.

The research was conducted in Tumbang Nusa village and Pilang village, located in Pulang Pisau Regency, Central Kalimantan Province. The selection of these villages as study areas was based on the following factors: First, the majority of the residents in both Tumbang Nusa and Pilang villages, specifically over 90%, belong to the Indigenous Dayak Ngaju community. These communities actively preserve and practice the traditional customs and culture of the Indigenous Dayak Ngaju. Second, both villages possess peatland ecosystems, which are currently undergoing changes in land use patterns. Third, the proximity of the villages to the researchers and their ease of accessibility were additional factors considered during the selection process.

To collect and collate the data for this study, a cross-sectional survey was used. A one-month in-depth interview was conducted in Tumbang Nusa village and Pilang village from mid-September 2021 to mid-October 2021 using purposive sampling with a total of eighty-eight respondents. The in-depth interview was conducted with village officials, Dayak elders, Mantir (Indigenous leaders), a Non-Governmental Organization (NGO) representative, researchers, and the provincial forestry department.

2. RESULT AND ANALYSIS

2.1. Indigenous Dayak Ngaju Peatland Management

There are no rules specifically governing peat forests in the Dayak Ngaju Indigenous community. Peat forest management is based on the zonation of the land. Peat forests can be used as agricultural areas, settlements, or protected forests. Peatland zonation is not based on the depth of the peat soil but based on the vegetation that grows in the area which then becomes a guideline for the community to determine the use of the area. It covers three zonations for the purposes of settlement, farming, and secondary forest.

Regarding the settlement zonation within the Dayak Ngaju Indigenous community, the organization of villages follows traditional rules that have been passed down through generations. In the villages of Tumbang Nusa and Pilang, most of the stilt houses are constructed on flat land near the river. Consequently, peat areas adjacent to rivers are commonly utilized as settlement sites. This strategic choice is motivated by the convenience of

accessing water, fish, and transportation routes, which are readily available in close proximity to riverside settlements.²⁷

For the farming zonation, the selection of land for farming, known as "*ladang*," is guided by several considerations, which are the presence of a nearby river or creek, the abundance of fresh and green leaves on plants within the primary forest, and the presence of specific grasses and trees, such as taro, *suná*, *bungur* tree (*Lagerstroemia*) and *Jajangkit* tree. These criteria do not apply to areas that were previously cleared for agriculture. In such cases, the land can be reused if there are trees with a trunk diameter exceeding 15 cm.²⁸ If a member of the Dayak Ngaju community clears land (A) within the primary forest for cultivation and subsequently re-cultivates it after a few years, the fertile land is referred to as "*balik uwak*." The individual who cleared the land is rewarded with rights to the land, acknowledging their hard work. According to Dayak Customary Law, the responsibility for managing forests converted into agricultural land rests with the initial cultivator. This principle is enshrined in Article 39 of the Customary Law of the Dayak, known as "*Singer nalinjam bahu himba balik-uwak*." If another individual (B) wishes to work on the previously cultivated land (A), they are obligated to compensate the previous cultivator (A) with voluntary offerings such as rice, white chicken, whetstone, machete iron, pickaxe, and *manas lilis*. The subsequent rights to the former field, after being cultivated by individual (B) for one or two years, will revert back to the ownership of individual (A).²⁹ The Dayak Ngaju people have developed a deep understanding of the peatland ecosystem through keen observation of the vegetation present in the area. By closely observing the growth of specific plants they can discern the ecological characteristics of the land. This Indigenous knowledge guides their decision-making in choosing the most suitable areas for farming. They avoid utilizing deep peat for agricultural purposes, as they are well aware that the soil in such areas tends to be acidic and more beneficial for conserving as forested areas.

For the secondary forest zonation, when a piece of land previously used for farming or "*ladang*" displays a thriving growth of valuable timber and fruit-bearing trees, it is conserved as a wood, fruit, medicine, vegetable, fish, and *purun* (grass species used for weaving) source forest. This designation ensures the availability of wood and fruits for the community's needs, allowing for sustainable utilization of these resources.³⁰

²⁷ Five Indigenous Dayak elders from Pilang and Tumbang Nusa villages, "Indigenous Dayak wisdom in peatland management" interviewed by Sumarni, Central Kalimantan, 2-10 October 2021.

