Jurnal The Messenger, Vol. 17, No. 1 (2025), pp. 70-93
P-ISSN: 2086-1559, E-ISSN: 2527-2810
DOI: 10.26623/themessenger.v17i1.11493

The Role of Family Communication in Transmitting Environmental Values among the Baduy

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Abstract
Purpose: This study examined how family communication transmitted environmental values among the Baduy (Indonesia), linking their unique traditional ecological knowledge, cultural practices, and identity-based frameworks to sustainability outcomes to inform broader conservation efforts.
Methods: This qualitative study conducted in-depth interviews with four purposefully selected Baduy participants (Banten, Indonesia) to capture diverse perspectives. Informants included a 'Tokoh Adat' (customary leader), the 'Kepala Desa Kanekes' (village head), and two 'Warga Baduy' (general community members), representing traditional authority, administrative leadership, and community viewpoints.
Findings: Findings illuminate the Baduy people's profound integration of traditional agriculture and environmental preservation. This commitment manifests in their strict chemical prohibition, reliance on natural fertilizers, deep reverence for protected forests, and adherence to eco-friendly farming methods. These practices are embedded within a robust framework of customary law ('adat') and significantly informed by 'Karma' belief, reflecting a sophisticated understanding of long-term ecological consequences. Furthermore, these ingrained traditions fundamentally shape intergenerational communication, positioning the family as the primary conduit for transmitting vital environmental values and ecological knowledge. This dynamic process actively cultivates environmental responsibility and perpetuates a harmonious coexistence with nature within the community.
Originality: Providing novel insights, this qualitative study uniquely examined family communication's role in embedding environmental values across Baduy generations (Indonesia). Findings illuminate how traditional ecological knowledge and cultural practices synergize, driving sustainable agriculture/waste management and reinforcing community resilience through ancestral wisdom, informing culturally grounded conservation.
Keywords: Family Communication, Identity-based Frameworks, Intergenerational Value Transmission, 'Karma' and Environmental Ethics.

Introduction
Sustainability intertwines ecological, economic, and social considerations in human and natural relationships. It embodies the idea of meeting present needs without compromising the ability of future generations to meet their own, striving for a balanced coexistence where humanity thrives without jeopardizing ecosystems. This multifaceted nature of sustainability underscores the urgency and complexity of our shared

Article History: *Received January 16, 2025; Revised April 18, 2025; Accepted April 21, 2025; Published April 26, 2025.*

responsibility to create a more sustainable and harmonious future (Alexander et al., 2022) (Harvey et al., 2022; Mosier et al., 2022). Within this context, communication is vital in promoting and understanding sustainable practices across various channels (SanMiguel et al., 2021).

Numerous scholars have substantiated the empirical importance of communication in sustainability, highlighting its pivotal role in catalyzing social change and ultimately realizing sustainability objectives. Communication emerges as a linchpin, facilitating the delicate equilibrium among diverse stakeholders' myriad interests and viewpoints. Achieving effective communication within the sustainability realm necessitates deploying strategies that disseminate information, cultivate meaningful dialogue, foster collaboration, and engender mutual comprehension. Sustainable communication transcends mere dissemination of information; it embodies a transformative force capable of harmonizing disparate perspectives and galvanizing collective action toward sustainable goals (Ding & Legendre, 2022; Hassell et al., 2020; Sahadev et al., 2022).

Addressing sustainability issues requires a nuanced understanding of gender, cultural differences, and identity studies, as these factors significantly influence perceptions and engagement with sustainability challenges and solutions. Research indicates that gender plays a crucial role in shaping attitudes toward sustainability, with women often exhibiting stronger environmental concerns and behaviors than men (Erguvan, 2024). Societal norms around masculinity can deter men from adopting eco-friendly behaviors, thereby reinforcing the importance of gender identity in sustainability practices (Brough et al., 2016). Identity studies further illuminate how individuals and groups construct their sense of self in relation to environmental values, revealing how deeply ingrained cultural and personal identities shape actions and decisions related to sustainability (Anderson, 2020; Bloodhart & Swim, 2020; Brough et al., 2016; Bogueva & Marinova, 2018; Newman & Trump, 2023; Paulson & Boose, 2019; Pavithra & Raju, 2024; Schweiger et al., 2024).

Cultural contexts further complicate these dynamics, as different societies may prioritize sustainability issues differently based on their unique values and norms. However, Shang et al. focus primarily on gender differences in research authorship related to the Sustainable Development Goal of Gender Equality rather than directly addressing cultural contexts in sustainability initiatives (Shang et al., 2022). Family dynamics also play a pivotal role in shaping values, attitudes, and behaviors related to sustainability. Families serve as primary social units where discussions about sustainability occur, influencing how individuals internalize and act upon sustainability issues (Bizri, 2022; Kallmuenzer et al., 2018; Schweiger et al., 2024).

Furthermore, consumption behaviors related to sustainability are influenced by gender, cultural identities, and other marginalized group statuses, highlighting the need for policies that address these disparities (Bloodhart & Swim, 2020). The interplay of gender, cultural differences, family dynamics, and identity studies is critical in understanding how sustainability issues are perceived and addressed (Ramos et al., 2024; Rotondi et al., 2024; Tam, 2025). By delving into interactions within families, we gain a deeper comprehension of the complexity and diversity inherent in sustainability communication, equipping us to dissect how families confront sustainability challenges like waste managemen (Hobbs et al., 2017; Kumar et al., 2021; Montero-Vega et al., 2024; Ntsabane et al., 2025; Viljoen et al., 2021; Wani et al., 2024). Embracing the family communication perspective in sustainability discourse allows us to navigate the sustainability challenges and solutions, offering valuable insights and a pathway to

catalyzing positive change at multiple levels of society (Ding & Legendre, 2022).

Indigenous peoples of the Baduy are deeply connected to their ancestral lands and natural resources, fostering unique social and economic systems that are intricately tied to their environment. As effective stewards of the land, they play a pivotal role in safeguarding significant areas of the earth's surface and biodiversity. Despite this, their traditional livelihoods and cultural practices face growing threats from development initiatives, often justified in the name of progress and modernity. These initiatives frequently disregard indigenous customs, leading to cultural erosion and, in some cases, human rights violations. For instance, while the Baduy community refrains from participating in general elections and avoids the use of electricity and modern technology, the Indonesian government continues to push for an information-driven society. This creates a fundamental tension between the state's vision of progress and the Baduy's commitment to preserving their cultural heritage, raising important questions about the sustainability of development policies that fail to accommodate indigenous ways of life. Recognizing and supporting the role of indigenous peoples in sustainable development is vital, as they contribute to environmental assessments, ecosystem management, climate change mitigation and adaptation, biodiversity conservation, and cultural preservation.

