



Forest As a Living Space: Rulership and Management in the Tenganan Pegringsingan Customary Forest, Karangasem Regency, Bali

Hutan Sebagai Ruang Hidup: Tata Kuasa dan Kelola di Hutan Adat Tenganan Pegringsingan, Kabupaten Karangasem, Provinsi Bali

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ABSTRACT

Humans control their cultural environment, which is associated with biotic and abiotic environments, resulting in environmental sustainability. The indigenous community's existence in managing environmental resources must be examined more deeply from the perspective of human ecology. Therefore, this research aimed to examine and analyze the management of resources and environment, mainly the customary forest in the Tenganan Pegringsingan indigenous community. This research employed a participatory observation and spatial ethnography paradigm to understand the pattern of the Tenganan Pegringsingan customary forest management based on customary law (*awig-awig*), legal delegation (The Customary Forest Decree), and the access of stakeholders to the customary forest. The customary forest governance involved *krama desa*, the land inheritance rights owners of the Tenganan Pegringsingan indigenous community, and *Penyakap*, immigrants/*krama sesambahan* tillers in the customary forest. These three stakeholders had different spatial access to the customary forest as a place and a space.

INTISARI

Kelestarian lingkungan tidak bisa dilepaskan dari aspek manusia sebagai pemegang kendali lingkungan kultural yang berkesinambungan dengan lingkungan abiotik dan biotik. Oleh karena itu, keberadaan masyarakat adat dalam pengelolaan sumber daya lingkungan perlu ditelaah lebih dalam dariacamata ekologi manusia. Penelitian ini dilakukan untuk mempelajari dan menganalisis bagaimana masyarakat adat Tenganan Pegringsingan mengelola sumber daya dan lingkungan mereka yaitu hutan adat. Metode yang dipakai dalam penelitian ini adalah observasi partisipatif menggunakan paradigma etnografi spasial. Keduanya digunakan untuk memahami pola pengelolaan hutan adat Tenganan Pegringsingan berdasarkan hukum adat (*awig-awig*), pendelegasian legal (*SK Hutan Adat*), dan juga akses para pihak terkait di Tenganan Pegringsingan terhadap hutan adat. Terdapat tiga pihak dalam tata kelola hutan adat yaitu (a) *krama desa*; (b) pemilik hak waris lahan yang merupakan masyarakat adat Tenganan Pegringsingan; dan (c) masyarakat *Penyakap* yang merupakan masyarakat pendatang/*krama sesambahan* penggarap lahan di hutan adat. Ketiga pihak tersebut memiliki akses berbeda terhadap aspek keruangan hutan adat sebagai tempat (*place*) dan ruang (*space*).

KATA KUNCI

hutan adat, ruang hidup,
Tenganan Pegringsingan, *Penyakap*

Introduction

Recognizing the customary forest as part of a private forest through Constitutional Court Decree No. 35 PUU-X/2012 and the Minister of Environment and Forestry Regulation No. 32 of 2015 on Private Forests allows the customary community to participate in forest management independently. The paradigm shift from state-based to community-based forest management started with removing the phrase "customary forest" from state forest areas in Forestry Law No. 41/1999 (De Royer et al 2018). This removal has changed customary forest status and management from state to private forest and from state-based to community-based forest management. This shift allows the customary law communities or *masyarakat hukum adat* (MHA) to apply for a customary forest status for the surrounding forests. Article 64 of Minister of Environment and Forestry Regulation No. 9 of 2021 concerning Social Forestry Management regulates MHA recognition. This regulation recognizes MHA as an association with clear institutions and customary territory boundaries, customary rules, devices, sanctions, and forest product collection for subsistence needs (Wibowo 2019; Tanjung 2021).

The Tenganan Pegringsingan indigenous community is one of the MHAs that proposes the customary forest scheme. The community converts other use areas (APL) previously used as forests with customary production and protection status into customary forests. This conversion process is aligned with regulations on access and withdrawal between the *krama desa*, who are managers, the Tenganan Pegringsingan indigenous community, which owns land inheritance rights, and *Penyakap*, who are tillers and settlers. The division of rights and obligations regarding access and withdrawal plays a role in determining governance, excluding rights and obligations and prohibiting land use conversion and commercialization, which could lead to alienation (Schlager & Ostrom 1992).

On 23 January 2019, the Ministry of Forestry and Environment issued the Customary Forest Decree to legitimate the implementation of customary law in managing the customary forest in Tenganan Pegringsingan. Their customary forest covers a total area of 564.73 ha, divided into protected forest (*Bet*)

dominated by *jaka*/aren trees (*Arenga pinnata*) and 291.74 ha and production forest (*Tegalan*) dominated by *nyuh*/coconut trees (*Cocos nucifera*) with 272.99 ha (Nugroho et al. 2020; Kurnianingsih 2022).

The customary forest management in the Tenganan Pegringsingan indigenous community is specifically carried out with local wisdom as an *Aga* or ancient village in the mountains with unique characteristics known as *Desa*, *Kala*, and *Patra*. The existence of two governments in the village (administrative and traditional) necessitates the separation of customary forest management from administrative affairs (Suwitra et al 2022). A *Perbekel* or a Village head leads the administrative village and oversees government administration affairs. Meanwhile, the *Krama Desa* And the *Keliang Desa* collectively lead the traditional village as customary decision-makers. This village structure shows that bureaucratically, the *Krama Desa*, as customary officials, regulates the environmental and forest resource management, while the *Perbekel* manages the administrative governmental affairs (Warren 1993; Purna et al 1997; Noak 2014).

Administratively, Tenganan Village comprises five *banjars*/hamlets, three of which are independent traditional *banjars*: Tenganan Dauh Tukad, Gumung, and Tenganan Pegringsingan. The other *banjars* are Bukit Kauh and Bukit Kangin, which are part of the Tenganan Pegringsingan customary area. Therefore, the Tenganan Pegringsingan has a village head, a Banjar head, and a *Krama Desa*, who regulate the community. In terms of customary affairs, Bukit Kauh and Bukit Kangin are part of the Tenganan Pegringsingan customary area. They are both inhabited by *Penyakap* or *Krama Sesambahan*, who have lived in these areas for generations to utilize the customary forest products. In general, three parties manage the Tenganan Pegringsingan customary forest and are interested in sharing living space.

This research analyzed the protective and productive functions (*Penyakapan*) of the customary forest as well as its governance and authority, both as living space for *Penyakap* and as resources for the indigenous community with inheritance rights, in which *krama desa* (the custodians of customary area management authority) carried out the governance. Therefore, this research aimed to fill the gap in

analysis related to micro-level customary forest management at the grassroots level and explore customary law community-based forest management in detail (Savitri 2014).

