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Legal Pluralism and Customary Forest Governance: Customary Community-Based Zoning and Institutional Adaptation in Yongsu Desoyo, Papua

Pluralisme Hukum dan Tata Kelola Hutan Adat: Penataan Zonasi Berbasis Masyarakat Adat dan Adaptasi Kelembagaan di Yongsu Desoyo, Papua

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ABSTRACT

Customary forest governance in Papua reflected the complex dynamics of legal pluralism, where state and customary law interacted in the management of community living spaces. This research aimed to analyze the governance of the indigenous forest by the Yongsu Desoyo community through a traditional zoning system consisting of *sena, buso*, and *sasena* as cultivation land, utilization zone, and sacred zone. The response of customary institutions, particularly *keret* and *ondoafi*, to external pressures and socioecological change was also examined. Data were collected through in-depth interviews, participant observation, and document analysis. The results showed that forest management practices in Yongsu Desoyo embodied key principles of Community-Based Natural Resource Management (CBNRM). The customary zoning system contributed to maintaining the ecological functions of the forest, strengthening social legitimacy, regenerating customary values, and promoting ecological justice. Furthermore, institutional adaptation and the active participation of youth were crucial to sustaining customary forest governance in the context of power asymmetries and limited legal recognition by the state. Customary forest governance in Yongsu Desoyo reported the potential of a co-governance approach that combined the strengths of customary institutions with formal policy support. This offered a strategic pathway for enhancing the sustainability of forests and advancing justice in conservation.

KATA KUNCI
hutan adat, pluralisme hukum, zonasi adat, kelembagaan komunitas, tata kelola sumber daya alam

INTISARI

Tata kelola hutan adat di Papua mencerminkan dinamika pluralisme hukum yang kompleks, yakni adanya interaksi antara hukum negara dan hukum adat dalam pengelolaan ruang hidup masyarakat. Penelitian ini bertujuan untuk menganalisis bagaimana masyarakat Kampung Yongsu Desoyo mengelola hutan adat melalui sistem zonasi tradisional yang meliputi sena sebagai lahan garapan, buso sebagai zona pemanfaatan, dan sasena sebagai zona sakral. Penelitian ini juga mengkaji bagaimana kelembagaan adat, terutama keret dan ondoafi, merespons tekanan eksternal dan perubahan sosial ekologis. Dengan menggunakan pendekatan kualitatif melalui wawancara mendalam, observasi partisipatif, dan studi dokumen, hasil penelitian menunjukkan bahwa praktik pengelolaan hutan di Yongsu Desoyo mencerminkan prinsip Community Based Natural Resource Management *(CBNRM). Sistem zonasi adat tersebut tidak hanya berperan dalam menjaga fungsi ekologis hutan, tetapi juga memperkuat legitimasi sosial, meregenerasi nilai-nilai adat, dan mendorong keadilan ekologis. Selain itu, adaptasi kelembagaan dan keterlibatan aktif generasi muda terbukti penting dalam menjaga keberlanjutan tata kelola hutan adat di tengah ketimpangan kekuasaan dan terbatasnya pengakuan hukum negara. Dengan demikian, tata kelola hutan adat di Yongsu Desoyo menunjukkan bahwa pendekatan* co-governance *yang memadukan kekuatan kelembagaan lokal dan dukungan kebijakan formal dapat menjadi langkah strategis untuk memperkuat keberlanjutan hutan serta keadilan dalam konservasi.*

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Introduction

Over the past several decades, customary community-based forest management has gained global recognition as an effective approach to biodiversity conservation and climate change mitigation. This approach emphasizes the importance of secure tenure rights, local knowledge systems, and collective governance as key elements in sustaining forest ecosystems (Jhaveri 2020; Chao 2021). Angelsen et al. (2018) reported that areas managed by indi-genous peoples and local communities experienced lower deforestation rates compared to conservation areas managed exclusively by the state.

In Indonesia, momentum toward the recognition of customary communities' rights was significantly strengthened by Constitutional Court Decision No. 35/PUU-X/2012, which ruled that customary forests were no longer part of state forests. However, research in West Papua shows that the expansion of oil palm plantations has driven large-scale forest conversion and threatens the living spaces of customary communities. Beyond the loss of access to land and forests, customary communities face the risk of losing long-standing cultural relationships with forest territories maintained across generations (Runtuboi et al. 2021). These results show the importance of recognizing customary land rights and protecting areas of high cultural value in Papua. Several studies suggested that strengthening local institutions and revitalizing customary norms served as counter-balances to external pressures threatening the sustainability of indigenous livelihoods (Siscawati et al. 2017; Fisher et al. 2018; Sahide et al. 2020).

Natural resource governance in customary territories is often confronted with the coexistence of overlapping state and customary legal regimes, creating a complex arena where local communities must navigate multiple normative systems to secure resource access while adapting to highly centralized regulatory frameworks (Po et al. 2019; Hariri & Babussalam 2024; Karso 2025). Recent empirical research from Aceh, Bali, and Eastern Indonesia reports how customary and local communities actively negotiate plural legal orders in everyday forest and environmental governance practices (Aldyan et al. 2025; Jaenong et al. 2025). In Papua, this dualism becomes particularly significant given the region's rich ecosystems and the continued vitality of customary institutions regulating spatial management practices.

Papua possesses distinctive characteristics in the context of spatial governance and customary-based conservation. The Manokwari Declaration of 2018, which committed to protecting 70% of Papua's land area as conservation zones, reflects political willingness to mainstream customary-based approaches. However, serious challenges persist, including overlapping concession permits, boundary conflicts, and the introduction of food estate programs (Chao 2021). Yongsu Desoyo Village, located on the northern slopes of the Cyclops Mountains, was formally recognized as a customary forest through Ministerial Decree of the Ministry of Environment and Forestry No. SK.8036/MENLHK-PSKL/PKTHA/PSL.1/12/2022, represents an important example of governance grounded in local wisdom. Customary communities apply a traditional zoning system that divides forest areas into specific zones such as *sena*, *buso*, *sasena*, and *eudoko*. Each zone serves distinct ecological, social, and spiritual functions regulated by customary norms and sanctions enforced by traditional institutions such as the *ondoafi* and the customary council. The system is a form of spatial management and an expression of a long-standing human–nature relationship passed down through generations.