²⁸ *Ibid.*

²⁹ *Ibid.* See also Dewan Adat Dayak Barito Utara. *Hukum Adat* <https://www.dadbaritoutara.com/hukum-adat/>

³⁰ *Ibid.*

2.1.1. Dayak Ngaju Farming Practice

The farming practices of the Dayak people integrate ecosystem management and Dayak traditions. The stages of farming identified in their study are as follows: inspecting the land, determining the land area, cleaning farming tools, slashing, cutting trees, burning the land, planting, weeding, harvesting, and performing a thanksgiving ceremony. These ten stages are universally followed by the Dayak people and must be completed.³¹

Dayak farming is typically initiated in May, during the most favorable season, according to an indigenous elder from Pilang and Tumbang Nusa Village. For the Dayak people, farming holds a deeper meaning beyond occupation; it is a spiritual connection with all beings, especially the Almighty, the Creator of the universe. Before opening and clearing the forest, the Dayak people perform a ritual called "*Mangariau*" to offer prayers to the spirits of the forest guards, requesting them to relocate. *Mangariau* is performed on small arable land, while for larger fertile lands, a ritual called "*Manyanggar*" is conducted, involving the offering of pigs or cows.³²

Slashing and burning practices, although controversial due to their association with forest fires, play a crucial role in shifting cultivation by clearing land and enhancing soil fertility.³³ The Dayak people, however, have been practicing this tradition responsibly for centuries. They conduct controlled burns simultaneously, equipped with water and fire extinguishers, solely for agricultural purposes, and ensure no socio-economic issues arise from these fires.³⁴

Cooperation is evident in Dayak farming, as men create holes in the soil through dibbling (*Manugal*), while women sow seeds in these holes. This collaborative planting process is accompanied by joyful interactions, jokes, and displays of various arts and cultures. The harvest marks the final stage of farming and brings great joy to the Dayak people. They express gratitude by performing the '*Pakanan Batu Ceremony*' or "feeding the rock ritual," acknowledging the farming tools they used. These rituals exemplify the Dayak people's respect for nature and all of creation, maintaining a harmonious relationship with their environment.³⁵

³¹ See Suriansyah and Achmadi Murhaini, "The Farming Management of Dayak People's Community Based on Local Wisdom Ecosystem in Kalimantan Indonesia," *Heliyon* 7, no. 12 (2021): 1-7; and Indigenous Dayak *Mantir* from Pilang villages, "Indigenous Dayak Farming" interviewed by Sumarni, Central Kalimantan, 8 October 2021.

³² Indigenous Dayak elders, *loc.cit.*

³³ Peter J.A. Kleinman, David Pimentel, and Ray B. Bryant, "The Ecological Sustainability of Slash-And-Burn Agriculture," *Agriculture, Ecosystems and Environment* 52, no. 2-3 (1995): 235-249.

³⁴ Suriansyah and Murhaini, *loc.cit.*

³⁵ Indigenous Dayak elders, *loc.cit.*

Traditional Dayak farming embodies values such as togetherness, compassion, mutual cooperation, art, rituals, and spirituality. It is characterized by a harmonious relationship with nature, responsible land management with limited burning, communal activities (*gotong royong*), and the preservation of local knowledge with high values.

Forestry Law and Law No. 18 of 2004 concerning Plantation prohibit land clearing through burning, except for specific exemptions introduced after the 1997–1998 forest fires.³⁶ Article 69 (2) of Environmental Protection and Management Law allows the continuation of fire use in traditional agricultural techniques while considering regional customs.³⁷ This exemption recognizes ancient practices of slash-and-burn as local knowledge protected under the law. However, there is ongoing debate and uncertainty about the definition and application of local knowledge.³⁸

During the drafting of Indonesia's new Job Creation Law, discussions were held regarding the repeal of this exemption. However, the implementation of the exception remains complex, and instances have been reported where traditional farmers practicing their local knowledge were detained for using fire to clear land. The enforcement of the zero-burning policy has caused fear among Indigenous communities, leading to disconnection from their land and traditions.³⁹

Additionally, the Food Estate program, which promotes zero-burning farming, has not effectively integrated Dayak Ngaju traditional values and knowledge in peatland management. The program's introduction of chemical fertilizers and non-local rice seeds conflicts with the regenerative farming system of the Dayak people, which relies on local seeds and avoids chemical inputs. The implementation of similar program, Mega Rice project in 90s, had led to a significant change in the traditional Dayak farming system, resulting in the abandonment of land in Tumbang Nusa and Pilang villages.⁴⁰

³⁶ See Law No. 41 of 1999 concerning Forestry, Art. 50; and Law No. 18 of 2004 concerning Plantation, Art. 26.

