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# *Sasi Pala* as a Form of Social Ecology: A Sociological Perspective on Resource Conservation and Community Resilience

**Author:**

Ishaka Lalihun<sup>1</sup>  
Clementina. O. M.  
Rumlus<sup>2</sup>  
Afdhal<sup>3</sup>

**Affiliation:**

Universitas Pattimura<sup>1,2,3</sup>

**Corresponding email**

[ishakalalihun@gmail.com](mailto:ishakalalihun@gmail.com)

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**Abstract:**

This study aims to analyze *sasi pala* as a form of social ecology that contributes to preserving natural resources while strengthening community resilience. *Sasi pala*, a customary practice in Maluku, regulates nutmeg harvesting to ensure sustainability, maintain ecological balance, and reinforce social cohesion within the community. This research employs in-depth interviews, participant observation, and document analysis using a qualitative approach. The study focuses on the Negeri Seith community, with data analyzed through environmental sociology and community resilience. Findings reveal that *sasi pala* is a conservation mechanism and a social contract that strengthens local governance and collective responsibility. It prevents overexploitation, facilitates intergenerational knowledge transfer, and ensures economic sustainability through continuous nutmeg production. However, this study is limited to *sasi pala* communities in Maluku, making its findings less generalizable to other ecological and socio-cultural contexts. Further research should explore *sasi* practices across different commodities and regions to broaden the understanding of sustainability rooted in indigenous wisdom. This research contributes to environmental sociology, indigenous resource management, and sustainable development discussions. Its insights can inform policymakers and scholars on integrating customary practices into modern conservation strategies. Unlike previous studies focusing primarily on conservation, this study highlights *sasi pala* as a dynamic socio-ecological institution that not only preserves biodiversity but also strengthens the social resilience of the communities that uphold it.

**Keywords:** *Sasi pala*, Social Ecology, Community Resilience, Local Wisdom, Resource Conservation

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## Introduction

As an archipelagic country rich in natural resources, Indonesia has a long history of environmental management based on local wisdom. One of the customary mechanisms that has endured in Maluku is *sasi pala*, a traditional regulatory system that governs the sustainable harvesting of nutmeg (*Myristica fragrans*) to prevent overexploitation and ensure ecological balance as well as economic benefits for local communities (Sahasilawane et al., 2024; Soselisa et al., 2024b). However, in recent decades, modernization and changes in natural resource governance have posed significant challenges to the sustainability of this practice.

One of the biggest challenges faced by *sasi pala* is the pressure from the global economy, which drives excessive exploitation. The increasing demand for nutmeg in international markets has led to uncontrolled harvesting practices and the conversion of traditional nutmeg forests into large-scale commercial plantations (Gunawan et al., 2022). Consequently, many communities have abandoned the *sasi* system as it is perceived to be less profitable compared to intensive agricultural methods (Lionata et al., 2025; Ulya et al., 2022). Beyond affecting the sustainability of nutmeg as a primary commodity, these changes also disrupt ecological balance, leading to soil fertility decline and degradation of nutmeg forests (Suherman et al., 2025).

Apart from economic pressures, social and cultural changes also influence the sustainability of *sasi pala*. Younger generations are increasingly distancing themselves from traditional values, leading to the weakening of customary authorities and a loss of understanding regarding the *sasi* mechanism (Mitchell, 2024). Meena et al. (2022) indicate that the traditional values supporting communal management systems are gradually eroding due to modernization and urbanization, where young people are more attracted to economic opportunities in other sectors that do not rely on customary systems. If the younger generation no longer participates in *sasi* practices, the sustainability of the system will be further threatened.

Another challenge arises from government policies that do not always support customary management mechanisms. In many cases, national economic and agrarian policies prioritize market-based approaches and individual ownership, which contradict the concept of *petuanan*—communal land ownership that underpins the *sasi* practice (Borelli et al., 2024; Nugroho et al., 2022). Government interventions often reduce the role of indigenous communities in managing their own resources, thereby weakening social control, which has long been a fundamental pillar of the *sasi* system (Soselisa et al., 2024a).

