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Keloka' Urang Tua as Cultural Common Property: Kinship, Authority, and Communal Orchard Governance in West Kalimantan

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Abstract

Studies of common property have predominantly focused on institutional arrangements, privatization, and open access dilemmas, often overlooking the cultural foundations that sustain collective resource governance. This article examines the management of *keloka' urang tua*, a communal durian orchard in Ulu Pengkadan, Kapuas Hulu, West Kalimantan, Indonesia, to explain how the sustainability of the commons is reproduced through kinship relations, customary authority, and collective social practices. Employing a qualitative ethnographic approach, the study draws on field observations, in-depth interviews with heirs and local authorities, and documentation of orchard management practices. The findings show that *keloka'* operates as a culturally embedded common property regime characterized by collective ownership, genealogically defined membership, layered access arrangements, rotational harvesting systems, and collectively

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negotiated distribution of harvests. The article argues that the sustainability of *keloka'* is maintained not primarily through formal regulations or economic rationality but through moral legitimacy, reciprocal obligations, customary norms, and the intergenerational reproduction of social relations. Beyond functioning as a communal fruit orchard, *keloka'* simultaneously serves as an ecological space, a kinship institution, and a mechanism for sustaining collective identity. This study contributes to common property scholarship by demonstrating that commons governance is fundamentally shaped by culturally mediated forms of authority, membership, and social reproduction within local communities.

[*Studi-studi tentang kepemilikan bersama* (common property) *selama ini lebih banyak berfokus pada pengaturan kelembagaan, privatisasi, dan persoalan akses terbuka, sehingga cenderung mengabaikan fondasi budaya yang menopang tata kelola sumber daya bersama. Artikel ini mengkaji pengelolaan keloka' urang tua, sebuah kebun durian komunal di Ulu Pengkadan, Kapuas Hulu, Kalimantan Barat, untuk menjelaskan bagaimana keberlanjutan bersama direproduksi melalui relasi kekerabatan, otoritas adat, dan praktik sosial kolektif. Penelitian ini menggunakan pendekatan kualitatif etnografis melalui observasi lapangan, wawancara mendalam dengan para pewaris dan otoritas lokal, serta dokumentasi praktik pengelolaan kebun. Hasil penelitian menunjukkan bahwa keloka' berfungsi sebagai rezim kepemilikan bersama berbasis budaya yang ditandai oleh kepemilikan kolektif, keanggotaan genealogis, akses berlapis, sistem panen bergilir, serta distribusi hasil yang dinegosiasikan secara kolektif. Artikel ini berargumen bahwa keberlanjutan keloka' tidak semata-mata ditopang oleh aturan formal atau rasionalitas ekonomi, melainkan oleh legitimasi moral, kewajiban timbal balik, norma adat, dan reproduksi hubungan sosial antar generasi. Selain berfungsi sebagai kebun buah komunal, keloka' juga menjadi ruang ekologis, institusi kekerabatan, dan mekanisme pemeliharaan identitas kolektif. Studi ini berkontribusi terhadap pengembangan kajian kepemilikan bersama dengan menunjukkan bahwa tata kelola bersama pada dasarnya dibentuk oleh relasi otoritas, keanggotaan, dan reproduksi sosial yang dimediasi secara budaya dalam komunitas lokal.*]

Keywords: Common Property, Communal Orchard, *Keloka' Urang Tua*, Malay Kinship, Local Culture.

Introduction

Research on Common Property Resources (CPRs) has long been central to scholarly discussions about how natural resources are governed, especially after the "tragedy of the commons" argument took hold. That thesis suggests that when resources are collectively owned, they are naturally likely to deteriorate environmentally (Hardin, 1968; Karpoff, 2022). In this view, people are assumed to pursue their own interests above all else, which would make shared resources

highly vulnerable to overuse unless they are put under private ownership or managed directly by the state. More recent studies, however, show that these assumptions do not capture the real social dynamics involved in how communities manage shared resources. Common property is not simply an unmanaged free-for-all. Instead, it is a type of collective governance that is sustained through rights, duties, and shared responsibilities, organized by a community of users who are recognized locally (Ostrom, 1990; Wilson, 2012). For this reason, common property should be clearly distinguished from open access regimes. Open access describes resources where there are no clear membership boundaries and where regulation is ineffective. Common property systems, by contrast, include clearly defined membership, regulated access, arrangements for sharing benefits, monitoring practices, and locally accepted ways to handle rule violations (D'Alpaos et al., 2023; Kumar, 2017; Mckean, 2000; Ostrom, 1990; Richter & Van Soest, 2025; Wade, 1987).

A large body of scholarship also indicates that the sustainability of CPRs largely depends on whether a community can maintain collective action, build strong local institutions, and ensure compliance through social sanctions and shared agreements (Andersson et al., 2014; Rout, 2010). In this sense, the key challenge in governing common resources is not collective ownership itself, but whether the institutions that support it are strong or fragile (Dhungana et al., 2024; Fisher et al., 2020; Hajjar et al., 2020). Even so, much of the existing research on common property still tends to focus more heavily on institutional and economic issues—such as how rules are designed, who has access rights, what incentives exist, and how monitoring works (Adhikari, 2021; Behnke, 2018; Wakamatsu & Anderson, 2018). These approaches often fail to consider how common governance is also deeply rooted in culture. An increasing number of studies show that the survival of CPRs is strongly influenced by kinship ties, systems of inheritance, moral legitimacy, and customary authority that are reproduced through everyday social life (Jodha, 1990; Mirasola, 2024). Shared resources, therefore, should not be treated only as economic goods. They are socio-ecological systems sustained by cultural norms, collective memory, and reciprocal obligations. For this reason, understanding common property requires a wider analytical lens—one that can explain the cultural foundations that enable collective governance to last over time.

These concerns are especially important in Indonesia, particularly in West Kalimantan, where land is facing mounting pressure from commercialization, privatization, corporate expansion, and development policies that often fail to properly recognize and accommodate customary institutions (Ambasari et al., 2025; Bahari & Faizin, 2026). In such settings, customary ways of managing communal land and orchards should not be viewed merely as leftover aspects of local tradition. Instead, they are living resource governance systems that continue to adjust and function within contemporary social conditions. Their academic

value lies not only in how they shape resource distribution and access but also in how they help sustain social relationships, ecological continuity, and locally grounded forms of collective responsibility.

Despite this importance, studies on customary ownership in Indonesia have largely focused on customary forests, agrarian conflicts, and land disputes within legal and political-economic frameworks (Aksinudin, 2023; Niko et al., 2023; Sirait, 2009) or on communal gardens mainly in relation to culture and conservation (Candra, 2022; Marjokorpi & Ruokolainen, 2003; Niko, 2025; Roslinda et al., 2022). As a result, communal orchard practices such as *keloka'* are more often treated as cultural traditions or heritage landscapes rather than as systems of common property governance. Consequently, these practices remain only weakly linked to broader theoretical debates on commons governance, even though they clearly display core characteristics of common property regimes—such as regulated access, shared legitimacy, social obligations, and long-term sustainability goals. Closing this gap is crucial because an insufficient understanding of how these local institutions work may cause land governance policies to weaken the very social mechanisms that help maintain community unity and ecological resilience (Sheergojri et al., 2025).