³⁷ Law No. 32 of 2009 concerning Environmental Protection and Management, Art. 69 (2).

³⁸ See Uda, Hein, and Sumarga, *loc.cit*; and Rika Fajrini, "Environmental Harm and Decriminalization of Traditional Slash-And-Burn Practices in Indonesia," *International Journal for Crime, Justice and Social Democracy* 11, no. 1 (2022): 28-43.

³⁹ See Michelle Staggs Kelsall, Roichatul Aswidah, and Randy Wirasta Nandyatama, "Beyond Commodification, Toward Job Creation: Indonesia at a Crossroads." (Jakarta: Sasakawa Peace Foundation, 2021: 9-18; and Mongabay, "New Indonesian Law May Make It Harder to Punish Firma for Haze-causing Fires," <https://news.mongabay.com/2020/10/new-indonesian-law-may-make-it-harder-to-punish-firms-for-haze-causing-fires/>

⁴⁰ See Ditta Wisnu, "Food Estate Program Law Politics," *Journal of Contemporary Sociological Issue* 2, no. 1 (2022):76-91; and Six Indigenous Dayak community and village official from Pilang and Tumbang Nusa villages, "Peatland Use and Land Change in Pilang

The 2015 forest fire incidents prompted the government to introduce new regulations regarding land clearing without burning, posing challenges for the Dayak community, who relied on farming as their livelihood. As a result, many community members shifted their occupations to rubber farming and fishing, leading to the abandonment of land in the villages of Tumbang Nusa and Pilang.⁴¹

2.1.2. Pukung Pahewan as Conservation Area

The Indigenous Dayak Ngaju has designated a primary forest in Pukung Pahewan as a reserve or protected forest, ensuring the tribe's future. This forest also serves as a sacred home for the "forest spirits" believed by the Dayak Ngaju people to coexist with the community.

According to Article 87 of Dayak Customary Law, known as '*Singer Karusak pahewan, Karamat, rutas dan Tajahan*,' anyone who mocks, burns, slashes, cuts down trees, or steals from the sacred area will face penalties. The punishment includes a demand for an inheritance penalty or compensation for the nearest village, ranging from 15 to 30 *kati ramu*. The offender must also conduct a small ceremony at the location, offering a pig sacrifice and covering the expenses of a mediator who communicates with the forest spirits as an act of apology.⁴²

The Indigenous Dayak Ngaju firmly believe in their responsibility to protect and preserve Pukung Pahewan, as it holds sacred and mystical messages within its traditions and rituals. Any disturbance, destruction, or hunting of animals or plants in the area, whether intentional or unintentional, is met with sanctions. The community fears that not only the violators but the entire village may be subjected to punishment by their ancestors and the forest spirits.⁴³ Pukung Pahewan represents a restricted space with specific constraints, where trees, stones, and other sacred elements must not be disturbed or harmed, including the surrounding area. It serves as a conservation methodology for the Dayak people to protect nature and symbolizes their willingness to coexist harmoniously with all organisms in nature, including animals, plants, and forest spirits.⁴⁴

Despite various policies in Indonesia regarding the conservation of peat forests, there is currently no policy that specifically addresses the

and Tumbang Nusa village" interviewed by Sumarni, Central Kalimantan, 14–20 September 2021.

⁴¹ Indigenous Dayak community and village official, *loc.cit*.

⁴² Murhaini, *loc.cit*.

⁴³ See Bulkani, Ilham, and Saifullah Darlan, "Pukung Pahewan: The Effort of Natural Resources Conservation in Dayak Ngaju Community," In: *IOP Conference Series: Earth and Environmental Science*. 314 (2019): 1-9; and Indigenous Dayak elders, *loc.cit*.