Methods

Time and Location

This research occurred in January 2023 and September-October 2023 in Tenganan Pegringsingan Village, Karangasem, eastern Bali. Tenganan Village lied at coordinates 8°28'38" South Latitude and 115°33'58" East Longitude (Wijana et al. 2020; Ratnani et al. 2021). This horse-shoe-shaped village, surrounded by hills, was situated at an elevation of 70-400 meters above sea level with an annual temperature of 21-31°C and an average rainfall of 620 mm per year (Suryadarma 2008; Ratnani et al. 2021). Geographically, the Tenganan Pegringsingan

indigenous community, also known as *Tegak desa*, was surrounded by Bukit Macang to the north, Bukit Kangin to the east, and Bukit Kauh to the west, almost entirely constituting customary forest areas. Bukit Kauh, located in the northwest part of *Tegak desa*, was predominantly *Tegalan* and hosted non-timber forest products, such as Balinese wani fruit (*Mangifera caesia*).

Bukit Kangin was located at 8°28'49" South Latitude and 115°34'42" East Longitude with an elevation range of 110-331 meters above sea level, with *Bet* or protected forest and a dominant land use. *Bet* was an area where *jaka/aren* trees (*Arenga pinnata*) thrived and were used as raw materials for *Tuak* commodities by the Tenganan Pegringsingan indigenous community and *Penyakap* in Bukit Kangin (Pradnyandari et al 2017). This research selected Bukit Kangin as the site because it featured both the *Bet* and *Tegalan* areas inhabited by the community. The land

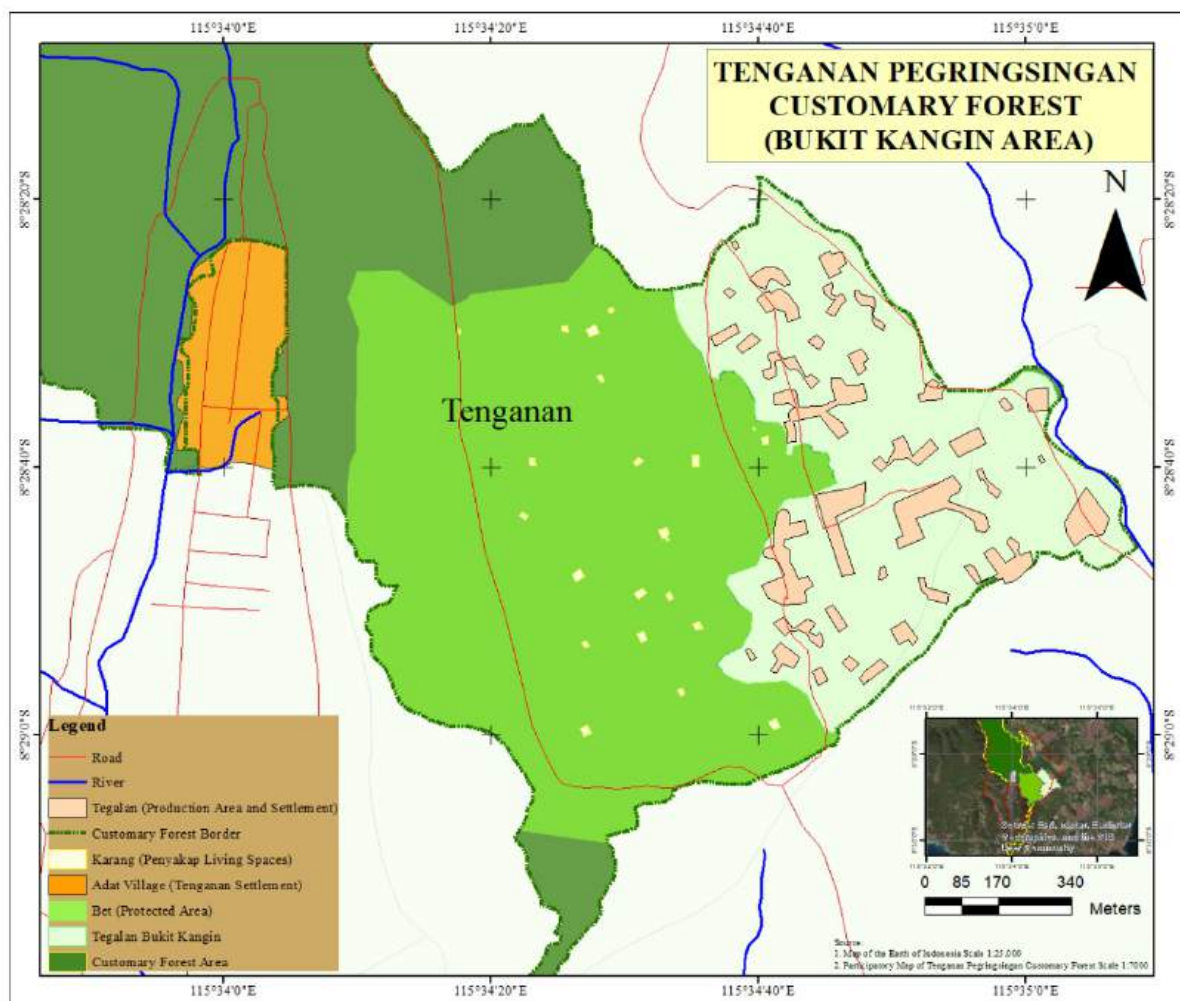


Figure 1. Map of the *Bet* and *Tegalan* in customary forest area in Bukit Kangin

cover of *Bet* was dominated by *jaka*/aren trees, which served as customary indicators of protected land. Meanwhile, *Tegalan*'s land comprised mixed crops with a dominance of coconut trees (*Cocos nucifera*). *Tegalan* was a production area where each *Karang* or yard in Bukit Kangin Village/*Banjar* was cultivated with intercropped plants and fruits, predominantly bananas (*Musa paradisiaca*) and mangosteen (*Garcinia mangostana*). *Penyakap* participants were obtained from the Bukit Kangin community in this research because only this hamlet had settlements within *Bet*. The Bukit Kangin hamlet had 21 permanent houses and yards (*Karang*) scattered within the *Bet* (Figure 1).

Data Collection and Analysis

This research used a participatory observation method through spatial ethnography and a human ecology paradigm. The researchers resided in the Tenganan Pegringsingan customary forest to conduct the participatory observation to understand how the forest was used and interpreted as a space and place for the three stakeholders (Low 2014; Low 2017). Spatial ethnography extended from Lefèbvre's social space theory in the context of spatial reproduction within the interrelated community (Chari & Gidwani 2005). In the case of the Tenganan Pegringsingan customary forest, two communities were within the same customary scope, namely the indigenous community and *Penyakap* (tillers). The two communities intersected in customary forests as patrons and clients, necessitating in-depth participatory observation. This process aimed to understand how the indigenous community and *Penyakap* spatialized the customary forest as a resource and living space or *lebensraum* in political geography. *Lebensraum* represents the complex relationship between living beings and their environment (Smith 1980).