Additionally, climate change is another factor that cannot be ignored. Extreme weather fluctuations, changes in rainfall patterns, and rising global temperatures can affect the productivity of nutmeg trees and threaten the ecological balance maintained through *sasi pala* (Daties & Baadila, 2021). If the *sasi* system does not adapt to environmental changes, its effectiveness as a conservation mechanism will diminish. Therefore, this study is crucial to understanding how *sasi pala* can endure as an ecological and social instrument in the modern era. Beyond examining the challenges faced, this research also seeks to explore potential adaptations that can be implemented to ensure the sustainability of *sasi pala* in the context of current social, economic, and environmental changes.

## Literature Review

*Sasi pala* is a form of local wisdom that has long been applied in Maluku to regulate nutmeg harvesting, ensuring environmental balance and the economic and social sustainability of indigenous communities (Sahusilawane et al., 2024). In an ecological context, *sasi* has been proven effective in controlling resource exploitation, thereby preventing environmental degradation caused by unsustainable agricultural activities (Jannah et al., 2024; Muin & Rakuasa, 2023).

However, in recent decades, modernization of resource governance has led to shifts in *sasi* practices. A study by Tranter et al. (2022) found that market-based economic policies often overlook customary practices in resource management, leading to excessive exploitation. Similarly, research by Asteria et al. (2024) revealed that government interventions in the plantation sector frequently reduce the role of indigenous communities in managing their own resources, thereby weakening the local value systems underlying the *sasi pala* practice.

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Beyond ecological and economic aspects, sasi also has significant social functions. Sasi is not merely a conservation mechanism but also serves as a social system that regulates relationships between individuals and groups within the community (Pahleviannur, 2024). Research by Matatula et al. (2024) shows that the sustainability of sasi practices depends on the strength of customary leaders and community support. In this context, social compliance and the value of kinship are crucial in ensuring the effectiveness of customary regulations in managing shared resources (Ungirwalu et al., 2025).

Furthermore, Dushkova & Ivlieva (2024) emphasize that community-based management systems can strengthen social resilience by fostering a sense of ownership over natural resources and preventing conflicts in their utilization. In this regard, sasi functions as a social regulatory instrument that connects cultural, religious, and economic values (Ufie et al., 2023). With the integration of customary and religious values, sasi practices in Maluku have undergone transformations that enable adaptation to social changes (Soselisa et al., 2024b).

Most research on *sasi pala* tends to emphasize its ecological and natural resource conservation aspects, while its social role in strengthening community resilience has not been extensively explored. Previous studies have mainly focused on how *sasi pala* prevents overexploitation, regulates sustainable harvesting patterns, and maintains ecological balance (Dushkova & Ivlieva, 2024; Girsang et al., 2023; Ryan, 2022). Meanwhile, research on the social impacts of this practice remains limited, particularly regarding how *sasi pala* fosters social cohesion, strengthens community networks, and serves as a mechanism for managing resource utilization conflicts.

In many indigenous communities in Indonesia, resource management based on local wisdom functions not only as a conservation tool but also as a social mechanism that regulates relationships between individuals and groups (Amaliah, 2025; Rakuasa, 2022). However, studies on *sasi pala* have yet to fully explain how this practice persists not only as an ecological system but also as a tool for strengthening social resilience amid changing times. Modernization challenges, global economic pressures, and changes in resource governance further underscore the importance of understanding how customary practices like *sasi pala* can adapt and remain relevant without losing their essence.

This research fills that gap by examining *sasi pala* from a socio-ecological perspective, analyzing how this practice not only sustains natural resources but also strengthens the social structure of communities. Rather than merely highlighting sasi as a conservation mechanism, this study explores how *sasi pala* plays a role in reinforcing social relationships, building collective trust, and preventing community fragmentation due to social and economic changes. By understanding the link between environmental sustainability and social resilience, this research will provide new insights into how customary mechanisms can continue to function amid modernization and globalization.

The novelty of this research lies in its approach, which positions *sasi pala* as a dynamic socio-ecological institution. This study not only examines how *sasi pala* contributes to biodiversity conservation but also how it serves as a foundation for the social resilience of Maluku communities. Unlike previous research that predominantly focused on ecological aspects, this study highlights the close relationship between customary resource management and community sustainability, offering a broader and more integrative perspective on the role of *sasi pala* in the modern era.