In this context, this study examines *keloka' urang tua* in Ulu Pengkadan, West Kalimantan, as a form of kinship-based and customary communal orchard governance. The novelty of this study is that it seeks to frame *keloka'* not simply as a cultural inheritance but as a living common property regime in which kinship, inheritance, and customary norms serve as the main institutional pillars of resource governance. Previous common property studies in Indonesia seldom explain how kinship-based communal orchards continue to operate as long-lasting institutions for managing shared resources. Accordingly, beyond describing a local practice, this study contributes to common property scholarship by showing that the sustainability of shared resources is supported not only through formal rules and collective rationality but also through cultural legitimacy that is reproduced across generations within the Malay communities of West Kalimantan.

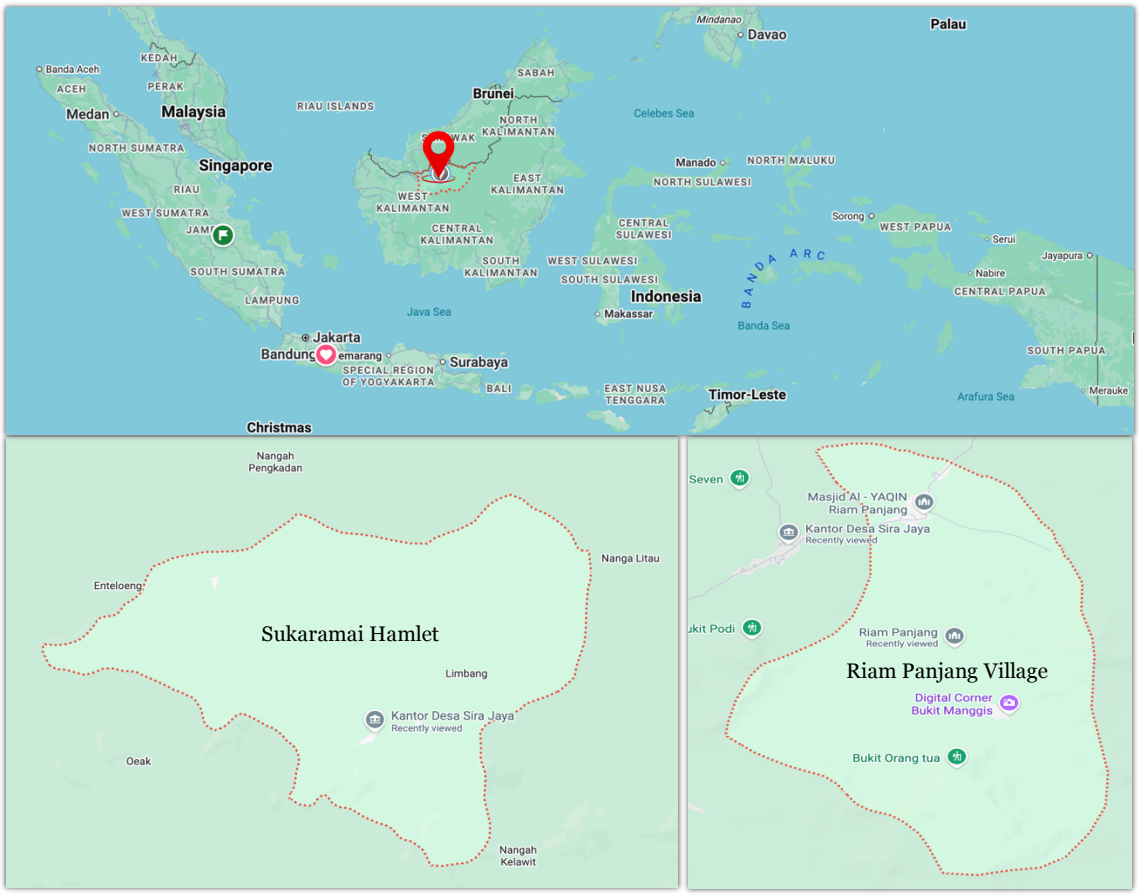
Research Methodology

This research used a qualitative approach with an ethnographic focus to understand the cultural practices behind how *keloka' urang tua* is managed as a communal orchard system. The study was carried out in the Ulu Pengkadan area, specifically in Sukaramai Hamlet and Riam Panjang Village in Kapuas Hulu Regency, West Kalimantan, Indonesia. In these places, *keloka'* is still alive and continues to operate as an intergenerational communal inheritance, one that local people actively maintain. As one informant explained, *Keloka' Jajang* is, to the best of his knowledge, the largest surviving *keloka'* in the Kapuas Hulu (In02, personal communication, January 2, 2026). Administratively, Sukaramai used to

be part of Riam Panjang, and before the territory was divided, the two communities formed a single historical and social unit (Yusriadi, 2014). Many of the indigenous residents in both locations are still connected through family ties. This matters analytically because the way *keloka'* is governed works through kinship networks and social relationships that go beyond present-day administrative borders. This situation provides a strong foundation for understanding how collective ownership, access rights, and customary responsibilities are passed down and reproduced over generations.

Figure 1

Map of the Two Research Sites in Kapuas Hulu



Source: Google Maps (2026).

The main fieldwork was conducted in December 2023, while historical information came from interviews carried out in 1997. Additional follow-up interviews and verification were later conducted in January 2026. During these periods, the researchers conducted in-depth interviews and directly observed how the orchard was managed. As part of the ethnographic immersion process, several team members stayed overnight in the orchard shelters located within the *keloka'* area. Semi-structured interviews were used to learn about local knowledge related to the history of *keloka'*, patterns of inheritance, access rules, ways the orchard is used, and both the social and ecological value of the orchard

for the community of heirs. Special attention was given to questions about ownership, who has management authority, the systems of utilization, and the wider social roles that *keloka'* plays within the community. A total of eight informants took part in the study. They included the head of *keloka'* (the head of the orchard), community elders, and members of the kinship group recognized as legitimate heirs of the orchard system (see Table 1). Informants were chosen purposively because of their direct involvement in managing *keloka'* and because they knew its historical development and how the communal governance system works. This sampling approach was meant to capture the emic perspectives—how *keloka'* is understood and sustained within daily social life—particularly in terms of its institutional and cultural dimensions.

Table 1
Data of Informants

Code	Gender	Position	Interview Period
In01	Male	Head of the *Keloka'*	December 24–25, 2023
In02	Male	Community Elder and Heir	December 23–24, 2023 and January 2, 2026
In03	Male	Community Elder and Heir	December 23–24, 2023
In04	Male	Heir	December 22 and 26, 2023
In05	Female	Heir	December 22, 2023 and January 3, 2026
In06	Male	*Keloka'* Administrator and Heir	December 26, 2023
In07	Female	Heir	December 22 and 26, 2025
In08	Male	Former Head of *Keloka'*	September 1, 1997

Source: Author' elaboration.