Scholarly discourse on the coexistence of multiple legal systems within a single society encompassing state and customary laws, or called as legal pluralism, is rarely discussed. Existing research has emphasized recognition politics, tenure insecurity, and the broader impacts of external pressures on indigenous livelihoods. However, limited attention has been given to the practice of legal pluralism in everyday forest governance through customary zoning, sanction mechanisms, and the interaction between local institutions and state policies. Empirical documentation of how Papuan customary communities operationalize customary spatial categories such as *sena*, *buso*, and *sasena* in relation to social legitimacy and formal legal recognition remains limited. This research addresses the gap by examining Yongsu Desoyo as a case through which legal pluralism can be understood as a coexistence of legal orders and a lived

governance process embedded in customary institutions, spatial practices, and socioecological adaptation. This research raises the questions: (1) How do community members formulate and implement customary zoning to regulate forest space use? (2) How do sanction mechanisms and social norms operate to enforce customary rules? and (3) How do customary communities navigate interactions between customary law and state policies in safeguarding territorial rights?

Using the case of Yongsu Desoyo, this research offers novelty in two main respects. First, the concept provides in-depth documentation of a customary zoning system that has received limited attention in academic literature, specifically from eastern Indonesia, such as Papua. The operation of zoning systems (*sena*, *buso*, *sasena*) is reported concretely in regulating space, activities, and the community's spiritual ecological relationship with the forest, rather than merely describing the existence of customary norms. The use of a participatory ethnographic approach and the integration of the Community-Based Natural Resource Management (CBNRM) framework with legal pluralism increases the distinctiveness of this research in the holistic analysis of forest governance from sociocultural, ecological, and institutional perspectives. Second, a rare case analysis concerning the acceptance of customary forests is represented through a ministerial decree by customary communities as an opportunity to strengthen local norms and expand the role of institutions in protecting living spaces. A positive dynamic of bottom-up legal innovation is reported in the context of spatial governance practices. Therefore, this research contributes to academic debate and provides practical lessons for policymakers in developing contextual and just community-based forest management models.

Methods

Research Site

This research was conducted in Yongsu Desoyo Village, a coastal settlement located in Ravenirara District, Jayapura Regency, Papua Province. The village covers approximately 3,394 ha, and was formally designated as a customary forest through the Ministerial Decree of the Ministry of Environment and Forestry No. SK.8036/MENLHK-PSKL/PKTHA/PSL.1/12/2022. Geographically, the village is located on the northern slopes of the Cyclops Mountains Nature Reserve, an ecologically significant conservation area characterized by high biodiversity and strong cultural heritage. The community structure consists of several *keret* (customary kinship units), each of which holds stewardship over specific forest zones based on ancestral inheritance.

Yongsu Desoyo was selected as the research site for three main reasons. First, the village represented a legally recognized customary forest area in Papua, making the context a relevant case for examining the interaction between customary and state law. Second, the community maintained an active customary zoning system to regulate forest access, use, and protection in everyday practice. Third, the case provided a valuable empirical setting for analyzing the adaptation of customary institutions to external pressures, legal recognition, and socioecological change.

Data Collection

This study adopted a qualitative approach grounded in community participation. Data were collected between January and March 2025 using three primary methods. First, in-depth interviews were conducted with key informants (Table 1), including the Village Head, who also served as the customary leader (*Ondofolo*), the Village Secretary, the Chairperson of the Indigenous Community Institution (*Lembaga Masyarakat Adat* (LMA)), and five indigenous community members from Yongsu Desoyo Village who actively used the customary forest. These community informants consisted of two females and three males. The selection of informants was intended to capture perspectives from both formal customary leadership and local community members directly engaged in customary forest use. Interview questions focused on customary forest zoning arrangements, prohibitions and sanctions, institutional structures, and experiences in dealing with spatial conflicts or state interventions. Second, participant observation was used to document daily community activities related to forest use and management, capturing everyday practices and social

Table 1. List of Informants

Code of Informant	Position/Role of Informant	Time of Interview
1	Ondofolo (customary leader)	13 March 2025
2	Community member and customary forest user from Yongsu Desoyo Village	18 January 2025
3	Community member and customary forest user from Yongsu Desoyo Village	18 January 2025
4	Community member and customary forest user from Yongsu Desoyo Village	18 January 2025
5	Community member and customary forest user from Yongsu Desoyo Village	18 January 2025
6	Community member and customary forest user from Yongsu Desoyo Village	18 January 2025
7	Chair of the Indigenous Community Institution (ICI), Yongsu Desoyo Village	18 January 2025
8	Yongsu Desoyo Village Secretary	13 March 2025

interactions within the customary governance system. Third, document analysis was conducted on village archives, official documents on customary forest recognition issued by the Ministry of Environment and Forestry, participatory maps, the Jayapura Regency Spatial Plan or *Rencana Tata Ruang Wilayah* (RTRW), and village regulations concerning natural resource management. These documents were used to validate and complement data obtained from interviews and observations.

Key informants were selected purposively based on roles, knowledge, and direct participation in customary forest governance. Customary leaders and village authorities were selected because of formal and customary decision-making roles. Meanwhile, community members were selected because of active use of customary forest areas and experiential knowledge of zoning practices, rules, and resource use. This purposive selection was intended to capture institutional and everyday perspectives on indigenous forest governance.

Data Analysis

Data analysis was conducted thematically through open and axial coding, following the approach outlined by Saldaña (2021). Interview transcripts and field notes were categorized into three main themes, namely (1) the structure of customary zoning and cultural meanings, (2) normative systems and sanction mechanisms, and (3) the relationship between customary law and state policies.