As a concrete step in addressing this research gap, the primary objective of this study is to analyze *sasi pala* as a form of social ecology that contributes not only to natural resource conservation but also to the social resilience of Maluku communities. This study aims to understand how *sasi pala* functions in regulating

social interactions, maintaining community stability, and strengthening adaptive mechanisms in response to economic and environmental changes. Additionally, this research seeks to identify factors that enable the persistence of *sasi pala* amid modernization pressures and how its embedded customary values can be integrated into more inclusive and sustainable resource management policies.

## Research Method

This study employs a qualitative approach to understand *sasi pala* as a form of socio-ecological system that not only plays a role in natural resource conservation but also strengthens community resilience. A qualitative approach is chosen as it allows for an in-depth exploration of experiences, values, and social practices related to *sasi pala*. As Creswell & Creswell (2018) suggests, qualitative research is highly effective in uncovering the meanings embedded in social and cultural practices, particularly in indigenous communities with complex value systems.

The research was conducted in Negeri Seith, Maluku, known as one of the communities that consistently implement *sasi pala*. Negeri Seith was selected due to its long-standing history in preserving this local wisdom and because the *sasi pala* practice in this area remains well-maintained despite various modernization challenges. Previous studies indicate that not all regions in Maluku still practice *sasi*, making research in Negeri Seith valuable in providing insights into how this practice persists and adapts to evolving social and economic contexts (Soselisa et al., 2024a, 2024b).

This study involved 15 key informants selected through purposive sampling, a technique where informants are chosen based on their relevance and in-depth understanding of *sasi pala*. The informants represented various perspectives within the community, including customary elders who make decisions regarding *sasi*, nutmeg farmers directly involved in the harvesting process, and religious leaders who contribute spiritual dimensions to the practice. Additionally, village officials were included to understand how customary regulations interact with modern policies, while young community members were selected to explore the involvement of future generations in the preservation of *sasi*. Local academics or researchers were also involved to provide scholarly perspectives on the sustainability of *sasi pala* within broader socio-ecological contexts. By engaging informants from diverse backgrounds, this study aims to develop a comprehensive understanding of the socio-ecological dynamics in *sasi pala* implementation, ensuring that the findings are not only descriptive but also analytical and reflective of ongoing social changes.

The study employed three primary data collection methods, which complement each other. First, in-depth semi-structured interviews were conducted, allowing informants to freely elaborate on their experiences and perspectives regarding *sasi pala*. Each interview lasted between 60–90 minutes, focusing on the history, regulations, and socio-ecological impacts of the practice. This approach follows Natow (2020), who emphasize that semi-structured interviews enable deeper exploration of meanings compared to structured interviews. This technique ensures that the collected data not only reflect factual information but also capture the narratives and subjective experiences of informants in practicing *sasi*.

Second, participant observation was applied, where the researcher actively engaged in community activities, particularly in the nutmeg harvesting process regulated by *sasi*. This technique aligns with Sarfo et al. (2021) approach, which underscores the importance of direct involvement in understanding social and cultural practices. By immersing in the daily lives of the local community, the researcher was able to observe firsthand how *sasi* regulations are implemented, how social interactions unfold within the community, and how adherence to customary rules is maintained despite pressures from modernization. This observational method not only provided factual insights into *sasi pala* practices but also captured social nuances that might be difficult to reveal through interviews alone.

Third, document analysis was conducted to reinforce data from interviews and observations. Secondary data were gathered through reviews of customary documents, community historical records, and previous studies on sasi in Maluku. This approach follows Bowen (2019), who states that document analysis not only provides historical context but also helps identify recurring patterns in social phenomena.

To ensure data validity and reliability, this study applied source and methodological triangulation. Source triangulation was carried out by comparing information obtained from different informants, such as contrasting the perspectives of customary elders and nutmeg farmers regarding the effectiveness of *sasi pala*. Meanwhile, methodological triangulation involved comparing the findings from interviews, observations, and document analysis to minimize potential biases arising from a single method (Lambert & Lambert, 2021).

## Result

### ***Sasi pala* as a Natural Resource Conservation Mechanism**

In Negeri Seith, Maluku, *sasi pala* has long been an integral part of the traditional resource management system. This system establishes strict regulations on when the community is allowed to harvest pala and when they must leave it undisturbed. These rules are set by traditional elders in collaboration with community groups to ensure compliance. In practice, a customary ritual marks the beginning of the sasi period, during which harvesting pala is strictly prohibited for a specific duration. When the harvesting period arrives, another customary ceremony is performed to reopen access to the resource.