Observation was carried out through direct participation in activities conducted within and around the *keloka'* area. This method allowed the researchers to see firsthand how the orchard is maintained and how community members interact socially in the process of managing the communal orchard. In addition, the study was strengthened by the long-term practical knowledge of one research team member, who was born in Riam Panjang and maintains close relationships with the local community. Field experiences and observational notes collected during repeated visits to *keloka' urang tua*—including visits in December 2023 and January 2026—were used as supporting data. These were then cross-checked with the head of *keloka'* and community elders, who themselves are part of the heirship network. This triangulation process was used to ensure the accuracy, consistency, and contextual relevance of the data applied in the analysis. The collected data were analyzed thematically by tracking recurring patterns in governance, social relationships, and ecological functions, as described in the informants' accounts and observed in everyday management practices. Through this approach, the study aimed to understand *keloka'* not only as a physical space for orchards but also as a culturally grounded system of

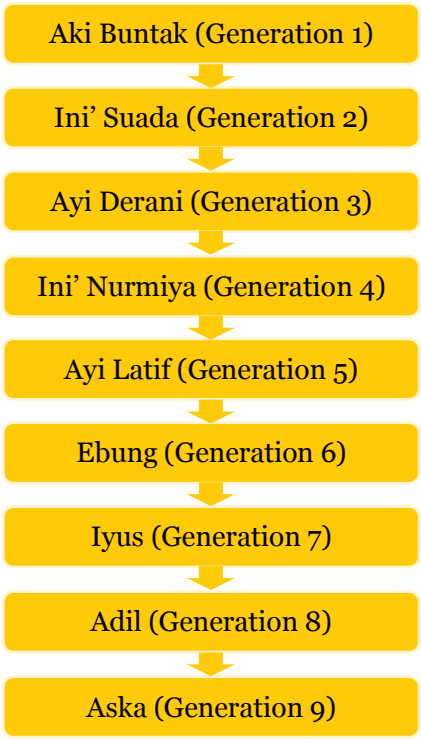
common property governance—one sustained through kinship ties, customary authority, and shared social practices.

Results

Keloka' *as a Kinship-Based Communal Orchard Inheritance*

Keloka' urang tua is a large communal durian (*dereyan*) orchard that is inherited collectively by descendants of an extended kinship group living around Ulu Pengkadan, especially in and around Sukaramai, Kapuas Hulu. Besides being called *keloka' urang tua*, this inherited orchard is also known locally as *Keloka' Jajang*. According to In06 (personal communication, December 26, 2023), the word "Jajang" is probably connected to the name of the nearby area, including Nanga Jajang Hamlet and the Jajang River (Batang Jajang), which is a tributary of the Pengkadan River. Tracing the family lines shows that *keloka'* has been passed down across many generations and still functions as a collectively recognized inheritance system. Figure 2 shows one genealogical line of *keloka'* heirs, reconstructed from Yusriadi's (2007) interview with In08, a former head of *keloka'* and the former head of Riam Panjang Village in 1997. The continuity shown in this lineage makes clear that *keloka'* is not only a physical orchard but also a kinship institution that has been reproduced over time—one through which collective rights and responsibilities are handed down from generation to generation.

Figure 2
One Genealogical Line of the Heirs of *Keloka' Urang Tua*



Source: Adapted from Yusriadi (2007).

Historically, *keloka' urang tua* started as an individually owned orchard that Aki Buntak established by planting the durian trees himself on the land. Over time, however, ownership gradually spread to descendants—children, grandchildren, great-grandchildren, and later generations—so the orchard became a collectively inherited resource. While there is no precise demographic information about the total number of descendants, the wider kinship network is still socially remembered and maintained, especially by the head of *keloka'* and community elders. They are able to trace genealogical ties across different family branches in a horizontal way. This was confirmed by the head of *keloka'*:

> *"Kalau siku' menyiku' nesi' kenal. Nna' tau kroti. Tapi, tingal kami nanya' anak sopa. Sopa apang inai, sopa inik-muyang. Pasti ketau."* [We may not know everyone individually anymore, but we can ask whose child they are, who their parents are, and who their grandparents or ancestors are. Their lineage can always be identified] (In01, personal communication, December 24-25, 2023).

This shows that genealogical recognition is a key way of defining who belongs to the *keloka'* community. Kinship is not only a symbolic sign of identity—it is also a socially recognized basis for deciding legitimate access rights and participation in the communal orchard system. People who claim to be heirs are expected to show their connection through recognized lines of descent, which the community collectively remembers and validates.

In social terms, *keloka' urang tua*'s role as shared inheritance is still acknowledged by members of the broader community in Ulu Pengkadan, including descendants who now live outside the village, the district, and even outside the province. During the durian season, members of the kinship community hold *layah* rights—meaning they have the right to collect durians that naturally fall from the trees once the fruit is ripe. Access to the harvest is formally managed through genealogical membership. Even so, villagers who do not belong to the heirship network may still get limited access (*melopus*) by coming to the orchard during the harvest season. Non-heirs are allowed to collect and eat durians in limited amounts, mainly for personal consumption, not for commercial purposes. However, these limits are guided less by strict numerical measurement and more by commonly understood social norms about what is appropriate. As one heir and local community elder explained:

> *"Intinya, orang luar tau datang kitu', ngelayah dan ngami' buah untuk makan. Bukan untuk dijual. Ya, kalau diitung-itung sesabitlah. 10 bijilah."* [Basically, outsiders may come here, collect durians, and take some fruit to eat, but not for selling. If estimated, perhaps about one basket, around ten fruits] (In02, personal communication, December 23-24, 2023).

This kind of layered access shows that *keloka'* governance does not rely only on exclusion. Instead, it creates negotiated boundaries shaped by kinship ties, customary norms, and moral understandings of fairness. Thus, the orchard is

neither fully closed off nor completely open. It functions as a culturally regulated commons, where rights differ depending on genealogical closeness and social legitimacy.

Among recognized heirs, access rights are also broken down into further categories. Those who are allowed to stay overnight in the orchard for two nights during the harvest season receive additional privileges connected to participating in collective harvesting activities. In addition, heirs who help maintain the orchard—especially by cleaning it before the durian season—receive extra harvesting turns in later rotations. In practice, these people are allowed to collect durians twice during the harvest season (In04, personal communication, December 22 and 26, 2023). This arrangement shows that access within *keloka'* is not based on descent alone; it is also strengthened through participation in collective labor and through fulfilling responsibilities for maintaining the orchard. Although kinship ties have slowly weakened because of population mobility, exogamous marriage, and geographic dispersion, the boundaries of *keloka'* membership are still kept in place. People outside the genealogical line, even if they live in villages around the orchard, are still treated as outsiders rather than legitimate heirs. As a result, they do not hold formal membership rights—despite the fact that there are no physical fences or territorial barriers around the orchard area (In07, personal communication, December 22 and 26, 2023). This highlights that *keloka'* governance depends less on physical enclosure and more on socially maintained recognition, customary legitimacy, and collective memory rooted in kinship relationships.

Local Authority Structure and Orchard Governance

The management of *keloka'* is coordinated by a head of *keloka'*, usually an elder who is recognized as a rightful heir within the genealogical line. The current head of the *keloka'*, In01 lives in Ulu Pengkadan and is 62 years old. He has been in this role for about twenty years, taking over from the previous head of *keloka'*, Ebung (In08). In everyday practice, the head of *keloka'* acts as a caretaker and moral guardian who oversees and regulates how the orchard is used. In effect, he is responsible for everything connected to *keloka'* governance. His authority, however, does not come from private ownership. Instead, it rests on customary legitimacy and shared recognition within the heirship community. This shows that, in *keloka'*, governance works through relational authority rooted in kinship ties rather than through formal bureaucratic institutions.