Indigenous peoples possess unique concepts and processes related to sustainability, drawing upon their traditional knowledge, values, and worldviews. These concepts include recognizing the interdependence and reciprocity between humans and nature, respecting the rights of 'Ibu Bumi' Indonesia word for 'Mother Earth', holistic land and territory management, and promoting sustainable production and consumption systems. Nevertheless, indigenous peoples also face challenges and opportunities in protecting the environment from development activities. By harnessing their traditional knowledge and practices, indigenous peoples of Baduy contribute significantly to global efforts to mitigate and adapt to climate change. It is crucial to address their challenges, such as erosion of their cultures and identities.

This research not only explores the alignment between the Baduy community's cultural values and global environmental sustainability but also considers the mechanisms through which these values are passed down through generations. In indigenous communities like the Baduy, the family unit plays a central role in maintaining and transmitting environmental values, ensuring that sustainable practices endure over time. This notion of value transmission is pivotal in fostering pro-environmental behaviors, as families act as primary agents of socialization. The following literature review delves into this dynamic, examining the relationship between family communication and the cultivation of environmental values, and synthesizing key insights from diverse studies.

Many scholars give insights into the idea that communication patterns play a crucial role in shaping environmental values within the family unit. Explicit dialogue concerning environmental issues, challenges, and potential solutions cultivates fertile ground for the exchange of knowledge and the development of personal responsibility (Brgles et al., 2023; Kirana, 2018; Liu & Kaida, 2024; Straub & Leahy, 2017; Wang & Zhang, 2024 ;Wu, 2020 ;Yang et al., 2021). By engaging in open and informed discussions about the environment, family members can enhance their understanding of ecological concerns, fostering a sense of shared accountability and promoting environmentally conscious attitudes and behaviors. Such communication patterns not only facilitate the transmission of knowledge but also nurture critical thinking skills, enabling individuals to evaluate information, consider diverse perspectives, and actively participate in environmental decision-making processes. Furthermore, the consistent integration of environmental

themes into family discourse normalizes ecological awareness, contributing to the formation of a strong environmental identity and a lifelong commitment to environmental stewardship (Cheng & Monroe, 2012; Otto & Pensini, 2017; Stocco et al., 2023).

These dialogues serve as a catalyst for critical thinking, empowering individuals to actively engage in environmental protection. Beyond direct communication, the subtle yet pervasive influence of role modeling significantly shapes environmental consciousness. Children and adolescents keenly observe the behaviors of their parents and siblings. Witnessing consistent pro-environmental actions, such as recycling or opting for sustainable products, normalizes eco-conscious practices and instills a profound sense of environmental responsibility. By observing their family members making environmentally conscious choices, young individuals internalize these behaviors as normative and desirable, fostering a sense of personal commitment to environmental stewardship. This process of social learning, where values and behaviors are acquired through observation and imitation, underscores the importance of parental and familial influence in shaping environmental consciousness across generations (Dermody et al., 2015).

Furthermore, sharing stories and experiences about nature and the environment weaves a rich tapestry of emotional connections and fosters a sense of stewardship towards the natural world (Chawla & Cushing, 2007). Narratives, encompassing personal anecdotes, family histories, or even fictional tales, serve to evoke empathy, ignite curiosity, and inspire pro-environmental action. Through these shared narratives, a deeper understanding of the intricate human-nature relationship emerges, cultivating a sense of intergenerational responsibility.

Family dynamics play a pivotal role in the transmission of environmental values. As primary caregivers and role models, parents exert a profound influence on their children's environmental attitudes and behaviors. Research indicates that parents who possess strong environmental values and actively engage in pro-environmental behaviors are more likely to raise children who reflect those values. Moreover, supportive and authoritative parenting styles, characterized by warmth, open communication, and reasonable expectations, are associated with increased environmental awareness and engagement in children (Milfont & Sibley, 2012).

Beyond the immediate family unit, the broader sociocultural context significantly influences the transmission of environmental values. Cultural beliefs and practices surrounding nature and the environment profoundly shape family communication patterns and the transmission of environmental values (Yasir et al., 2023). Societies that hold a deep reverence for nature and integrate ecological principles into their cultural narratives often foster stronger environmental values within families. Conversely, societies that prioritize economic growth and material consumption may inadvertently downplay the importance of environmental stewardship. Religious beliefs, traditional practices, and societal norms all contribute to the complex tapestry of factors that influence how families perceive and interact with the natural world. Understanding these sociocultural nuances is crucial for comprehending the diverse ways in which environmental values are cultivated and transmitted across generations (Uzzell & Räthzel, 2009).

While the existing body of research offers valuable insights, several areas warrant further exploration. Longitudinal studies are essential to track the long-term impact of family communication on environmental value transmission and its influence on pro-environmental behaviors across the lifespan. Understanding how early family influences

shape environmental values and actions throughout an individual's life can inform the development of more effective and targeted interventions. This research can shed light on the enduring legacy of family communication and its role in shaping long-term environmental engagement.

Additionally, research must delve into the role of family communication in transmitting environmental values within diverse family structures. Recognizing and understanding the unique dynamics within single-parent households, blended families, and extended family networks is crucial to ensure inclusivity and develop tailored strategies for promoting environmental awareness. This exploration of diverse family structures will contribute to a more nuanced and comprehensive understanding of how environmental values are cultivated and transmitted.

A deeper understanding of the complex dynamics of intergenerational transmission of environmental values is crucial. Investigating how grandparents' experiences and wisdom influence their grandchildren's environmental attitudes and behaviors, and how family communication mediates this transmission process, can help harness the wisdom of elders in fostering environmental stewardship among younger generations. By exploring the intergenerational transmission of ecological knowledge and values, we can gain valuable insights into the enduring influence of family narratives and traditions on environmental consciousness.

This study investigates the complex alignment between the distinct cultural values of the Baduy indigenous community and prevailing global environmental sustainability principles, thereby advancing a novel perspective within the field. Departing from prior research that often acknowledges the role of indigenous culture in ecological stewardship more broadly, this work distinctively foregrounds family communication as a central, yet frequently neglected, mechanism facilitating the intergenerational transmission of environmental values. Through meticulous examination of familial dialogue, role modeling, and narrative practices, the research elucidates how traditional ecological knowledge (TEK) is internalized, adapted, and sustained across generations--a dimension of cultural continuity often overlooked in mainstream sustainability literature.