A traditional elder in Negeri Seith explained that sasi is not merely a restriction but a form of respect for nature and a means of ensuring that future generations can continue to benefit from its yields. Without regulations like sasi, people might recklessly cut down trees or overharvest, disregarding sustainability for others.

This practice aligns with Mamada & Perrings (2022) theory of common-pool resources, which states that shared resources require community-based governance to prevent overexploitation. In the context of environmental governance, *sasi pala* functions as a social control mechanism that regulates access to resources through collective norms. This customary regulation has proven to be more effective than external interventions, as it is backed by strong social legitimacy.

The implementation of *sasi pala* contributes to ecological balance by preventing excessive exploitation that could lead to environmental degradation. Field observations indicate that areas still practicing sasi have higher nutmeg tree regeneration rates compared to regions that have abandoned the practice. Additionally, forests in sasi-protected areas remain preserved, with better-maintained biodiversity.

A nutmeg farmer in Seith emphasized that without restrictions, nutmeg could be depleted, and the soil could deteriorate, ultimately affecting the quality of future harvests. He pointed out that under the sasi system, trees are given time to regenerate, allowing flowers and fruits to develop more optimally. Furthermore, decisions regarding the lifting of sasi are made by the Kewang, the customary institution responsible for overseeing and preserving forest sustainability.

Studies conducted in various indigenous communities indicate that local management systems are often more sustainable than state- or market-based approaches (Chausson et al., 2023). From a socio-ecological systems perspective, *sasi pala* reflects a harmonious interaction between humans and the environment, where communities recognize the ecological carrying capacity and adjust their behaviors to maintain balance.

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Field observations in Seith reveal that the sustainability of the ecological system under sasi is supported by three key factors: (1) allowing nature to recover during rest periods, (2) involving the community in monitoring, and (3) enforcing social sanctions to ensure adherence to customary rules. Through this mechanism, resource exploitation is minimized, while ecological benefits such as soil fertility improvement and sustainable nutmeg harvests are maintained.

The continuity of *sasi pala* relies heavily on the role of traditional elders, who hold moral and social authority within the community. These elders serve as the primary decision-makers in determining when sasi is enforced and when it is lifted. Additionally, they uphold the rules through social sanction mechanisms for those who violate them. A traditional elder in Seith asserted that breaking sasi is believed to bring misfortune or illness to the violator and their family. This belief reinforces sasi as a deeply respected practice within the community. Even children understand that before sasi is lifted, no one dares to collect forest produce, including fallen nutmeg. According to him, sasi is not merely a regulation but an essential part of Maluku's cultural identity.

Beyond traditional elders, local institutions such as farmer groups and youth organizations also play a crucial role in ensuring the effective implementation of sasi. They act as monitors and mediators in case of violations and educate younger generations on the importance of preserving sasi. From a socio-ecological systems perspective, the involvement of various social actors highlights that ecological sustainability cannot be separated from the social dynamics that support it (Yu et al., 2024).

Field observations reveal that in villages where traditional institutions remain strong, adherence to *sasi pala* is higher compared to areas experiencing rapid urbanization or modernization. This suggests that the sustainability of sasi depends not only on ecological factors but also on the strength of the social institutions that uphold it. Strengthening indigenous institutions and increasing local community participation are therefore key factors in preserving this system amid changing times.

*Sasi pala* in the indigenous community of Negeri Seith follows a structured and well-regulated procedure. The enforcement or lifting of sasi is announced by the Kewang, the customary institution responsible for maintaining order and conservation within the sasi system. This announcement is broadcast through loudspeakers in one of the mosques in each soa (community unit) at night, ensuring that all community members are informed simultaneously. Before entering the forest to harvest nutmeg, landowners must submit a formal request to the Kewang in the form of an official document known as a bon. This document serves as legal proof that the landowner is permitted to access their land and harvest their nutmeg in accordance with customary regulations.