Analytical Framework

The analytical framework considered two key theoretical approaches, namely CBNRM and legal pluralism. CBNRM positioned local communities as the primary actors in decision-making and natural resource governance, assuming that active community participation, clearly defined access rights, and the integration of local knowledge enhanced ecological sustainability and social well-being (Berkes 2009). In Yongsu Desoyo, the principles were reflected in the customary forest zoning system, including *sena*, *buso*, and *sasena*, as well as in the active role of customary institutions.

Legal pluralism was particularly relevant in Papua, where state law and customary legal systems coexisted and overlapped. This approach emphasized that no single legal system operated in absolute terms, and the relationships between systems might be cooperative, conflicting, or complementary (von Benda-Beckmann 2002). According to Hariri and Babussalam (2024), this configuration could be understood as combining juridical legal pluralism, expressed through the state's formal recognition of customary forests, and empirical legal pluralism, reflected in the everyday practices. In Yongsu Desoyo, the interaction between the ministerial decree recognizing customary forests and long-standing indigenous norms reported the layered form of legal pluralism. The community complied with formal state regulations and independently upheld customary norms governing prohibitions, sanctions, and ritual practices.

CBNRM and legal pluralism were applied integratively to understand how customary communities interpret, protect, and govern living spaces, as well as navigate the dynamics between state recognition and local authority in forest governance. The results were derived from a combination of in-depth interviews with customary leaders, village authorities, and community members, as well as direct observation of community activities, and analysis of customary and administrative documents. Legal pluralism was operationalized by examining observable dimensions, namely, 1) customary zoning categories and rules

through which the community regulated access and resource use, 2) the sanction mechanisms and deliberative processes used to enforce customary norms, and 3) how community members and customary authorities negotiated formal state recognition, government interventions, and village-level policy processes. These dimensions were used to identify the coexistence, interaction, and selective mobilization of customary and state law in everyday forest governance.

Result and Discussion

The Structure of Customary Zoning and Its Cultural Meanings

The Customary Territory of Yongsu Desoyo

This subsection was presented in relation to the first research objective of examining the formulation and implementation of the customary zoning system in Yongsu Desoyo. The customary forest governance system was organized through a traditional zoning arrangement that reflected ecological functions and cultural meanings. Based on interview data and community accounts, this system consisted of three principal zones: *sena*, *buso*, and *sasena*. *Sena* refers to cultivation or garden areas used for subsistence farming and the production of crops such as areca nut, coconut, mango, and other plants that support daily livelihoods. *Buso* is the area designated for the use and collection of forest resources, including hunting and the harvesting of non-timber forest products such as sago, coconuts, and other natural materials. *Sasena* refers to sacred or highly restricted areas protected through customary norms and are not open to ordinary use. According to *Ondofolo*, the forest was divided according to customary understandings of function, restriction, and inherited responsibility. Therefore, each part possessed meaning within the life of the community (Interview with *Ondofolo*, 13 March 2025). This arrangement showed that forest

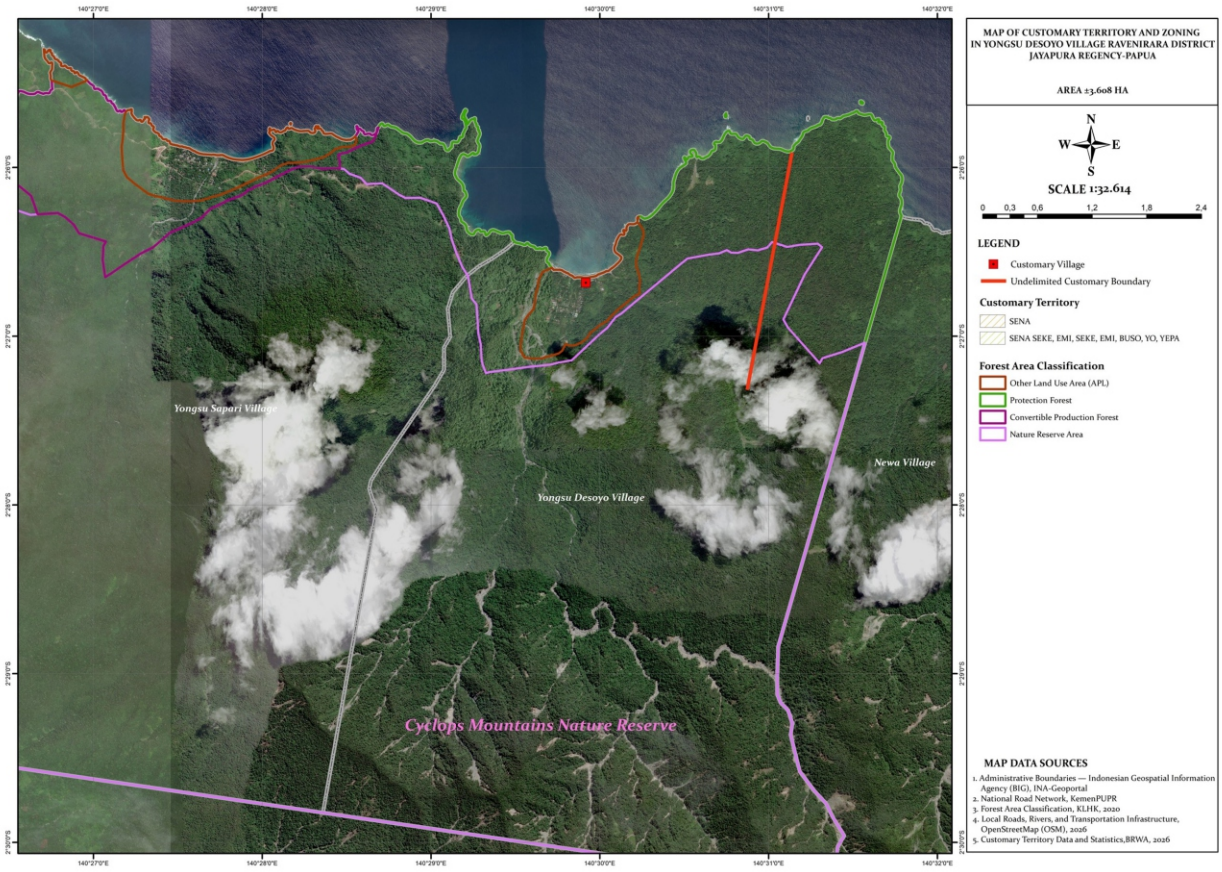


Figure 1. Map of Customary Territory and Zoning in Yongsu Desoyo Village, Ravenirara District, Jayapura Regency, Papua. Adapted from *Badan Registrasi Wilayah Adat (BRWA)*, Jayapura Regency; spatial boundaries digitized and cartographic design by the authors.