A further significant contribution derives from the study's focused engagement with the Baduy community itself--an understudied indigenous group in Indonesia whose societal practices offer a salient exemplar of resistance to certain facets of modernization alongside strict adherence to customary laws ('adat'). Their integrated system encompassing agriculture, forest conservation, and waste management, intrinsically guided by coherent spiritual and ecological principles, presents a pertinent model for sustainable living. This research therefore serves to connect specific local instantiations of indigenous sustainability with broader global discourses and challenges.

Theoretically, the study further contributes by offering an innovative reconceptualization of 'Karma.' Moving beyond conventional treatments of Karma as a purely religious or philosophical construct, this research analyzes it as a functional socio-cultural mechanism that actively reinforces environmental ethics within the Baduy context. Understood through this lens, 'Karma' operates as a form of internalized, intergenerational accountability, compelling environmentally responsible behavior. This perspective furnishes a novel theoretical portal for examining non-material, culturally specific drivers of pro-environmental action.

Methodologically, the research employs an integrated analytical framework, examining how agricultural routines, waste management systems, and forest conservation efforts function synergistically within the Baduy socio-ecological system. This

comprehensive vantage point underscores the necessity of integrating ecological, cultural, and social dimensions when striving for durable sustainability, yielding pertinent insights applicable to both policy formulation and practical sustainability initiatives.

Crucially, the research eschews romanticization by incorporating a critical analysis of the challenges and limitations inherent within the Baduy system. It explicitly addresses the impacts of external pressures, including demographic shifts, proximate resource exploitation, and potential cultural erosion, thereby ensuring a balanced perspective. This nuanced analysis augments the study's relevance and applicability, informing considerations for adapting or scaling insights from indigenous models within diverse and dynamic contexts.

In essence, by centralizing the role of family communication, theorizing Karma as a functional ethical driver, showcasing the Baduy's integrated environmental system through a holistic lens, and maintaining a critical perspective on inherent limitations, this research introduces a multifaceted and original understanding of indigenous sustainability. These contributions collectively position the study as a significant addition to the scholarly literature on indigenous knowledge, environmental governance, and the cultural dimensions of sustainability.

Methods

This research is methodologically grounded in the constructivist paradigm, which posits that knowledge is actively constructed rather than objectively discovered, shaped by individual experiences, social interactions, and cultural contexts (Guba, 1990; Patton, 2015). Constructivism challenges notions of a singular, transferable truth, instead emphasizing the subjective lens--informed by unique backgrounds, values, and beliefs--through which individuals interpret their world. Consequently, understanding how environmental perspectives are formed and enacted within specific cultural settings is paramount. This study specifically selected the Baduy community due to their distinct socio-cultural isolation and long-standing adherence to traditional ecological knowledge and practices, offering a unique opportunity to explore deeply embedded indigenous approaches to environmental sustainability. Employing a qualitative approach aligned with constructivism, we conducted in-depth interviews with four key individuals representing diverse roles within the community: customary leader, 'jaro' (head of Kanekes village, the administrative unit encompassing Baduy territory), and two community members), to capture a multifaceted understanding of their perspectives. Fieldwork was undertaken in the Baduy region of West Java, Indonesia. The research design included observational methods implemented in selected villages within both 'Baduy Luar' (Outer Baduy) and, following appropriate permissions and protocols, the more secluded 'Baduy Dalam' (Inner Baduy).

The use of in-depth, open-ended interviews directly reflects the constructivist emphasis on privileging subjective experience, interpretation, and socially situated meanings (Guba & Lincoln, 1994). This method facilitated the elicitation of rich narratives, allowing participants to articulate their knowledge, values, and practices concerning agriculture, environmental stewardship, and cultural norms in their own terms. The aim was to move beyond generalized observations and delve into the nuanced, contextually grounded realities co-constructed by the Baduy individuals themselves regarding their intricate relationship with the natural world. By prioritizing participant voices and experiences, this methodology sought to generate data that illuminates the complexity of Baduy ecological understanding and contributes a culturally specific

perspective to broader discourses on indigenous knowledge and environmental sustainability.

Results

The Baduy tribe, also known as Urang Kanekes, is an indigenous community residing in West Java, specifically within Kanekes village in the Lebak Regency of Banten Province, Indonesia. Their distinct identity is profoundly shaped by an unwavering commitment to ancestral traditions and customary law (‘adat’), alongside a deliberate, culturally ingrained separation from many modern societal influences. This commitment is particularly rigorous among the Inner Baduy (Baduy Dalam), who meticulously maintain traditional norms and rituals; symbolic practices, such as the ritualistic use of rice cones (congcot), serve to embody and reinforce their cultural resilience (Krisnadi et al., 2024). This strict observance of custom is fundamental to preserving the community's unique social and religious fabric, deeply rooted in their Sunda Wiwitan belief system which emphasizes harmony with nature, reverence for ancestral wisdom, and dedicated environmental stewardship (AS et al., 2020).

Central to the Baduy identity are the specific beliefs and governance structures guiding their lives. The comprehensive system of customary law, adat (often referred to as Pikukuh Karuhun), governs nearly every facet of existence and is regarded as sacred and immutable. This framework is interwoven with ‘Sunda Wiwitan’ beliefs, incorporating respect for ancestors and nature spirits, and includes a functional understanding of ‘Karma’, where intergenerational consequences reinforce ethical conduct. Spiritual authority and the primary responsibility for ensuring the preservation of these traditions rest with the Pu'un, the paramount traditional leader residing within the Inner Baduy territory (Asteria et al., 2021).

The community exhibits a distinct internal social structure, divided into the Inner Baduy (‘Baduy Dalam’) and the Outer Baduy (‘Baduy Luar’). The ‘Baduy Dalam’, considered the core group, maintains significant isolation, rigorously adhering to tradition by consciously rejecting modern technologies, formal education systems, and maintaining simple, traditional attire (typically white). The ‘Baduy Luar’ inhabit surrounding villages, functioning as an intermediary zone. While upholding core adat principles, they engage in more interaction with the outside world, may utilize limited modern tools, participate in trade, and demonstrate greater flexibility in adapting certain customs or incorporating modern goods and practices, such as cultivating specific commercial crops like coffee, to support their subsistence and economy (Asteria et al., 2021; Iskandar et al., 2019). This distinction has significant implications for navigating interactions with modern legal and social frameworks.