Broadly speaking, the head of *keloka'* carries out three main functions (In01, personal communication, December 24-25, 2023). First, he serves as the guardian of the orchard by monitoring its condition over time and protecting its territorial boundaries. This role is especially important because the orchard covers a large area and directly borders lands owned by different people on all sides. Under such conditions, boundaries can gradually shift through gradual

encroachment. Field observations made in December 2023 found that the *keloka' urang tua* area is not enclosed by fencing. Instead, the orchard's boundaries are mainly indicated by trees at its edges. A few years earlier, shifting cultivation near the *keloka'* border led to rubber planting that partly extended into the traditional orchard territory. Sorting out and restoring those boundaries became the responsibility of the head of *keloka'*. This makes it clear that territorial governance in *keloka' urang tua* depends less on formal boundary markers and more on socially recognized authority and collective memory about customary spatial limits.

Second, the head of *keloka'* keeps track of the flowering cycles of durian and other fruit trees in the orchard. This information matters socially because the other members of the heirship network rely on him for updates about when the fruiting season will begin. In this respect, the head of *keloka'* acts as a key hub of seasonal ecological knowledge. Third, once the durian flowers start developing into young fruit, he formally informs the heirs through the *pengurus keloka'* (orchard administrators). These administrators act as coordinators across different villages where descendants currently live. They then pass along information about when the group cleaning of the orchard will take place. On the scheduled day, participants typically travel to the orchard together. Travel time depends on distance and transport options. In the past, the trip from Riam Panjang to Ulu Pengkadan took around two hours on foot. Now, motorcycles cut the journey down to roughly twenty to thirty minutes. These practices show that *keloka' urang tua* governance is upheld not only by rules about access but also by coordinated social organization and shared labor, sustained through kinship networks spanning scattered settlements.

Fourth, the head of *keloka'* sets and announces the official period for *ngelayah dereyan*, meaning the collection of naturally fallen ripe durians. During the early part of the fruiting season, residents living near the orchard are generally free to collect fallen fruit without restrictions, since formal regulation usually has not started yet. This is because durians that fall at the beginning of the season are often considered *ubung*—spoiled or lower-quality fruit—which is treated as a normal feature of early-season fruit. Heirs only begin staying overnight in the orchard once the *dorak* season arrives, which refers to the time when high-quality ripe fruit starts falling naturally. In earlier times, people built their own temporary shelters called *pongkal dereyan*, and there was no requirement to pass these shelters on to later harvesters. These shelters were made by assembling wooden or bamboo poles into simple frames without nails. Tarpaulins were stretched over the frame, and the floors were made from logs or bamboo—offering only minimal space to rest while waiting for durians to fall (In08, personal communication, 1 September 1997). The temporary and collectively maintained nature of these shelters reflects the seasonal and cooperative character of how the orchard is used in *keloka' urang tua*.

Figure 3
***Pongkal* in *Keloka'* Before 2024**

Source: Research Documentation (2023).

Since 2024, however, the *keloka'* administrators have started building semi-permanent shelters (*pongkal*) that measure about 4 × 6 meters (see Figure 3). These structures are built in the center of the orchard, with sawn timber used for the pillars, roof frames, and beams. The floors and walls are made from wooden planks, and the roofs are covered with corrugated metal sheets. Unlike the earlier temporary shelters, which relied on roots and bark ties instead of nails (see Figure 4), these newer structures reflect a stronger, more permanent collective investment in orchard infrastructure. In this setup, the head of *keloka'* acts as the coordinating authority: he records who wants to participate in *ngelayah* and organizes the rotation of people who stay overnight in the *pongkal*. He also has the authority to remind or reprimand individuals who enter the orchard without following the established registration procedures. These changes point to a gradual institutional adaptation in *keloka'* governance, where increasing organizational complexity can be accommodated without fundamentally changing the customary foundation of authority.

The head of *keloka'* is assisted by several *keloka'* administrators who work as coordinators and intermediaries between orchard leadership and the wider heirship community. At present, nine people have been appointed to these roles. Their selection seems to consider representation from different family branches and villages where descendants currently live, though no formal criteria regarding representation have been clearly stated. As one heir who also serves as a *keloka'* administrator explained:

> *"Kaban dari mona-mona yang masuk pengurus keloka' mantau asal uga'; dari Ulu Ngkadan, Tubuk, Riam Panyang, dan Jajang."* [Relatives appointed as *keloka'* administrators are also chosen based on where they come from—some are from Ulu Pengkadan, Tubuk (Tintin Kemantan), Riam Panjang, and Nanga Jajang] (In06, personal communication, December 26, 2023).

This arrangement suggests that governance in *keloka'* is organized not only through genealogical descent but also through kinship representation distributed across different places. The administrative structure, therefore, helps maintain communication and coordination among descendants spread across multiple settlements while still preserving the collective character of orchard management.

Figure 4
***Pongkal* in *Keloka'* After 2024**

Source: Research Documentation (2026).

Together with eight other coordinators, In06 helps the head of *keloka'* organize orchard-related activities within their respective local communities. Their duties include coordinating collective cleaning activities and sharing information about harvesting schedules. One key goal of this coordination is to prevent too many people from staying overnight in the orchard at the same time, because a larger group would mean smaller shares of the durians each participant can collect. By keeping track of how many people have registered with the head of *keloka'*, the coordinators can estimate how many participants will stay overnight during a specific harvesting period (In06, personal communication, December 26, 2023). This shows how resource distribution in *keloka'* is managed through anticipatory coordination and negotiated participation rather than through strict allocation rules.

In some cases—such as during the researchers' field visit—the head of *keloka'* may also negotiate with people who have already registered, asking them to reconsider their plans so that others can be accommodated. One heir and local community elder explained:

> *"Macam kinih, sida' dari ituk, balang karena ada kian. Jadi sida' melalu, karena kian tuk sekali-sekali."* [Like now, those from here (Ulu Pengkadan) decided not to collect durians because you were here. They gave way because your visit only happens occasionally] (In03, personal communication, December 23-24, 2023).

These kinds of arrangements reflect the discretion used by the head of *keloka'*, while also showing that community members are willing to make room for one another through shared understanding. Overall, this flexibility indicates that governance in *keloka' urang tua* is fairly informal in practice. Although there are no written regulations, these arrangements have long been socially recognized and consistently passed down through generations. Major decisions are generally made collectively, while more technical matters are delegated to the head of *keloka'*. In this sense, the head of *keloka'* does not function like an authoritarian ruler; rather, he acts as a facilitator, mediator, and guarantor of social order within the communal orchard system.

Utilization Practices and the Economy of Keloka'

Most of the time, *keloka'* is used during the durian harvest season. In general, durian fruit is available once a year, though especially plentiful harvests don't always happen annually; they often come in cycles of two to three years. When harvests are poor, *keloka'* draws less attention from heirs, since the amount of fruit is too small to justify overnight stays in the orchard and is viewed as not economically worthwhile. Intensive use only happens during the height of the fruiting period, when ripe durians naturally drop from the trees. Based on local experience, only certain trees reliably produce abundant harvests.