As a contribution to the community and for the sustainability of the sasi system, each nutmeg owner is required to pay a levy in the form of a tax. Based on customary agreements reached through a full Saniri (traditional council) meeting, for every ten nutmeg harvested, one must be given to the Kewang as a tax contribution. The revenue from this tax is then allocated to support various social and customary needs related to the maintenance of the sasi system and the welfare of the community. Compliance with this regulation is strictly monitored by the Kewang, who ensures that all provisions are enforced fairly and consistently across the community.

To maintain order and uphold respect for customary laws, the sasi system is accompanied by a sanction mechanism for anyone who violates its regulations. If sasi is in effect and someone is caught taking a single pala illegally, they are fined Rp1.000. However, if an individual enters the forest to harvest nutmeg without

an official permit from the Kewang, regardless of whether sasi is open or closed, they must pay a significantly higher fine of Rp500.000.

More severe penalties are imposed on individuals caught stealing or harvesting nutmeg belonging to others. If someone is found stealing nutmeg, whether during an active sasi period or after it has been lifted, they face a fine of Rp1.000.000. If the perpetrator cannot afford to pay the fine, they are subjected to 100 lashes by the Kewang with approval from the village government. In cases where the perpetrator refuses to comply with the punishment, the matter is escalated to the police for legal action. These strict sanctions serve as a deterrent while ensuring social balance and justice within the community.

Once the sasi harvest is completed, an open auction is held for the harvested nutmeg and coconut, allowing the entire community to witness the bidding process and the final revenue generated. This tradition not only ensures transparency in natural resource management but also strengthens community trust in the customary mechanisms passed down through generations. The auction proceeds from four designated forest boundaries amounted to Rp38.500.000.

The funds collected are then responsibly allocated for communal purposes. A total of Rp3.850.000 is deposited into the village treasury as general funds for administrative and operational needs of the customary government. The same amount, Rp3.850.000, is allocated to the Kepala Soa (community leader), who oversees fund management and distribution for the welfare of the soa. Additionally, to support religious and social activities, Rp1.925.000 is designated for the four mosques in Negeri Seith. The remaining Rp28.875.000 is used for village development projects planned through customary deliberations. These projects cover various aspects, including infrastructure development, improvement of public facilities, and initiatives aimed at enhancing community welfare.

### ***Sasi pala* as a Social Contract and Community Resilience**

The *sasi pala* system functions not only as a natural resource management mechanism but also as a form of social contract that regulates relationships among community members to maintain ecological and economic balance. Participation in sasi involves various elements of society, including farmers, traditional elders, religious leaders, and the younger generation. This process not only enforces strict customary rules but also fosters a sense of solidarity through collective action mechanisms.

In collective action theory, Al-khateeb et al. (2024) emphasizes that cooperation within groups does not occur spontaneously but requires incentives and rules to ensure compliance from all parties. In the context of *sasi pala*, these incentives come in the form of harvest sustainability guarantees and social benefits derived from adherence to customary regulations. A nutmeg farmer in Negeri Seith explained that without sasi, people could harvest nutmeg at any time without clear rules. However, with sasi in place, everyone knows the proper time for harvesting and when they must wait. This system creates order in harvesting, preventing competition and ensuring that no one feels disadvantaged.

Field observations indicate that community involvement in sasi extends beyond harvest supervision to include customary rituals marking the beginning and end of the sasi period. Religious leaders often participate in these processes, providing moral legitimacy to the customary rules. Additionally, village youth are frequently involved in monitoring activities to ensure there are no violations. This mechanism reflects the fundamental principles of collective action, where collectively enforced regulations strengthen compliance and foster a sense of ownership over the system.

The sustainability of the *sasi pala* system heavily depends on how knowledge about this practice is passed down through generations. In social capital theory, Putnam (2020) emphasizes that the sustainability of social institutions relies on strong social relationships and the continuity of norms and trust within a community. In this context, *sasi pala* serves as a form of social capital that strengthens community cohesion through the transfer of values and knowledge.

Berkes (2009) highlights the importance of intergenerational knowledge transfer in maintaining the sustainability of local resource management systems. In Seith, for example, children and teenagers are introduced to the concept of *sasi* from an early age through stories told by parents and traditional elders. A traditional elder explained that the community teaches children that nutmeg is not only for present consumption but also for the future. They are guided to understand when they can harvest and when they must wait, ensuring that trees continue to bear fruit and provide benefits for future generations.