The community’s relationship with nature is another cornerstone of their identity. They practice traditional swidden farming (‘ngahuma’), a method deeply rooted in their ecological and potentially cosmic knowledge and beliefs, deliberately avoiding modern agricultural techniques like wet rice cultivation, inorganic fertilizers, and synthetic pesticides (Iskandar et al., 2019). This is complemented by strictly enforced customary laws for the conservation of protected and sacred forests, which are integral to their cultural identity and environmental governance (Coggins & Chen, 2022), alongside a reliance on rivers for daily needs. Their approach demonstrates ecological conservatism but also allows for selective adoption of compatible practices, such as integrating robusta coffee into traditional agroforestry systems.

Cultural expressions, artifacts, and socialization processes further solidify Baduy

identity. Traditional dwellings, constructed from natural materials like rock, bamboo, and dried palm leaves, embody cultural continuity and harmony with the environment. Tools like the Leuit Lenggang granary used for rice storage reflect sophisticated indigenous knowledge, potentially incorporating principles akin to ethnomathematics and geometry (Farokhah et al., 2023). Artisanal skills, including customary weaving, are vital components of their cultural heritage transmitted across generations. The community deliberately favors non-formal, customary methods of education and parenting over formal schooling, aiming to protect and perpetuate indigenous knowledge and social norms. Adherence to specific food restrictions also plays a role in reinforcing their philosophy of simplicity. Key cultural events, such as the Ngalaksa ceremony (serving functions including a traditional census with symbolic items) (Maftukha, 2018) and the Seba ceremony, reaffirm community bonds and their commitment to ancestral mandates. Initiatives like Saba Budaya Baduy represent structured efforts to manage interactions with visitors, promoting cultural resilience alongside sustainable tourism principles (Praptika et al., 2024).

Despite their documented cultural resilience (Iskandar et al., 2019; Praptika et al., 2024) and sophisticated adaptive strategies, particularly evident among the Outer Baduy, the community's distinct identity and traditional way of life confront considerable exogenous pressures. These challenges encompass the pervasive influences of modernization, escalating tourism interactions often generating friction between economic imperatives and cultural integrity, potential jurisdictional conflicts arising from discrepancies between customary law (adat) and external legal or policy frameworks, encroachment upon ancestral lands, and broader systemic environmental threats. The introduction of external market forces and cultural narratives, exemplified by tourism, precipitates ongoing tensions, compelling community members to navigate the complex trade-offs between potential economic opportunities and the fundamental imperative to preserve sociocultural authenticity. Consequently, the Baduy identity is best understood not as static, but as a complex, dynamic articulation forged through the interplay of deep-rooted adherence to ‘adat’ and Sunda Wiwitan beliefs, dedicated ecological stewardship manifested in unique subsistence practices, distinct social structures differentiating internal community roles, and a conscious, ongoing negotiation with the forces of modernity--all of which collectively reinforce an enduring commitment to ancestral values and cultural continuity amidst change.

Table 1. The difference ‘Baduy Dalam’ (Inner Baduy) and ‘Baduy Luar’ (Outer Baduy)

Aspect	Inner Baduy	Outer Baduy
Farming Practices	Traditional swidden farming	Traditional swidden farming with some modern crops
Environmental Practices	Strict conservation, no modern goods	Some modern goods, integrated commercial crops
Cultural Events	Ngalaksa ceremony	‘Ngalaksa’ ceremony
Governance	‘Pu'un’ authority, ancestral rules	‘Pu'un’ authority, ancestral rules
Tourism	‘Saba Budaya Baduy’	‘Saba Budaya Baduy’

Note: The table is a synthesis by the researchers based on field data

Central to Baduy subsistence and cultural expression is a diverse yet meticulously regulated agricultural system designed to meet daily needs while upholding ecological principles. Their agro-ecological portfolio includes the cultivation of staple crops such as rice and corn, carefully selected cash crops like ginger and bananas, and the sustainable harvesting of timber resources. Critically, the selection and management of cultivated

species are not governed by market logic or arbitrary choice but are mandated by specific customary regulations (‘adat’), explicitly oriented towards maintaining ecological equilibrium and ensuring the long-term vitality of their lands. Within this system, rice cultivation assumes paramount cultural and practical significance. Its practice necessitates a synchronized, community-wide mobilization of labor, ritually culminating in the ‘kawalu’ ceremony. Throughout the entire cultivation cycle, from planting to harvest, strict adherence to traditional protocols and associated rituals is rigorously maintained; this disciplined observance functions not only to propitiate spiritual forces but also to reinforce social cohesion, synchronize collective action, and actively perpetuate the community's perceived spiritual interconnectedness with the natural world, thereby embedding sustainability precepts deeply within cultural practice.

The Baduy people of Indonesia provide a compelling example of how traditional agricultural practices can be deeply intertwined with cultural beliefs and environmental sustainability. Their farming methods, rooted in ancestral wisdom and a profound respect for nature, eschew modern technologies in favor of time-tested techniques that promote ecological balance. Rejecting the use of chemical fertilizers, pesticides, and modern tools, the Baduy prioritizes harmony with the environment. They employ rotational farming and agroforestry systems, which serve to prevent soil erosion, maintain biodiversity, and ensure the long-term health of the land. These practices are not merely pragmatic strategies for resource management; they are deeply embedded within the Baduy belief system. For the Baduy, the land is not simply a resource to be exploited but a sacred gift inherited from their ancestors. This perspective fosters a strong sense of responsibility and an unwavering commitment to environmental stewardship. They believe that protecting the land is essential not only for their own well-being but also for the well-being of future generations. This intergenerational perspective underscores the sustainable ethos that permeates Baduy culture and agricultural practices (Mirajiani et al., 2019). In the Baduy Indigenous community, the use of chemicals is strictly prohibited, both in the inner Baduy (‘Baduy Dalam’) and Outer Baduy or ‘Baduy Luar.’ They adhere to customary regulations that forbid the use of chemical fertilizers in agriculture. Instead, they prioritize the utilization of natural fertilizers such as compost derived from decomposed leaves (Iskandar et al., 2018).

The Baduy people exhibit a profound commitment to environmental preservation. This is clearly demonstrated in their deep respect for designated prohibited forest areas, which are strictly safeguarded from any form of exploitation, including clearing for agriculture. Prioritizing the sustainability of the natural environment, the Baduy employ environmentally friendly farming methods and maintains a robust system of waste management. This includes the collection and controlled burning of non-organic waste, particularly plastic, in designated areas to minimize pollution. Organic waste, such as food scraps, is disposed of in designated locations to facilitate natural decomposition.