Besides ordinary, unnamed durians, *keloka' urang tua* is also known for several especially valuable varieties, especially *dereyan kui* and *dereyan porin*. These varieties are known for their yellow flesh and their rich, savory taste, which people often compare to cakes as a way to describe their exceptional flavor. Durian of this kind is frequently brought home as a gift by people who participate in *ngelayah*. In earlier times, gifts (*dereyan amu'*) were chosen with care from the highest-quality fruits. After selecting them, the thorns were trimmed off (*dititi'*), leaving only the smooth outer shell around the edible portion. These practices show that durian in *keloka'* carries more than just economic worth—it also has symbolic and social meaning, rooted in local systems of reciprocity and kinship exchange.

Within *keloka' urang tua*, durians are rarely harvested directly from the tree while they are still unripe. They are also not commonly picked too early for

artificial ripening or commercial sale. To this day, the orchard—and durian in particular—has not been treated purely as a commercial asset. Unlike privately owned fruit trees, whose fruit can be harvested whenever buyers are available, durians in *keloka' urang tua* are traditionally left to ripen and fall naturally before they are collected (In05, personal communication, January 3, 2023). Collecting naturally fallen fruit is called *ngelayah*. More specifically, *ngelayah* involves staying overnight in orchard shelters (*pongkal*) while waiting for ripe durians to fall on their own. This reflects a cultural logic of use that prioritizes ecological rhythms and customary rules over market-driven extraction. The ban on harvesting unripe fruit also works as an informal conservation method, helping maintain the orchard's long-term productivity and the shared value it provides.

In wider Malay society, *ngelayah* can be carried out individually or collectively. But in *Keloka' Urang Tua*, *ngelayah* is organized collectively through coordinated groups, or harvest parties. These groups are formed by mutual agreement and managed through a rotational system locally known as *bilin*, which is meant to limit how many people stay in the orchard at any one time. Because of this, the number of participants in each group is never fixed. Sometimes fewer than ten people take part, representing different households, while at other times the number may be more than a dozen. The durians gathered during each night are shared equally among everyone who participated on that occasion. To keep things fair and avoid disputes, one person in the group typically plays an informal role in organizing how the fruit will be distributed. In addition to the portions given to participants, a special share is set aside for the head of *keloka'* as recognition of his role as guardian and coordinator of the orchard (In04, personal communication, December 22 and 26, 2023). These arrangements show that access to resources in *keloka' urang tua* cannot be separated from participation in collective practices and related social responsibilities. Harvesting is therefore not guided by individual accumulation but by reciprocity, negotiated fairness, and shared communal accountability.

Historically, durians harvested from the orchard were often processed into *tempoyak*, a fermented durian product that is well known in Malay culinary traditions (Ahmad et al., 2018). Long-term durian preservation has long been practiced among Malay communities (Anggadhania et al., 2023; Rajagukguk & Arnold, 2021). *Tempoyak* is eaten either as a side dish or used as an ingredient in traditional foods such as *lamoi* or *lamboy*, a fish stew flavored with fermented durian. In addition to *tempoyak*, durian is also processed into *lempok*, a kind of durian sweet that resembles sticky fruit paste. The durian flesh is stirred continuously in a large pan for several hours until it thickens and turns brownish. When prepared properly, *lempok* can be stored for several months. More recently, however, durians harvested from *keloka' urang tua* have increasingly been transported to Ulu Pengkadan village and sold commercially. During the peak 2024 durian season, prices were roughly IDR 3,000 to 5,000 per fruit, and

the buyers were mostly middlemen from outside the village. Even though the monetary returns are relatively modest, the income still supports household livelihoods, and the durians are then shipped to urban markets. This change suggests that *keloka'* is gradually connecting with broader market networks, although commercialization remains secondary to its communal and cultural functions.

Even with durian's growing economic value, individual heirs have never been seen as acceptable to harvest durians on their own within *keloka' urang tua*. Collective harvesting practices and jointly agreed-upon rules are still followed across generations. As one heir explained:

> *"Semua urang ngimai semua aturan yang ada. Nesi' ada yang ngami' keniri'. Kalau berani, tau kona' ukum."* [Everyone follows all the existing rules. No one takes fruit individually. If someone dares to do so, they may face customary sanctions] (In05, personal communication, December 22, 2023).

Customary law in the Embau region, including Ulu Pengkadan, remains socially powerful and continues to regulate many everyday aspects of life (Nordin et al., 2025). Unauthorized harvesting is treated as a violation of customary norms (*larang adat*) and can lead to sanctions. Even if the formal penalties themselves may not be severe, the social and psychological impact on violators within the community is considered highly significant (In01, personal communication, December 24-25, 2023). This shows that adherence in *keloka' urang tua* is sustained less through strict coercive enforcement and more through moral legitimacy, social recognition, and the collective pressure that arises within long-lasting kinship relationships.

Ecological Functions and Social Space

Keloka' is viewed not only as a communal resource but also as a landscape that is deliberately protected. Because of this, the area is looked after with great care and kept from being harmed or changed. Fruit trees in the orchard are not allowed to be cut down, and the land cannot be converted to other uses. Durian trees and other large plants are preserved as long-term communal assets meant to support future generations. Even though many of the trees are now quite old, local knowledge indicates that they are generally left to die on their own. At the same time, younger durian trees that appear within the orchard are permitted to grow and develop without interference. As things stand now, the trees differ greatly in both age and size. The biggest durian trees are said to reach around four adult arm spans (*pangkap*), and one *pangkap* is roughly equal to 1.4 meters. Using this local measure, some of the durian trees in *keloka' urang tua* have bases that exceed 1.5 meters in diameter.

As a "forest" of durian trees located in the upper reaches of the Pengkadan River, *keloka'* also plays important ecological roles—especially as a water

catchment area and an environmental buffer zone. These ecological functions are closely tied to broader customary beliefs and practices around forest protection that have developed over time within communities across Kapuas Hulu Regency (Bong et al., 2016; Felker et al., 2017). For that reason, the orchard's dense vegetation is not understood as just a contributor to agricultural output. Instead, it is seen as essential to the long-term sustainability of both the orchard ecosystem and the surrounding environment. In this way, *keloka' urang tua* functions simultaneously as a productive space and as a culturally managed ecological common.

Beyond its economic and ecological importance, *keloka'* is also a significant social space for the extended kinship community. The harvest season offers a time for different generations to come together—renewing kinship relationships and strengthening social ties among heirs. These shared activities take place during *mpokat* (community meetings among orchard administrators), *nyiang* (collective orchard cleaning), and *ngelayah* during the *dorak* harvest season. Through these routines of gathering, working together, and sharing the harvest, *keloka'* creates common experiences that deepen people's attachment to the orchard and reinforce collective responsibility for maintaining it (In02, personal communication, January 2, 2026). *Keloka' urang tua*, therefore, reflects a form of communal orchard governance rooted in shared ownership and cultural continuity. Its management includes kinship-based rules about access, seasonal limits on resource use, collective distribution of harvests, and ongoing ecological protection of the orchard landscape. More broadly, these practices show that the sustainability of *keloka'* is not upheld only through formal institutional rules. Rather, it is sustained through the ongoing reproduction of social relationships, customary responsibilities, and shared cultural values that are continuously embedded in everyday communal life.