Human ecology played an avant-garde role in understanding environmental issues and the sustainable use of natural resources (Becker & Ostrom 1995). Furthermore, human ecology emerged from the fusion of social science and geography, assuming the importance of ecological principles in explaining and understanding holistic human organization in interaction with natural resources and geographical conditions (Rambo 1983; Bubolz & Sontag 1993).

Ethnographically, humans became an aspect of the environment's development, comprising physical, biotic, and cultural aspects, showing that every human development was followed by adaptation to both aspects (Steward 1955; Steiner 2016). The perspective of environmental influence on humans and their choices evolved into environmental perception. This perspective emphasized humans' subjective, active, and creative process in receiving sensory influence from the physical environment (Marques et al. 2020; Mónus 2020). Spatially, the indigenous community was bound to or interdependent with their environment's categorization, regulation, and management (Haenn & Wilk 2006).

The participants were purposively selected using snowball sampling from three interest groups. These groups included members of the *Krama Desa*, *Penyakap* with permanent buildings within the protected forest (*Bet*), and inheritance rights owners whose land was cultivated and had permanent buildings within *Bet*. The data triangulation used in-depth interviews with *Penyakap*, who resides in the *Tegalan* area of Bukit Kangin. The selection of in-depth interview participants also considered their domicile based on the map in Figure 1. In this case, the *Krama Desa* and land inheritance rights owners resided in the *Tegak Desa* area, while *Penyakap* resided in the customary forest area (*Bet* & *Tegalan*). This process was part of cultural spatial analysis because both parties had a cultural base of Aga Balinese (Tenganan indigenous community) and general Balinese (*Penyakap*).

A total of 215 *Penyakap* households resided in the Bukit Kangin customary forest area, with 21 households living within *Bet* and the remainder in *Tegalan*. Mapping comprised coordinate points recording the *Penyakap* settlements within *Bet* and measuring the built-up *karang* areas. The mapping and measurement resulted in 0.719 ha of built-up *Karang* area of 103 ha of *Bet* area in Bukit Kangin. The average settlement size within *Bet* of Bukit Kangin was 342.8 m².

Data analysis employed triangulation from textual sources (*awig-awig*), in-depth interviews, and participatory observation. An analysis of the interview transcripts was to synthesize the field findings. The analysis included transcripts of interview data from three main groups of customary forest management in

Tenganan: *Krama Desa*, inheritance rights owners, and the *Penyakap*, who lived in Bukit Kangin hamlet. Subsequently, cross-checking through the social forestry facilitator and the head of the forest management unit in the East Bali Region was done to gain two-way perspectives about the customary forest establishment and how it should be in Tenganan. Furthermore, participatory observations of the *Penyakap* were to locate and map their homes inside the conservation area. In-depth interviews were also conducted regarding the process of the *Penyakap*'s migration to settle in the forest (*Bet*) historically and connected it to their relatives living in *Tegalan* Bukit Kangin.

Results and Discussion

Krama and Forest Governance Systems

The *Krama* system represented the socio-demographic structure in Tenganan Pegringsingan, which segregated the living space of the indigenous community and immigrants. This system could guide the community in understanding the Tenganan Pegringsingan customary forest management. In addition, this was because there were several layers of *Krama* (communities) based on their places of residence and connection to the customary system in

Tenganan Pegringsingan. The *Krama* system revolved around the *Krama Desa* as a collective institution of 26 married couples of the Tenganan indigenous community based on endogamous marriage (Nursanti 2022; Wibowo et al. 2023). The three parties that managed and used the customary forest were the *Krama Desa* as regulators, the Tenganan Pegringsingan indigenous community as land inheritance rights owners, and *Penyakap* residing within the customary forest area as tillers (Figure 2).

The *Krama Desa*

The *Krama Desa* and Tenganan Pegringsingan indigenous community, originating from ten *Soroh* (clans), resided in the western and central parts of the *Tegak Desa*, which were known as Banjar Kauh and Banjar Tengah. The *Tegak Desa* settlement form had six rows of *Karang* (houses) separated by *Awangan* (paths). *Awangan* was a sacred part of the traditional housing development concept in Tenganan Pegringsingan because every house door and *Bale Buga* (sacred space) faced *Awangan* (Adnyana et al 2021).

As a customary institution, the *Krama Desa* managed the community within the customary area and used the customary forest. The *Krama Desa* used *awig-awig*, or customary law, consisting of 61 articles as the highest legal system in Tenganan Pegrings-

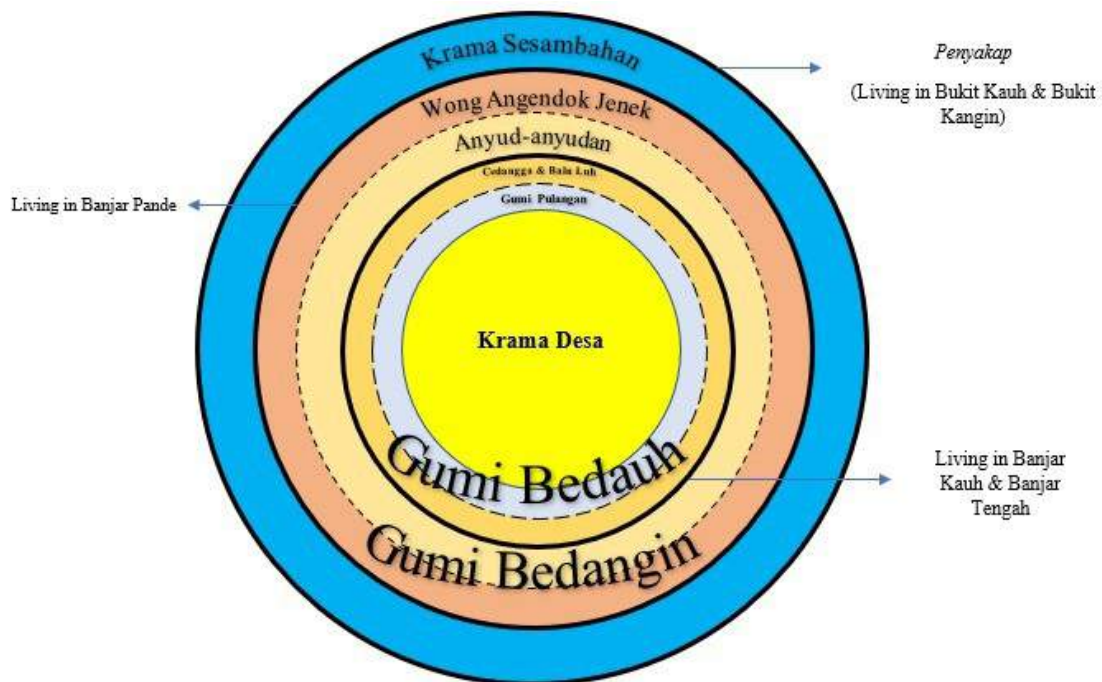


Figure 2. The *Krama* system in the Tenganan Pegringsingan customary area

singan. In addition, there were other customary rules, such as *Dresta*, *Pararem*, *Sima*, *Pangeling-eling*, and *Ilikita*. *Dresta* was a written or oral rule interpreted collectively in each traditional village, thereby adjusting to the local cultural and environmental conditions, or called *Dresta Mawacara* (Singarimbun & Amalina 2016; Wisuda et al 2020). *Pararem* was a rule resulting from customary decisions and served as a supplement to *awig-awig* (Mardika 2013). *Sima* was a local custom or tradition believed internally in Tenganan Pegringsingan (Purna et al 1997). *Pangeling-eling* were unwritten rules believed to be rules passed down from the *Krama Desa* predecessors, while *Ilikita* was an agreement or treaty binding between parties.