Remarks: *Teprang Yowari*, as shown in the map, refers to a locally recognized place name within the customary territory of Yongsu Desoyo and should not be understood as a separate zoning category such as *sena*, *buso*, or *sasena*.

space was treated as a socially and spiritually ordered landscape shaped by customary meanings and inherited territorial knowledge.

Figure 1 shows that the customary territory of Yongsu Desoyo is spatially organized through clearly recognized boundaries and functional zones reflecting patterns of use and customary meaning. The map suggested that the customary landscape was embedded within a broader territorial setting shaped by forest functions, administrative boundaries, and locally recognized spatial divisions. In this context, *Teprang Yowari* identified a locally known customary place within the mapped territory rather than a distinct category of forest zoning. Therefore, the zoning system was a conceptual classification of forest use and a concrete spatial arrangement that guided how the community governed, protected, and used the customary territory.

The cultural meaning of the zoning system was in the belief that forest space was inseparable from ancestral rights, social order, and ecological balance. Interview data showed that each clan or *keret* had territorial boundaries. These boundaries were understood as customary markers that embodied ancestral legitimacy and moral responsibility. Informant 1 emphasized that customary boundaries were intended to respect inherited rights and prevent actions that could disturb social and ecological balance. Permission was required from the customary rights holder whenever a clan wished to access or use resources located on another clan's customary land (Interview with Informant 1, 18 January 2025). Community members also stressed that the forest should not be exploited carelessly because nature was believed to respond through misfortune or ecological disturbances. In this context, Informant 1 explained that the forest was protected because of its importance for the well-being of future generations and because deforestation was believed to increase the risk of flooding and other forms of environmental degradation (Interview with Informant 1, 18 January 2025). Sacred and restricted areas were further associated with spiritual beliefs, including the understanding that individuals entering certain places with improper intentions could become lost or encounter danger. These perspectives demonstrate that customary zoning was both functional and symbolic, as spatial governance was closely linked to collective memory, moral responsibility, and respect for the natural environment.

The zoning system served important livelihood functions. Community members described the customary forest as the main basis of subsistence, particularly through gardening, resource gathering, and other activities providing food and income for households. An indigenous community member and customary forest user from Yongsu Desoyo Village (Informant 2) explained that the customary forest was regarded as a living space that had sustained the community across generations and remained under collective protection (Interview with Informant 2, 18 January 2025). This perspective helped explain why the protection of customary forests was understood as a cultural obligation and intergenerational responsibility. The structure of customary zoning in Yongsu Desoyo reflected an integrated socioecological system in which livelihood needs, territorial authority, spiritual meaning, and conservation practices were mutually reinforcing.

Customary Zoning as an Adaptive Model of Forest Governance in Yongsu Desoyo

Yongsu Desoyo is a legally recognized customary law community in Ravenirara District, Jayapura Regency, Papua. The customary forest area of approximately 3,394 ha was formally recognized by the Ministry of Environment and Forestry (now the Ministry of Forestry) in 2022. The community traced its origin to ancestral migration from the Genyem area and was socially organized through a *keret*-based kinship system. This kinship structure shaped social identity, territorial attachment, and customary authority within the community. Village documents identified several *keret*, including Ormuseray, Tablaseray, Yoafifi, Day, Okroseray, Nusa, Yakadewa, Nari, and Abisay. Customary leadership was centered on the *Ondofolo*, whose authority was closely connected to lineage and the governance of communal territory. This ethnographic background was essential for understanding that customary forest governance in Yongsu Desoyo was embedded in a living social system structured by ancestry, kinship, and customary leadership. In this context, the Indigenous community of Yongsu Desoyo possessed a well-established

system of customary forest governance organized through a traditional zoning framework consisting of three main zones: *sena, buso,* and *sasena.* Each zone was governed by specific customary rules, including temporal access restric-tions, permitted activities, and clearly defined customary sanctions for violations. This zoning practice reflected ecological and economic considerations as well as profound spiritual values. For instance, the *sasena* zone was regarded as a cosmological space believed to be inhabited by ancestral spirits, and access was tightly regulated, permitted only within specific ritual contexts. Knowledge of the functions and boundaries of each zone was transmitted orally across generations and sustained through informal, community-based monitoring mechanisms.

Customary institutions played a central role in this governance system. The *ondoafi* and *keret* leaders acted as guardians of customary spatial order, overseeing forest use and serving as key actors in resolving conflicts among land users. Decision-making processes were conducted through customary deliberation (*musyawarah adat*). Community members were afforded opportunities to express views within the forums, even though the social structure remained hierarchical.

The Yongsu Desoyo customary community showed significant adaptive capacity in responding to formal regulatory changes affecting customary territory. Formal recognition by the Ministry of Environment and Forestry was positively received by the community. For residents, this recognition functioned as external validation that strengthened the customary legal system. State legitimacy was accepted provided the concept did not displace long-standing local norms. In this context, customary forest governance was grounded in inherited traditions, ongoing normative renewal, and institutional expansion to address contemporary challenges. For example, the community reinforced local customary sanctions, including access prohibitions, customary fines, and ecological restoration rituals, such as forest closure ceremonies, in response to threats such as illegal logging by external actors.