Discussion

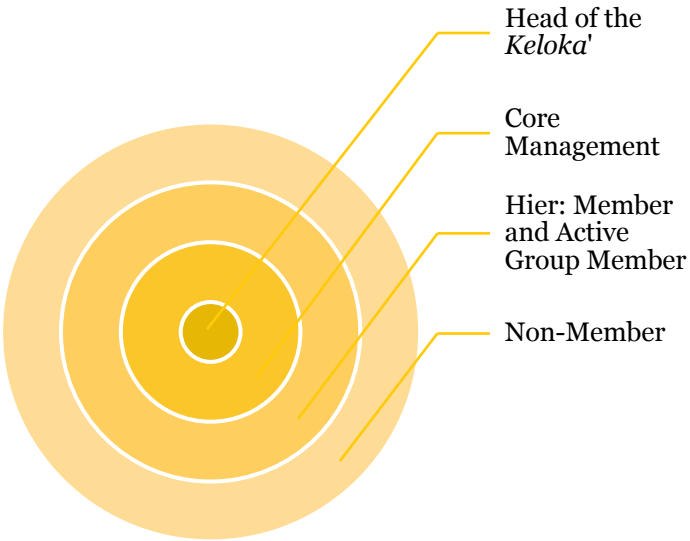
The results of this study show that *keloka' urang tua* functions as a living, sustainable common-property system. While many commons are assumed to operate like open access resources (D'Alpaos et al., 2023; Hardin, 1968; Mckean, 2000), *keloka'* is instead a resource system that is collectively managed. In *keloka' urang tua*, people's access is governed through shared ownership and community-based norms about how the orchard can be used. This difference matters in common property theory because it clearly separates resources managed by local institutions from resources that do not have effective regulation. The *keloka' urang tua* case, therefore, strengthens long-standing critiques of the "tragedy of the commons" argument, which often treats collective ownership as if it simply means a lack of rules. In *keloka' urang tua*, the orchard's sustainability depends directly on socially embedded institutions—not on privatization or formal government regulation alone. This aligns with recent

scholarship that understands commoning not only as a form of ownership but also as an ongoing relational process and a governance practice that is continually reproduced within society (Lai, 2025; Ostrom, 1990; Partelow & Manlosa, 2023). More importantly, the *keloka' urang tua* case indicates that the durability of commons governance cannot be separated from the cultural relationships through which collective legitimacy and obligations are continually renewed.

At the same time, *keloka' urang tua* also shows features that go beyond classical ideas about how membership boundaries work in common-property governance. The findings suggest that access is organized through two overlapping circles. The inner circle includes heirs who are recognized genealogically, while the outer circle allows non-members limited access, but only with approval from the head of *keloka'*. This shows that membership boundaries in *keloka' urang tua* are clearly defined, yet they are not rigidly exclusionary. Although genealogical status is the main basis for access, entitlement, and participation are also shaped by other factors, such as social closeness, customary approval, and involvement in orchard maintenance. In this setting, cultural legitimacy and moral responsibility are key mechanisms that keep people complying with communal rules. These findings are important because they suggest that exclusivity in common-property systems can work in layered, relational ways (Figure 4): bounded enough to prevent open access but flexible enough to sustain social cohesion within the wider community. In this regard, *keloka'* adds an important nuance to common property theory, which has often described the member–non-member distinction in more binary terms (Partelow & Manlosa, 2023; Wade, 1987). Rather than relying on rigid enclosure, *keloka'* illustrates how commons governance can be maintained through socially negotiated boundaries rooted in kinship ties and moral reciprocity.

Figure 4

Layered Membership Structure in the *Keloka'* Common Property System



Source: Authors' elaboration.

The role of the head of *keloka'* further demonstrates that collective action is supported by effective local authority. The head of *keloka'* is not the owner of the orchard; instead, the person acts as a coordinator, mediator, and guardian of customary legitimacy. This finding echoes Wade's (1987) argument that local authority is important for ensuring rule compliance, while also building on wider international research that highlights the value of leadership quality, community forums, and institutional accountability for successful commons governance. For instance, Antinori & Rausser (2007) show that local participatory forums used to share information and secure collective agreement on management plans are linked to stronger rule compliance and improved forest conditions in Mexico. Likewise, Dhungana et al. (2024) find that in Nepal, the sustainability of community forest user groups depends largely on the quality of group management, cooperation, and collective action. Experimental evidence from Kahsay et al. (2023) also suggests that leadership accountability directly affects conservation outcomes. In *keloka' urang tua*, these dynamics appear in the position of the head of *keloka'* as a node of social trust—authority remains legitimate because it is embedded in collective relationships rather than separated from them. As a result, authority in *keloka' urang tua* works less through coercion and more through moral recognition and reciprocal obligation.

From the viewpoint of how resources are used, practices such as *ngelayah*, rotational harvesting through *bilin*, the collective sharing of harvests, and access that is differentiated based on participation in orchard maintenance all point to a strong connection between rights of use and responsibilities of care. These arrangements show that resource use in *keloka' urang tua* is seasonal, managed, and based on contribution—challenging the assumption that common property automatically leads to overexploitation. In this respect, *keloka'* resembles other community-based systems of resource governance documented elsewhere. For example, the Qero system in Guassa, Ethiopia, shows how local rules, communal sanctions, and restrictions on resource use can support long-term conservation while also protecting local livelihoods (Beyene, 2010). More broadly, a global analysis of 643 community forest cases across 51 countries found that the social and environmental results of community-based management depend on a mix of social, economic, and institutional factors (Hajjar et al., 2020). The ecological sustainability observed in *keloka' urang tua*, therefore, supports the argument that communal resource systems endure because utilization, monitoring, and the continued reproduction of local institutions are interdependent. In *keloka' urang tua*, participating in harvesting is inseparable from participating in maintaining the social order that collective access depends on.

Beyond its ecological and economic roles, *keloka'* also functions as a social space where community cohesion is continually renewed. The harvest season is not only a time to extract resources; it is also when extended families from different generations and settlements come together, refresh genealogical

memory, and strengthen their shared attachment to the orchard. As a result, *keloka' urang tua*'s value goes beyond the durian harvest itself and includes social cohesion, reciprocity, and continuity across generations. This is important because it reinforces the idea that commons should be understood both as socio-ecological systems and as relational social processes. Recent work on commoning emphasizes that collective resource governance not only allocates material resources—it also shapes social relationships, power structures, and forms of legitimacy. From this perspective, Sheergojri et al. (2025) argue that collective action in resource governance is closely tied to broader socio-ecological resilience. Within *keloka' urang tua*, then, kinship and inheritance are not just cultural background factors; they are the primary social mechanisms through which the common property institution stays alive across generations. The orchard continues because it remains a channel through which social relations themselves are reproduced.

Compared with studies in Indonesia that have focused mainly on customary forests, agrarian conflicts, or land disputes, this study shows that communal fruit orchards should also be recognized as complex forms of common-property governance (Gaur et al., 2018; Ponstingel, 2023). The main theoretical contribution of this study is its claim that culture—especially kinship, inheritance, moral legitimacy, and customary authority—acts as the institutional foundation that sustains collective resource governance (Beyene, 2010; Rusmiyati et al., 2026). Practically, these findings suggest that land governance policies in customary regions cannot depend only on formal legal recognition. They also must account for layered access arrangements, local leadership structures, and the social reproduction mechanisms that keep commons institutions functioning over time (Vandermale et al., 2024). In this way, *keloka' urang tua* enriches the common-property literature from Indonesia by offering a model of Malay communal orchard governance that persists not because it is untouched by change but because its cultural institutions remain able to adapt to social transformation without losing their social legitimacy.