The *Krama Desa* was the leading actor in enforcing customary law in Tenganan Pegringsingan, specifically regarding customary forest management. For example, Article 8 of *awig-awig* regulated that all *Krama* (communities) living in the customary area were prohibited from planting *Tarum* trees (*Indigofera tinctoria* L.). The reason was that *Tarum* was the primary material used for natural dyes to produce *Geringsing* double ikat woven cloth (Putriani et al 2018). Cultivating *Tarum* could affect the vegetation diversity in the customary forest area. Almost all natural dyes for *Geringsing* woven cloth were purchased from outside the village, such as the roots of *Sunti/Mengkudu* (*Morinda citrifolia* L.) and *Kepundung* (*Baccaurea racemosa* Reinw.) as mixtures for red color.

Two other plants used as natural dyes were *Tingkih/Kemiri* trees (*Aleurites moluccana*) and coconut wood (*Cocos nucifera*) as mixtures for white and light yellow colors. *Tingkih* trees were among the six prohibited woods besides Durian (*Durio zibethinus*), *Pangi/Kluwak* (*Pangium edule* Reinw.), *Cempaka* (*Michelia alba*), *Nangka* (*Artocarpus heterophyllus* Lamk.), and *Tehep/Terap* (*Artocarpus elasticus* Reinw.). These six prohibited tree species were forbidden to be cut down or harvested before their fruits fell on the ground, as regulated in Article 61 of *awig-awig*. The prohibition of using forest products, such as wood, was also applied to land inheritance rights owners, although these individuals legally had certificates for areas within the customary forest.

Land Inheritance Rights Owners (Indigenous Community)

Land inheritance rights owners in Tenganan were the indigenous communities residing in Banjar Kauh and Banjar Tengah. These right owners were Tenganan natives who inherited land parcels in the customary forest through generations. They legally held certificates and paid taxes for the land but customarily only had land use rights because the traditional village became the principal owner of the entire customary area. Land inheritance rights owners could not sell their land due to structural regulation. Although inheritance rights in Tenganan Pegringsingan were given equally to both men and women, there was a prohibition on inheriting when a Tenganan woman married an outsider (exogamy). When a Tenganan woman married a man from outside the village, the woman followed the general inheritance laws of Bali, which favored men. Therefore, the inheritance rights of the woman were relinquished to avoid external interference in their land management.

Land inheritance rights owners were generally former *Krama Desa*, referred to as *Krama Gumi Pulangan* in the *Pekraman* system. When a couple married endogamous, each brought inheritances from their ancestors. The Tenganan Pegringsingan indigenous community did not recognize the caste system as generally practiced in Balinese Hindu society. In addition, the Tenganan were not allowed to harvest fruits from prohibited trees because these trees had social functions for immigrants, such as Banjar Pande and *Penyakap* (Wijana & Setiawan 2020).

Regarding forest management, land inheritance rights owners were in a middle position and squeezed because access to resources was limited to profit-sharing and *Salaran* (gifts from *Penyakap*'s gardens). Generally, the Tenganan established a profit-sharing system of 1:3 for fruits in the *Tegalan* area, such as coconuts, and 1:1 for *Tuak Jaka* products from *Bet*. The most significant income for land inheritance rights owners came from *Tuak Jaka*. The Tenganan typically inherited land in the customary forest inhabited for generations by *Penyakap*. Therefore, the land inheritance rights owners and *Penyakap* generally had a close relationship.

Penyakap

Penyakap were a group of tenant farmers who lived and settled in the customary forest area of Tenganan Pegringsingan, both in Bukit Kauh and Bukit Kangin. *Penyakap* generally built houses in the *Tegalan* area. Starting in 1967, some built semi-permanent houses in the *Bet* of Bukit Kangin with permission from land inheritance rights owners. Until 2023, there were 21 permanent houses occupied by 22 families within *Bet* of Bukit Kangin. In addition, *Penyakap* sustained their livelihoods through a profit-sharing system with land inheritance rights owners (Yunus et al. 2016). *Penyakap* was also called *Krama Tamiu* (immigrants) or *Krama Sesambahan* because *Penyakap* was required to pay *Sambah* money in the fifth month of the Tenganan calendar, amounting to IDR. 25,000.00-30,000.00/year (Articles 38 and 54 of the *awig-awig*).

As immigrants without land ownership, *Penyakap* depended on their compliance with customary forest products and profit-sharing schemes. Although not bound by Tenganan Pegringsingan's customs and religious ceremonies, *Penyakap* still adhered to the *awig-awig*. Bukit Kangin used approximately 60.6 ha of the *Tegalan* area and 103 ha of the *Bet* area. Based on participatory mapping (see Figure 1), the built-up area

in *Tegalan* was 10.78 ha or approximately 17.8% of the total *Tegalan* area in Bukit Kangin. Meanwhile, the built-up area within *Bet* was approximately 0.718 ha or 0.7% of the total *Bet* area in Bukit Kangin. The average settlement size in the *Bet* of Bukit Kangin was 342.8 m² or 3.4 acres, more extensive than those in the *Tegak Desa* of Tenganan with 200 m² or 2 acres.

Customary Forest Permit Governance

The Tenganan Pegringsingan indigenous community already had a synergistic forest management system before the customary forest recognition through the Customary Forest Decree issued by the Ministry of Environment and Forestry in 2019. They govern the business permit for managing non-timber forest products and a timber harvesting permit for house construction. In this context, the business permits were the permissions for stakeholders in Tenganan Pegringsingan to use customary forest products. The land inheritance rights owners, *Krama Desa* and *Penyakap*, living in Bukit Kangin, had inter-relationships due to proximity and access to managing and utilizing non-timber forest products. This *Krama Desa* governed the permit through reporting bureaucracy, verification/ checking, permit payment, and issuance.

