

Spiritual Ecology and Indigenous Wisdom: Cultural Foundations for Sustainable Environmental Practices in Indonesia

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Abstract: This study explores the intersection between spiritual ecology and indigenous wisdom as foundational elements for sustainable environmental practices in Indonesia. The research aims to address the underexplored integration of cultural and spiritual values within modern environmental policies by demonstrating how traditional ecological knowledge and spiritual beliefs foster pro-environmental behaviour. Employing a qualitative phenomenological approach, data were collected through semi-structured interviews with four individuals actively engaged in conservation work across non-profit, indigenous, household, and educational sectors. Thematic analysis was used to identify key motivational patterns rooted in religious responsibility, spiritual reflection, gratitude for nature, and concern for future generations. The findings reveal that spiritual and indigenous values serve as intrinsic drivers of ecological behaviour, aligning with the Bio-Psycho-Social-Spiritual (BPSS) framework. These values are translated into practical conservation efforts, such as forest protection, biodiversity preservation, and environmental education. The study suggests that the incorporation of indigenous spirituality into environmental governance can produce culturally grounded, ethically robust sustainability models. The originality of this research lies in its empirical linkage between lived spiritual experiences and policy-oriented environmental practices, offering a transdisciplinary perspective that bridges scientific rationality with cultural relevance.

Keywords: Bio-Psycho-Social-Spiritual (BPSS); environmental policy; indigenous knowledge; spiritual ecology; sustainable behaviour.

Abstrak: Penelitian ini mengeksplorasi keterkaitan antara ekologi spiritual dan kearifan lokal sebagai fondasi utama dalam membangun perilaku lingkungan berkelanjutan di Indonesia. Tujuan penelitian ini adalah untuk mengisi kesenjangan kajian mengenai integrasi nilai-nilai budaya dan spiritual dalam kebijakan lingkungan modern dengan menunjukkan bagaimana pengetahuan ekologis tradisional dan keyakinan spiritual mendorong tindakan pro-lingkungan. Dengan pendekatan kualitatif fenomenologis, data dikumpulkan melalui wawancara semi-terstruktur terhadap empat individu yang terlibat aktif dalam kegiatan konservasi di sektor nirlaba, komunitas adat, rumah tangga, dan pendidikan. Analisis tematik digunakan untuk mengidentifikasi pola motivasional utama yang meliputi tanggung jawab religius, refleksi spiritual, rasa syukur terhadap alam, dan kepedulian terhadap generasi mendatang. Temuan menunjukkan bahwa nilai-nilai spiritual dan kearifan lokal merupakan penggerak intrinsik perilaku ekologis yang selaras dengan kerangka Bio-Psiko-Sosial-Spiritual (BPSS). Nilai-nilai ini diterjemahkan dalam praktik konservasi nyata seperti perlindungan hutan, pelestarian keanekaragaman hayati, dan pendidikan lingkungan. Penelitian ini menyarankan bahwa integrasi spiritualitas dan kearifan lokal dalam tata kelola lingkungan dapat menghasilkan model keberlanjutan yang berakar pada budaya dan berlandaskan etika. Keaslian studi ini terletak pada keterkaitannya yang empiris antara pengalaman spiritual yang hidup dan praktik kebijakan lingkungan, menawarkan perspektif transdisipliner yang menjembatani rasionalitas ilmiah dengan relevansi kultural.

Kata Kunci: Bio-Psiko-Sosial-Spiritual (BPSS); ekologi spiritual; kebijakan lingkungan; kearifan lokal; perilaku berkelanjutan.

1. Introduction

The global ecological crisis is worsening due to the uncontrolled exploitation of natural resources. In Indonesia, population growth and industrialisation are accelerating environmental degradation, with increasingly visible impacts every year. Data from the National Disaster Management Agency (BNPB) shows that 5,402 environmental disasters occur in one year, including forest fires, floods, landslides, and extreme weather (BNPB, 2022). Major incidents such as the earthquake in Mamuju, West Sulawesi, and Cyclone Seroja in East Nusa Tenggara have caused hundreds of casualties and forced thousands of residents to flee. Deforestation is a major factor in the acceleration of ecological damage, with 99% of forest fires in Indonesia caused by human negligence, mainly due to the expansion of oil palm plantations (BPS, 2019). In addition to contributing to the environmental crisis, this exploitation also marginalises indigenous communities who depend on the forest for their survival (Nurkamilah, 2018). The loss of forests threatens biodiversity and erases the ecological knowledge that indigenous peoples have passed down for generations. This environmental damage disrupts the spiritual and cultural practices of indigenous peoples who view nature as an integral part of their identity. One approach that can solve this crisis is utilising local wisdom and spirituality in environmental management. Many indigenous communities have a deep spiritual relationship with nature, which forms the basis of their conservation practices. This approach is in line with the Sustainable Development Goals (SDGs), which emphasise the importance of integrating cultural and traditional knowledge into global environmental policy.

Previous research has explored the role of local wisdom and spirituality in environmental conservation, which can be categorised into three primary approaches. The first approach concerns research related to customary law and indigenous knowledge in environmental management. For example, Handayani and Suparno (2023) highlight the significance of customary law in preserving agrarian practices within the Sasak community, such as the *Bekayaq Pataq Pare* tradition, which emphasises the harmonious relationship between humans and nature. Hilman et al. (2019) examine the Kampung Kuta community in West Java and their enforcement of customary taboos to protect forests and natural resources. Henri et al. (2022) investigate the Malay community in Bangka Belitung and their efforts to conserve forests by preventing land conversion into mining areas. These studies demonstrate the effectiveness of traditional practices such as selective logging, the protection of sacred groves, and restrictions on land use, all of which are rooted in indigenous knowledge systems (Abas, Aziz, & Awang, 2022; Supyan, Susanto, Samadan, & Sulistiono, 2021).

