

# Integration of Eco-Islamic Values and Local Wisdom of the *Suku Anak Dalam*: A Model for Conservation Education and Cultural Resilience Strengthening

Pahmi Pahmi<sup>1\*</sup>, Alhusni<sup>1</sup>, Khaidir Ali<sup>2</sup>, Mukhlas Nugraha<sup>3</sup>

## AFFILIATIONS

1. UIN Sulthan Thaha Saifuddin Jambi, Indonesia
2. Al Azhar University, Cairo Egypt
3. IAI Muhammad Azim, Jambi, Indonesia

\*Corresponding authors:  
fahmi.sy@uinjambi.ac.id

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## ABSTRACT

This study analyzes the integration of Eco-Islamic values with the local wisdom of the *Suku Anak Dalam* (SAD) in Jambi to develop a culture-based conservation education model. Through a qualitative ethnographic approach involving in-depth interviews, participant observation, and document analysis, the research reveals that the ecological practices of SAD, such as *hompongan* (customary forest enclosures), *tanah peranakan* (ancestral land conservation), and the *besale* ritual, not only represent environmental ethics aligned with Islamic principles (*kalifah*, *amanah*, *mizan*, *'adl*) but also contain rich pedagogical values. This integration gives rise to an Eco-Islamic Indigenous Framework, which is operationalized into a culture-based conservation education model. This model offers a contextual learning approach to strengthen ecological literacy, cultural identity, and community resilience. The study concludes that integrating spiritual values and local wisdom into conservation education can be an effective strategy for achieving environmental and cultural sustainability simultaneously.

## KEYWORDS:

Conservation Education, Culture-Based Learning Model, Eco-Islam, Local Wisdom, *Suku Anak Dalam*, Value Integration

## INTRODUCTION

In recent decades, environmental degradation, deforestation, and cultural erosion have become interconnected global challenges, with global scientific reports confirming an unprecedented rate of biodiversity loss (IPBES, 2019). In Indonesia, this issue is acutely felt by indigenous communities whose lives depend on the forest. The *Suku Anak Dalam* (SAD) in Jambi Province, Sumatra, is one community possessing a rich treasury of Indigenous Ecological Knowledge (IEK), a system emphasizing harmony with nature, collective preservation, and spiritual respect for the environment (Najib, 2020). Recent studies increasingly confirm that the traditional knowledge of SAD, including sustainable food systems and complex forest resource management, is a crucial foundation for environmental sustainability (Ginting et al., 2025). However, rapid modernization, land conversion for oil palm plantations, and systematic socio-religious transformations are disrupting their traditional ecological practices and cultural integrity. These pressures often trigger social conflicts, including with the surrounding Jambi Malay communities, further exacerbating their

vulnerability and eroding their resource base (Harun et al., 2023). Amid these challenges, the search for sustainable solutions relies not only on local wisdom but also increasingly refers to value sources from religious traditions. In this context, the global Muslim community is witnessing the rise of “Eco-Islam,” a theological and ethical movement responding to the ecological crisis through Islamic principles (Gade, 2023).

Parallely, the global Muslim community is witnessing the rise of “Eco-Islam,” a theological and ethical movement responding to the ecological crisis through Islamic principles (Gade, 2023). Concepts such as *kalifah* (stewardship), *amanah* (trust), *mizan* (balance), and *’adl* (justice) form the core of this framework (Khalid, 2010). The encounter between Eco-Islamic ethics and the indigenous ecological wisdom of communities like SAD opens a significant, yet underexplored, pathway for promoting environmental sustainability and cultural resilience.