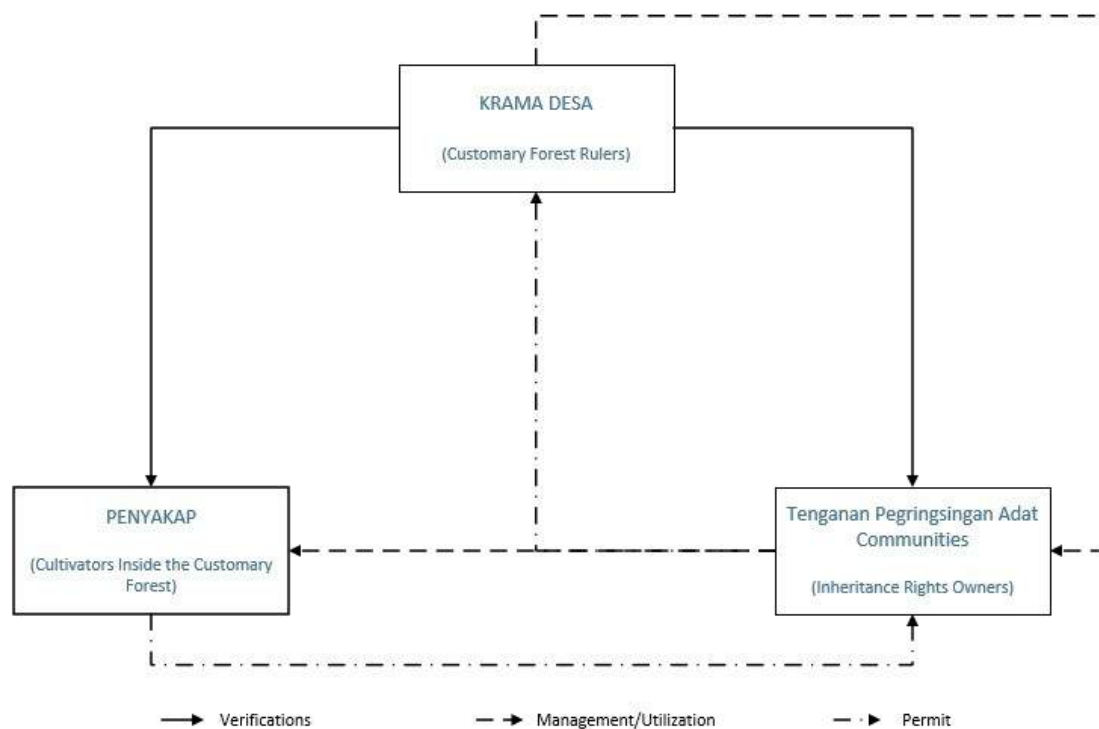


Figure 3. Customary forest management permit in Tenganan Pegringsingan

The *Krama Desa* of Tenganan Pegringsingan had strict rules regarding management and use permits. First, the management permits were granted to land inheritance rights owners and *Penyakap*, who worked in the *Tegalan* and *Bet* areas (conservation forest). Second, the *Krama Desa*, as the owners of the entire customary area, granted utilization permits to *Penyakap* or land inheritance rights owners. Third, three *Krama Desa* (*Mriksa*) representatives, consisting of a *Luanan*, a *Bahan Dulkan* (*Keliang Adat*), and a *Tambalapu*, verified the feasibility of tree harvesting for various purposes. The verifiers conducted field inspections and ensured that the harvested timber and its use complied with the permits. *Penyakap*, as land tillers in *Bet* and *Tegalan*, applied for permits from land inheritance rights owners as legal certificate holders. However, by customary regulations, all customary forests became part of the customary area, making the inheritance right owners pass on the management permit to the *Krama Desa* as customary forest managers (CFM). Subsequently, the *Krama Desa* verified the presence of *Penyakap* on the customary lands and recorded the number of buildings constructed on it (Figure 3).

The *Krama Desa* also verified the land and ensured the associated inheritance rights owners. The *Krama Desa* had the right to impose use restrictions, such as prohibiting the construction of permanent buildings in the *Bet* area. However, this action was not consistently implemented during the participatory observation because customary rules needed to regulate it specifically. The implicit prohibition of land conversion within *Bet* was already regulated in the *awig-awig* and Article 94 of the Minister of Environment and Forestry Regulation No. 9 of 2021 Paragraph 2 Letter (e), which mentioned a ban on the CFM building facilities that altered the natural landscape in the protected customary forest area. For these reasons, some permits for permanent housing development only comprised *Penyakap* and land inheritance rights owners.

Timber Harvesting Permit

A timber harvesting permit should gain at least a 2:1 vote from the verifiers. *When they need wood*, *Penyakaps* must request a permit from land inheritance rights owners. Subsequently, the land

inheritance rights owners would request a timber harvesting permit for *Penyakap* to Bale Agung by filling in the "Harvester Book" and paying IDR. 2,000.00 for each tree for which they requested permits. *Krama Desa* owned the "Harvester Book" that recorded the applicant's name, date, location, tiller, quantity, three verification columns, permit fee amount, and wood species. Only trees in the western river area (*Tukad Buhu*) or the Bukit Kangin region could be felled, while trees in the customary forest area in the Bukit Kaja region (north of the village) were prohibited.

Apart from the permit above, there were also customary rules regarding timber harvesting, namely

1. *Pengapih* was a permit to cut trees for thinning purposes with three or more similar trees. Thinning was an action to create space for other vegetation in the forest (Wijana et al 2020; Kurnianingsih 2022). Land inheritance rights owners must report thinning activities, verified by three representatives of the traditional village (*Mriksa*), with at least 2:1 votes.
2. *Penaho* was a permit for cutting trees that overshadowed other plants in the *Tegalan* area, where coconut was the main commodity. The area generally contained mixed gardens with low-stemmed plants. When a tree overshadowed the garden beds, a cutting permit could be requested. This tree was called a *penaho* tree or *kekeran* wood (Wijana et al 2020; Kurnianingsih 2022).
3. *Ngundit* was a permit for changing the area from *Bet*, dominated by aren (*Jaka*) vegetation, to *Tegalan*, dominated by coconut. Before old Aren trees were felled, verification should ensure that the fronds were broad enough for soil transport, or called *Ngundit*. Furthermore, a land conversion permit from *Bet* to *Tegalan* was given with the area and number of trees to be planted.
4. *Tumapung* was a special permit granted by the traditional village to newly married *Krama*. The rules regarding new family residences in Tenganan were quite strict. Newlyweds were not allowed to live with their parents when the father or both parents were still alive but could occupy a house from the previous family (grandparents) when it was unoccupied. However, when newlyweds had no place to live (or inherited an empty

house), the married couples were given one remaining *karang* in the *Tegak Desa* (Kauh and Tengah) to build a house. Newlyweds had three months to move from their parent's house to the new house. The timber needed to build this new house was obtained from a *tumapung* permit. They had a maximum of six months to process the *tumapung* timber and establish the *Bale Tengah* in the traditional house of *Tenganan Pegringsingan*, approximately 6 m x 3 m in size. The trees harvested must be from the inheritance land of the newlyweds' family.