The second approach focuses on research regarding the role of spirituality in environmental conservation. Research by Alfitri and Hambali (2013) reveals that the Tepung Tawar tradition in Sumatra not only fosters social harmony but also contributes to ecological stability. Haryono (2021) explores the concept of ecological mysticism from a religious perspective, emphasising the spiritual connection between humans and nature. Sinapoy (2018) documents the environmental protection practices of the Moronene tribe in Southeast Sulawesi, which incorporate spirituality into customary forest conservation. Indigenous belief systems, such as the sanctity of sacred sites and relational ontologies that highlight the interconnectedness of all life forms, have become essential to preserving ecosystems (Cladis, 2019; Mitima-Verloop, Mooren, & Boelen, 2021). Spiritual practices, such as respect for sacred lands and animals, promote a profound sense of intrinsic responsibility for environmental stewardship (Simpson, 2022; Smith, 2024).

The third approach concerns the Integration of indigenous knowledge with global sustainability policies. Ningrum et al. (2018) developed a local wisdom-based learning model designed to enhance students' understanding of environmental ethics. Barrera-Hernández et al. (2020) and Ibarra et al. (2020) demonstrate that a spiritual connection with nature can serve as a powerful motivator for environmentally friendly behaviour. However, despite the extensive exploration of the theoretical

aspects of spiritual ecology and local wisdom, there remains a significant gap in research regarding the practical application of these concepts within modern environmental policies (Valera, 2018). Studies by Turner et al. (2022) and Thamrin (2021) emphasise that integrating traditional knowledge with modern scientific approaches can result in more sustainable and culturally sensitive conservation strategies. Collaborative efforts that respect and incorporate indigenous perspectives are crucial to developing holistic conservation policies that bridge traditional and scientific knowledge (Harrington, 2015; Quiocho et al., 2023).

Although considerable research has examined the theoretical role of indigenous wisdom and spirituality in environmental conservation, there is a notable gap in practical applications within modern environmental policy. Previous studies have primarily focused on exploring indigenous customs and spiritual practices in isolated communities, with a limited focus on how these traditional systems can be integrated into broader, contemporary environmental governance frameworks. While the integration of indigenous knowledge with scientific approaches has been suggested (Turner et al., 2022; Thamrin, 2021), there is insufficient research on actionable strategies for policymakers to effectively combine these practices in tackling the escalating ecological crisis. Furthermore, while spiritual connections to nature are widely acknowledged, the specific ways these practices can influence global sustainability policies remain underexplored, leaving a critical gap in understanding how these ancient practices can address modern environmental challenges.

This study aims to bridge the gap in the existing literature by exploring how Indigenous wisdom and spiritual ecology can be practically applied to modern environmental policies. By adopting the Bio-Psycho-Social-Spiritual (BPSS) framework and the ecological self-concept (Listopad, Michaelsen, Werdecker, & Esch, 2021; Pérez Ibarra et al., 2020; Saad, De Medeiros, & Mosini, 2017), this research seeks to: analyse the role of spirituality and Indigenous wisdom in promoting environmentally friendly behaviour, examine how principles of spiritual ecology can be integrated into sustainability policies, and identify both the challenges and opportunities in incorporating spirituality and Indigenous wisdom into contemporary conservation strategies. This study contributes to the theoretical understanding of these concepts and provides practical recommendations for policymakers, educators, and environmental advocates, facilitating a more holistic and culturally inclusive approach to environmental management.

This study argues that spirituality and indigenous wisdom significantly influence the development of sustainable behaviour, supported by the theoretical foundation of the Bio-Psycho-Social-Spiritual (BPSS) framework. The BPSS framework posits that an individual's spiritual connection with nature not only impacts their mental and social well-being but also drives eco-friendly actions (Lehman, David, & Gruber, 2017; Sulmasy, 2002). Building on this framework, the study hypothesises that the stronger the individual's spiritual relationship with the environment, the more likely they are to engage in sustainable practices. Additionally, integrating indigenous knowledge into environmental policies is anticipated to be more effective in fostering sustainable conservation solutions than relying solely on science-based approaches. This is grounded in the idea that indigenous wisdom, deeply embedded in cultural and spiritual practices, provides a more contextually relevant and holistic model for environmental stewardship (Pérez Ibarra et al., 2020). By testing these hypotheses, the study aims to provide empirical evidence supporting the integration of spirituality and indigenous wisdom into environmental policies, enhancing the effectiveness of sustainability programmes across diverse communities.

2. Methods

This research focuses on understanding the relationship between local wisdom, spiritual ecology, and environmentally sustainable behaviour (Sponsel, 2011). The unit of analysis comprises individuals actively engaged in environmentally sustainable activities. These participants, selected from diverse backgrounds, act as key informants whose personal and professional experiences contribute to a deeper understanding of how indigenous knowledge and spiritual practices influence their environmental actions.

The study employs a qualitative (Creswell & Creswell, 2018), phenomenological research design, chosen for its ability to explore the lived experiences of participants in relation to their sustainable environmental practices. The phenomenological approach is particularly suited to examining how individuals interpret and apply spiritual ecology and local wisdom in their daily lives (Panggabean, Tjitra, & Murniati, 2014). This qualitative method provides a rich, in-depth understanding of subjective experiences, making it ideal for uncovering how spiritual and cultural knowledge is integrated into environmentally friendly behaviours.

Primary data were collected from four participants involved in various environmentally sustainable activities. These participants represent different sectors, including non-profit organisations, volunteer programmes for indigenous communities, and private sector professionals involved in sustainability initiatives. The participants were selected using purposive sampling to ensure they shared characteristics aligned with the study's focus on sustainable practices influenced by local wisdom and spiritual ecology. The following table 1 provides an overview of the participants.