This research lies at the intersection of three main conceptual frameworks. First, Eco-Islam, which draws on Qur’anic principles to build an environmental theology, emphasizes the role of humans as *khalifah* or stewards of the Earth, responsible for its preservation (Foltz, 2003; Gade, 2023). Second, Indigenous Ecological Knowledge (IEK), referring to the cumulative body of knowledge, practices, and beliefs developed by indigenous communities through adaptive processes, encompassing a holistic understanding of local ecosystems and cultural norms governing human-environment interactions (Tengö et al., 2017). Third, Cultural Resilience, which examines the capacity of a culture to maintain and adapt its core identity, values, and knowledge systems when facing external shocks and pressures (Marshall et al., 2019). This study investigates how SAD’s engagement with Eco-Islam potentially functions as a mechanism for cultural resilience and adaptation, allowing them to reinterpret and strengthen their ecological identity within a changing religious and socio-economic landscape. Such dynamic processes align with findings on the adaptive capacity of SAD in responding to surrounding transformations (Indrizal & Anwar, 2023).

## Literature Review

Scientific studies show a close link between spirituality, environmental ethics, and cultural resilience in Indonesian indigenous communities. Eco-Islam has emerged as a theological response to environmental degradation, offering an ethical framework through the concepts of *khalifah*, *amanah*, and justice (Basri et al., 2025; Wijisen & Anshori, 2023). Its application is reflected in MUI’s environmental fatwas and eco-pesantrens (Fikri & Colombijn, 2021; Sunardi et al., 2023), although a gap between theology and practice at the community level persists (Wijisen & Anshori, 2023). Meanwhile, Indigenous Knowledge represents a holistic ecological knowledge system developed intergenerationally (Ginting et al., 2025). For the SAD in Jambi, this knowledge serves as a guide for resource management and a belief system that places nature as a sacred entity (Ginting et al., 2025). Although its conservation value is recognized, the integration of indigenous knowledge into modern policies remains limited (Anggraeni et al., 2024; Ginting et al., 2025).

Parallely, conservation education has shifted towards holistic and value-based approaches (Ardoin & Bowers, 2020). Culture-based conservation education emphasizes the integration of local wisdom into pedagogical frameworks (Reyes-García & Benyei, 2019). This approach has proven to enhance conservation effectiveness while strengthening cultural identity (Druker-Ibáñez & Cáceres-Jensen, 2022; Rayne et al., 2020). In Indonesia, this model

aligns with the principles of Merdeka Belajar (Purwanti et al., 2025; Zainuddin, 2025), although its implementation still faces challenges in integrating spiritual-religious dimensions with ecological wisdom.

A synthesis of recent studies indicates Indigenous Knowledge as the foundation of Cultural Resilience for indigenous communities (Wahyuni et al., 2025). The integration of Eco-Islam and Indigenous Knowledge opens strategic opportunities to strengthen cultural resilience and environmental preservation (Fikri & Colombijn, 2021; Wijzen & Anshori, 2023). The convergence of these three discourses offers an opportunity to design educational models that are ecologically transformative and culturally empowering.

### **Research Gap and Novelty**

Previous research on Eco-Islam and Indigenous Knowledge has tended to run parallel without investigating their synergistic intersection in the context of conservation education. Most Eco-Islam research focuses on theological and normative dimensions (Basri et al., 2025; Wijzen & Anshori, 2023), while studies on indigenous communities like SAD emphasize ecological conservation aspects through customary law (Ginting et al., 2025; Anggraeni et al., 2024). This separation creates a gap in understanding how Islamic values and local ecological wisdom can interact to form an effective conservation education model. Specifically, three main gaps are identified. First, a theoretical gap between the normative discourse of Eco-Islam and the empirical practice of Indigenous Knowledge. Second, a methodological gap in integrating spiritual-religious dimensions with indigenous ecological wisdom into an educational framework. Third, a practical gap in developing conservation education models that simultaneously accommodate faith-based ecology values and local wisdom.

The novelty of this research lies in its integrative approach, positioning Eco-Islam not as a separate normative framework, but as a living and transforming value system through interaction with Indigenous Knowledge in an educational context. This research presents a dual novelty: conceptually through the development of the “Eco-Islamic Indigenous Framework,” and practically through the operationalization of this framework into a culture-based conservation education model relevant to the Indonesian socio-cultural context. Thus, this research not only bridges these two major discourses but also offers a new paradigm for developing conservation education that is culturally, spiritually, and ecologically relevant (Wahyuni et al., 2025; Enkin Asrawijaya, 2024). The resulting model is expected to serve as a reference framework for developing conservation education in other indigenous communities undergoing similar religious transformations.