⁴⁴ Merissa Octora, "The Local Knowledge of Dayaknese: Case Study of Pahewan Tabalean," *International Conference on Contemporary Social and Political Affairs Atlantis Press*, (2018): 104-107.

management of Pukung Pahewan. This recognition of Indigenous Dayak Ngaju values in sustainable forest management is crucial in the implementation of conservation efforts in Central Kalimantan.

2.2. Leveraging Indigenous Dayak Participation in Peatland Management through Customary Forest Practices

The Indigenous Dayak Ngaju people have a deep understanding of the interconnectedness between their lives and the ecosystems they inhabit. Their social, economic, and cultural aspects are intricately linked to the natural environment, and there exists a reciprocal relationship between the people and the land, encompassing a concept known as the "duty of care".⁴⁵ The duty of care implies a responsibility to care for and protect the land, which is closely tied to cultural norms and values. While the community benefits from the ecosystem, they recognize their duty to ensure its well-being. This perspective acknowledges that any benefits derived from the environment should be balanced with the preservation of cultural heritage and ecological integrity.⁴⁶

In the Dayak Ngaju community, the economy is not viewed as separate from the ecosystems but rather as an integral part of them. The well-being of the community's economy is closely intertwined with the health of the surrounding ecosystems. As a result, there is a mutual exchange between the two, with the community relying on the resources and services provided by the ecosystem, while also recognizing the need to sustainably manage and conserve those resources.

However, throughout the colonial and New Order eras, the Indigenous Dayak Ngaju people faced the unfortunate reality of their customary rights not being recognized, which deprived them of the authority to manage their natural resources and apply their local wisdom.⁴⁷ This lack of recognition became evident during the Soeharto era when the Indonesian government initiated the ill-fated Mega Rice Project in the peatlands of Central Kalimantan. Tragically, the project's improper irrigation methods and degradation of the peatlands resulted in catastrophic forest fires in 1997, engulfing extensive areas that included Pilang and Tumbang Nusa.⁴⁸

Without Free, Prior, and Informed Consent (FPIC) from the community, the government proceeded with the construction of thousands of canals, resulting in the cutting and destruction of many villagers' farm areas. This

⁴⁵ See Bulkani, Ilham and Darlan, *loc.cit.*; and Indigenous Dayak mantir, *loc.cit.*

⁴⁶ See Sara A. Thornton et al, "Towards Biocultural Approaches to Peatland Conservation: The Case for Fish and Livelihoods in Indonesia." *Environmental Science & Policy* 114 (2020): 341-351; and Octora, *loc.cit.*

⁴⁷ Tjilik Riwut, *Kalimantan Membangun Alam dan Kebudayaan* (Yogyakarta: NR Publishing, 2017), 345.

⁴⁸ Two members of Grassroot organisation Ranu Welum Foundation, "Land Rights of Indigenous Dayak Peoples" interviewed by Sumarni, Palangka Raya 20 October 2021.

lack of consultation and consent has had significant negative impacts on the affected communities, disrupting their livelihoods and causing environmental damage. The consequences were two-fold for the communities: not only did they suffer the loss of their lands without compensation, but they also witnessed the severe environmental damage caused by the ill-conceived project.⁴⁹ The implementation of FPIC is essential to ensure that decisions made by the government respect the rights, interests, and well-being of local communities and enable more sustainable and inclusive development.⁵⁰

The experience of facing discrimination in agrarian conflicts within Pilang village heightened the Indigenous peoples' awareness regarding the significance of obtaining formal recognition for their ancestral territories. In response, they have embarked on a determined struggle to secure official acknowledgment of their customary forest, which would grant them the autonomy to independently manage their ecosystem.

In 2019, their long and arduous struggle began to yield positive outcomes with the issuance of a decree by the Pulang Pisau Regent recognizing indigenous peoples. Additionally, the Ministry of Environment and Forestry issued a decree acknowledging their customary forest, as specified in Minister of Environment and Forestry Decree No. 5447/MENLHK-PSKL/PKTHA/KUM.1/6/2019.⁵¹ Notably, the Barasak Island Customary Forest, covering 102 hectares and designated for protection, stands as Central Kalimantan's only customary forest established through a social forestry scheme. The swift issuance of the decree for Barasak Island, located within an area with a different designated use, sets it apart from customary forests in forested areas, which typically require recognition through regional regulations (*peraturan daerah*) as mandated by the law.⁵²

2.3. Customary Forest: Recognising Indigenous Dayak Ngaju Land Management

The recognition of customary forests in Pilang Village provides greater space for Indigenous Dayak peoples to use their traditional knowledge and wisdom in managing forests for the greatest prosperity of their people. This also promotes the utilization of time and space perspectives of the Indigenous Dayak people, while emphasizing *handep* collaboration and equal partnership among stakeholders.