These practices are linked to Baduy’s customs and philosophies. Monthly gatherings reinforce these traditions, providing a forum for discussing customary matters and strategies for environmental preservation. The Baduy believes that violations of these customary rules carry karmic consequences that can extend to future generations, further emphasizing their commitment to long-term sustainability. In essence, the Baduy prioritizes a holistic approach to environmental stewardship, encompassing natural agricultural practices, the avoidance of chemical use, adherence to forest prohibitions, and unwavering respect for established customary regulations.

The Baduy traditional philosophy places significant emphasis on the protection of

nature, viewing it as a shared responsibility integral to their community's well-being. This philosophy is operationalized through a set of well-defined customary rules that meticulously guide their environmental preservation efforts. Several key principles underscore the Baduy's commitment to nature conservation. Firstly, they engage in natural farming practices, strictly adhering to organic principles and eschewing the use of chemical fertilizers or pesticides. This commitment to sustainability is evident in their cultivation of various crops, including rice, corn, Kaempferia galanga, ginger, and bananas. Secondly, the Baduy prioritizes forest conservation, recognizing these areas as vital water sources and essential habitats for wildlife. Designated as 'forbidden forests,' these zones hold sacred status and are strictly protected from any form of exploitation, including agricultural activities. This deliberate safeguarding of forested areas underscores the Baduy's understanding of ecological balance and their commitment to preserving biodiversity. In essence, the Baduy traditional philosophy recognizes the paramount importance of environmental protection and actively integrates these principles into their customary rules. This fosters a holistic and sustainable approach to conservation, ensuring the continued health of the environment for present and future generations.

The Baduy community is renowned for its unwavering commitment to upholding customary rules passed down through generations. These rules are not merely a set of guidelines but a deeply ingrained code of conduct that governs their relationship with the environment and ensures the preservation of their traditional way of life. For the Baduy, violating these rules carries significant consequences, including karmic repercussions that can extend to future generations. This belief underscores the intergenerational impact of their actions and reinforces their commitment to long-term sustainability.

Beyond adherence to customary rules, the Baduy actively strive to preserve their local wisdom, which emphasizes a harmonious relationship with nature. This deep connection is evident in their traditional rituals and ceremonies, which serve as acts of reverence toward the natural world and pay homage to their ancestors. Through these rituals, the Baduy community reinforces the spiritual connection between humans and the environment, fostering a sense of responsibility for its protection.

A fundamental principle of Baduy traditional philosophy involves the imperative to maintain a harmonious coexistence between humanity and the natural environment. Far from being perceived as an individual obligation, environmental stewardship is conceptualized as a collective responsibility deeply interwoven with the community's identity and cultural heritage. This profound apprehension of the intrinsic interconnectedness binding humans to their ecosystem underpins the Baduy way of life, guiding practices aimed at ensuring the sustained ecological integrity and communal continuity.

From a sociological perspective, the concept of Karma provides a valuable analytical framework for examining the interplay between belief systems, moral accountability, and social action. Originating primarily within Hindu and Buddhist traditions, Karma posits a principle of causality wherein intentions and actions precipitate commensurate consequences, potentially manifesting within the actor's present life or subsequent existences. This doctrine often functions as an ethical heuristic, shaping social norms and informing perceptions of responsibility towards both fellow humans and the broader environment. By accentuating the linkage between actions and outcomes, Karma offers a lens for analyzing frameworks of moral accountability and the perceived long-term effects of individual choices on collective well-being. Sociological inquiry into

Karma can thus elucidate the mechanisms through which specific belief systems influence social structures, ethical decision-making processes, and the establishment of social control within communities.

From a sociological perspective, 'Karma' can be understood as a mechanism of social control. It provides a moral compass that encourages individuals to act ethically, as believing in karmic retribution can deter harmful behaviors. Moreover, 'Karma' is intertwined with fatalistic tendencies in various cultures. Ruiu highlights that belief systems, including the laws of 'Karma', can socialize individuals into accepting specific fatalistic worldviews, which can affect their responses to life events and societal challenges (Ruiu, 2013). This perspective suggests that 'Karma' shapes individual actions and influences broader societal attitudes toward fate and agency, impacting how communities navigate social and economic hardships.

Furthermore, the sociological examination of 'Karma' extends to its role in shaping cultural practices and community cohesion. In addition, applying 'Karma' in sociological studies often intersects with identity and social exclusion issues. For example, Pandey and Gupta explore how the interpretation of 'Karma' within the context of widowhood in Hindu society can lead to negative attitudes and social exclusion, reflecting the broader implications of religious beliefs on social dynamics (Pandey & Gupta, 2019). It illustrates how the understanding of 'Karma' can vary significantly across different social contexts, affecting individuals' experiences and societal interactions.

Can be viewed through the 'sociology of knowledge,' where the understanding and interpreting karmic principles influence social practices and community engagement (Berger & Luckmann, 1966). This perspective emphasizes the importance of cultural context in shaping how Karma is perceived and enacted within different societies. 'Karma' in sociology is a multifaceted concept encompassing moral accountability, social control, and cultural identity. It influences individual behavior and community norms, shaping how people interact with one another and their environment. By understanding 'Karma' through a sociological lens, researchers can gain insights into the complex interplay between belief systems and social dynamics, highlighting the significance of cultural context in shaping human behavior.

The Baduy community operates under the principle that one's actions affect their future destiny and experiences. As a concept, Karma is deeply embedded and understood by the Baduy people. Violations of customary rules or engagement in prohibited actions, such as environmental damage, criminal behavior, or other transgressions, are believed to result in corresponding karmic consequences. According to some literature, the concept of Karma has existed in Hinduism, Buddhism, and Jainism. Karma refers to the total of a person's deeds in this life and past ones, which determine their destiny in subsequent lives. Karma is also understood to include ideas, words, and physical deeds. In Sanskrit, 'Karma' signifies action or deed (Bronkhorst, 2023; Locke, 2021; Lyons, 2021; Pakhomov, 2021; Sharma, 2021).

The Baduy people adhere to rules and prohibitions related to plant cultivation, waste management, and chemical usage to safeguard the environment. Plant species that may harm the environment or are deemed unsuitable are strictly prohibited; the Baduy community has strict rules and regulations concerning plant cultivation, waste management, and chemical usage to protect the environment. They prohibit the cultivation of plant species that can harm the environment or are considered unsuitable, and the use of chemicals in agriculture is also banned. The Baduy people actively promote environmental preservation by using proper waste disposal techniques, such as

incinerating plastic waste to prevent harm. While using chemicals in agriculture is also forbidden. Environmental preservation is actively pursued through proper waste disposal practices, including the incineration of plastic waste to prevent harm.

