



SIRIAH KA SIDANG AS AN INDIGENOUS MECHANISM FOR CUSTOMARY FOREST GOVERNANCE IN MINANGKABAU

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ABSTRACT

This study examines how siriah ka sidang, a customary conflict resolution mechanism practised by the indigenous community of Nagari Pasia Laweh, West Sumatra, contributes to ecological sustainability, social cohesion, and culturally legitimate justice. It addresses two questions: (1) How is siriah ka sidang practised? and (2) How does it influence forest governance, the preservation of ecological knowledge, and the reduction of long-term conflicts? A descriptive qualitative approach was employed, with data collected through in-depth interviews, focus group discussions (FGDs), and participatory observation conducted between June 2025 and May 2026. The findings identify three key principles. First, hearings are convened only after community members submit reports supported by sufficient evidence of customary law violations. Second, proceedings take place only when both parties voluntarily agree to participate, fulfil the required procedures, and accept the final decision. Third, the mechanism prioritises

reconciliation, collective responsibility, and environmental stewardship rather than punishment, thereby supporting sustainable forest governance, preserving ecological knowledge, and preventing long-term conflicts. This study concludes that *siriah ka sidang* reflects the principles of the green economy and exemplifies embedded ecological governance, in which ecological management is rooted in cultural values, customary institutions, local beliefs, and community relationships while promoting a restorative model of justice perceived as more legitimate and effective than alternative dispute-resolution mechanisms.

Keywords: *Siriah ka sidang*, moral ecology, customary forest, traditional ecological governance, Minangkabau

INTRODUCTION

Siriah ka sidang is a customary tradition practised by *ninik mamak* (customary leader) in Nagari Pasia Laweh as part of the process of resolving disputes through a customary assembly. This tradition has been passed down from generation to generation since ancient times, although its exact origins remain unknown. In practice, a customary hearing is conducted only after a report is received from community members regarding illegal logging activities within customary forests. Once such a report is submitted, a customary assembly is convened and attended by both the reporting party and the accused party. A distinctive feature of the proceedings is the presentation of betel leaves, gambier, areca nut, and *sadah* (lime) in a traditional container known as a *carano*. This ceremonial offering is believed to create an atmosphere that encourages the disputing parties to speak openly, honestly, and sincerely. As a result, *siriah ka sidang* is regarded as an important mechanism for uncovering the truth and facilitating a fair and peaceful resolution within the customary justice system.

The practice of *siriah ka sidang* has contributed significantly to the recognition of Nagari Pasia Laweh, Agam Regency, West Sumatra, which received the Best Nagari Award in the Nature Conservation category in 2023 from the Ministry of Environment and Forestry of the Republic of Indonesia. The community manages approximately 2,345 hectares of customary forest within a broader forest area of 7,000 hectares designated as a state forest. The *siriah ka sidang* tradition, which has been practised for generations, is widely regarded as an effective mechanism for preventing customary law violations related to the use and management of customary forests. Community members are accustomed to seeking permission from traditional leaders before accessing forest resources, reflecting a strong culture of respect for customary norms and environmental stewardship. This practice offers a valuable response to the growing challenges of deforestation and environmental degradation affecting many tropical regions. The experience of Nagari Pasia Laweh demonstrates that indigenous communities can play a crucial role in safeguarding ecosystem sustainability through the implementation of customary law and local wisdom. It also highlights the importance of greater state recognition and support for indigenous governance systems as an integral component of sustainable environmental management (Pabbajah 2021; Philip et al. 2022; Prasetyo et al. 2020).

To date, studies on the resolution of customary forest conflicts through customary assembly have developed along three main lines of inquiry. First, existing research has focused on the role of customary law in promoting sustainable forest protection, as reflected in various indigenous governance mechanisms, including the *silih* customary system of Hampura, *pasang ri kajang*, and the customary principles practised by the Suku Anak Dalam community in Jambi (Ahmed and Dhiman, 2023; Bempong et al. 2023; Triyuni et al. 2023; Yulia et al. 2025). Second, a growing body of research emphasises the significance of customary forests as sacred spaces for indigenous and local communities. This perspective is reflected in studies of *seloko adat*, the customary practices of the Baduy community, and the cultural traditions of the Iban people, all of which highlight the spiritual, cultural, and social values attached to forest landscapes

(Moudopoulos-Athanasίου 2023; Shiferaw et al. 2023; Wang and Hu 2023; Ridwan et al. 2025). Third, existing studies highlight the knowledge of local communities regarding the use and management of customary forests, recognising such knowledge as an important component of legal pluralism. Examples can be found in indigenous forest governance practices in Aceh and Bali, where local ecological knowledge continues to shape patterns of resource management and environmental protection (Kuru et al. 2021; Hertog et al. 2022; Sobaih and Naguib 2022; Tias et al. 2026). Overall, research on customary forests has primarily focused on their functions, rituals, and the ecological knowledge possessed by local communities. While these studies have made valuable contributions to understanding indigenous environmental governance, they tend to examine knowledge, rituals, and institutions as separate elements. As a result, they have not fully explained how cultural practices operate in an integrated manner as concrete mechanisms of ecological governance. This gap highlights the need for further research that explores the dynamic relationship between customary institutions, cultural values, and environmental management within indigenous communities.