Field observations also reveal that in some communities, younger generations are beginning to take a more active role in documenting and disseminating information about *sasi pala* through social media and digital initiatives. This indicates an adaptation in the mechanism of value transmission, where traditional practices remain preserved while integrating modern technology to ensure their continuity.

Beyond maintaining ecological and social balance, *sasi pala* also has a significant economic impact on local communities. In the concept of sustainable livelihoods, Natarajan et al. (2022) emphasizes that livelihood sustainability depends on stable access to assets, including natural resources, social capital, and effective management systems. In this case, *sasi pala* functions as a mechanism that regulates the harvest cycle systematically, allowing farmers to avoid detrimental market fluctuations. A nutmeg farmer in Negeri Seith explained that the *sasi* system plays a role in maintaining their economic stability. Without *sasi*, nutmeg could be sold at any time, potentially leading to market oversupply and price drops. However, with regulated harvesting, nutmeg prices remain stable, enabling farmers to live more securely and prosperously.

Observations indicate that in villages where *sasi* is still practiced, nutmeg prices tend to be more stable compared to areas that have abandoned the system. This stability results from collectively managed harvests, which reduce the risk of oversupply that could depress market prices. Additionally, this system helps prevent excessive exploitation, which could harm farmers in the long run.

Another positive impact is the formation of community-based savings patterns. In some communities, revenue from *sasi* harvests is used to fund social activities such as public facility development and children's education. This demonstrates that *sasi pala* not only benefits individual economic well-being but also supports the collective welfare of the community as a whole.

## **Discussion**

### **Dynamics and Challenges in the Implementation of *Sasi pala***

*Sasi pala* has long served as a customary system that ensures the sustainability of natural resources and the well-being of local communities. However, in recent decades, economic pressures and modernization have increasingly tested the resilience of this system. Changes in the global economic structure have provided incentives for communities to exploit nutmeg yields in the short term, often neglecting the sustainability principles that underpin the *sasi* system. From the perspective of market economy vs. traditional sustainability, market-driven economies that focus on short-term profits often conflict with customary systems that prioritize sustainability and ecological balance.

Observations in Negeri Seith indicate that high international demand for nutmeg has tempted some community members to harvest outside the *sasi* schedule. A nutmeg farmer interviewed revealed, “The rising price of nutmeg makes many people tempted to harvest early, especially when faced with urgent needs such as school fees or medical expenses.” This phenomenon reflects the dilemma faced by the community: on one hand, they want to maintain the customary system that has proven effective in resource management, but on the other hand, pressing economic needs drive them to seek quicker financial gains.

Modernization also brings another challenge—the introduction of technology-based and capital-intensive agricultural practices that differ from traditional methods. Some farmers have begun adopting intensification techniques that contradict *sasi* principles, such as using chemical fertilizers and more aggressive harvesting systems. This aligns with Polanyi (2018) findings that in a market economy, natural resources are no longer viewed as part of a social and customary system but as commodities to be freely exploited. Consequently, there is a shift from community-based economic practices to a more individualistic economy, where short-term profits are prioritized over the long-term sustainability of socio-ecological systems.

Beyond economic pressures, social dynamics also influence the continuity of *sasi pala*. Changes in migration patterns and increased access to education have led to decreased community involvement in the *sasi* system. Many young generations migrate to urban areas for work or further education, making them less active in customary practices involving the maintenance and monitoring of nutmeg forests. A traditional leader in Negeri Seith stated, “In the past, every young person knew when *sasi* was opened and closed, but now many do not care because they are busy with jobs in the city.”

Observations indicate that youth participation in customary deliberations has significantly declined. While they were once actively engaged in discussions and decision-making regarding *sasi*, now only a handful remain involved. This suggests a shift in values, where customary systems are no longer regarded as an integral part of daily life but rather as symbolic traditions only revived during ceremonial occasions. The market economy vs. traditional sustainability theory also explains this phenomenon, where modernization fosters new values oriented towards economic efficiency, making customary systems that emphasize social and ecological balance less relevant to some people.

However, not all changes bring negative impacts. In some cases, local communities have begun adapting the *sasi* system with more flexible approaches. For instance, in certain areas, communities have integrated modern technology to strengthen *sasi* enforcement, such as using digital communication tools to announce *sasi* schedules or transparently document harvests. This demonstrates that while *sasi* faces significant challenges, there is room for innovation to ensure its continued relevance in a changing era.