The customary philosophy of nature protection is imparted to the community, particularly the younger generation, through monthly meetings and teachings delivered by parents and traditional leaders. The Baduy people strive to protect the environment and incorporate customary regulations into their daily lives, including their agricultural practices and utilization of natural resources. These customary practices encompass an understanding of prohibitions and the recognition of 'Karma's' influence, which is believed to impact their lives and the lives of future generations. In cases where customary rules are violated, such as acts of adultery or other transgressions, the Baduy people acknowledge that the perpetrator will face appropriate consequences or karmic impacts. The law of 'Karma' is believed to be in effect and can influence one's destiny and the lives of future generations. Consequently, efforts are made to address these transgressions and mitigate the impacts, aiming for a balanced manifestation of 'Karma'.

Within the religious context, the Baduy people hold beliefs that encompass faith in God or Gusti Allah. They observe rituals and fasting as integral aspects of their religious practices. Differences exist in the specific practices and timings of fasting observed. Furthermore, their belief system acknowledges a supreme power governing all aspects of life. The Baduy community is committed to preserving the environment by enforcing strict rules and regulations regarding plant cultivation, waste management, and chemical usage. They prohibit the cultivation of plant species that may harm the environment or are considered unsuitable.

Additionally, the use of chemicals in agriculture is also banned. The Baduy people actively promote environmental preservation by using proper waste disposal techniques, such as incinerating plastic waste to prevent harm. They are dedicated to preserving the environment and actively ensure their practices are sustainable and environmentally friendly. The Baduy people follow 'Agama Sunda Wiwitan', a unique religious belief system that incorporates elements of ancestor worship and the reverence of supernatural entities connected to nature's forces. While they embrace the concept of the law of Karma, the Kanekes people do not adhere to Buddhism or Hinduism. Rather, they abide by the principles of Amanat Buyut. Although they occasionally use the expression "Alhamdulillah" (praise to Allah), their religious practices and beliefs diverge from Islam. The Baduy people possess a distinct theological understanding of Allah that differentiates them from Islamic teachings.

The Baduy people celebrate their commitment to 'Amanah Buyut' every year with a significant cultural event known as the 'Seba' ceremony. This ritual occurs at the Lebak Regent Hall in Banten, Indonesia. It serves as a crucial moment for the community to communicate and assert their dedication to the sacred values embedded in 'Amanah Buyut.' During this ceremony, the Baduy indigenous people gather to express their spiritual connection, gratitude, and reciprocity with the natural world. The 'Seba' ceremony is a testament to the community's unwavering commitment to cultural heritage. By fostering a harmonious relationship between humans and nature, it reinforces the enduring significance of 'Amanah Buyut' in shaping their collective identity (please see Table 2).

Table 2. Baduy Community Practices, Beliefs, and Environmental Stewardship

Theme/Aspect	Descriptions	Rationale	Specific Rituals
Philosophy & Worldview	Emphasis on harmonious human-nature coexistence;	'Amanat Buyut' (Ancestral mandate), ecological balance	'Seba' ceremony
Agricultural Practices	Diverse cultivation; rejection of modern tech.	Ancestral wisdom, ecological balance, adherence to 'adat'.	'Kawalu'; rotational farming, agroforestry, natural fertilizers.
Environmental Preservation	protection of forests; waste management; prohibition of harmful chemicals.	Sustainability, minimizing pollution, protecting vital resources.	No exploitation in forbidden forests.
Customary Rules ('Adat')	commitment to rules governing the environment.	Preservation of traditional way of life.	Crop selection, farming methods, forest use, waste disposal, chemical avoidance.
Belief System: 'Karma'	Deeply embedded belief that actions have consequences affecting present/future destiny and generations.	Moral accountability, intergenerational responsibility, social control, reinforcing adherence to 'adat'.	Belief that violating adat leads to karmic consequences.
Belief System: Religion	Follow 'Sunda Wiwitan'	Adherence to unique indigenous beliefs,	Rituals, fasting
Knowledge & Tradition	Local wisdom	Continuity of culture, adherence to 'Amanat Buyut.'	Community meetings, teachings by parents/leaders, traditional rituals and ceremonies.

Note: 'Karma' is frequently used in various entities

Discussion

During the conversation, participants explored various methods employed by the Baduy community to protect nature. First, they discussed agriculture and land use as central aspects of environmental preservation. Following customary rules, the community carefully selects and cultivates crops such as rice, corn, aromatic ginger, ginger, and wood. These agricultural practices are interwoven with traditional ceremonies, such as 'kawalu' and lunar greetings, reinforcing their commitment to maintaining environmental integrity.

The profound integration of Baduy traditional ecological knowledge (TEK), agricultural practices, and cultural life manifests in several key domains. Central to their subsistence is the practice of swidden farming ('ngahuma'), meticulously guided by TEK and a specific agricultural calendar, the 'pananggalan'. This traditional calendar dictates the annual cycle of farming activities, demonstrating resilience with only minor adjustments necessary in response to environmental perturbations, thereby ensuring agricultural practices remain synchronized with natural rhythms (Iskandar & Iskandar, 2016). The management of 'huma' (upland rice) exemplifies this integration. Cultivation, from seed selection through yield management, adheres strictly to traditional methods devoid of modern technological inputs, a strategy deeply rooted in local wisdom and

values aimed at long-term sustainability and community food security. The harvested rice is stored in traditional barns (‘leuit’), where it can last for decades, securing food reserves and facilitating the continuation of essential traditional ceremonies (Lindawati et al., 2024). Notably, this rice is allocated principally for daily consumption and ritual purposes rather than commercial sale, underscoring the paramount cultural significance of agriculture within the community (Iskandar et al., 2018).

Huma Rice Management: The management of huma rice, or upland rice, follows traditional practices from seed selection to yield management, without the use of modern technology. This approach is rooted in local wisdom and traditional values, ensuring long-term sustainability and food security for the community 3. The rice is stored in leuit (traditional barns) and can last for decades, supporting both food reserves and traditional ceremonies (Lindawati et al., 2024). Integral to this system are traditional ceremonies, such as ‘kawalu’ and lunar greetings, which punctuate the agricultural cycle and serve to reinforce the community's commitment to maintaining environmental integrity through sustainable practices (Iskandar et al., 2018; Lindawati et al., 2024).