This study examines *siriah ka sidang* through the lens of traditional ecological knowledge (Berkes et al. 2000). This perspective is particularly appropriate because *siriah ka sidang* is rooted in the long-standing experience of indigenous communities in managing and protecting their customary forests. Its effectiveness is reflected in the findings of ecological assessments conducted by the Ministry of Environment and Forestry of the Republic of Indonesia during the evaluation process for the 2023 Nature Conservation Award. These assessments recognised the important role of customary institutions in supporting environmental conservation and sustainable forest governance. Despite its significance, *siriah ka sidang* has not been formally documented in written form. Instead, it is embedded within the community's cultural values, spiritual beliefs, and collective identity. According to local leaders, particularly the *wali nagari*, this tradition remains an effective mechanism for conservation and conflict resolution.

However, its continuity is increasingly challenged by modernisation and social change. The gradual erosion of oral traditions and declining community participation in customary rituals have made it more difficult to preserve and revitalise *siriah ka sidang* as a customary dispute-resolution mechanism. Ideally, ecological knowledge should not exist in isolation. Rather, it should be institutionalised within social structures that regulate access to, distribution of, and control over natural resources. Through such institutionalisation, indigenous conservation practices can be maintained across generations and integrated into broader environmental governance frameworks (Ostrom 1990; Reyes-García et al. 2019). In this way, indigenous conservation practices can receive formal legal recognition and protection within the broader legal system.

Building on this research gap, this study argues that *siriah ka sidang* is not merely a mechanism for conflict resolution but a form of embedded ecological governance. From the receipt of reports to the customary hearing process and the issuance of decisions, both the mechanisms and underlying values are deeply embedded within customary institutions, social relations, cultural norms, and traditional authority structures. These practices do not operate in isolation; rather, they are interwoven into broader social systems, both vertically—through the hierarchy of customary leadership—and horizontally—through community networks, customary institutions, and social relations. This embeddedness constitutes the main theoretical contribution of this study. Accordingly, this study contributes to the development of traditional ecological knowledge and the concept of embedded ecological governance. *Siriah ka sidang* integrates knowledge systems, institutional arrangements, and customary law enforcement simultaneously, thereby forming a coherent socio-ecological order. As a result, forest conservation is not understood as the outcome of external interventions, but as an inherent property of the socio-cultural system of indigenous communities.

LITERATURE REVIEW

The tradition of customary assembly like *siriah ka sidang* can be understood through the concept of the customary forest–indigenous society as a socio-ecological system. Within this framework, customary assembly function as the core mechanism of socio-ecological governance. They are not limited to resolving social conflicts, but also play a broader role in maintaining ecological norms, restoring the balance of human-forest relations, strengthening the legitimacy of customary institutions, and enhancing the resilience of socio-ecological systems that sustain customary forests. Existing literature on customary forests and indigenous communities often treats these two elements separately. However, ontologically, they constitute an integrated socio-ecological system in which each component continuously shapes and reproduces the other. Customary forests are not only managed by indigenous communities but are also sustained through the values, norms, and institutions that are embedded within community life (Govigli et al. 2020; Rai and Mishra 2022; Setiyoningsih and Chaesar 2021).

The customary assembly itself emphasises the restoration of social and ecological harmony rather than criminalisation (Safrijal et al. 2023). From the perspective of indigenous communities, forests are still primarily regarded as a resource base. In practice, this often leads to an underappreciation of the ecological functions of forests, including biodiversity conservation and climate change mitigation (Bahagia et al. 2020; Moriguchi et al. 2020; Saleh et al. 2020). It is in this context that the role of traditions and customary institutions becomes crucial in regulating access to customary forests. Indigenous institutions are not merely technical regulatory systems; rather, they represent a moral-ecological order that is embedded within social life. From this perspective, customary forests function not only as ecological habitats, but also as socio-cultural spaces that sustain and reproduce community life (Healey 2020; Mudombi-Rusinamhodzi and Thiel 2020).

In the Indonesian context, various studies on customary courts constitute an important element within the framework of legal pluralism. In Aceh, customary assembly are recognised for their capacity to resolve disputes through restorative approaches, although state intervention at times weakens the authority of customary institutions (Safrijal et al. 2023). Similarly, customary assembly function as effective community-based ecological governance mechanisms in maintaining forest sustainability, as demonstrated in the practices of the Kajang community in South Sulawesi (Dewi et al. 2025). In this regard, customary courts possess moral, social, and ecological legitimacy that is often absent in formal legal systems (Rusmiyati et al. 2026). However, the existing literature still tends to position customary assembly as complementary rather than foundational institutions in environmental governance. In practice, tensions frequently arise between customary law and state law, particularly in relation to the governance and management of customary forests (Marnelly et al. 2023).