Table 1. Overview of Participants

Participant	Name	Gender	Age	Scope of work
1	LR	Female	39 years	Communications coordinator for a non-profit forest conservation organization and originator of an Indonesian forest love movement.
2	FM	Female	42 years	Volunteer and program developer for indigenous communities and local wisdom organizations.
3	VM	Female	50 years	Housewife
4	NS	Male	35 years	Department head at a household product manufacturer

The data were collected through semi-structured interviews, which allowed for an in-depth exploration of participants' perspectives on their engagement in environmentally sustainable activities. The interviews were conducted between December 2021 and January 2022. An interview guide with open-ended questions was employed to facilitate discussions on the role of local wisdom in environmental conservation and the spiritual dimensions influencing participants' sustainable practices. Semi-structured interviews were chosen for their flexibility, allowing participants to freely share their insights while ensuring the core themes of the study were covered.

The interview data were analysed using thematic analysis, a method that focuses on identifying, analysing, and reporting recurring patterns or themes within the qualitative data. The analysis process began with the verbatim transcription of the interviews. The transcribed data were then coded to highlight key responses, particularly those related to the influence of local wisdom, spirituality, and sustainable practices. These initial codes were grouped into broader themes that captured the main aspects of the participants' experiences. This thematic analysis ensured that the findings remained grounded in the participants' voices, providing a comprehensive understanding of how spiritual ecology and local wisdom shape environmentally conscious behaviour (Irawan, 2017).

3. Results

Local Wisdom in Addressing Ecological Crisis

Local wisdom plays a vital role in maintaining environmental balance, as demonstrated by various indigenous practices across Indonesia. Traditional forest management systems, such as *hutan adat*, preserve biodiversity by designating sacred areas where logging is forbidden (Anwar, Hafizianor, & Asysyifa, 2023; Jamalludin et al., 2023; Maria, Karim, & Taskur, 2020; Sinapoy, 2018). Agricultural traditions, like the Sasak people's *Bekayaq Pataq Pare* in Lombok, integrate rituals that promote sustainable farming and respect for the land (Atsar, Surya, Zunnuraeni, & Jha, 2023). Similarly, the *Sasi Laut* practice in Maluku exemplifies effective marine conservation by restricting fishing during certain

periods to allow ecosystems to regenerate (Putri, Luh Chandrika, Laras Pangestu, & Suryanda, 2021). In Sumba, the Marapu belief system fosters harmony with nature, viewing forests as sacred homes for ancestral spirits (Djoh, Pati, & Taranau, 2023), while in Java, taboos and customary laws prevent the overexploitation of natural resources (Rahmaniar, Suyitno, Supana, & Saddhono, 2020). These practices protect the environment and reflect a deep spiritual connection between humans and nature, ensuring sustainability for future generations.

FM demonstrates a profound commitment to enlightening Indigenous individuals, gaining invaluable experiences and profound insights into the intricate tapestry of cultural values and spirituality. The individual delves into exploring spirituality, employing the perspective of *Marapu* (the traditional belief system of the Sumba people, which honours ancestral spirits and is deeply connected to nature), the prevailing religious belief system embraced by the inhabitants of Sumba.

Most people call this concept *Marapu*. In the jungle, there is a deep spiritual yearning for God. Well, hornbills are revered in some cultures, so hunting their wings is illegal. These divine beings resemble Gods. Thus, hunting their wings is disrespectful. Integrating current knowledge shows that hornbills disperse and propagate seeds in their ecosystems (FM, Personal Communication, December 30, 2021).

LR mentioned *Tri Hita Karana* (a Balinese Hindu philosophy that focuses on the three causes of well-being: harmony with God, harmony with nature, and harmony among people) as the fundamental principle underlying the essence of Balinese existence.

When we examine the local wisdom of indigenous and traditional communities in Indonesia, it becomes clear that these values are deeply rooted in our culture. However, with the advent of industrial development and modern capitalism, these traditional values have been increasingly lost, and in some cases, even deliberately eliminated. The concept of *Tri Hita Karana* in Hinduism illustrates this connection beautifully. It emphasizes how people can live in harmony and peace by balancing their relationship with God, other people, and nature (LR, Personal Communication, November 29, 2021).

Table 2. Traditional Environmental Practices in Indonesia and Their Ecological Impact

Local Tradition	Location	Main Practice	Environmental Impact
<i>Hutan Adat</i> (Customary Forest)	Kalimantan, Sumatra	Protecting designated areas from deforestation	Conservation of biodiversity
<i>Sasi Laut</i> (Marine Sasi)	Maluku	Prohibiting fishing during certain periods	Regeneration of marine ecosystems
<i>Bekayaq Pataq Pare</i>	Lombok	Agricultural rituals based on indigenous traditions	Sustainable land management
<i>Marapu</i>	Sumba	Ban on hunting certain wildlife, such as hornbills	Preservation of species and ecosystems

Table 2 summarises several examples of local wisdom practices that contribute to maintaining ecological balance across various regions in Indonesia. Each tradition has a unique mechanism for preserving nature, whether through restrictions on resource exploitation or sustainable ecosystem management.

Indigenous knowledge systems embed sophisticated environmental protection mechanisms through cultural taboos and customary laws. For instance, the Marapu belief system of the Sumba people prohibits hunting hornbills, which are both spiritually significant and ecologically vital for seed dispersal. Similarly, in Bali, the Hindu philosophy of *Tri Hita Karana* emphasizes living in harmony with God, nature, and fellow humans, fostering sustainable practices and equitable resource distribution. These traditions not only align with ecological principles but also reflect an intrinsic cultural commitment to environmental preservation (Djoh et al., 2023; Sudarsana, 2017). Indigenous traditions in Indonesia highlight key patterns and themes that contribute to environmental

sustainability. Prohibitions against harmful practices, such as hunting sacred animals or engaging in deforestation, are rooted in spiritual beliefs that ensure ecological balance. Customary laws further regulate the use of natural resources, protecting forests and ecosystems from overexploitation. These practices demonstrate the alignment of spiritual beliefs with tangible conservation outcomes, showing how traditional systems effectively preserve biodiversity and maintain ecological integrity.