Similar adaptive responses were evident in relation to the presence of outsiders and newcomers in Yongsu Desoyo, through economic mobility, intermarriage, or other forms of settlement. Even though many of the relevant regulations remained orally transmitted, the concepts were clearly recognized and consistently observed within the community. The main prohibitions comprised crossing inter-clan territorial boundaries without permission, accessing or using land belonging to another *keret*, opening forest areas without approval from customary authorities, and converting customary forest for private interests. Therefore, access to land and forest resources was preceded by permission from the *Ondofolo*, clan leaders, or other recognized customary rights holders. These prohibitions were communicated and reinforced through a traditional customary deliberation forum that serves as the central meeting place for Indigenous leaders and community members to discuss matters related to customary land rights (*hak ulayat*), natural resource management, conflict resolution, and collective decision-making under customary law (*para-para adat*). Through this forum, customary rules and decisions were disseminated to community members via the customary leadership structure. In cases of violation, customary law was enforced through deliberation and sanctions in the form of customary fines, social reprimands, restrictions on access, or referral to state authorities. Customary institutions continued to adapt their regulatory practices to demographic and social change while maintaining the social and ecological integrity of the customary territory.

Customary law was understood as a living body of orally transmitted norms, values, and sanctions that continued to guide social and ecological relations within the community. In this context, the relevance differed from state law. Customary law was more directly embedded in everyday life, particularly in regulating access to forest areas, inter-clan boundaries, sacred spaces, and acceptable forms of resource use through the authority of the *ondoafi* and customary leaders. State law was more relevant in providing formal recognition, administrative legitimacy, and policy support beyond the community level. These two systems operated in different but interconnected domains, shaping customary forest governance through ongoing interaction and mutual adjustment. Therefore, formal state recognition opened a dialogic space in which two legal systems operated in parallel. In this space, the adaptive and contextual institutional

capacities of the customary community became most evident. The community actively developed localized governance mechanisms that responded to legal, social, and ecological change.

Customary forest governance continued to be maintained through the intergenerational preservation of ancestral practices and active adaptation to the complexities of contemporary spatial governance. The community's ability to retain the values and functions of customary zoning, while responding to formal regulations and external pressures, showed that customary law remained a living, flexible, and context-specific system. However, this adaptive capacity was not interpreted as evidence of fully secure or uncontested governance, since the implementation of collective land rights and the principle of free and informed consent remained limited. Customary communities were custodians of tradition and active agents who continued to negotiate legal, social, and ecological pressures under conditions of unequal recognition.

The customary forest governance practiced in Yongsu Desoyo was understood as a localized expression of tradition and an adaptive model of natural resource management capable of balancing historical legitimacy, institutional innovation, and state recognition. These results allowed policymakers and scholars to reconsider overly centralized approaches to conservation and spatial planning and promote the integration of plural legal systems into forestry and regional development policies grounded in principles of ecological justice.

Normative Systems and Sanction Mechanisms

The customary zoning system was sustained by a normative order that regulated access, use, and conduct within customary forest areas. These rules were transmitted orally and consistently observed within the community. The main prohibitions included crossing inter-clan territorial boundaries without permission, accessing or using land belonging to another *keret*, opening forest areas without approval from customary authorities, and converting customary forest for private interests. Access to forest land and resources was preceded by permission from the *ondoafi*, clan leaders, or other recognized customary rights holders. As Informant 1 explained, "when one clan wished to access or use resources located on another clan's customary land, permission was obtained from the customary rights holder" (Interview with Informant 1, 18 January 2025). This principle governed access to customary land and applied equally to community members and outsiders seeking to enter, settle, or use resources within the customary territory.

The normative system was transmitted through customary deliberation and leadership structures rather than formal written codification. Interview data showed that important decisions were first discussed in the *para-para adat*, where customary leaders deliberated on the substance, fairness, and implications of a rule before the concept was communicated to the wider community. In this process, the *ondoafi* occupied a central position, supported by *mandataris*, clan leaders, and other customary functionaries who transmitted and implemented decisions. *Ondofolo* emphasized this procedural norm by stating, "the key principle was that matters were discussed in the *para-para adat* before any decision" (Interview with *Ondofolo*, 13 March 2025). This structure allowed customary norms to remain socially embedded and continually reinforced through everyday interaction, rather than functioning as abstract legal commands detached from community life. Customary law operated as a living body of orally transmitted norms, values, and sanctions that regulated social and ecological relations within the territory.

Sanction mechanisms were similarly rooted in deliberation and social accountability. Interview data showed that present-day violations were addressed through discussion, customary fines, social reprimands, restrictions on access, and referral to state authorities when necessary. Several informants explained that customary fines could be paid using *tomako batu*, a traditional stone axe with high cultural value that has long been used as a form of customary compensation in the resolution of customary disputes. Other informants emphasized that sanctions also involved collective judgment and moral censure, thereby reinforcing compliance with customary norms and restoring social harmony. *Ondofolo* explained that sanctions for serious territorial violations could be harsher, but the practices were

adjusted through interaction with the church and the state, leading to more mediated and proportionate forms of enforcement (Interview with *Ondofolo*, 13 March 2025). Community members stated that violations of customary rules carried social, spiritual, and ecological consequences. As Informant 1 explained, damage to the customary forest was not regarded as a minor offense because destructive actions were believed to have far-reaching consequences for both people and nature, including environmental disturbances such as flooding (Interview with Informant 1, 18 January 2025).

The normative system combined social regulation, customary authority, and ecological ethics to maintain territorial order and collective responsibility. The force of customary law depended on the existence of prohibitions and sanctions, as well as the shared understandings of territory, reciprocity, and respect for ancestral norms. Therefore, the governance of the customary forest was sustained through a normative system that was practical, moral, and deeply embedded in community life.

Keret as the Social Basis and Source of Customary Legitimacy in Forest Governance

In the customary community of Yongsu Desoyo, the *keret* constituted the core of the social structure underpinning the allocation of customary territory, resource tenure, and authority in ritual and village deliberation. Functionally, *keret* was connected to a lineage, clan, or extended kinship group. The concept embodied a broader significance, representing genealogical ties as well as ecological and spiritual legitimacy over the community's living space. Each *keret* held stewardship over specific zones within the customary forest, such as *sena*, *buso*, or *sasena*, and bore intergenerational responsibility for the utilization and protection.