An approach is needed that conceptualises customary assembly as mechanisms for the production and reproduction of ecological values and knowledge through customary decisions. In practice, customary law functions not only as a set of social rules, but also as a moral system that regulates human relations with nature (Lingaas 2022; Gimenez 2022; Dewi et al. 2024). The distinctiveness of customary courts lies in the fact that their decisions are not based on individual rationality alone, but on collective values that are internalised within families and the wider community. In this sense, customary assembly serve to maintain social and cosmological balance, as well as relationships among families, through mediation processes and customary sanctions accepted by the community (Bustani 2018; Prasetyo and Irwansyah 2020; Thiede and Gray 2020; Pabbajah 2021; Philip et al. 2022).

Nevertheless, three main gaps can be identified in the literature on customary assembly. First, the ontological gap, which refers to the persistent separation between customary assembly mechanisms and ecological sustainability, even though both are fundamentally part of a single relational system. Second, the epistemological gap, in which ecological knowledge is often reduced to technical or instrumental knowledge, while the symbolic dimensions and cultural practices embedded in customary assembly are largely overlooked. Third, the analytical gap, where the contribution of customary assembly to ecological sustainability is still explained in normative terms, without a detailed examination of the concrete socio-cultural mechanisms through which these outcomes are produced. Based on these gaps, this study offers a novel contribution by positioning the *siriah ka sidang* as a symbolic-institutional mechanism that integrates human-forest relations within a unified socio-ecological system.

METHODS

The analysis unit in this study comprises three main forms of data, namely indigenous peoples' statements regarding the *siriah ka sidang*, observational data on customary forest utilisation practices, and the transcript from the focus group discussion (FGD). The selection of these three units of analysis is based on the consideration that the combination of oral, visual, and discursive materials can provide a more comprehensive understanding of how customary traditions are practised, interpreted, and experienced by the community. All data were analysed through a data reduction process involving thematic grouping, coding, and the development of relevant sub-themes aligned with the research questions. From this process, inductive conclusions were drawn to generate a deeper understanding of the role of the *siriah ka sidang* in resolving conflicts over customary forest use while simultaneously contributing to forest preservation.

This study employs a descriptive qualitative design with a case study approach (Miles et al. 2014). This approach was chosen because it focuses on exploring the lived experience and meanings of the indigenous people of Nagari Pasia Laweh, Agam Regency, in practicing the *siriah ka sidang*. It is not intended for generalisation, but rather for contextual depth. The research process involves data reduction by selecting relevant segments of statements and organising them according to themes related to the implementation of traditions and their social-ecological impacts. Through this case study approach, the research not only enhances understanding of customary practices as a cultural experience but also reveals the community's collective awareness of the interconnectedness between customary law, social welfare, and ecological conservation.

Data were collected from twenty-five indigenous informants through in-depth interviews, FGDs, and field observations conducted from June 2025 to May 2026. The informants were selected using a purposive sampling based on two criteria: (1) having experience and knowledge of the *siriah ka sidang* to provide in-depth explanations of its practice in resolving customary forest conflicts and (2) being able to communicate effectively and allocate time for in-depth interviews. Several informants were recommended by traditional leaders and village authorities, while others were identified through snowball sampling. Interviews were conducted after initial contact was made via telephone to arrange agreed-upon times and locations.

In addition to in-depth interviews, FGDs were conducted by dividing the twenty-five participants into three groups: (1) representatives of village government officials; (2) representatives of customary leaders; and (3) representatives of farmer groups. Through these discussions, the research team captured the dynamics of customary hearings, negotiation of meaning, and collective agreements regarding customary forest use. Data were analysed using qualitative thematic analysis, including data reduction, coding, and thematic categorisation aligned with the research questions. Triangulation of data sources was used to enhance the validity and reliability of the findings.

Field observations were also conducted, focusing on the implementation process of *siriah ka sidang* in Nagari Pasia Laweh and its implications for ecological sustainability, social cohesion, and justice within the indigenous community. The researcher observed each stage of the process, the actors involved, the norms and values enacted, as well as cultural symbols and meanings embedded in the practice. Observations also included patterns of natural resource management, such as rules restricting exploitation, conservation practices, and community interactions with customary forests. All findings were documented in field notes containing descriptive accounts, socio-ecological context, and analytical reflections linking local practices to concepts of environmental sustainability.

Data analysis followed a thematic approach within a case study framework to capture the deep meanings of indigenous experiences in practising *siriah ka sidang*. Thematic analysis was used to identify recurring patterns such as customary rules, deliberation mechanisms, and resource-sharing practices, while the case study approach enabled an interpretation of the broader socio-ecological significance of these practices. The analysis process included verbatim transcription of interviews and FGDs, repeated reading to understand context and meaning, and interpretative coding. This study also incorporates visual documentation from field observations as supporting evidence of the research process. The findings were then interpreted by identifying relationships between *siriah ka sidang* and its socio-cultural and ecological contexts. This process produces not only a descriptive account of the phenomenon but also a reflective understanding of its role as a mechanism for conflict resolution and ecological wisdom.