Conclusion

This study finds that *keloka' urang tua* in Ulu Pengkadan, Kapuas Hulu Regency, functions as a common property regime deeply rooted in local culture. It is sustained through kinship ties, customary authority, and norms for managing resources that are continually reproduced by the community. The results indicate that the long-term sustainability of the communal orchard is supported by membership defined through genealogy, access arrangements organized in layers, harvesting that follows rotational practices, shared labor duties, and regulation mechanisms that are socially recognized and accepted. In other words, *keloka'* is not an open access resource. Instead, it reflects a model of communal governance where ecological sustainability and social cohesion strengthen one

another through cultural practices and responsibilities passed down across generations. The study also shows that commons governance in *keloka' urang tua* is not driven solely by formal rules or economic rationality. It is equally shaped by moral legitimacy, reciprocity, and the ongoing reproduction of social relationships within the Malay kinship system in West Kalimantan.

From a theoretical standpoint, this research adds to scholarship on common property by offering a perspective grounded in culture from Malay communities in West Kalimantan. *Keloka' urang tua* suggests that communal orchards should be understood not just as systems for managing resources but also as spaces where collective identity, social memory, and intergenerational responsibilities are reproduced. As a result, the study broadens existing approaches to common property by demonstrating that the sustainability of shared resources depends strongly on culturally embedded forms of legitimacy and relational governance. Practically, the findings indicate that policies related to land governance, conservation, and rural development in customary areas should not rely solely on formal legal recognition. They should also pay closer attention to local institutions that shape access, responsibilities, and how benefits are shared through mechanisms embedded in social life. However, this study is limited because it focuses on a single *keloka'* case and does not systematically compare communal orchard practices across different regions or communities. Future research could, therefore, conduct comparative work across multiple customary communities or investigate how *keloka' urang tua* governance changes under growing market pressures and wider social transformation. In this way, the study of common property contributes not only to wider academic discussions but also to efforts to sustain ecological resources and collective forms of social life at the local level.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Disclosure Statement

No potential conflicts of interest were reported by the authors.

Ethics Statement

This study was conducted in accordance with established research ethics principles. Informed consent was obtained from all informants, and all identifying information was anonymized to ensure confidentiality.

Generative AI Usage Statement

The authors used Wordvice AI exclusively for proofreading, grammar checking, and language polishing. This tool did not contribute to the research design, data analysis, interpretation, argumentation, or the generation of scholarly content. All intellectual and academic contributions presented in this manuscript are solely those of the authors, who assume full responsibility for its accuracy, originality, and integrity.

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Bibliography

Adhikari, B. (2021). The Economics of Common Pool Resources: A Review. *Ecology, Economy and Society–the INSEE Journal*, *4*(1), 71–88. https://doi.org/10.37773/ees.v4i1.377

Ahmad, A., Yap, W. B., Kofli, N. T., & Ghazali, A. R. (2018). Probiotic Potentials of Lactobacillus Plantarum Isolated from Fermented Durian (Tempoyak), a Malaysian Traditional Condiment. *Food Science & Nutrition*, *6*(6), 1370–1377. https://doi.org/10.1002/fsn3.672

Aksinudin, S. (2023). Implikasi Pertanahan dalam Penanganan Konflik Agraria di Indonesia. *Litigasi*, *24*(2), 184–204. https://doi.org/10.23969/litigasi.v24i2.9804

Ambasari, N., Heriani, I., & Khatimah, H. (2025). Perlindungan Hak Ulayat Masyarakat Adat Dayak di Wilayah Hukum Kapuas Hilir. *Indonesian Journal of Islamic Jurisprudence, Economic and Legal Theory*, *3*(3), 3011–3024. https://doi.org/10.62976/ijijel.v3i3.1423

Andersson, K., Benavides, J. P., & León, R. (2014). Institutional Diversity and Local Forest Governance. *Environmental Science & Policy*, *36*, 61–72. https://doi.org/10.1016/j.envsci.2013.07.009

Anggadhania, L., Setiarto, R. H. B., Yusuf, D., Anshory, L., & Royyani, M. F. (2023). Exploring Tempoyak, Fermented Durian Paste, a Traditional Indonesian Indigenous Fermented Food: Typical of Malay Tribe. *Journal of Ethnic Foods*, *10*, 42. https://doi.org/10.1186/s42779-023-00206-2

Antinori, C., & Rausser, G. (2007). Collective Choice and Community Forestry Management in Mexico: An Empirical Analysis. *The Journal of Development Studies*, *43*(3), 512–536. https://doi.org/10.1080/00220380701204471

Bahari, R., & Faizin, M. A. (2026). Deforestasi dan Krisis Ekologis Kalimantan: Dampak Regulasi Pembukaan Lahan terhadap Kesejahteraan dan Konflik Sosial Masyarakat. *Journal of Legal, Political, and Humanistic Inquiry*, *1*(3), 318–330. https://doi.org/10.65310/8wv3fd08

Behnke, R. (2018). Open Access and the Sovereign Commons: A Political Ecology of Pastoral Land Tenure. *Land Use Policy*, *76*, 708–718. https://doi.org/10.1016/j.landusepol.2018.02.054

Beyene, F. (2010). Customary Tenure and Reciprocal Grazing Arrangements in Eastern Ethiopia. *Development and Change*, *41*(1), 107–129. https://doi.org/10.1111/j.1467-7660.2009.01631.x

Bong, I. W., Felker, M. E., & Maryudi, A. (2016). How are Local People Driving and Affected by Forest Cover Change? Opportunities for Local Participation in REDD+ Measurement, Reporting and Verification. *PloS One*, *11*(11), e0145330. https://doi.org/10.1371/journal.pone.0145330

Candra, H. K. (2022). Pengelolaan Tembawang oleh Masyarakat Desa Batu Onap Kabupaten Melawi Kalimantan Barat. *PIPER*, *18*(1), 138–142. https://doi.org/10.51826/piper.v18i1.628

D'Alpaos, C., Moretto, M., & Rosato, P. (2023). Common-Property Resource Exploitation: A Real Options Approach. *Land*, *12*(7), 1304. https://doi.org/10.3390/land12071304

Dhungana, N., Lee, C. H., Khadka, C., Adhikari, S., Pudasaini, N., & Ghimire, P. (2024). Evaluating Community Forest User Groups (CFUGs)' Performance in Managing Community Forests: A Case Study in Central Nepal. *Sustainability*, *16*(11), 4471. https://doi.org/10.3390/su16114471

Felker, M. E., Bong, I. W., DePuy, W. H., & Jihadah, L. F. (2017). Considering Land Tenure in REDD+ Participatory Measurement, Reporting, and Verification: A Case Study from Indonesia. *PLOS ONE*, *12*(4), e0167943. https://doi.org/10.1371/journal.pone.0167943

Fisher, M. R., Workman, T., Mulyana, A., Balang Institute, Moeliono, M., Yuliani, E. L., Colfer, C. J. P., & Adam, U. E. F. B. (2020). Striving for PAR Excellence in Land Use Planning: Multi-Stakeholder Collaboration on Customary Forest Recognition in Bulukumba, South Sulawesi. *Land Use Policy*, *99*, 102997. https://doi.org/10.1016/j.landusepol.2017.09.057

Gaur, M. K., Goyal, R. K., Kalappurakkal, S., & Pandey, C. B. (2018). Common Property Resources in Drylands of India. *International Journal of Sustainable Development & World Ecology*, *25*(6), 491–499. https://doi.org/10.1080/13504509.2018.1423646

Hajjar, R., Oldekop, J. A., Cronkleton, P., Newton, P., Russell, A. J. M., & Zhou, W. (2020). A Global Analysis of the Social and Environmental Outcomes of Community Forests. *Nature Sustainability*, *4*(3), 216–224. https://doi.org/10.1038/s41893-020-00633-y

Hardin, G. (1968). The Tragedy of the Commons. *Science*, *162*(3859), 1243–1248. https://doi.org/10.1126/science.162.3859.1243

Jodha, N. S. (1990). Rural Common Property Resources: Contributions and Crisis. *Economic and Political Weekly*, *25*(26), A65–A78.