However, the rapid development of industrialization and modern capitalism has led to the gradual erosion and marginalization of these traditional values. As societal and economic shifts challenge traditional systems, the need to preserve and adapt these practices becomes increasingly urgent. The modernization of forest villages, for instance, has disrupted the Benuaq community's connection with their environment, highlighting the necessity of integrating cultural preservation with ecological resilience (Rahmawati, 2015).

In the context of globalization, these traditional practices offer valuable models for modern environmental policy development. The collective responsibility and conservation ethics inherent in systems like Tri Hita Karana and Sasi Laut could inform contemporary strategies for resource management, urban planning, and sustainable development (Putri et al., 2021; Sudarsana, 2017). By embedding cultural values into policy frameworks, these practices provide a balanced approach that fosters deeper connections between communities and their natural environments.

The integration of local wisdom into modern environmental policies could offer a balanced approach to addressing current ecological challenges. For instance, traditional practices' collective responsibility and conservation ethics could be incorporated into contemporary resource management strategies. These traditional systems demonstrate how cultural values can effectively drive sustainable behavior, offering a model for environmental protection that goes beyond mere regulation to foster a deeper connection between communities and their natural environment. This integration could be particularly valuable as Indonesia, and the world at large, grapples with finding sustainable solutions that balance development needs with environmental preservation.

Spiritual Ecology and Motivation for Sustainable Behavior

Indonesia's rich cultural and ecological diversity provides a fertile ground for exploring the interplay between spirituality, local wisdom, and environmental stewardship. The nation's indigenous communities have long upheld traditions that harmoniously integrate their spiritual beliefs with ecological practices, demonstrating the profound potential of local wisdom in addressing contemporary ecological challenges (Hasbullah, Jamrah, Syafitri, & Zulkifli, 2022; Rozi & Taufik, 2020). Indigenous communities integrate their religious devotions and spiritual convictions with their interactions with the natural world, guided by intergenerational local knowledge. This reflects their moral and spiritual obligation to treat nature and the environment with profound reverence (Andariati, 2019). Many of these belief-based practices incorporate *animism* (belief in spirits) and *dynamism* (belief in forces of nature), as evidenced by certain tribes, such as the Akit Tribe, who rely on nature for their livelihoods. The Akit tribe adheres to many deeply held principles and beliefs that harm existence if not implemented (Hasbullah et al., 2022).

Spirituality is discovered when the participant can extrapolate their interaction with nature beyond the physical environment (Raffay, Wood, & Todd, 2016). Engaging in physical activity amidst nature can be perceived as a profound expression of reverence and devotion. They could not only perceive it but also express it through their innate understanding of the local context. This concept revolves around three interconnected sources of contentment and equilibrium.

Islam teaches that Allah told the angels in *Q.S Al Baqarah* Verse 30 that He would appoint a caliph on earth. As Earth's caliph, humans must protect the planet and its contents. Allah created the universe in the best condition for human habitation. Our responsibility as humans is to maintain it (LR, Personal Communication, November 29, 2021).

I go up this mountain as an act of worship. This is my reply to Allah who created me: I live, I breathe oxygen without paying, why should I calculate what Allah gives me? It's not appropriate. (VM, Personal Communication, November 30, 2021).

NS asserts that the correlation between humanity and nature is of equivalent significance to the correlation between humans. Spiritually speaking, humans and their surroundings are interconnected in a reciprocal relationship. The outcomes of the substances humans release into the environment are their own. When humans dispose of harmful substances in the environment, the environment will return the favour.

Man's relationship with nature and others is equally important. Whatever allows us to live, I think nature gave it. As humans and nature interact, spirituality and nature are deeply connected. Environmentally, what is sown is what is reaped. The environment responds to us in return for our actions and contributions (NS, Personal Communication, January 3, 2022).

VM disclosed that her consistent engagement in environmentally conscious practices is a genuine expression of gratitude towards the blessings bestowed upon her by both God and nature. Spirituality is demonstrated through our actions towards nature, as we acknowledge that it is not only home to humans, animals, and plants but also to unseen entities that safeguard it. These entities should be revered as fellow creations of God.

According to my understanding, God didn't create humans alone. God supposedly created all creatures, not just humans. All creatures must be able to love. My view is that it shows compassion and harmony. A single tree can shelter many entities, even invisible ones like God's ethereal spirits. Various scriptures mention mountain-dwelling beings. Where will they live if nature is destroyed? (VM, Personal Communication, November 30, 2021).

These narratives reflect a profound interweaving of spiritual values and ecological consciousness, where environmental responsibility is rooted in rational ethics and deeply held cosmologies and beliefs. To further contextualise these findings, Table 3 summarises the key spiritual concepts identified in this study, along with their associated communities, environmental practices, and ecological impacts. This table highlights how spirituality, across different traditions, drives sustainable behaviours and conservation ethics, offering a culturally embedded framework for environmental stewardship.

Table 3. Spiritual Dimensions and Their Environmental Impact

Spiritual Concept	Associated Community	Environmental Practice	Impact on Nature
Caliphate (Khalifah)	Muslim Communities	Stewardship of nature as a religious duty	Sustainable environmental management
Animism & Dynamism	Akit Tribe	Respect for spirits and natural forces	Conservation of natural ecosystems
Tri Hita Karana	Balinese Hinduism	Harmony with God, nature, and humans	Balanced resource use and conservation
Marapu Belief System	Sumba Indigenous	Protection of sacred sites and species	Biodiversity preservation

Table 3 summarises the spiritual principles that influence various indigenous and religious communities in Indonesia, showing their direct impact on environmental conservation and sustainability. Motivational Patterns in Sustainable Behaviour can be seen in Religious Responsibilities such as Participants often cited religious texts and teachings as their motivation to protect the environment. This manifests in the form of stewardship responsibilities, such as the Islamic concept of humans as 'khalifah on earth.' Spiritual Reflection e.g. many participants found joy and introspection in interacting with nature, considering it an act of worship or a means to connect with divine forces.