RESULTS AND DISCUSSION

The expected results of this study correspond to two research questions, namely, first, to comprehensively describe the process of *siriah ka sidang* as practised by indigenous people of Nagari Pasia Laweh, and second, to analyse its impact on forest governance, the preservation of ecological wisdom, and the reduction of long-term conflicts.

The Process of *Siriah ka Sidang*: Symbolic Logic in Ecological Governance

Siriah ka sidang is a customary mechanism that remains actively practised in the Nagari Pasia Laweh to address two main functions: resolving violations of customary law and regulating permits for the use of forest resources by indigenous communities. Based on interview data, customary violations related to forests are addressed through a staged process in which customary leaders play a central role in law enforcement. The process begins with a report submitted to the *ninik mamak*, who then summons the alleged perpetrator, witnesses, and the affected parties. A customary hearing is subsequently convened at a location deemed accessible to all parties, typically either at the customary leader's residence or, in certain cases, at the perpetrator's home, depending on geographical considerations.

The customary session begins with the seating of the *ninik mamak*, followed by the formal opening of the hearing. Participants take turns expressing their statements using *petatah-petitih* (traditional expressions rich in meanings of respect, solidarity, and rhetorical skill). After these exchanges, customary leaders clarify the facts, listen to testimonies, and assess the degree of violation. Importantly, judgments are not based solely on individual actions but also on their ecological consequences and their implications for collective resource governance. Damage to customary forests is interpreted not only as a violation of rules but also as a disruption to ecological balance and inherited norms. Considerations include the extent of environmental damage, the perpetrator's intent, and possible breaches of ecological taboos embedded in customary law.

Based on these considerations, sanctions are determined collectively and are generally restorative-restitutive in nature, such as the surrender of livestock, payment of customary fines for communal purposes, or compensation to affected parties. Once the decision is pronounced and accepted, its implementation aims not only to create deterrence but also to restore social relations and ecological balance, thereby preventing prolonged conflict within the community.

The term *siriah ka sidang* originates from the obligation of the host to provide a traditional offering of betel leaves served in a container called a *carano*. The complete set includes betel leaves, gambier, *sadah* and areca nut. The use of betel leaves is significant because they are easily found in the surrounding environment and are traditionally believed to strengthen teeth and act as a natural antiseptic. Thus, participation in the assembly is also associated with care for health and the reinforcement of social cohesion. During the hearing process, both customary leaders and participants consume betel nut together while discussions, clarifications, and evaluations of the case take place. This shared practice creates a sense of comfort, focus, and willingness among *ninik mamak* to deliberate thoroughly.

The combination of bitter, salty, sour, and ultimately sweet tastes symbolises the emotional and social process of reaching consensus. The resulting sweetness represents collective satisfaction once a decision is achieved and accepted. This practice demonstrates that *siriah ka sidang* is not merely a procedural mechanism but a symbolic system that produces meanings of togetherness and social harmony in decision-making. Environmental governance in this context does not operate solely through formal regulation, but through symbolic-cultural processes that legitimise ecological action. In other words, decisions are not grounded purely in legal rationality of right and wrong, but in cultural mechanisms that prioritise social cohesion as the ultimate objective. Figure 1 provides an overview of the *siriah ka sidang* tradition.



Figure 1: The rules of the *siriah ka sidang* tradition.

Source: Nagari Government documentation (2025)

Based on interview data, the implementation of *siriah ka sidang* involves the participation of all customary authorities. In the Minangkabau customary system, customary leadership is structured in a three-tier hierarchy: at the tribal level, decisions are made by the *penghulu* (clan leaders); at the regional level, authority rests with the tribal chiefs; and at the *nagari* (state) level, decisions are made by the customary institution known as The Nagari Customary Council (KAN). This layered structure reflects an organised and collective decision-making process in which every resolution passes through successive levels of customary authority. The hierarchy is intended to maintain balance among individual, clan, tribal, and *nagari* interests.

The practice of carrying a complete *siriah* in a *carano* is also an essential part of customary procedures when communities seek to utilise customary forests for economic purposes. Before extracting forest resources or undertaking activities within customary territories, community members are required to first obtain permission from the *ninik mamak* and the KAN through this ceremonial process. As one FGD informant stated, “Every use of customary forests must begin by bringing betel nut to *ninik mamak* and KAN” (FGD-01). This practice demonstrates that customary forest governance is grounded not only in formal rules but also in a culturally embedded system of meaning and values. This finding aligns with the concept of traditional ecological knowledge, which understands ecological practices as part of an intergenerational system of knowledge and cultural meaning (Berkes et al. 2000; Sinthumule 2023).