Furthermore, the Baduy employs sophisticated TEK for broader environmental conservation, implementing land-use zonation systems and maintaining soil fertility through ecologically sound practices like appropriate fallow periods and the cultivation of leguminous crops. In response to contemporary pressures, such as population growth and limited forest land availability, adaptive cultural strategies have also evolved. For instance, members of the Outer Baduy may engage in temporary outmigration to non-Baduy areas to practice swidden farming, a strategy that helps sustain their farming system and fulfill traditional ritual obligations without unduly straining local resources (Lindawati et al., 2024). Collectively, these practices demonstrate a cohesive agro-ecological system where agricultural activities, conservation efforts, and cultural ceremonies are deeply interwoven, guided by traditional knowledge to ensure both environmental sustainability and cultural continuity.

Second, the Baduy community places great importance on minimizing chemical usage, aligning their agricultural practices with cultural values emphasizing a harmonious relationship with nature. They strictly adhere to customary rules prohibiting artificial fertilizers, instead relying on compost made from decaying leaves. This approach reflects their environmental consciousness and highlights cultural norms' role in shaping sustainable farming behaviors. By using natural alternatives, the Baduy contribute to soil health and the sustainability of their agricultural systems, underscoring their holistic approach to environmental stewardship.

The Baduy community’s agricultural system places paramount importance on minimizing chemical usage, a practice deeply interwoven with cultural values emphasizing a harmonious human-nature relationship. This approach is fundamentally rooted in their traditional ecological knowledge (TEK) and codified within customary laws (‘adat’) that meticulously guide farming methods and land management. Specifically, their practice of swidden farming (‘ngahuma’) inherently eschews modern high-yield rice varieties, inorganic fertilizers, and synthetic pesticides, relying instead on time-tested, ecologically informed techniques to ensure environmental sustainability.

This commitment to low-chemical, nature-aligned agriculture is further reflected in the traditional proscription against cultivating certain commercial plants, such as coffee, clove, cacao, teak, and rubber, within their designated territory (Iskandar et al., 2019). This restriction serves to maintain ecological balance and directly supports their cultural valuation of environmental conservation. Governing these activities are customary laws

and local wisdom that prioritize sustainable land management to ensure both long-term food security and ecological integrity, demonstrating profound respect for the natural world (Muhammad, 2018). Moreover, in response to external pressures like population growth and increased food demand, adaptive cultural strategies, such as temporary outmigration by Outer Baduy members for swidden farming in non-Baduy areas, have been developed (Iskandar et al., 2018). This allows the community to uphold their sustainable, low-input farming system and adhere to cultural norms even when facing resource constraints. Underpinning this entire approach is an environmental ethic characterized by biocentric and ecocentric principles, which prioritize the intrinsic value and well-being of all living organisms and the ecosystem, integrating these ethics seamlessly into their agricultural practices and overall way of life.

Third, interviews with community members shed light on their approach to river conservation. The participants emphasized the sacredness of rivers and their vital role in the ecosystem, guided by customary rules that shape their behaviors. One notable rule prohibits bathing in rivers, a practice aimed at preserving the cleanliness and purity of these water sources. This prohibition reflects the community's deep commitment to environmental preservation and their efforts to align daily activities with their reverence for nature (Asteria et al., 2021). The prohibition of river bathing, rooted in cultural values, emerges as a practical measure in their broader efforts to safeguard the ecological integrity of their environment.

The discussions further highlighted Baduy's commitment to forest conservation. Participants acknowledged the critical role forests play in cultural and ecological heritage, recognizing the vulnerability of their natural surroundings. The community adheres to strict customary rules prohibiting illegal logging and other destructive practices, ensuring the sustainability of their ecosystems. Informants spoke specifically about the vigilant management of customary land, where measures are being taken to prevent damage and inappropriate land use. This careful stewardship extends beyond their immediate territories, as the Baduy people also apply their guiding principles to lands outside their designated areas, balancing resource utilization with cultural respect for the environment.

Additionally, the Baduy community emphasizes the protection of flora and fauna, guided by customary rules prohibiting poaching and protecting endangered species. Education plays a crucial role in passing these values to younger generations, with parents and traditional leaders as key figures in imparting knowledge about environmental protection. Informants noted that teachings on nature conservation are transmitted through spells and customary laws, with violations believed to result in karmic consequences. This belief reinforces the community's long-term perspective on environmental sustainability.

The Baduy community exemplifies how cultural identity shapes environmental stewardship. Their commitment to sustainable agricultural practices, such as organic farming and rotational agroforestry, stems from a deep-seated belief in the sacredness of the land. This cultural identity is reinforced through rituals like ‘kawalu’, which bind the community together in a shared mission to protect their environment. By viewing these practices through the lens of identity studies, we see that the Baduy do not merely follow rules--they embody a way of life that defines who they are as a people (Asteria et al., 2024; Iskandar et al., 2018).

Culturing staple crops like rice, corn, and ginger is accompanied by traditional rituals, such as the kawalu ceremony, which reinforces community bonds and collective responsibility toward the environment (Iskandar et al., 2018). These rituals serve as a

reminder of the community's interconnectedness with nature and their moral obligation to protect it for future generations. The community's strict adherence to customary laws governing land use and environmental practices, believed to carry karmic implications, further underscores their commitment to environmental stewardship (Asteria et al., 2024).

Moreover, their waste management practices reflect Baduy's environmental consciousness. The community actively engages in collecting and incinerating plastic waste to prevent pollution, aligning with their broader sustainability goals (Ulum et al., 2024). This proactive approach demonstrates their understanding of the ecological impacts of waste on their environment and reflects their commitment to preserving both their surroundings and cultural identity.

Karma plays a pivotal role in shaping the Baduy's environmental ethics. The belief that actions have consequences affecting future generations fosters a strong sense of accountability within the community (Muhammad, 2018; Duong, 2023; Kanojia, 2024). This belief is passed down through educational efforts targeting younger generations, ensuring that environmental stewardship is integrated into daily life (Asteria et al., 2024). By framing environmental protection as a communal responsibility, the Baduy people cultivate a culture of respect for nature that is deeply embedded in their social fabric. The Baduy community's agricultural practices reflect their rich cultural heritage and unwavering commitment to environmental stewardship. Rooted in a philosophy that values sustainability and communal responsibility, their traditional methods serve as a model for integrating indigenous knowledge with contemporary environmental challenges. Baduy's practices highlight the importance of preserving traditional ecological knowledge to foster resilience and sustainability under modern pressures (Asteria et al., 2024; Habiyaremye & Korina, 2021).