Gratitude for Natural Resources such as The perception of nature as a divine blessing fosters a deep sense of responsibility and concern for environmental sustainability. Concern for Future Generations e.g. many participants were involved in environmental conservation to ensure a livable planet for future generations.

Data analysis reveals four primary motivational patterns underpinning sustainable behaviour among participants. First, religious responsibility emerges as a central driver, where spiritual teachings—such as the Islamic concept of *khalifah* or the Marapu worldview—instil a moral obligation to safeguard the environment. Second, participants exhibit spiritual reflection, perceiving nature not merely as a physical space but as sacred, thus engaging with it as a form of worship and contemplation. Third, there is a deep sense of gratitude for nature, where natural resources are viewed as divine blessings that must be respected and used responsibly. Finally, a strong concern for future generations is evident, with participants framing their environmental actions as part of a moral legacy to ensure ecological viability for their descendants. These motivational themes reflect an integrated spiritual-ecological ethic that reinforces sustainable behaviour on both individual and communal levels.

Spirituality is discovered when the participant can extrapolate their interaction with nature beyond the physical environment. Engaging in physical activity amidst nature can be perceived as a profound expression of reverence and devotion. Many participants describe their actions, such as tree planting or mountain climbing, as spiritual practices guided by religious teachings and reflections. They believe these acts honour both visible and invisible spiritual entities in nature, reinforcing a sense of accountability and commitment to sustainability.

A strong sense of religious responsibility motivates many individuals to engage in sustainable behaviour. Participants often refer to religious texts and teachings that emphasise environmental stewardship, such as the Islamic concept of humans as 'khalifah on earth.' This belief instils a duty to protect and maintain the environment as a form of spiritual commitment.

Spiritual reflection also plays a significant role in fostering sustainable practices. Many individuals experience a deep sense of joy and introspection when engaging with nature, viewing it as an act of worship or a means of connecting with divine forces. This spiritual engagement reinforces their appreciation for the natural world and strengthens their commitment to environmental conservation.

Gratitude for natural resources further drives sustainable behaviour. Viewing nature as a divine blessing fosters a profound sense of responsibility to care for and sustain the environment. This perspective encourages mindful consumption and active participation in conservation efforts, ensuring that natural resources are preserved for future generations.

The concern for future generations is another critical motivational factor. Many individuals participate in environmental conservation efforts with the hope of leaving behind a livable and thriving planet. The understanding that present actions directly impact the well-being of future generations fuels a strong commitment to sustainability, prompting behaviours that align with long-term ecological balance.

Finally, it turns out to be exciting because planting trees is for the future of this earth. I used to think it was just a routine activity, but over time, I realised that every tree planted is like a legacy—something that will benefit the environment, future generations, and even unseen creatures that depend on the forest. It gives me a sense of purpose and fulfilment, knowing that my small actions today contribute to a greener and more liveable world tomorrow (VM, Personal Communication, November 30, 2021).

Spiritual ecology bridges the connection between spiritual beliefs and environmental care, forming part of a worldwide movement to protect nature (Aur, 2022). Religious institutions and spiritual communities can act as influential partners in promoting environmental initiatives, while traditional ecological knowledge provides valuable insights for sustainable living. By recognising the sacred dimensions of human-nature relationships, environmental efforts can become more culturally sensitive and impactful, fostering sustained and meaningful global action.

What is my source of motivation? I am motivated to ensure a sustainable and ecologically sound planet for my daughter, enabling her to develop resilience in confronting the climate crisis. My

actions aim to ensure future generations' long-term viability (LR, Personal Communication, November 29, 2021).

These findings demonstrate that spiritual ecology is not merely a theoretical lens, but a lived reality that deeply shapes environmental ethics and behaviours. The integration of spirituality with indigenous wisdom provides a holistic foundation for sustainability—one that bridges rational policy with cultural resonance. This supports previous scholarship that emphasises the role of religious values and local traditions in driving conservation outcomes (Aur, 2022; Harvey, 2016; Sponsel, 2011). It also aligns with the Bio-Psycho-Social-Spiritual (BPSS) framework, illustrating how spirituality contributes to ecological identity and long-term behavioural change.

In this context, spiritual ecology serves as a culturally relevant and ethically grounded model for engaging communities in environmental action. Recognising these motivational dimensions is essential for designing inclusive environmental policies and educational strategies that resonate across faith and cultural lines.

Practical Application of Local Wisdom and Spiritual Ecology in Environmental Management Strategies

Society 5.0 refers to a society in the 21st century centred around humans and driven by technology. Since the onset of the Industrial Revolution, humans have undergone a metamorphosis into instruments of industry. The pragmatic approach is frequently employed in human development to foster the growth of industries or settlements. The interests of future generations are inevitably relegated to a secondary position when rulers prioritise personal or group interests exclusively. Unregulated environmental exploitation gives rise to many detrimental environmental consequences, including water scarcity, pollution, waste accumulation, climate change, biodiversity depletion, and a decline in human well-being. A morally committed ethic of environmental care is essential to prevent and resolve the environmental crisis. Engaging science, ethics, and religion in dialogue may provide an effective remedy for the environmental crisis.

LR and FM are employed in fields involving environmental protection and community advocacy regarding the significance of nature conservation. LR monitors deforestation using satellite images and field data, reporting breaches to palm oil purchasers and multinational firms who source palm oil from deforested plantations. Additionally, her organisation has reported on various firms that have cleared forests for plantations, destroying elephant, tiger, and orangutan habitats.