From the perspective of indigenous communities, forests are not viewed solely as economic resources, but as an integral part of social, cultural, and spiritual life. This is reflected in the interviewed informant statement: “For us, customary forests are not only a place to harvest resources, but also a source and spirit of life” (INT-02). In this sense, customary forests are constructed as socio-cosmological entities imbued with moral and relational significance. This view is consistent with ecological anthropology, which emphasises the intertwined relationship between humans and nature within moral and social orders (Descola 2001; Kohn 2013). Accordingly, the sustainability of customary forests is maintained not only through rules and sanctions but also through the community’s interpretation of forests as fundamental to identity and survival (Hernandez et al. 2022).

Epistemologically, *siriah ka sidang* functions as a mechanism for the production and transmission of practice-based ecological knowledge (embodied knowledge). Knowledge of customary forest governance is not acquired through formal education, but through participation in social practices, particularly customary deliberations. In the FGD, informants noted: “Every decision regarding forests is discussed collectively in customary deliberation, and from there, we learn the rules and boundaries” (FGD-04, FGD-02). This demonstrates that local ecological knowledge is contextual, emerging from collective experience and continuously reproduced through everyday social interaction, as emphasised by Berkes et al. 2000. From an axiological perspective, *siriah ka sidang* also establishes an ecological moral order that guides community behaviour in environmental management. Customary norms are reinforced through social sanctions that carry a strong binding force. An FGD informant explained: “If customary rules are violated, individuals may be socially ostracised or even excluded through customary sanctions” (FGD-03). In communal societies, such sanctions function as an effective mechanism for internalising ecological values and ensuring compliance with collective rules (Ostrom 1990; Reyes-García et al. 2019). Consequently, adherence to customary forest governance is understood not merely as a rational choice based on cost-benefit considerations, but as a moral obligation embedded in social life.

From a symbolic anthropological perspective, *siriah ka sidang* can be understood as part of a broader “web of significance” that shapes how society interprets and manages its environment (Geertz 1973: 5). Symbols and rituals, such as the use of betel nut (*siriah*) in permission-seeking and dispute resolution processes, function as mediating devices that connect social action with shared ecological values. Through this symbolic framework, environmental sustainability is maintained not only through technical regulation but also through culturally meaningful practices that guide behaviour. However, this study also shows that this system is inseparable from power relations. Customary authorities, particularly *penghulu* and the KAN, hold a central role in determining access to and utilisation of forest resources. As one interview informant stated: “The final decision remains with the *penghulu* or KAN” (INT-11). This finding aligns with access theory, which explains that resource access is shaped not only by formal rules but also by prevailing power relations within a community (Ribot and Peluso 2003). Therefore, *siriah ka*

sidang functions not only as an ecological governance mechanism, but also as a social arena in which indigenous knowledge, values, and authority structures interact in regulating community relations with customary forests.

Conceptually, the findings of this study indicate that *siriah ka sidang* can be categorised as institutionalised symbolic ecological governance, namely a form of ecological governance that integrates symbols, norms, and customary institutions in regulating human-environment relations. The novelty of this study lies in demonstrating that traditional ecological knowledge does not operate solely as a practical system of knowledge for natural resource management, but also encompasses symbolic and political dimensions that shape collective community behaviour (Berkes et al. 2000; Pabbajah 2021). These findings suggest that ecological sustainability within indigenous communities is not merely produced through formal rules, but through processes of collective meaning embedded in rituals, norms, and everyday social practices. From this perspective, *siriah ka sidang* represents an alternative form of ecological rationality that differs from modern paradigms, which tend to emphasise technocratic regulation and formal legal instruments. These results also challenge the assumption of the universality of state-centred environmental governance models and market-based mechanisms.

From the perspective of interpretive anthropology, symbols do not merely represent reality but actively shape and guide social action (Geertz 1973). However, the findings also show that symbolic systems cannot be understood independently of surrounding power relations. Customary authorities play a central role in interpreting norms, regulating access to resources, and enforcing social sanctions. Therefore, the analysis of *siriah ka sidang* requires an approach that integrates both interpretive and critical perspectives. Within this framework, symbols and rituals institutionalised through customary structures not only produce meaning but also generate material consequences in the form of resource governance, conservation practices, and strengthened social cohesion. These findings indicate that sustainability in indigenous communities is inherent, as ecological values are deeply internalised within cultural systems that are continuously reproduced. In this context, *siriah ka sidang* can be understood as a form of embedded ecological governance, where environmental management is inseparable from the symbolic, social, and moral structure of indigenous society.

From Symbols to Survival: The Impact of Conflict Resolution and Community Welfare

Based on in-depth interviews and FGDs involving twenty-five informants, this study identifies several impacts of *siriah ka sidang* on reducing long-term conflict and supporting community welfare. First, this tradition contributes to improving the welfare of indigenous communities through regulated and equitable access to forest resources. Through established customary procedures, community members are granted rights to utilise forest resources to meet economic needs, while still respecting collective interests and social balance.