Customary Sanctions Against Timber Harvesting

Sanctions for unauthorized timber harvesting in the *Tenganan Pegringsingan* customary forest were outlined in Article 3 of the *awig-awig*, which regulated theft. When the perpetrator was not the *Krama Desa*, the fines would be 2,000 *Kepeng* coins, along with returning the stolen wood in cubic meters (m^3) in a case where the wood still existed, plus its value. For example, if 3 m^3 of stolen *Cempaka* wood were still intact, it must all be returned along with the value of ten cubic meters of wood. In a case where the market value of *Cempaka* wood was 6 million rupiah per m^3 , the reimbursement to the traditional village was 60

million rupiah plus the entire stolen wood in cubic meters plus 2,000 *Kepeng* coins. When the perpetrator was the *Krama Desa*, the return of the wood was the same as above, with the additional sanction of being dishonorably discharged.

Inheritance and Profit-Sharing Agreement for Non-Timber Forest Products

The application for a management permit for non-timber forest products utilization in the *Bet* area of *Bukit Kangin* followed several steps. First, *Penyakap* submitted a permit to the land inheritance rights owners to cultivate *Bet Jaka* (aren) land. Second, land inheritance rights owners granted a permit outright when *Penyakap* did not intend to construct buildings within *Bet*. However, when *Penyakap* intended to construct buildings in *Bet* and conduct cutting to clear the land, the land inheritance rights owners requested a permit from the *Krama Desa*. After the *Krama Desa* verified the request, they granted the permit.

Penyakap could inherit cultivated land and houses within *Bet* according to their inheritance laws, specifically the youngest son. When *Penyakap* had no successors, the land inheritance rights owners revoked the agreement, even though it lasted three generations. Therefore, land inheritance rights

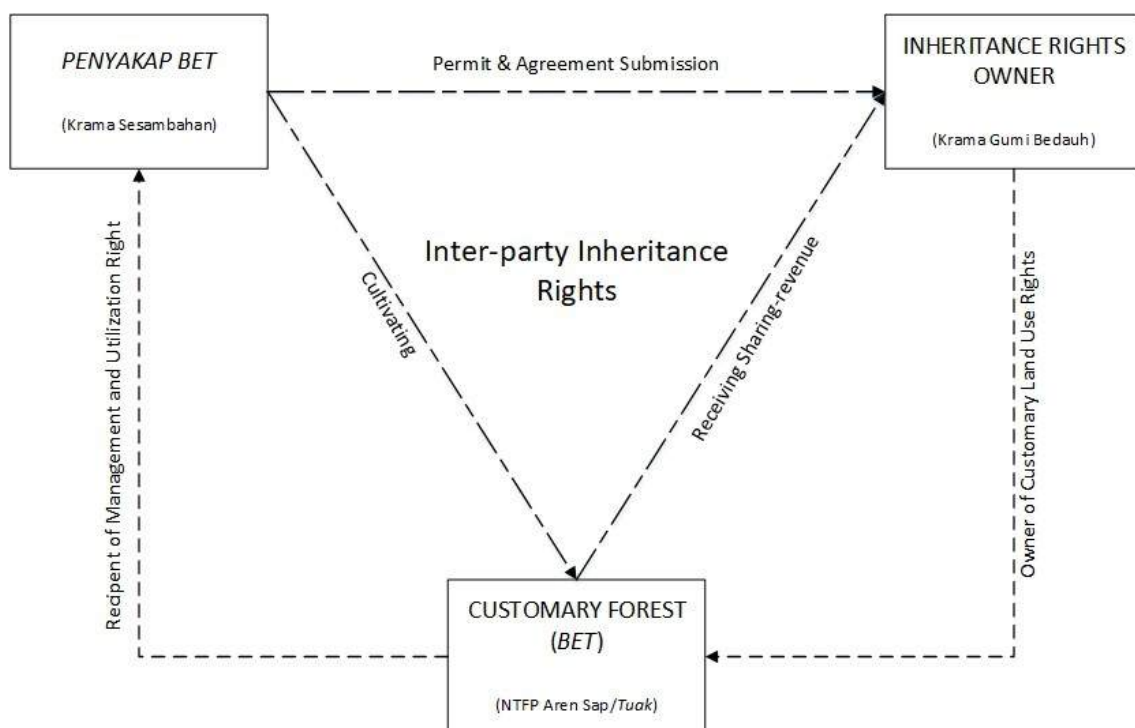


Figure 4. Land management relations in the Tenganan Pegringsingan customary forest

owners inherited the obligation to manage the cultivated land, and *Penyakap* passed down the work to their descendants until *Penyakap* could not continue. *Penyakap*, who harvested aren sap for *Tuak Jaka* production, had two employment contracts: paying a share every *Kajang Kliwon* (15 days) or using a *Meti* system by paying a specific amount annually to the land inheritance rights owners.

The utilization permits pattern in the Tenganan Pegringsingan customary forest created a stacked inheritance resembling a triangular diagram (Figure 4). This inheritance occurred within the families of land inheritance rights owners and *Penyakap*. The triangular inheritance created a patron-client relationship between the two parties across generations. Through participatory observation and historical interview data mining, the findings showed that *Penyakap* in Bukit Kangin had lived and maintained a patron-client relationship with land inheritance rights owners for seven generations.

Environmental Management

As customary forest managers (CFM/PHA), the Krama Desa were no longer at the highest level in the responsibility relation (Figure 5) due to the implementation of the Customary Forest Decree issued by the Ministry of Environment and Forestry, which essentially bound them to the Business Work Plan (BWP). In this regard, the CFM of Tenganan Pegringsingan should report to the East Bali Forest Management Unit (FMU/KPH) as the forest manager in the Karangasem Regency area. The initial status of the Tenganan Pegringsingan customary forest area was APL forest. The customary forest in Tenganan was designated under Article 37 of Law No. 41 of 1999 on Forestry, where forest use by the respective customary law community (MHA) followed its function (paragraph 1). Furthermore, paragraph 2 of Article 37 states that the use of the customary forest for protection and conservation purposes should not disrupt its function (Forestry Law of 1999; Nugroho et al., 2020).