Currently, I am employed in Indonesia as the communications coordinator for a non-profit organisation focused on human rights and forest conservation. Furthermore, I co-founded an association-driven campaign to foster a greater appreciation for Indonesia's forests among young Indonesians (LR, Personal Communication, November 29, 2021).

FM is employed by a non-profit organisation that educates isolated Indigenous communities who cannot attend conventional schools due to cultural and geographical reasons and promotes environmentally responsible behaviour. In addition to advocating for preserving natural environments and Indigenous forests, they ensure these communities have access to resources and education.

Our organisation focuses on improving the literacy of Indigenous peoples, as their lack of skills increases their vulnerability to threats. We support informed decision-making and foster a learning culture that adapts to market changes. Our primary concern is the immediate impact of situations on their communities, and our main focus is building empathy for them (FM, Personal Communication, December 30, 2021).

VM is active in mountain climbing and environmental conservation, such as planting trees in the mountains and mangrove trees on the beach. NS holds the position of department head in a company that produces household products. His interest in environmental issues stems from the direct relevance of renewable energy to his field of study.

During my undergraduate studies in Malaysia, I became interested in environmental issues. A final project topic that caught my attention was biodiesel production from used vegetable cooking oil. This topic intrigued me and fuelled my interest in sustainable solutions. I'm fascinated by the

practical application of reducing vehicle emissions, which contribute to global warming (NS, Personal Communication, January 3, 2022).

Table 4. Relationship Between Local Wisdom, Spirituality, and Modern Conservation Programs

Local Wisdom/Spiritual Concept	Community/Region	Environmental Practice	Impact on Conservation
Caliphate (Khalifah)	Muslim Communities	Stewardship of nature as a religious duty	Sustainable environmental management
Animism & Dynamism	Akit Tribe	Respect for spirits and natural forces	Conservation of natural ecosystems
Tri Hita Karana	Balinese Hinduism	Harmony with God, nature, and humans	Balanced resource use and conservation
Marapu Belief System	Sumba Indigenous	Protection of sacred sites and species	Biodiversity preservation

As illustrated in Table 4, various indigenous communities in Indonesia uphold distinct spiritual frameworks that guide their environmental practices and contribute to conservation outcomes. Each belief system—whether it be the Islamic concept of *khalifah*, the Balinese Hindu philosophy of *Tri Hita Karana*, or the *Marapu* cosmology in Sumba—emphasises a moral and spiritual responsibility towards nature. These beliefs are not merely abstract values, but are enacted through specific environmental practices such as forest stewardship, sacred site protection, and ritual-based conservation. The table demonstrates how these local wisdom traditions, rooted in both spirituality and ecological ethics, result in tangible environmental benefits such as biodiversity preservation, ecosystem regeneration, and sustainable resource management. Recognising these culturally embedded practices is essential for developing conservation programmes that are both ecologically sound and socially inclusive.

The integration of local wisdom and spiritual beliefs plays a vital role in protecting the environment by connecting cultural values with practical conservation efforts. This connection works particularly well because it makes environmental protection part of a community's core beliefs and daily practices rather than treating it as a separate issue. In education, this approach takes shape through ethnopedagogy—teaching methods that incorporate local customs and values while serving community needs (Selasih & Sudarsana, 2018). For example, FM's organization demonstrates this by helping Indigenous communities improve their literacy skills while teaching them about environmental protection.

Several key patterns emerge from the data regarding environmental management approaches. First, Community-Based Engagement is FM's work with Indigenous communities exemplifies the importance of education and empowerment in environmental protection. Teaching literacy and environmental awareness ensures long-term conservation efforts. Second, Advocacy and Practical Conservation is LR's monitoring of deforestation highlights the importance of advocacy, where scientific tools such as satellite imaging are combined with policy interventions. Third, Technical Expertise and Sustainability is NS's research into biodiesel production showcases how environmental consciousness and innovation can drive sustainable solutions. Fourth, Integration of Traditional and Modern Approaches is Spiritual ecology connects ethical values and conservation by incorporating religious principles and ecological knowledge into environmental strategies.

The principles of community-based engagement, environmental advocacy, and technical expertise illustrated in these case studies can inform global environmental policies. Incorporating local wisdom into sustainability strategies can bridge the gap between traditional conservation practices and modern scientific approaches. Governments and organisations can learn from Indigenous and community-led initiatives, ensuring environmental policies are culturally relevant, socially inclusive, and environmentally effective.

To clarify the relationship between spiritual beliefs, ecological values, indigenous knowledge, and their integration into modern environmental policy, a conceptual model is presented below. This model illustrates the flow of ideas and practices from belief systems to policy action, highlighting how spirituality and local wisdom shape sustainable mindsets and behaviours. The visualisation is intended to assist readers from various disciplines in understanding the structural contribution of indigenous and spiritual frameworks to global environmental governance in a more systematic and integrated manner.