Second, from an ecological perspective, *siriah ka sidang* functions as a control mechanism that ensures the sustainability of customary forests. Every form of forest resource utilisation must be approved through a customary licensing process involving *ninik mamak* and tribal leaders. In addition, the community is bound by customary regulations that define permissible and prohibited areas, including restrictions on tree cutting around water sources and in ecologically sensitive protected forest zones. Through this system, *siriah ka sidang* not only regulates resource use but also aligns local economic activities with broader environmental conservation objectives. Figure 2 illustrates land managed by tribal members based on permits granted by customary leaders in accordance with applicable customary regulations.



Figure 2: Community farmland in customary forest areas with land use based on the *siriah ka sidang* mechanism.

Source: Direct observation in the Nagari Pasia Laweh customary forest, in June 2025

Figure 2 shows farmland within customary forest areas cultivated with crops such as corn and bananas by community members based on permits granted through the *siriah ka sidang* mechanism. Interview results with farmers indicate that this tradition not only regulates access to land and forest resources but also ensures a distribution of benefits that is perceived as fair by the community. Any proceeds derived from customary forest utilisation are allocated to collective social purposes, such as the construction of *rumah gadang* (traditional houses), the implementation of customary ceremonies, and the financing of the appointment of traditional leaders. In addition, forest use is regulated selectively based on the economic condition of community members. Economically disadvantaged households are given priority access to forest resources, whereas wealthier individuals are generally restricted from using customary forests for commercial purposes. This indicates that *siriah ka sidang* is oriented towards collective welfare by prioritising communal interests over individual gain.

Furthermore, *siriah ka sidang* establishes a socio-ecological moral order that integrates community welfare, environmental conservation, and social cohesion within a single value system. This principle is reflected in the distribution of forest benefits based on solidarity and collective responsibility. As one FGD informant emphasised: “Forest products should not be enjoyed alone, but should be shared for the common good” (FGD-02). This demonstrates that indigenous natural resource management is not driven solely by market logic, but by moral norms that govern relationships between individuals, communities, and the environment. This system can therefore be understood as a form of moral ecology economy, in which social justice and ecological sustainability are treated as inseparable objectives.

From an economic perspective, the redistribution of forest benefits for *rumah gadang*, customary activities, and other communal needs illustrates that economic activity in indigenous communities is not an autonomous system. Instead, it is embedded within social relations, cultural values, and collective responsibilities. This perspective aligns with critiques of green economy approaches that are often technocratic and insufficiently attentive to the moral dimensions of resource distribution (Raworth 2018). In the context of indigenous peoples, economics is more appropriately understood as a relational system that is oriented towards the sustainability of living together, rather than towards the accumulation of individual benefits. Therefore, the *siriah ka sidang* not only functions as a mechanism for the management of customary forests, but also as a social institution that ensures that the benefits of natural resources are distributed fairly and sustainably for all communities.

From an ecological perspective, conservation norms within *siriah ka sidang* are deeply internalised in everyday community practices. The prohibition on cutting trees around water sources, for example, is understood not merely as a customary rule but as a principle directly linked to the continuity of life. As one FGD informant stated: “We should not cut down trees near water sources because it preserves life” (FGD-01). This suggests that conservation practices are not externally imposed regulations, but part of a shared system of meaning inherited through daily life. Consistent with this, various studies show that traditional ecological knowledge

significantly contributes to biodiversity conservation and ecosystem resilience due to its grounding in long-term experience and strong cultural relationships between people and nature.

In practice, *siriah ka sidang* also functions as a mechanism for regulating forest resource utilisation. All forms of forest use must pass through a customary licensing process, with clear rules regarding permitted and prohibited areas, including restrictions on logging near water sources and in designated protected forest zones. Compliance is reinforced through customary sanctions for violators, ensuring that conservation norms are not only normative but also socially enforceable. Through collective monitoring and customary legitimacy, overexploitation can be prevented while maintaining the ecological functions of customary forests.

In addition, ecological practices in the *siriah ka sidang* are integrated with the community's social life cycle. This is reflected in tree-planting practices associated with major life events such as births and marriages. As stated by an FGD informant: "Every birth or marriage, we plant a tree" (FGD-02). This practice illustrates a symbolic linkage between social reproduction and ecological regeneration, where life-cycle events are accompanied by actions that contribute to environmental restoration. This can be understood as a form of culture-based ecological stewardship, in which sustainability is produced through the integration of symbolic meaning, social practice, and intergenerational responsibility.

From a social perspective, *siriah ka sidang* plays an important role in strengthening community cohesion through customary deliberation mechanisms. As one FGD informant noted: "With customary deliberation, conflicts can be resolved, and everyone feels treated fairly" (FGD-04). This shows that environmental governance in indigenous communities is not limited to resource management, but also involves the production and reproduction of social justice. Community-based governance thus enhances legitimacy and participation while strengthening social stability in resource management (Etchart 2022; Hernandez et al. 2022). Analytically, *siriah ka sidang* forms a socio-ecological moral order in which moral values, social structures, and ecological practices are mutually reinforcing. In contrast to previous studies that often separate cultural, economic, and environmental dimensions, this study demonstrates that these dimensions operate simultaneously within an integrated system (Persha et al. 2011; Dewi et al. 2025).