The Baduy community offers a compelling exemplar of integrating traditional agricultural practices with profound environmental stewardship, deeply embedded within their unique sociocultural milieu. Their strict adherence to sustainable methods, including organic farming principles, rotational agroforestry, and meticulously enforced customary laws ('adat'), underscores an unwavering commitment to conserving biodiversity and maintaining ecological equilibrium. Cultural rituals, notably the 'kawalu' ceremony, serve not merely as symbolic observances but as crucial mechanisms for reinforcing communal bonds and collective responsibility towards the natural world, thereby highlighting the inextricable nexus between cultural praxis and environmental sustainability. However, while the Baduy system provides valuable perspectives on sustainable living, a critical assessment reveals inherent constraints and challenges that circumscribe its broader applicability and long-term resilience. Within the Baduy community, family identity plays a pivotal role in transmitting environmental values across generations. Elders serve as custodians of traditional ecological knowledge, teaching younger members about sustainable farming, waste management, and forest conservation. The belief in 'Karma' further strengthens this familial bond, creating a sense of accountability that transcends individual lifetimes. Through family communication, the Baduy cultivates a collective identity centered around environmental responsibility.

Despite their resilience, the Baduy face challenges that threaten their cultural and environmental identities. External pressures, such as population growth and encroachment on customary lands, test the community's ability to maintain their traditional practices. Younger generations, exposed to modern influences, must navigate the tension between preserving their heritage and adapting to new realities. Understanding

these dynamics through the lens of identity studies provides valuable lessons for supporting indigenous communities in safeguarding their cultures and ecosystems.

A primary set of constraints relates to the system's context-specificity and limited adaptive capacity concerning external inputs. The efficacy of Baduy Traditional Ecological Knowledge (TEK) and associated agricultural techniques, such as swidden farming (‘ngahuma’) reliant on extensive fallow periods, is intricately coupled with their specific geographical and socio-cultural environment. This tight coupling presents significant barriers to facile transferability or scalability to regions facing different ecological constraints or higher population densities demanding more intensive land use. Furthermore, the community's principled refusal to adopt modern agricultural technologies--including synthetic fertilizers, pesticides, and high-yield crop varieties, while reflecting a core tenet of their environmental philosophy, may concurrently limit their capacity to adapt effectively to emergent challenges like climate change impacts or novel pests and diseases that could jeopardize food security. Similarly, the proscription against cultivating commercially significant crops potentially constrains economic diversification, increasing vulnerability to financial uncertainties.

Compounding these factors are dependencies on internal socio-cultural mechanisms and a relative scarcity of external empirical validation. The remarkable success of Baduy environmental governance is heavily predicated upon widespread adherence to customary laws (‘adat’) and a deeply ingrained belief in karmic consequences, fostering robust communal accountability. However, the resonance and efficacy of such socio-cultural drivers are contingent upon specific cultural frameworks that may be absent elsewhere. Moreover, the continuity of these practices faces potential attrition as younger generations encounter external influences through migration or digital connectivity, potentially weakening adherence to tradition. Concurrently, while Baduy practices are widely lauded for their sustainability ethos, rigorous scientific investigation validating their long-term ecological efficacy under contemporary environmental stressors remains limited. For instance, the precise ecological impacts of waste management techniques like plastic incineration require thorough assessment. This paucity of empirical data, partly related to the community's cultural insularity which can impede collaborative research and knowledge exchange, restricts the confident extrapolation of their methods and raises questions regarding potential unintended environmental consequences.

Finally, despite possessing adaptive strategies such as the temporary outmigration practiced by Outer Baduy members, the community remains acutely susceptible to external pressures. Accelerating population growth in surrounding areas, regional deforestation, and encroachment on customary lands pose significant threats to the integrity of their territory and the viability of their traditional subsistence patterns. Increasing external demand for land and resources can strain the Baduy's capacity to enforce ‘adat’ and protect their environment, potentially jeopardizing the delicate balance they strive to maintain. This vulnerability underscores the challenges faced even by well-established indigenous systems when confronted by pervasive external socio-economic and environmental forces. While the Baduy community furnishes a remarkable illustration of integrated, sustainable living rooted in indigenous knowledge and strong cultural values, the system possesses inherent limitations. Its context-dependency, deliberate eschewal of modernization, reliance on specific socio-cultural norms, and susceptibility to external pressures collectively highlight the complexities involved in drawing universal lessons from their experience. Future research and policy initiatives

should therefore focus on nuanced understanding, seeking to learn from the principles of Baduy wisdom--such as holistic ecosystem management and communal responsibility--while critically evaluating their applicability and exploring pathways for integrating such insights respectfully and effectively within diverse contemporary contexts to foster context-appropriate resilience and sustainability.

Conclusion

The Baduy community distinctively embodies a holistic integration of environmental stewardship and cultural philosophy, meticulously governed by customary laws (adat) and profound traditional ecological knowledge. This synergy is evident in their sustainable agricultural system, characterized by practices like swidden farming (‘ngahuma’) aligned with the traditional ‘pananggalan’ calendar, the strict eschewal of agrochemicals and prohibited commercial crops, and careful management of ‘huma’ rice stored long-term in ‘leuit’ for subsistence and ritual needs. Their commitment extends to comprehensive conservation efforts, including the stringent protection of sacred forests and rivers--manifested in rules like prohibiting river bathing--the safeguarding of biodiversity, and conscientious waste management involving practices such as plastic incineration. Underpinning this entire socio-ecological fabric is a deep-seated environmental ethic rooted in Sunda Wiwitan beliefs and the ancestral mandate (‘Amanat Buyut’), characterized by biocentric principles and amplified by the pivotal belief in Karma, which instills a powerful sense of intergenerational accountability for environmental actions. This intricate system of values and practices is perpetuated through community rituals like ‘kawalu’ and robust intergenerational communication, where elders and parents actively transmit ecological wisdom and customary rules. The Baduy experience thus powerfully underscores the efficacy of indigenous knowledge systems as resilient models for sustainable living, demonstrating the inextricable linkage between cultural continuity and ecological health. Recognizing this successful integration warrants meaningful policy engagement that respects and supports Baduy customary governance through sensitive, collaborative approaches. Furthermore, future research should delve deeper into the long-term resilience and adaptive capacity of this unique system amidst mounting external pressures like climate change and market integration, examine the complex interface between ‘adat’ and formal governance structures, and potentially quantify the ecological benefits derived from their stewardship practices.

Conflict of Interest

We have no conflicts of interest, whether financial or personal, or about any relationships with individuals or organisations, that could affect the material discussed in this manuscript.

Acknowledgements

The authors would like to express their sincere gratitude to Sapri for his invaluable assistance in facilitating access to the Baduy Dalam community. His support and guidance were instrumental in enabling this research, and we deeply appreciate his dedication and generosity throughout the fieldwork process.

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