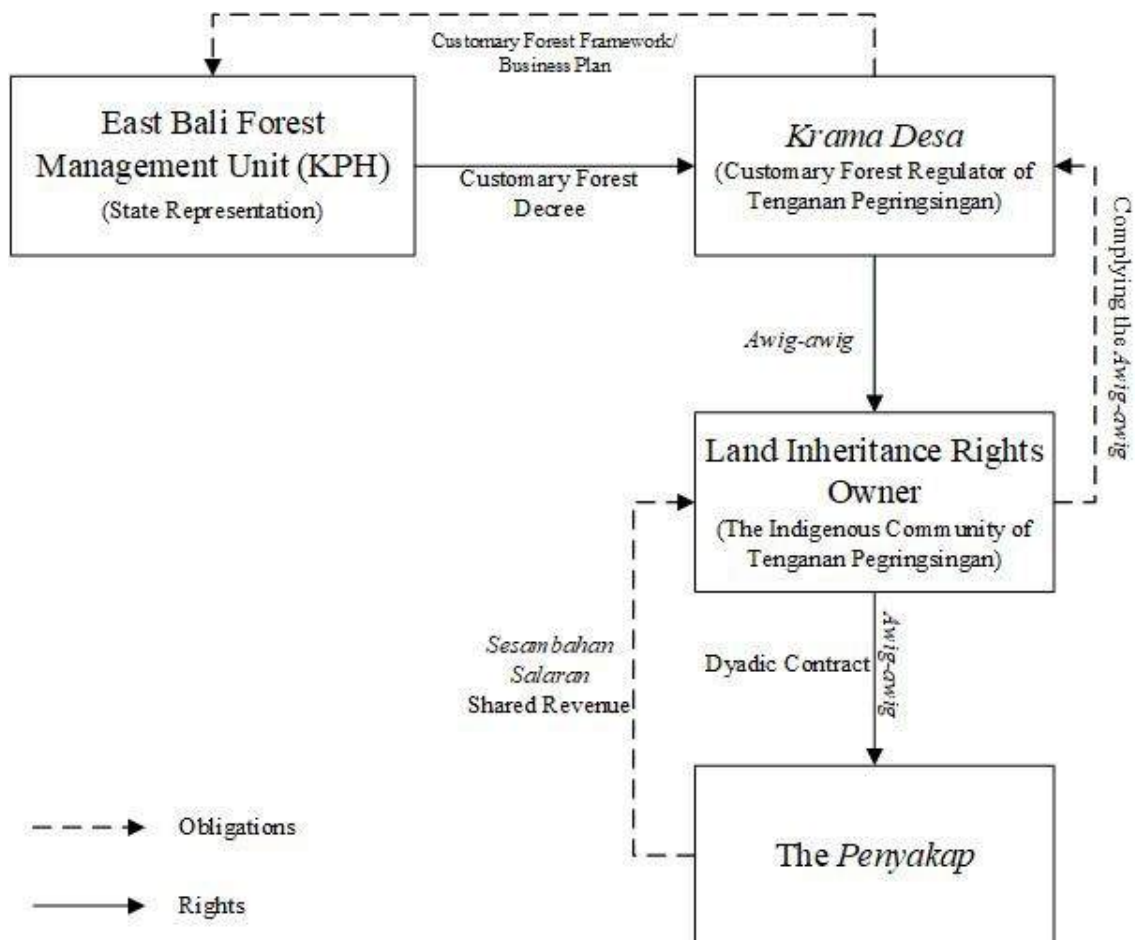


Figure 5. Right and obligation relations in the management of the Tenganan customary forest

The CFM of Tenganan Pegringsingan had an obligation to report on the progress of the Tenganan Customary Forest Business Work Plan (BWP) at least every three months. This obligation was part of Article 94 compliance in Minister of Environment and Forestry Regulation No. 9 of 2021 on Social Forestry Management. According to this article, the CFM of Tenganan Pegringsingan must adhere to the principles of sustainable forest management, use the local wisdom, maintain forest functions, use the forest according to its function, restore and enhance forest functions, as well as provide security, and protection for the forest.

Article 94 indicated that the CFM was also prohibited from leasing customary forest areas, changing their status and function, cutting trees in protected forest areas, using mechanical equipment in protected forest areas, building facilities that altered the landscape in protected forest areas, and planting oil palm trees in customary forest areas. In this regard, the CFM of Tenganan Pegringsingan designated the *Bet* as a protected customary forest area. Commercialization must ideally not be allowed within this area, specifically by land inheritance rights owners. In addition, within the *Bet*, cutting down trees and constructing facilities that altered the landscape were prohibited.

When referring to all actors in the management of the Tenganan Pegringsingan customary forest, there were at least relations of responsibility that enabled the management of the customary forest to function. First, as the CFM, *Krama Desa* was obliged to report the BWP of the customary forest utilization to the East Bali FMU. This relationship was facilitated by social forestry assistants assigned by the Bali Provincial Forestry Office. Second, the relationship between the *Krama Desa* and the land inheritance rights owners. The *Krama Desa* had the authority to regulate and impose sanctions when land inheritance rights owners in the customary forest violated land use regulations, including commercialization. The *Krama Desa* based the management and sanctions for violations of customary forest governance on the *awig-awig*. As a formal basis, the *Krama Desa*, as the CFM, could also refer to Article 94 of Minister of Environment and Forestry Regulation No. 9 on Social Forestry Management. Third, the relationship

between the land inheritance rights owners and *Penyakap* as the tillers. This relationship became the most fundamental because *Penyakap*'s utilization of non-timber forest products formed the economic basis for both parties. Therefore, this relationship heavily depended on the quality of the association between the parties, the harmonization of interests and needs, as well as profit-sharing as a measure of cooperation or reciprocity.

According to Lefebvre (1991), human relations with space had a logical coherence with what made them comfortable psychologically (mental place) and practically material (mental thing). Living space (*lebensraum*) made place and space two distinct entities where a community could develop through a particular cultural environment (Low 2014; Low 2017). Power over space in a community was correlated explicitly with access. In this regard, *Penyakap* established generational access to live closer to their sources of livelihood in the Tenganan Pegringsingan customary forest. Inheritance rights owners entrusted their land in the customary forest to *Penyakap* with a perception of a harmonious relationship. The potential conflict over access remained, such as tensions arising due to two main subjects: violations of the forest land's conversion into residential areas, relations with *krama desa*, and transactional matters related to profit-sharing with land inheritance rights owners. Ribot and Peluso (2003) and Peluso & Ribot (2020) argued that the location of a property or resource became the focal point of relationships between parties with similar use intentions. These interparty relationships then formed a system with patterns of "what," "how," "when," and "who does." The system was formed around what was referred to as the flow of benefits over a resource. A web of powers emerged when there was a resource and several parties seeking benefits. In the context of access, the web of powers was described as a group of people or institutions positioning themselves as regulators or controllers (Ribot & Peluso 2003).

Customary Forest as a Living Space and Resource

The *Bet* and *Tegalan* of Bukit Kangin were properties or resources where the *Krama Desa* acted as regulators and controllers to balance resource utilization through the comprehensive implemen-

tation, including *Penyakap* (*Krama Tamiu*) of *awig-awig*. Although *Penyakap* was not part of the Tenganan Pegringsingan customary practices, *Penyakap*'s livelihood dependency in the customary forest area bound them to the applicable customary rules. *Penyakap* in Bukit Kangin were bound to a lifetime work contract extending to their descendants.

This work contract was part of how living space (*lebensraum*) merged into "environments of the mind" (Peluso & Ribot 2020). This term refers to individuals' or communities' ability to access resources influenced by social and emotional differences. In addition, land inheritance rights owners had a higher social stratum regarding resource access. However, the owners only had access to ownership, tax payment obligations, and profit sharing. The land they paid taxes on annually belonged to the traditional village and could not be sold (Sitinjak et al 2020).