The novelty of this study lies in its argument that sustainability is not merely the outcome of policy design or technical intervention, but also the product of moral and symbolic structures embedded within society. In this sense, *siriah ka sidang* extends the concept of sustainability from ecological sustainability to moral-ecological sustainability, integrating ethical, cultural, and institutional dimensions. This study moreover confirms that well-being in indigenous communities cannot be reduced to material indicators alone, but must be understood as a relational balance between people, society, and the environment. Thus, *siriah ka sidang* offers a model of relational well-being that contributes to global sustainability discourse and demonstrates broader conceptual relevance beyond its local context.

The main theoretical contribution of this study lies in its effort to bridge three previously separate scholarly traditions: anthropological symbolism, political ecology, and moral economy. By demonstrating how symbols generate institutions and how institutions, in turn, shape moral-ecological orders, this study offers an integrative framework that moves beyond the fragmented approaches found in earlier literature. If traditional ecological knowledge has often emphasised knowledge systems, while political ecology focuses on power relations, this study shows that both can only be fully understood when situated within processes of cultural meaning-making. In this sense, the research contributes not only to ecological anthropology but also encourages an epistemological shift in sustainability studies – from a focus on regulation and technology towards a recognition of culture as a foundational element of environmental governance.

A key finding of this study is that *siriah ka sidang* represents a concrete form of ecological wisdom articulated through customary law in the management of customary forests in West Sumatra. Through deliberative processes led by *ninik mamak*, this tradition not only regulates the distribution of forest resources to support social welfare and indigenous livelihoods but also establishes clear conservation principles. These include prohibitions on tree cutting in water source areas, the enforcement of customary sanctions for violations, and obligations to engage in tree planting as an expression of intergenerational responsibility (Healey 2020). In this way, the *siriah ka sidang* performs a dual function: maintaining ecological balance through customary institutions while ensuring the socio-economic sustainability of indigenous communities. This practice demonstrates that customary-law-based local wisdom can serve as an effective conservation instrument while enriching global debates on ecological knowledge and indigenous governance (Rai and Mishra 2022).

The findings also indicate that *siriah ka sidang* is relevant across multiple dimensions of community life. Socially, customary deliberation strengthens cohesion and provides an inclusive conflict-resolution mechanism accepted by all parties (Govigli et al. 2020). Culturally, it functions as a medium for transmitting matrilineal values and customary norms that sustain collective identity over time (Gibson et al. 2015; Burnett et al. 2020; Camargo et al. 2022). Environmentally, rules against overexploitation, the protection of sacred areas, and conservation practices such as tree planting demonstrate that *siriah ka sidang* operates as an ecological governance instrument that extends beyond technocratic approaches to sustainability. In contrast to the Sustainable Development Goals (SDGs), which prioritise quantifiable indicators such as efficiency and impact measurement, this practice shows that sustainability is also constructed through values, norms, and living social institutions (Reid and Rout 2020; Panda and Dash 2025).

Siriah ka sidang does not treat the environment as a mere object of rational management, but rather as an integral component of a broader system of values, beliefs, and social relations. Accordingly, ecological practice grounded in local wisdom is oriented not only towards material sustainability but also towards cosmological balance and intergenerational moral responsibility. This highlights ethical and spiritual dimensions of sustainability that are often underrepresented in universal and reductionist development paradigms (Bahagia et al. 2020; Moriguchi et al. 2020; Saleh et al. 2020).

From a cultural and environmental anthropology perspective, these findings confirm that *siriah ka sidang* is a manifestation of local wisdom that reflects the interconnection between values, social norms, and ecological practices within Minangkabau society (Govigli et al. 2020). Culturally, it illustrates how matrilineal structures, the authority of *ninik mamak*, and ritual symbols such as betel function as mechanisms of legitimacy in collective decision-making. Ecologically, it embeds principles of environmental stewardship through restrictions on exploitation, customary sanctions, and obligations for conservation-oriented practices such as tree planting (Gu et al. 2020; Reeves et al. 2020). In this sense, *siriah ka sidang* constitutes a knowledge system that integrates cultural and ecological dimensions, consistent with ecological anthropology perspectives that view culture as both adaptation and a mechanism for sustaining collective life (Usop and Usop 2021; Macias Gimenez 2022; Dewi et al. 2024).

Overall, this study reinforces the understanding that customary law and local wisdom function not only as systems of social regulation, but also as effective ecological instruments for sustaining natural resources (Mudombi-Rusinamhodzi and Thiel 2020). Academically, this study highlights the importance of integrating cultural anthropology and environmental studies to better understand the role of indigenous practices in addressing contemporary conservation challenges (Etchart 2022; Marsaban and Said 2023; Montasir et al. 2023; Mustafid et al. 2024; Parsaulian et al. 2024; Salleh et al. 2024). This implies the need to expand scholarly attention to the relationship

between customary law and ecological wisdom as an alternative foundation in sustainability discourse. Consequently, this study contributes not only to ecological anthropology but also to broader recognition of indigenous peoples as key actors in environmental governance at both national and global levels.