Based on interview data and historical accounts provided by community members, two main categories of *keret* were identified in Yongsu Desoyo, namely customary and assimilated *keret*. The customary *keret* were regarded as the direct descendants of the first ancestors who opened and settled the territory. This *keret* possessed the highest degree of legitimacy within the customary institutional structure, namely Ormuserey, Tablaseray, Yoafifi, Day, Okroserey, and Nusa. Central symbolic and structural positions were occupied as custodians of customary rituals, regulators of natural resource distribution, and key decision makers in customary deliberations. This pattern was consistent with Mansoben's analysis of Papuan customary political organization, particularly the *ondoafi* system in the northeastern Papuan and Sentani cultural region, where leadership was hereditary, rooted in kinship, and closely connected to territorial control and responsibility over communal resources. In this context, the position of the leading *keret* reflected a broader Papuan institutional logic in which ancestry, territorial precedence, and customary authority formed the basis of customary governance.

Historical processes and social dynamics formed assimilated *keret* through intermarriage between local inhabitants and outsiders, family migration from neighboring villages, or the granting of residency rights in recognition of contributions to the village. Several *keret*, including Yakadewa, Nari, and Abisay, were formally acknowledged within the customary system. These *keret* were subjected to long processes of acculturation and socialization and were accepted through customary forums. Recognition of assimilated *keret* was typically accompanied by spatial limitations or specific arrangements governing the rights to resource management.

The *keret* system constituted an important social foundation for the local legitimacy of customary forest governance. Rights to space were not derived solely from formal legal instruments, such as the ministerial decree recognizing the customary forest, but were also shaped through genealogical, spiritual, and social relationships maintained by each *keret*. Papuan customary political organization was closely connected to kinship, hereditary leadership, and territorial authority (Mansoben 1995). In a legal pluralism framework, *keret* was understood as the social unit through which customary law was practiced and negotiated in relation to the state. In this context, state recognition of customary forests that did not adequately engage with the *keret* system might weaken locally grounded decision-making and benefit distribution. The structure also functioned as an internal mechanism for monitoring customary violations, transmitting knowledge across generations, and responding to external pressures. Therefore, strengthening the role of *keret* in territorial documen-

tation, district-level spatial planning, and youth inclusion remained important for the continuity of customary forest governance.

Legal pluralism presented significant challenges. An imbalance between customary rules and district spatial planning frameworks (RTRW) triggered spatial conflicts and threatened the integrity of customary territories, particularly when national development priorities failed to recognize local social structures. Research on forest cover change in West Sumatra showed that legal pluralism between state law and customary law produced overlapping claims and management uncertainty. Contested authority often contributed to conflict and forest degradation when the state asserted forests as state-controlled areas while communities maintained *ulayat* claims (Rudy et al. 2021). These results showed that formal recognition was insufficient. The requirement was a reconfiguration of the relationship between state law and customary legal systems.

Threats to the continuity of the customary system were reported from external pressures such as state intervention or economic expansion, as well as internal dynamics, particularly the declining inclusion of youths in learning and sustaining customary knowledge and practices. This condition reflected a broader challenge of value regeneration under rapid modernization and social change. The literature on customary knowledge transmission suggested that the resilience of customary systems depended on the preservation of cultural symbols and narratives, as well as intergenerational reproduction of norms, institutional roles, ecological ethics, and practical knowledge related to resource management (Akhmar et al. 2023; Malapane et al. 2024). Value regeneration was understood as the collective capacity to sustain customary authority and socially embedded systems of spatial governance in changing socio-ecological contexts.

The modernization of education, increasing urbanization, and expanded access to digital media profoundly shaped the aspirations of young people in Papua. Many youths were more inclined to pursue urban employment, formal education, or modern lifestyles. This indirectly distanced the youth from traditional activities such as hunting, gathering, or participation in customary deliberations. The dynamic created a significant generational gap between the customary knowledge held by elders and the lived experiences shaped by global cultural influences. This trend reduced the interconnected-ness between the social and ecological systems sustaining customary forest governance when left unaddressed.

The Relationship between Customary Law and State Policies

This subsection was presented in relation to the third research objective, namely, to analyze how the Yongsu Desoyo community navigated the interaction between customary law and state policies in safeguarding the territory. The relationship between customary law and state policies reflected an ongoing process of interaction, negotiation, and selective accommodation rather than simple opposition. Formal recognition of the customary forest through the Ministerial Decree of the Ministry of Environment and Forestry marked an important convergence between state and customary law. At the local level, such recognition gained practical meaning only when the concept engaged with the existing social and institutional foundations of customary governance, specifically the *keret* system, the authority of the *ondoafi*, and the zoning principles regulating access to territory and resources. Interview data showed that community members viewed formal recognition as important to strengthen awareness of forest protection and clarify the legal status of the customary forest. In this context, state intervention respected customary authority, which did not bypass clan-based territorial rights. This was reflected in Informant 3's explanation that each clan possessed clearly defined customary territorial boundaries and that the use of customary forest land required permission from the customary leader. Furthermore, legal recognition and protection of customary forests were considered important because they strengthened community awareness and commitment to safeguarding customary forests. Informants 3, 4 and 5 emphasized that legal recognition by the Jayapura Regency Government was essential for strengthening community awareness of sustainable customary forest management. They explained that formal recognition encouraged community members to use customary forests responsibly while maintaining ecosystem integrity

(Interviews with Informants 3, 4 and 5, 18 January 2025).

State law operated within interconnected domains rather than displacing customary institutions. Meanwhile, customary law remained more directly embedded in everyday life, particularly in regulating forest access, inter-clan boundaries, sacred areas, and acceptable forms of resource use. Informants 3 and 5 explained that customary forest use followed established customary procedures because each clan possessed clearly defined territorial boundaries, and permission from the customary leader was required before clearing or using forest land. Similarly, Informant 4 emphasized that land use was governed by customary tenure, under which each clan held land allocated for cultivation and community members were prohibited from violating customary boundaries (Interviews with Informants 3, 4 and 5, 18 January 2025). State law became more relevant in providing formal recognition, administrative legitimacy, and external policy support. This relationship was also reflected in community accounts of cooperation with government actors. Informant 6, the Chairperson of the Indigenous Community Institution (LMA) in Yongsu Desoyo Village, explained that government programs were generally supported by the community, provided that prior permission had been obtained from the respective clan leaders (Interview with Informant 6, 18 January 2025). In addition, government participation included annual monitoring of customary forest conditions through police and support for tree planting programs. This cooperative orientation was reinforced by the *Ondofolo*, who explained that the relationship with the government was strengthened through partnership. Interview data consistently indicated that government programs entering the customary territory were required to obtain the *Ondofolo*'s approval and be discussed in the *para-para adat* before implementation (Interviews with Informant 6, 18 January 2025; Informant 7, 13 March 2025; *Ondofolo*, 13 March 2025).