Penyakap had the lowest position in resource utilization (Figure 5). However, *Penyakap* had closer emotional ties and sociological perceptions closer to the resources due to their perception of Bet and Tegal. *Penyakap* perceived *Bet* and *Tegal* as resources but also as their properties or, more deeply, their living space (*lebensraum*). In addition, their ancestors had lived there for three to seven generations, built an immigrant community, and formed an administrative banjar, indirectly producing space. As an analogy, *Penyakap* lived within their constructed space in a place without the right to own it. Meanwhile, land inheritance rights owners legally held certificates and paid taxes but did not reside in or cultivate the land. Furthermore, customary rules limited its management. The owners were in a squeezed position because their inherited land could only be managed according to the authority or be in control of the traditional village as the owner of the

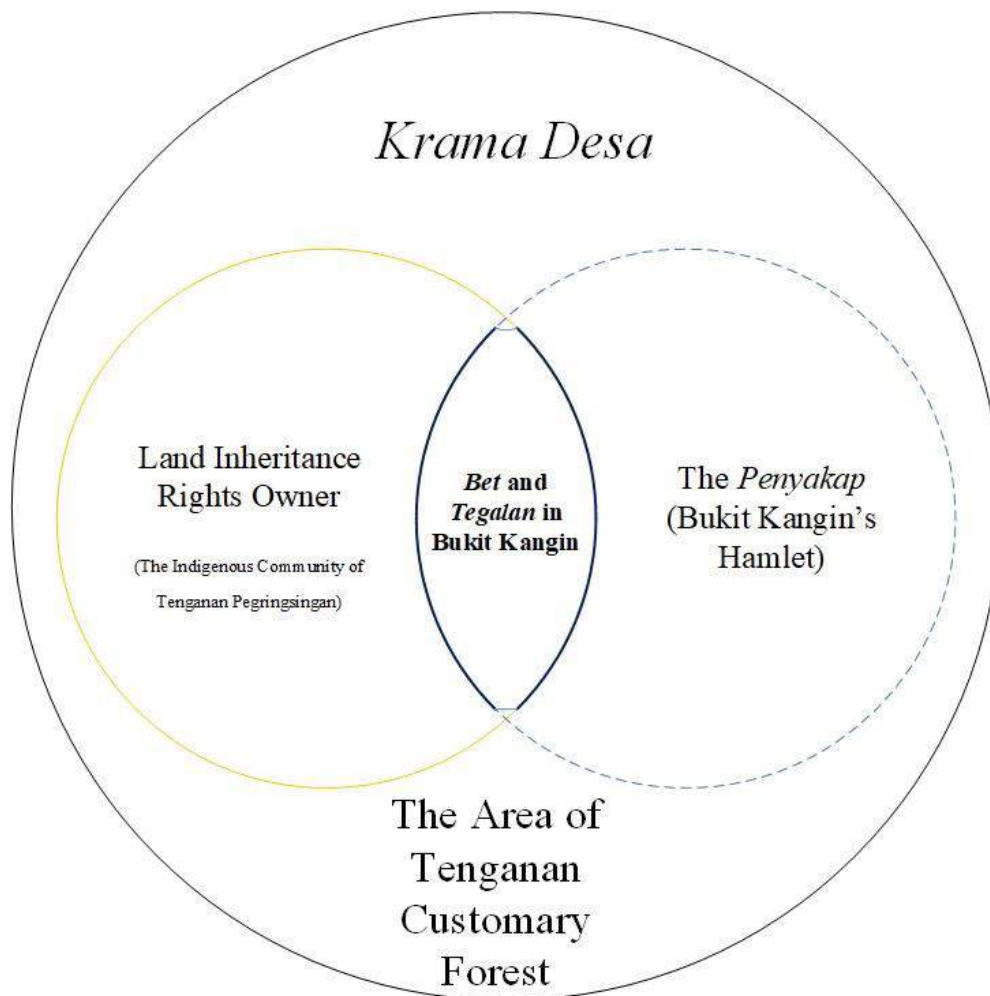


Figure 6. Spatial power relations in the Tenganan Pegringsingan customary forest

Tenganan Pegringsingan customary area.

Borrowing Low's (2017) spatial-cultural terminology, the relationship between *Penyakap* and land inheritance rights owners on *Bet* and *Tegalan* of Bukit Kangin resembled an overlapping relationship between space and place. An inter-dominance relationship of "place contained within space" occurred between these two parties and *Krama Desa*, the controller of the customary forest area. The traditional village generally perceived *Bet* and *Tegalan* as part of the customary forest or, in this case, as a place. According to Low, a place gradually became an abstract space that lost "cultural intimacy" and "affective qualities." Cultural intimacy refers to the cultural continuity in the customary forest as part of the cultural space for the Tenganan Pegringsingan indigenous community. Meanwhile, affective qualities refer to the loss of affective qualities from the successors with the customary forest. These two aspects posed a threat when the Tenganan Pegringsingan customary forest lost its identity as part of the local cultural and communal space (Subadra-Abioso & Triyadi 2017).

Conclusion

In conclusion, the *Krama Desa*'s position in managing customary areas also made them responsible for regulating settlements within the customary forest and forest products utilization. This structure indicated how *Penyakap* could live in and use the customary forest as part of their living space (*lebensraum*) without having direct customary ties to Tenganan Pegringsingan. Although customs, ceremonies, and traditional housing arrangements differed from those of the Tenganan Pegringsingan indigenous community, *Penyakap* resided in the customary area. Therefore, *Penyakap* must manage, use, and preserve the customary forest. This management was consistent with *awig-awig* and legal provisions through the Tenganan Pegringsingan Customary Forest Decree and the Minister of Environment and Forestry Regulation No. 9 of 2021 on Social Forestry Management.

The main finding of this research was the existence of an unrecorded reporting relationship related to customary forest product utilization as the

basis for formulating the Tenganan Pegringsingan Customary Forest Business Work Plan (RKU). The results must serve as input for the East Bali Forest Management Unit (FMU), which manages the forest areas in Tenganan. The existence of the Customary Forest Decree legally designated the *Krama Desa* as the customary forest managers (CFM) with the obligation to report the management and the utilization of the customary forest to the state through the East Bali FMU. This mechanism assessed the customary forest governance process and the existing problems.

The role of the customary forest as a social, economic, and cultural place and space bound the three parties, namely the *Krama Desa*, the Tenganan Pegringsingan indigenous community as land inheritance rights owners, and *Penyakap* as tillers and settlers. The sustainability of the cultural and biophysical environment became a crucial aspect of the Tenganan Pegringsingan customary forest management. The presence of the three main actors and systematic control ensure the function and utility value of the customary forest for future generations, both among the indigenous community and *Penyakap*.

The *Krama Desa* needed to regulate and communicate with *Penyakap* and Keliang Banjar Bukit Kangin about establishing permanent settlements in *Bet* because *Bet* was a customary forest with protective functions. For example, rules prohibited house construction in *Bet* for families that already had *Karang*. These rules could prevent *Penyakap*'s successors from applying for a permit to build houses on other vacant *Karang*.

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