⁴⁹ Indigenous Dayak community and village official, *loc.cit*

⁵⁰ Stephanie Baez, "The Right REDD Framework: National Laws that Best Protect Indigenous Rights in a Global REDD Regime," *Fordham Law Review* 80 (2011): 821.

⁵¹ See Indigenous Dayak mantir, *loc.cit*; Minister of Environment and Forestry Decree No. 5447/MENLHK-PSKL/PKTHA/KUM.1/6/2019, Art.1.

⁵² Grassroot organisation Ranu Welum Foundation, *loc.cit*.

This framework centers around the concept of time and space as utilized by the Indigenous Dayak people. Time refers to the understanding and respect for the temporal aspects of ecological processes and the intergenerational perspective. It recognizes that sustainable management of peatlands requires long-term thinking and planning, considering the needs and well-being of future generations. The Indigenous Dayak people's knowledge of the land passed down through generations, holds insights into the temporal dynamics of the ecosystem. Space refers to the Indigenous Dayak people's intimate connection with the physical and cultural landscapes of the peatlands. It recognizes the significance of their traditional practices, cultural values, and customary land management systems. The framework promotes the preservation and revitalization of Indigenous practices and institutions related to peatland management. By valuing their knowledge and expertise, the framework seeks to incorporate Indigenous perspectives into decision-making processes.⁵³

The framework also emphasizes *handep* collaboration and equal partnership among stakeholders. It recognizes that effective peatland management requires the active involvement and meaningful participation of Indigenous communities, government agencies, non-governmental organizations, and other relevant stakeholders. *Handep* refers to a custom practiced by the Dayak people, where they come together to collectively clear agricultural land.⁵⁴ When one villager is clearing land, others join in to provide assistance, with relatives also contributing their labor as repayment for previously received services while working on their own fields. Those who are unable to participate may feel a psychological and customary burden, as reciprocity is valued within the Dayak community. This sense of obligation to help one another fosters a strong sense of community among the Dayak people.⁵⁵

By fostering *handep* collaboration, the framework aims to create a more inclusive and equitable approach to peatland management, where the voices and rights of Indigenous Dayak communities are valued and integrated into decision-making processes. This will also allow the community to run their initiative, such as making tree nurseries for native peatlands species that give them economic benefits or making bee keeping. To make this movement viable, it must be supported financially and technically by providing mentoring and tools.

⁵³ See Indigenous Dayak mantir, *loc.cit*; Indigenous Dayak community and village official, *loc.cit*; and Grassroot organisation Ranu Welum Foundation, *loc.cit*.

⁵⁴ Muhammad Husni, "Kearifan Lokal Handep Masyarakat Dayak: Perspektif Cendekiawan Muslim Dayak di IAIN Palangka Raya," *Rihalah Jurnal Sejarah dan Kebudayaan* 8, no. 2 (2020): 113-133.

⁵⁵ Indigenous Dayak Mantir, *loc.cit*.

The Indigenous Dayak Ngaju people in Pilang village have faced a challenging struggle to obtain recognition for their customary land, primarily due to the extensive documentation required and the reluctance of some local governments to acknowledge indigenous territories. The community was struggling to navigate the intricate legal processes required for recognition, including meeting various administrative requirements and complying with governmental regulations. Limited access to legal support and information further compounds the difficulties faced by Pilang community.