Legal pluralism was a source of conflict and a space of institutional adaptation. Customary leaders selectively adjusted governance practices in response to the presence of state law and changing social conditions, while preserving the core authority of the institutions. Informant 6 explained that customary rules remained in force, including the prohibition against violating territorial boundaries and the requirement that all access to customary land be authorized by the relevant customary authority. Violations were resolved through customary deliberation, followed by the imposition of customary fines. The *Ondofolo* similarly emphasized that decisions were first discussed in the *para-para adat* before being formalized and communicated to the community. Furthermore, the *Ondofolo* explained that customary enforcement had evolved over time. While sanctions in the past were more severe, they had gradually shifted toward mediation, customary fines, and, when necessary, referral to the police through continued interaction with government and church institutions. These findings indicate that customary institutions have maintained their authority while adapting their enforcement practices to contemporary legal and social conditions (Interview with Informant 6, 18 January 2025; Interview with *Ondofolo*, 13 March 2025).

The relationship remained unequal because formal state recognition of community-based governance was limited and did not guarantee legal parity in decision-making, territorial control, or benefit distribution. Therefore, customary institutions continued to bear practical responsibility for forest governance while operating within broader legal and administrative structures that remained largely state-centered. In this context, the Yongsu Desoyo case reported that more substantive co-governance required formal recognition of customary forests and deeper policy engagement with the internal institutions, norms, and territorial logics. The interaction between customary law and state policy was understood as a simple contrast between two separate legal orders, as well as a lived and negotiated process where customary authority continued to shape the interpretation, acceptance, and implementation of formal recognition.

CBNRM and Legal Pluralism in Yongsu Desoyo's Customary Forest Governance

The customary forest management practices of the Yongsu Desoyo community clearly reflected core principles of CBNRM, in which local communities acted as the primary decision-makers in governing natural resources (Milupi et al. 2017; Adeyanju et al.

2021). Research showed that well-designed CBNRM arrangements enhanced ecological outcomes, strengthened local institutions and social equity, and sustained culturally embedded management practices, contributing to long-term social-ecological resilience and biocultural sustainability (Pretty et al. 2009; Delgado-Serrano et al. 2018; Ulambayar et al. 2019). In the Papuan context, these principles were evident in the customary zoning system regulated across generations and maintained through social norms and customary sanctions.

The customary zoning system regulated land use for economic or ritual purposes and carried significant ecological implications. The *sasena* zone was strictly protected due to its sacred status. It functioned indirectly as a community-based conservation area. Customary communities effectively created spaces that allowed for natural vegetation regeneration and biodiversity protection by prohibiting hunting, logging, and other extractive activities. This practice was consistent with the concept of biocultural conservation, which recognized the role of cultural values and belief systems in sustaining ecosystems (Pretty et al. 2009).

Customary institutions such as the *ondoafi* and *keret* leaders played a central role as custodians of values and regulators of spatial governance. Research on community-based resource management emphasized that successful local governance depended on formal rules as well as strong social legitimacy and broad community participation (Berkes 2009). Research on oil palm expansion and sustainability certification showed that weak implementation of collective land rights and the principle of Free, Prior, and Informed Consent (FPIC) within Roundtable on Sustainable Palm Oil (RSPO) mechanisms contributed to persistent land conflicts and raised doubts about the effectiveness and legitimacy of certification schemes as tools for conflict resolution (Afrizal et al. 2023). Recent global assessments of forest tenure reforms and the Sustainable Development Goals confirmed that secure recognition of land and forest rights for Indigenous peoples and local communities was a normative obligation and foundational precondition for equitable and sustainable development (Katila et al. 2020). These insights resonated strongly with the experiences of indigenous communities in Papua, which asserted the recognition of customary land rights through various regional declarations.

The governance system was not entirely free from power asymmetries between indigenous communities and the state. Power imbalances remained a latent issue in forest governance, particularly when the formal state claimed control over conservation areas, positioning customary communities as "encroachers," despite long-standing stewardship of territories. Unequal legal status could lead to administrative exclusion, where communities lose effective control over lands despite strong historical and cultural legitimacy. This phenomenon reflected what Li (2007) described as "rendering technical," a process through which complex social practices were marginalized because the practices did not conform to official state narratives.

Despite the challenges, the Yongsu Desoyo case showed that relationships between the state and customary institutions were not inherently antagonistic. On the contrary, spaces for coexistence and synergy were developed. The enactment of Ministerial Decree No. SK.8036/MENLHK-PSKL/PKTHA/PSL.1/12/2022, which formally recognized the customary forest, was positively received by the community. This recognition strengthened local norms and expanded the role of customary institutions in protecting living space. In several instances, district governments and forestry technical agencies engaged in dialogue and collaboration with customary institutions, particularly in participatory mapping, the formulation of forest protection plans, and capacity building for community-based forest management. These developments reported that resource governance became more inclusive, effective, and sustainable when the state respected local social structures and provided space for customary institutions to play an active role.

Customary institutions reported dynamic institutional adaptability in responding to external pressures such as development expansion, national forestry regulations, and interventions by non-governmental organizations (NGOs) and government agencies. For example, decisions to adjust customary zoning boundaries by considering wildlife migration corridors or areas of social conflict represented

adaptive responses to changing socio-ecological contexts. Some *keret* included youth in decision-making processes to ensure that customary norms remained relevant and socially accepted across generations.