Kahsay, G. A., Bulte, E., Alpizar, F., Hansen, L. G., & Medhin, H. (2023). Leadership Accountability in Community-Based Forest Management: Experimental Evidence in Support of Governmental Oversight. *Ecology and Society*, *28*(4).

Karpoff, J. M. (2022). The Tragedy of "the Tragedy of the Commons": Hardin versus the Property Rights Theorists. *The Journal of Law and Economics*, *65*(S1), S65–S84.

Kumar, M. (2017). Common Property Resources Status in Jharkhand: A Case Study on Oraons Common Property Right in Chotanagpur Area of Ranchi District. *Man in India*, *97*(2), 281–293.

Lai, L. W. (2025). Some Reflections on Hardin's Property Rights Solution to the Tragedy of the Commons. *Economic Affairs*, *45*(1), 140–146. https://doi.org/10.1111/ecaf.12696

Marjokorpi, A., & Ruokolainen, K. (2003). The Role of Traditional Forest Gardens in the Conservation of Tree Species in West Kalimantan. *Indonesia. Biodiversity & Conservation*, *12*, 799–822. https://doi.org/10.1023/A:1022487631270

Mckean, M. A. (2000). Common Property: What is It, What is It Good for, and What Makes it Work. People and Forests: Communities, Institutions, and Governance. *International Forestry Resources and Institutions Research Program, Indiana University, Indiana, U.S.A.*, 27–55.

Mirasola, C. (2024). Common Heritage as Public Trust: A Property Law Approach to Managing Resources Beyond National Jurisdiction. *Southern California Law Review*, 97(6).

Niko, N. (2025). Dayak Benawan Indigenous Futures: Tropical Rainforest Knowledge in Kalimantan, Indonesia. *ETropic: Electronic Journal of Studies in the Tropics*, *24*(1), 218–239. https://doi.org/10.25120/etropic.24.1.2025.4144

Niko, N., Widianingsih, I., & Muhammad, F. (2023). Indigenous Forest: The Crucial Role of Dayak Benawan Women's Knowledge in West Kalimantan, Indonesia. *Journal of Namibian Studies*, *37*.

Nordin, Z. S., Ruslan, I., Yusriadi, Y., Hamzah, N., & Darmadi, D. (2025). Integrating Islamic Law and Customary Law: Codification and Religious Identity in the Malay Buyan Community of Kapuas Hulu. *Journal of Islamic Law*, *6*(1), 89–111. https://doi.org/10.24260/jil.v6i1.3410

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.

Partelow, S., & Manlosa, A. O. (2023). Commoning the Governance: A Review of Literature and the Integration of Power. *Sustainability Science*, *18*, 265–283. https://doi.org/10.1007/s11625-022-01191-2

Ponstingel, D. (2023). Community Gardens as Commons through the Lens of the Diverse Economies Framework: A Case Study of Austin, TX. *Applied Geography*, *154*, 102945. https://doi.org/10.1016/j.apgeog.2023.102945

Rajagukguk, Y. V., & Arnold, M. (2021). Tempoyak: Fermented Durian Paste of Malay Ethnic and its Functional Properties. *International Journal of Gastronomy and Food Science*, *23*, 100297. https://doi.org/10.1016/j.ijgfs.2020.100297

Richter, A., & Van Soest, D. (2025). Experiments on Common Property Management. In *Encyclopedia of Energy, Natural Resource, and Environmental Economics* (pp. 168–176). Elsevier. https://doi.org/10.1016/B978-0-323-91013-2.00009-5

Roslinda, E., Siswoyo, A., & Nantah, N. (2022). Assessing the Potential of Tembawang, a Traditional Forest Management in Sanggau, West Kalimantan, Indonesia for Ecotourism. *Biodiversitas Journal of Biological Diversity*, *23*(4), 2187–2195. https://doi.org/10.13057/biodiv/d230454

Rout, S. (2010). Collective Action for Sustainable Forestry: Institutional Dynamics in Community Management of Forest in Orissa. *Social Change*, *40*(4), 479–502. https://doi.org/10.1177/004908571004000405

Rusmiyati, C., Wahyono, E., Carolina, C., Tursilarini, T. Y., & Tantri, E. (2026). Participatory Governance of Customary Forests: Institutional Collaboration in Islamic Law and Customary Law Perspectives. *Al-Manahij: Jurnal Kajian Hukum Islam*, *20*(1), 21–42. https://doi.org/10.24090/mnh.v20i1.15484

Sheergojri, I. A., Rashid, I., Aneaus, S., Rashid, I., Qureshi, A. A., & Rehman, I. U. (2025). Enhancing the Social-Ecological Resilience of an Urban Lake for Sustainable Management. *Environment, Development and Sustainability*, *27*(3), 8085–8110.

Sirait, M. (2009). *Indigenous Peoples and Oil Palm Plantation Expansion in West Kalimantan, Indonesia*. Cordaid Memisa.

Vandermale, E. A., Bogetti, J., & Mason, C. W. (2024). Land Use Policy Frameworks in Canada and Aotearoa New Zealand: Examining the Opportunities and Barriers of Indigenous-Led Conservation and Protected Areas. *Land*, *13*(6), 886. https://doi.org/10.3390/land13060886

Wade, R. (1987). The Management of Common Property Resources: Finding a Cooperative Solution. *The World Bank Research Observer*, *2*(2), 219–234. https://doi.org/10.1093/wbro/2.2.219

Wakamatsu, M., & Anderson, C. M. (2018). The Endogenous Evolution of Common Property Management Systems. *Ecological Economics*, *154*, 211–217. https://doi.org/10.1016/j.ecolecon.2018.08.007

Wilson, J. (2012). On the Value of the Intellectual Commons: In A. Lever (Ed.), *New Frontiers in the Philosophy of Intellectual Property* (1st ed., pp. 122–139). Cambridge University Press. https://doi.org/10.1017/CBO9780511920837.006

Yusriadi, Y. (2014). Sejarah dan Perkembangan Orang Melayu di Riam Panjang Kalimantan Barat. *Khatulistiwa*, *4*(2), 148–168. https://doi.org/10.24260/khatulistiwa.v4i2.257

Yusriadi, Yusriadi. (2007). *Dialek Melayu Ulu Kapuas, Kalimantan Barat*. Kuala Lumpur: Dewan Bahasa dan Pustaka.