A further novelty of this study is its move beyond prior studies that remain largely descriptive or focused on documenting customary law systems (Berkes et al. 2000; Prasetyo et al. 2020; Pabbajah 2021; Asuoha et al. 2022). Most previous research, such as the study of Mudombi-Rusinamhodzi and Thiel (2020) on the ecological wisdom of rural communities in various countries, tends to emphasise the pattern of people's adaptation to the environment in the context of agriculture and subsistence. Similarly, the study of customary law in Minangkabau generally highlights more of its social and political functions (Dewi et al. 2024), but it has not specifically discussed its role in forest conservation.

By focusing on the *siriah ka sidang*, this study offers a different perspective, showing that customary law functions not only as a social regulatory system but also as an ecological instrument that directly contributes to forest sustainability (Berman 2018; Yörük et al. 2019; Thiede and Gray 2020). The findings demonstrate that customary practices have tangible ecological effects through conservation rules, collective monitoring, and culturally embedded environmental ethics. In this way, this study integrates cultural anthropology, customary law, and ecology into a more holistic and interdisciplinary analytical framework.

CONCLUSION

The findings of this study identify two interrelated layers in the practice of *siriah ka sidang*. First, institutionalising ecological governance, understood as the process through which customary symbols, rituals, and authorities operate as mechanisms of legitimacy that regulate access to forests while defining the boundaries of community ecological action. Second, moral economy and socio-ecological order, in which symbolic structures generate material consequences in the form of more equitable resource distribution, sustainable conservation practices, and the maintenance of social cohesion within the community. In this sense, sustainability is not produced solely through formal rules or regulatory frameworks, but is also enacted through everyday socio-ecological practices. This demonstrates that institutionalised ecological wisdom embedded in customary systems can function as a regulatory instrument that integrates ecological sustainability with the socio-economic needs of local communities (Govigli et al. 2020). The findings also highlight the relevance of *siriah ka sidang* to green economy discourse promoted by the Indonesian government, as well as to broader community-based conservation approaches in global sustainability debates (Syofiarti et al. 2023; Bestari et al. 2024).

The main findings of this study confirm that the *siriah ka sidang* functions as a customary mechanism that not only regulates the distribution of forest resources for social welfare but also ensures environmental sustainability through clearly defined rules, prohibitions, and sanctions. This tradition reflects the capacity of Minangkabau local wisdom to maintain a balance between socio-economic needs and ecological conservation. The integration of these dimensions gives rise to the concept of embedded ecological governance, namely a form of governance in which ecological, social, and cultural dimensions are inseparable. Within this framework, forests are not positioned as external objects to be managed, but as part of a relational and moral order embedded within society. Consequently, sustainability is not understood as the outcome of external intervention, but as an inherent property emerging from the socio-cultural system itself.

Theoretically, this study challenges dominant sustainability paradigms that tend to be technocratic and universalistic by demonstrating that governance rooted in meaning, symbols, and morality can produce ecological systems that are both adaptive and equitable. By placing positioning culture as a foundational element rather than a supplementary factor, this study encourages an epistemological reorientation in sustainability studies—from a focus on regulation and technology towards an understanding of sustainability as a contextual, relational process grounded in the lived experiences of indigenous communities.

This study also contributes to expanding scholarly understanding of customary law as an ecological instrument, while providing empirical evidence that local wisdom can serve as an alternative model for forest conservation. In practical terms, the findings emphasise the importance of recognising and integrating indigenous traditions such as *siriah ka sidang* into sustainable forest management policies at both local and national levels. Accordingly, this study enriches the discourse in cultural and environmental anthropology and offers relevant implications for sustainable development policy.

However, this study has several limitations. It focuses on a single case study site and therefore cannot fully represent variations of *siriah ka sidang* across the broader Minangkabau region. In addition, the data are predominantly derived from the perspectives of customary leaders, while the views of other social groups, such as younger generations and more mobile community members, remain underexplored. For this reason, the findings are not intended for broad generalisation, but rather to provide an in-depth understanding of a specific customary context that contributes to environmental conservation. Future research with a wider scope and a more participatory approach involving diverse actors is needed to enrich the understanding of the dynamic relationship between customary law and forest governance.

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COMPLIANCE WITH ETHICAL STANDARDS

This research was conducted in accordance with established research ethics standards. Ethical approval was granted by the Research Ethics Committee of the Institute for Research and Community Service (Lembaga Penelitian dan Pengabdian), Institut Seni Indonesia Padangpanjang, under Approval No. 64/DST/IT7.4/HM.01.01/2026. All data were collected, analysed, and reported honestly and transparently, without fabrication, falsification, or manipulation. All participants provided informed consent prior to their involvement in the study. Furthermore, all sources referenced in this study have been properly acknowledged and cited.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest that could have influenced the design, conduct, or findings of this research. All authors have reviewed and approved the final version of the manuscript before submission.

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