From a legal pluralism perspective, the experience of Yongsu Desoyo stated that customary and state law did not necessarily exist in conflict, but interacted in productive ways. The issuance of the ministerial decree recognizing the customary forest opened opportunities for cooperation while maintaining customary norms as the primary source of legitimacy. According to 'von Benda-Beckmann (2002), healthy legal pluralism enabled indigenous communities to innovate in navigating multiple legal systems in defending rights and accessing formal state programs. However, further examination was required of the internal social structures, particularly the *keret* system as a unit through which customary rights and responsibilities were inherited and maintained, to fully understand the construction of legitimacy and authority in customary forest governance.

Intergenerational Regeneration and Youth Engagement in Sustaining Customary Forest Governance

A wide range of anthropological and legal research on Papua and Indonesian customary law showed that the sustainability of customary governance depended on the reproduction of social relations and everyday practices, including those of youth. Chao (2021) showed that customary knowledge, affect, and values were learned through children's direct participation in work, ritual practices, and multispecies relationships in the forest, rather than through state-based formal education. Similarly, research on customary forests in West Papua emphasized that formal recognition of customary territories remained ineffective when local actors, including youth, were not meaningfully engaged in decision-making processes and everyday management practices (Ungirwalu et al. 2021).

The literature on legal pluralism further stated that customary systems depended on social legitimacy and relational knowledge embedded in memory, practice, and local networks of authority, rather than exclusively on written legal documents (von Benda-Beckmann 2002; Hamida 2022). Therefore, the weakening of governance occurred at a functional level through a decline in active customary actors, as well as at structural and symbolic levels when youth became less included in customary forums, rituals, and forest management practices.

The value system underpinning customary forest governance weakened as younger generations became less familiar with the meanings of sacred areas, such as *sasena*, and the cultural significance of customary traditions, including the traditional communal stone-heating ceremony used to prepare food during customary rituals and celebrations (*bakar batu*) and ancestral welcoming dances. Therefore, sustaining customary forest management requires intergenerational and inclusive strategies to regenerate and transmit customary values. These strategies should strengthen customary institutions by complementing traditional leadership based on age and lineage with broader community participation, capacity building, and innovation.

A relevant approach was the formation of customary youth groups or forest guardians, as practiced by the Dayak Wehea community in East Kalimantan. This established the *Petani Hutan Muda* (Young Forest Farmers) group as guardians of customary forests with dual roles as conservation stewards and peer educators (Indriatmoko et al. 2014). In addition, the integration of participatory technologies, such as GPS-based mapping, drone-assisted deforestation monitoring, and community-based reporting applications, provided meaningful entry points for youth to bridge customary values with modern competencies. Youth engagement in customary land mapping, documentation of ancestral narratives, and the management of customary ecotourism initiatives opened new, productive, and contextually relevant pathways for value regeneration.

Local education programs that incorporated customary knowledge and traditional ecological curricula were systematically developed at the village or district level. The inclusion of *keret* and *ondoafi* in mentoring training programs or customary field schools served as critical intergenerational bridges for sustaining customary authority during rapid social change. In this context, youth engagement was a complementary component of customary systems and a fundamental prerequisite for ensuring the continuity of customary forest governance as a living,

adaptive, and socially just social-ecological system. Institutional innovation grounded in social regeneration determined the relevance and resilience of customary systems in the face of future challenges. The discussion reinforced the conclusion that the successful protection of customary forests depended on legal recognition by the state and resilience of values, social legitimacy, and the institutional capacity of systems to sustain and reproduce locally rooted approaches to spatial governance.

Conclusion

The customary community possesses a forest governance system that is historically and socially well established and capable of adapting to external dynamics, including state regulations and contemporary ecological challenges. Forest management is grounded in a customary zoning system, such as *sena, buso,* and *sasena*, that regulates the ecological, economic, and spiritual functions of the forest. *Sena, buso,* and *sasena* are enforced through institutional mechanisms, strong social legitimacy, and locally rooted values transmitted across generations.

A key result of this research is the community's capacity to renew customary norms in response to issues such as the risk of illegal logging and in-migration from outside the village. These adaptations reflect the flexibility of customary law as a living normative system and affirm the role of customary communities as passive policy objects and active subjects in managing and protecting living space.

Formal state recognition of customary forests through the Ministerial Decree of the Ministry of Environment and Forestry marks an important convergence between state and customary law. However, recognition is insufficient unless the concept is grounded in a genuine understanding of local social structures and norms, specifically the role of *keret* as the core unit of customary spatial governance. The case of Yongsu Desoyo shows that meaningful forest governance is obtained from juridical recognition and the ability of state law and customary institutions to interact in line with social realities. This result highlights the importance of policy approaches that move beyond formal acknowledgment toward substantive engagement with indigenous governance systems.

Legal pluralism in Yongsu Desoyo generates conflict and creates spaces for adaptation and negotiation that enrich forest governance practices. The strength of customary zoning contributes to environmental conservation while reinforcing the community's social legitimacy in safeguarding the territory. Formal state recognition of community-based governance remains limited, and the risks of conflict and unequal access to resources persist without legal parity. Therefore, strengthening co-governance approaches between the state and local communities is essential as a fair and context-sensitive pathway forward.

Based on the results, this research proposes several policy implications: (1) Strengthening the institutional capacity of customary authorities, particularly *keret* and *ondoafi*, through technical and legal support to enable active participation in spatial planning and forest protection at district and provincial levels, (2) Integrating customary territories into regional spatial plans (RTRW) and local forestry strategies, while respecting customary zoning and the ecological and social functions as part of community-based conservation efforts, (3) Enhancing youth participation within customary systems through contextual education, schools, and youth engagement programs in monitoring and documenting territories, to ensure intergenerational sustainability of institutions, and (4) Developing collaborative mechanisms among institutions, local governments, and civil society organizations to promote more equitable, adaptive, and responsive forest governance in the face of environmental and social change. The state and other stakeholders can strengthen sustainable development agendas grounded in ecological sustainability, as well as social and cultural justice, by recognizing customary communities as strategic partners in forest conservation.

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