The procedure of obtaining legal recognition for customary forests still follows the procedure required by the Forestry Law. To be able to manage the forest, Indigenous communities should be recognized by district or provincial governments, as stated in Article 67 of Forestry Law.⁵⁶ If their territories fall within the administrative jurisdiction of a single district, recognition should come from the district government. For territories spanning across multiple districts, recognition must be obtained from the provincial government. However, the practical implementation of this provision often hampers the recognition of customary forests since many local governments are unwilling to acknowledge Indigenous territories. This reluctance from local authorities constraints Indigenous communities from gaining the legal recognition they need to govern their natural resources effectively.⁵⁷

However, their efforts have been bolstered by the invaluable support and assistance of a third party, USAID-Lestari. This external entity has played a crucial role in providing the necessary backing and resources to navigate the complex process of formal recognition. With the aid of USAID-Lestari, the Indigenous community in Pilang village has been able to overcome barriers and advance their cause, paving the way for the recognition and preservation of their ancestral lands.⁵⁸

2.4 Barriers in Community-led Peatland Management

Indigenous communities may face various challenges in governing their natural resources. The limited availability of resources to maintain and manage their natural resources might be the biggest barrier for them. For instance, in the case of Pilang village, even after obtaining legal recognition of their customary forest, the community encountered difficulties in securing funding to support their initiatives. They faced challenges in

⁵⁶ See Safitri, *loc.cit*; and Law No. 41 of 1999 concerning Forestry, Art. 67.

⁵⁷ Indigenous Dayak community and village official, *loc.cit*.

⁵⁸ See Indigenous Dayak mantir, *loc.cit*; and Official of Barasak Customary Forest. "Community Effort in Obtaining Legal Recognition of Barasak Customary Forest," Pilang Village, interviewed by Sumarni, 15 October, 2021.

finding financial resources for essential infrastructure development, such as custom buildings, necessary for the development of ecotourism and generating economic benefits for the community. The lack of adequate resources can hinder communities from implementing sustainable practices and maximizing the potential of their natural resources.

Additionally, Indigenous communities may also encounter knowledge and managerial challenges, which pose significant barriers to effective governance. The progress in government-led peatland restoration has been constrained primarily by socio-economic challenges faced by communities.⁵⁹ To achieve successful intervention, it is essential to comprehend community concerns and develop optimal short and medium-term income solutions that facilitate the transition to sustainable income generation.⁶⁰ By addressing these socio-economic aspects, peatland restoration efforts can become more effective and inclusive, benefiting both the environment and local communities. However, historical marginalization and limited access to education and training opportunities have left some Indigenous communities lacking the necessary knowledge and expertise. This knowledge gap inhibits their ability to manage their customary forests efficiently and fully benefit from them.

Addressing the barriers to community sovereignty in governing their natural resources and obtaining legal recognition of their customary forests necessitates collaborative efforts involving government agencies, civil society organizations, and the Indigenous communities themselves. These efforts should focus on overcoming the challenges related to recognition by local governments, securing sufficient resources, bridging knowledge gaps, and simplifying the legal processes. By empowering Indigenous communities and supporting their rights and stewardship over their ancestral lands and resources, a more inclusive and sustainable approach to natural resource governance can be achieved.

3. CONCLUSION

Peatland serves as a valuable ecosystem for the Indigenous Dayak Ngaju community. Their adoption of a zonation system for peatland use, along with the integration of ecosystem management and cultural rituals into their farming practices, showcases their deep connection and harmonious relationship with nature. However, despite the laws in Indonesia that recognize the rights of Indigenous peoples and aim to

⁵⁹ Dyah Puspitaloka et al, "Analysis of Challenges, Costs, and Governance Alternative for Peatland Restoration in Central Kalimantan, Indonesia," *Trees For People* 6, (2021): 100131.

⁶⁰ Benjamin John Wiesner and Paul Dargusch, "The Social License to Restore— Perspectives on Community Involvement in Indonesian Peatland Restoration," *Land* 11 (2022): 1038.

safeguard their customary lands, the implementation and enforcement of these laws have demonstrated weaknesses and inconsistencies. Furthermore, several programs and policies have failed to prioritize seeking the consent and opinions of the community, despite the evident impact on their traditional way of life. To address these issues, it is essential to urgently implement the principle of FPIC and enhance the implementation and enforcement of legal protections. FPIC ensures that decisions affecting Indigenous communities are made in consultation with them, respecting their rights and interests. Strengthening legal protections will further safeguard the rights and well-being of Indigenous communities, providing them with the necessary legal mechanisms to protect their customary lands and maintain their traditional way of life. To bridge the gap between government policies and indigenous knowledge, it is important to foster a legal framework that recognizes and integrates the utilization of the 'time and space' perspectives of the Indigenous Dayak people, while placing emphasis on the collaborative practice of handep among all stakeholders involved.

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