### **Integrating Sasi into Modern Conservation Policies**

*Sasi pala* is not merely a traditional mechanism for regulating the use of natural resources but also reflects a community-based management model that can be integrated into modern conservation policies. The principles of *sasi*, which emphasize ecological balance, local wisdom, and social control in resource exploitation, share similarities with the co-management concept developed by Berkes (2009). This concept highlights the importance of collaboration between the government, indigenous communities, and conservation institutions in managing resources sustainably.

Observations conducted in Negeri Seith revealed that the *sasi* system implemented by the local community is highly effective in limiting the exploitation of nutmeg and ensuring the sustainability of harvests. A

traditional leader interviewed explained, “We believe that without *sasi*, nutmeg trees could be overexploited and eventually depleted. But with the rules that have been passed down through generations, the harvest remains stable.” This principle aligns with the co-management model, where customary rules serve not only as local ethical guidelines but also as community-based regulations that support conservation efforts.

However, challenges arise when the government and conservation institutions often adopt a top-down approach to natural resource management. In some cases, government-imposed conservation regulations overlook the role of local communities, leading to resistance. Ideally, co-management should position local communities as active partners in conservation policies rather than mere recipients of government-imposed rules. According to an interview with an official from the Maluku Environmental Agency, he acknowledged, “*Sasi* could actually be part of regional conservation policies, but so far, there has been no official regulation that accommodates this system within environmental laws.” This indicates a gap between local practices and formal policies that still needs to be bridged.

Several regions in Indonesia have adopted co-management approaches in their conservation policies, such as in the management of customary forests and traditional fisheries areas. If the principles of *sasi pala* can be institutionalized within natural resource management policies, there is a significant opportunity for the government to develop regulations that are more responsive to local socio-ecological conditions. Thus, the *sasi* system would not only serve as a cultural heritage but also as an effective policy instrument for promoting environmental sustainability.

The success of *sasi pala* in maintaining a balance between resource use and conservation opens opportunities for applying its principles in other sectors, such as fisheries and forestry. In fisheries, for instance, *sasi laut* practices, which have been implemented in several areas of Maluku, have proven effective in regulating harvest periods for fish and other marine resources, thereby preventing overexploitation. The same principle could also be applied in the forestry sector, where a similar mechanism could be used to regulate the harvesting of timber or non-timber forest products in a sustainable manner.

Observations in coastal communities in Maluku indicate that several villages have begun to adopt the *sasi* concept in managing their marine resources. A fisherman from Haruku Village stated, “In the past, we used to catch fish anytime, but now we realize that if we don’t regulate it, the fish could disappear. That’s why we started implementing *sasi laut*, with rules similar to *sasi pala*.” This demonstrates that collective awareness of sustainability can grow when communities have control over the resources they manage.

According to co-management theory, the success of this model depends on three key factors: (1) active participation of local communities, (2) support from the government or conservation institutions, and (3) effective enforcement mechanisms. In the case of *sasi pala* and its potential replication, the first factor has already been well-established, as indigenous communities exhibit a strong awareness of sustainability. However, the other two factors still require strengthening. Without clear policy support from the government, these community-based initiatives risk losing legitimacy in the long run. Moreover, enforcement mechanisms remain a challenge, particularly in the face of economic pressures and modernization, which may drive individuals to violate *sasi* regulations.

A strategic step forward would be to develop a co-management model that involves local communities, academics, and policymakers in formulating regulations that are more flexible while still upholding sustainability principles. With formal recognition of systems like *sasi pala*, local communities would not only act as policy implementers but also as partners in decision-making. If *sasi* principles can be replicated

with strong policy support, this system has the potential to become a community-based conservation model applicable across various sectors.

### ***Sasi pala* as a Dynamic Socio-Ecological Institution**

*Sasi pala* is not merely a customary conservation mechanism aimed at maintaining ecological balance but also functions as a social institution that strengthens community resilience. In a socio-ecological context, such institutions do not only regulate the use of natural resources but also establish norms and values that collectively shape community life. The existence of *sasi pala* in Maluku has fostered ecological awareness passed down through generations, nurtured a sense of ownership over natural resources, and reinforced community solidarity in sustaining this tradition. Thus, *sasi pala* is not solely about environmental aspects but also reflects the reciprocal relationship between humans and nature within a broader social system.