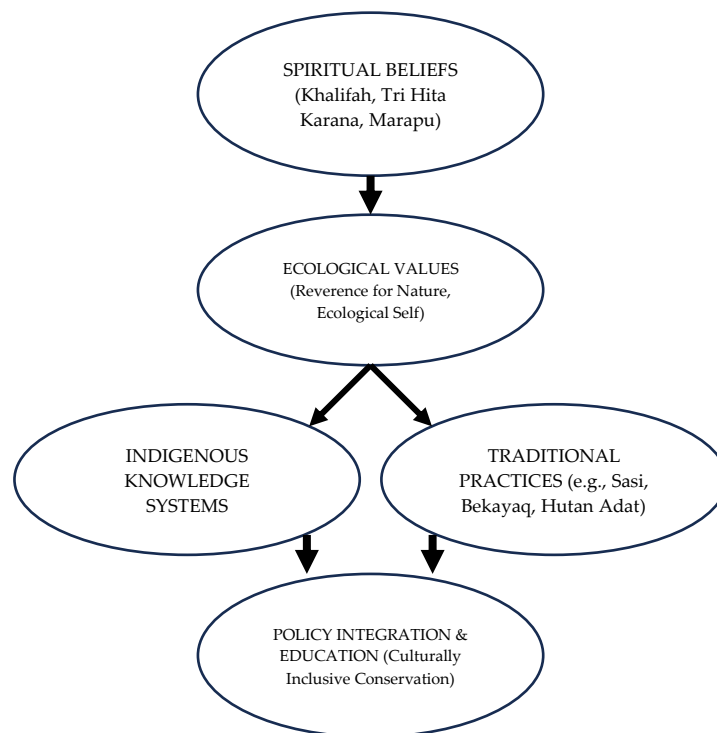


Figure 1 Conceptual Model of the Integration of Spiritual Beliefs and Indigenous Knowledge in Environmental Conservation

Figure 1 illustrates a conceptual model that maps the integration of spiritual beliefs and indigenous knowledge into environmental conservation strategies. At the core of this model are spiritual beliefs—such as *Khalifah* in Islam, *Tri Hita Karana* in Balinese Hinduism, and the *Marapu* cosmology in Sumba—which inform and inspire deep ecological values. These beliefs give rise to a heightened ecological consciousness, often manifested through the concept of the *ecological self*, wherein individuals perceive themselves as morally and spiritually bound to protect the natural world. These values are deeply embedded in indigenous knowledge systems, which have been cultivated over generations and are expressed through traditional environmental practices such as *Sasi Laut*, *Hutan Adat*, and ritual taboos. Together, these components inform and shape policy integration and education, forming a culturally grounded foundation for modern environmental management. The arrows in the diagram signify the flow and interdependence between these domains, suggesting that sustainable environmental policy cannot be achieved in isolation from the spiritual and cultural dimensions that guide human-nature relations in many local communities. This model, therefore, proposes a holistic framework in which science, policy, tradition, and belief are harmonised for more inclusive and effective environmental stewardship.

4. Discussion

The findings of this study reveal that indigenous wisdom and spiritual ecology play a significant role in shaping environmentally sustainable behaviour. Through interviews with participants engaged in conservation efforts, four dominant motivational themes emerged: religious responsibility, spiritual reflection, gratitude for nature, and concern for future generations. These motivations are embedded in culturally specific belief systems such as the Islamic notion of *khalifah*, the Balinese philosophy of *Tri Hita Karana*, and the Marapu worldview in Sumba. Traditional practices—ranging from forest and marine taboos to ritual-based conservation—reflect a deep spiritual connection with nature, guiding ethical actions and fostering ecological responsibility. The study also highlights the practical application of these values in environmental advocacy, education, and sustainable innovation, demonstrating the relevance of integrating local wisdom into contemporary environmental strategies.

The emergence of four motivational patterns—religious responsibility, spiritual reflection, gratitude for nature, and concern for future generations—corroborates the core premise of the Bio-Psycho-Social-Spiritual (BPSS) framework. According to Lehman, David, and Gruber (2017) and Sulmasy (2002), an individual's spiritual connection with nature serves not only as a source of psychological resilience and social coherence but also as a key driver of eco-friendly behaviour. This is evident in the participants' narratives, where sustainable actions such as tree planting, forest conservation, and responsible consumption are described as extensions of their spiritual identity and moral responsibility. Their environmental stewardship is not merely an act of compliance with external regulations but emerges from intrinsic values rooted in spiritual beliefs. This inward motivation aligns with the BPSS assertion that when individuals perceive nature as sacred or spiritually significant, they are more likely to internalise environmental responsibility and transform it into consistent, meaningful action.

Moreover, the integration of indigenous knowledge and spirituality—as seen in practices like *Sasi Laut*, *Hutan Adat*, or the Marapu belief system—validates Pérez Ibarra et al.'s (2020) argument that indigenous wisdom provides a contextually relevant and holistic model of environmental stewardship. These practices illustrate how deeply embedded ecological ethics can serve as a culturally sustainable alternative to externally imposed, science-based solutions. Rather than relying solely on rational conservation models, participants demonstrate that their actions are driven by intergenerational knowledge, ritual observance, and respect for unseen spiritual entities in nature. This fusion of spiritual ecology and indigenous wisdom preserves biodiversity and reinforces communal identity and social harmony, making it a potent foundation for crafting inclusive and durable environmental policies.

The findings of this study resonate with previous research that underscores the importance of local wisdom and spirituality in environmental conservation. Similar to Handayani and Suparno (2023), who emphasised the role of customary law in the Sasak community's agrarian traditions, and Hilman et al. (2019), who examined the enforcement of environmental taboos in Kampung Kuta, this study also illustrates how indigenous practices effectively preserve ecological balance. However, unlike these earlier works that focus predominantly on the community or regional level, the current research extends the analysis to the individual motivational level, highlighting how personal spiritual experiences and ethical convictions drive sustainable behaviour. Furthermore, while studies such as those by Alfitri and Hambali (2013) and Sinapoy (2018) have explored spirituality's role in fostering environmental ethics, this study integrates that dimension with the Bio-Psycho-Social-Spiritual (BPSS) framework, thereby offering a multidimensional understanding of spiritual ecology as both a personal and collective phenomenon.

What distinguishes this research from earlier approaches is its attempt to bridge the gap between theory and practice by illustrating how indigenous spirituality and wisdom are already being applied by individuals working in diverse sectors—from non-profit organisations to corporate leadership. Previous works, including those by Ningrum et al. (2018), Turner et al. (2022), and Thamrin (2021), have advocated for the integration of traditional knowledge into global sustainability frameworks, yet few have provided concrete, lived examples of such integration in action. This study fills that gap by providing empirical evidence of how spiritual values and local wisdom inform real-world

environmental practices and policy advocacy. In doing so, it contributes a novel, practice-oriented perspective to the discourse, demonstrating the feasibility and value of spiritually grounded, culturally embedded strategies in addressing contemporary ecological challenges.