In practice, *sasi pala* has a direct impact on the social stability of indigenous communities. When *sasi* regulations are enforced, not only are ecological aspects considered, but economic welfare and social harmony as well. For instance, the *sasi* system creates a more equitable distribution of nutmeg harvests, ensuring that harvesting occurs only at designated times to optimize yields. This prevents excessive exploitation by certain individuals, thereby reducing economic disparities within the community. Additionally, *sasi* opening and closing rituals serve as collective moments that strengthen inter-community ties, foster a sense of togetherness, and reaffirm social values such as mutual cooperation and shared responsibility for the environment.

However, as a socio-ecological institution, *sasi pala* is not immune to evolving challenges brought about by socio-economic changes. Modernization and global market expansion have introduced new dynamics in natural resource management, including shifts in land ownership patterns, a cash-based economic system, and increased pressure to enhance agricultural productivity. Some communities face the dilemma of maintaining the *sasi* system, which restricts harvests to specific periods, or adapting to market demands that require year-round nutmeg availability. Furthermore, population migration and the weakening of customary authority in certain areas have contributed to declining compliance with *sasi* regulations. This indicates that while resilient as an institution, *sasi pala* must adapt to its changing surroundings to remain sustainable.

To ensure the continued relevance of *sasi pala* within an evolving socio-ecological context, adaptive strategies are needed to accommodate social and economic dynamics without compromising its conservation essence. One possible adaptation is integrating *sasi* principles into government policies, granting the system stronger legal recognition. Additionally, innovative economic incentive schemes for communities practicing *sasi* could help balance sustainability with local livelihoods. With a flexible and community-based approach, *sasi pala* can remain a pillar of socio-ecological resilience while addressing contemporary challenges.

To further understand the dynamics of *sasi pala* as a socio-ecological institution, comparative research with similar practices in other regions is essential. Many indigenous communities in Indonesia and beyond have tradition-based conservation systems that share principles with *sasi*. For example, the *awig-awig* system in Lombok governs community-based marine resource management, while *tavy* in Madagascar is a customary prohibition against the exploitation of certain resources. By comparing *sasi pala* with similar practices, a deeper understanding can be gained regarding the key factors that sustain traditional socio-ecological institutions amid the forces of globalization.

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## Conclusion

This study confirms that *sasi pala* serves as more than just a conservation mechanism; it is a dynamic socio-ecological institution that integrates environmental sustainability with social resilience. The research findings demonstrate that *sasi pala* effectively regulates nutmeg harvesting, preventing overexploitation and ensuring the long-term viability of natural resources. Furthermore, the practice reinforces local governance and collective responsibility, strengthening social cohesion through the enforcement of customary laws and sanctions. The intergenerational transmission of knowledge within the community highlights the role of *sasi pala* in sustaining traditional ecological wisdom, which aligns with the environmental sociology perspective. Ultimately, this study achieves its objective by illustrating how *sasi pala* not only preserves biodiversity but also supports economic stability and enhances community resilience.

Despite its contributions, this study has several limitations. Firstly, it is restricted to the Negeri Seith community, making its findings less generalizable to other regions with different socio-ecological contexts. The study also focuses primarily on nutmeg (*pala*) cultivation, while other natural resources under *sasi* regulation (such as marine resources) remain unexplored. Additionally, while the research utilizes qualitative methods, the absence of quantitative data on ecological and economic impacts limits the ability to measure the long-term effectiveness of *sasi pala* in numerical terms. These constraints suggest the need for broader and more comparative research to deepen the understanding of *sasi* as a traditional resource management system.

To enhance the effectiveness of *sasi pala*, future studies should explore its applicability to other commodities and different geographical areas, comparing its implementation in various socio-cultural settings. Policymakers should consider integrating customary ecological practices with formal conservation strategies, ensuring that traditional knowledge systems remain relevant in modern governance. Additionally, interdisciplinary approaches combining sociology, ecology, and economics can provide a more comprehensive assessment of the sustainability of *sasi pala*. Lastly, encouraging youth participation and education in customary conservation practices will be crucial for maintaining the continuity and adaptation of *sasi* in the face of social and economic changes.

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