The findings of this study underscore the vital role of spirituality and indigenous wisdom not only as cultural artefacts but as living, dynamic forces shaping sustainable behaviour in contemporary contexts. Socially, these findings reveal that environmental stewardship is not merely a scientific or technical endeavour, but one deeply embedded in ethical and spiritual worldviews that motivate individual and collective action. Historically, this reflects a continuity of indigenous cosmologies that resist erasure despite pressures from modernisation and industrial development (Mitima-Verloop et al., 2021; Simpson, 2022). Ideologically, the research challenges the anthropocentric paradigm of mainstream environmental governance by proposing an ecocentric framework where humans are not separate from nature, but morally responsible members of an interconnected ecological community (Harvey, 2016; Sponsel, 2011). By highlighting how participants translate their spiritual beliefs into tangible conservation practices, this study contributes to a broader understanding of environmental ethics—one that aligns with culturally grounded frameworks such as the BPSS model and supports global calls for inclusive, community-based sustainability solutions (Lehman et al., 2017; Pérez Ibarra et al., 2020). Ultimately, the integration of spiritual ecology into environmental policy and education offers a transformative pathway to ecological resilience that respects cultural diversity while advancing global sustainability goals.

The findings of this study offer promising insights into the role of spiritual ecology and indigenous wisdom in fostering sustainable environmental behaviour, but they also reveal critical tensions that must be addressed for effective application. On the functional side, the internalisation of spiritual values and local wisdom creates a powerful moral framework that motivates eco-friendly actions, independent of external enforcement. This intrinsic motivation fosters community-led conservation initiatives and offers culturally rooted solutions to environmental degradation. However, several disfunctions emerge. One is the romanticisation of indigenous knowledge, which risks treating traditional practices as monolithic or timeless panaceas. As Briggs (2005) and Wohling (2009) warn, such idealisation can lead to misapplication and decontextualisation, ignoring the contextual specificity and dynamic evolution of local knowledge systems. Additionally, the instrumental use of spirituality—for instance, as a means to justify environmental agendas—can dilute its sacred and theological significance (Deal & O’Grady, 2020; Weatherdon, 2017), reducing deeply held beliefs to policy tools rather than preserving them as sources of meaning and identity. Another key challenge lies in the translation of local values into higher-level policy frameworks, which are often constrained by institutional fit, epistemological gaps, and power imbalances (Reese & Rosenfeld, 2013; Sausman, Oborn, & Barrett, 2016). The highly contextual nature of local spiritual-ecological systems makes them difficult to scale or integrate into technocratic, secular policy models that dominate national and global governance. Without thoughtful adaptation and mutual learning, such integration may either marginalise indigenous voices or weaken the effectiveness of environmental policies (Helman & Maron, 2019; Mistry, Jafferally, Ingwall-King, & Mendonca, 2019). Therefore, while the study affirms the value of spiritual and indigenous perspectives, it also calls for reflexivity, cultural sensitivity, and inclusive mechanisms to ensure these knowledge systems are not appropriated or diminished in broader environmental agendas.

Building upon the findings and critical reflections of this study, several policy actions are necessary to ensure the respectful and effective integration of spiritual ecology and indigenous wisdom into contemporary environmental governance. First, environmental policies should adopt culturally inclusive frameworks that acknowledge and legitimise diverse worldviews, particularly those rooted in indigenous cosmologies and spiritual traditions. This can be achieved by creating platforms for intercultural dialogue and participatory policy-making that involve indigenous leaders, spiritual practitioners, and local communities as equal stakeholders in environmental decision-making processes. Second, capacity-building initiatives must be developed to bridge epistemological divides between local and scientific knowledge systems, promoting mutual learning without compromising

the autonomy of traditional practices. Third, governments and institutions should support context-sensitive pilot programmes that demonstrate how local values and spiritual motivations can enhance the effectiveness of sustainability efforts, particularly at the community level. Finally, educational reforms—such as integrating local ecological wisdom and spiritual narratives into school curricula—can foster a deeper environmental consciousness from an early age. By implementing these actions, policymakers can move beyond symbolic inclusion and towards a genuinely integrative, ethical, and sustainable environmental management approach that is both locally grounded and globally responsive.

5. Conclusion

This study concludes that spirituality and indigenous wisdom play a pivotal role in promoting sustainable behaviour and holistic environmental management. The key findings demonstrate that the motivation to protect the environment is not solely driven by scientific knowledge or external regulation, but is deeply rooted in religious beliefs, spiritual reflection, gratitude for nature, and concern for future generations. Concepts such as *khalifah* in Islam, *Tri Hita Karana* in Balinese Hinduism, and the *Marapu* belief system in Sumba serve as value frameworks that actively inform and guide conservation practices in everyday life.

From a scholarly perspective, this research makes a significant contribution by integrating the *Bio-Psycho-Social-Spiritual* (BPSS) framework into the study of ecological behaviour, while also offering a new conceptual approach that merges spiritual values and indigenous knowledge into modern environmental policy. The study extends existing literature by providing empirical insights into how individuals translate traditional ecological values and spiritual commitments into practical conservation actions. In doing so, it advocates for a culturally inclusive and transdisciplinary model of sustainability that bridges science, policy, and lived experience.

Nevertheless, this study faces several limitations. The relatively small number of participants and the focus on the Indonesian context restrict the generalisability of the findings to broader settings. Moreover, the qualitative nature of the research, while rich in narrative, does not quantify the environmental impact of spiritual or indigenous practices. Future research is encouraged to adopt mixed-methods approaches, expand the geographical scope, and explore how spiritual and cultural values can be effectively institutionalised within national and international environmental policy frameworks.

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