### **Research Rationale**

The rationale for this research is rooted in the urgent need to address the challenges of environmental degradation and the erosion of local wisdom amid the socio-religious transformations experienced by indigenous communities, particularly the SAD in Jambi. The failure of conventional top-down conservation approaches that are insensitive to cultural-spiritual dimensions, and the gap between the theological values of Eco-Islam and the practice of indigenous ecological knowledge in education, drive the need to develop an integrative and contextual conservation education model. By exploring the synergy between Eco-Islamic principles and Indigenous Knowledge, this research not only seeks to strengthen

the cultural and ecological resilience of the community but also formulates a pedagogical framework relevant to the Indonesian socio-cultural context. Practically, the findings are expected to become a reference model for developing culture-based conservation education, while theoretically enriching the discourse of environmental education with an integrative perspective that combines spiritual, cultural, and ecological dimensions equitably.

### **Research Objectives**

Based on this rationale, this research generally aims to develop a Culture-Based Conservation Education Model by exploring the integration of Eco-Islamic values and Indigenous Knowledge within the SAD community in Jambi. Specifically, this research aims to: (1) identify and document the indigenous ecological practices of SAD and the local wisdom values contained within them; (2) analyze the interpretation and integration of Eco-Islamic principles (*kalifah, amanah, mizan, 'adl*) in the community's conservation practices; (3) explore the dynamics of interaction between Eco-Islam and Indigenous Knowledge in shaping contemporary ecological ethics; and (4) formulate a culture-based conservation education model relevant to the socio-cultural context of the community. Through these specific objectives, the research is expected not only to contribute to environmental and cultural preservation but also to produce an innovative pedagogical framework adaptable to various conservation education contexts in Indonesia.

## **RESEARCH METHOD**

### **Research Design**

This study uses a descriptive qualitative approach with an ethnographic lens (Creswell & Poth, 2018). This design was chosen to gain a deep and contextual understanding of the complex social phenomena surrounding the interaction of indigenous knowledge, religious values, and ecological practices within the SAD community, and to explore the pedagogical potential of integrating these values for developing a conservation education model. The ethnographic lens is deemed appropriate as it allows for a detailed description (thick description) of cultural patterns, rituals, and daily community life, focusing on how Eco-Islamic principles are embodied, applied, and can be transformed into a learning framework within their specific socio-ecological context (Emerson et al., 2011). This approach enables the researcher not only to understand the cultural meaning of traditional conservation practices but also to identify elements that can be developed into a culture-based education model.

### **Research Location and Participants**

The study was conducted in Jambi Province, Sumatra, Indonesia, specifically focusing on the SAD settlements within the Kejasung forest area of Batu Sawar Village, Maro Sebo Ulu District, Batang Hari Regency, along with the surrounding buffer zones undergoing transition due to oil palm expansion as shown in Figure 1. This location was selected for its significance as a cultural and ecological frontier where traditional lifestyles, modern pressures, religious changes, and intergenerational knowledge transmission dynamics intersect. Participants were selected using a purposive sampling strategy, supplemented by snowball sampling to identify key informants possessing rich and relevant knowledge (Patton, 2015). Participants

were divided into two main groups: members of the SAD Community, including traditional elders (*Tumenggung*), community members who have embraced Islam (*muallaf*), young cultural successors, and ordinary community members; and Malay Muslim Community Figures, such as religious leaders (*ustadz, kyai*) and local community leaders. The inclusion of young cultural successors as participants was considered crucial for understanding the challenges and opportunities in transmitting ecological-spiritual knowledge to the younger generation. The sample consisted of 15 participants, with recruitment continuing until theoretical saturation was reached (Charmaz, 2014).

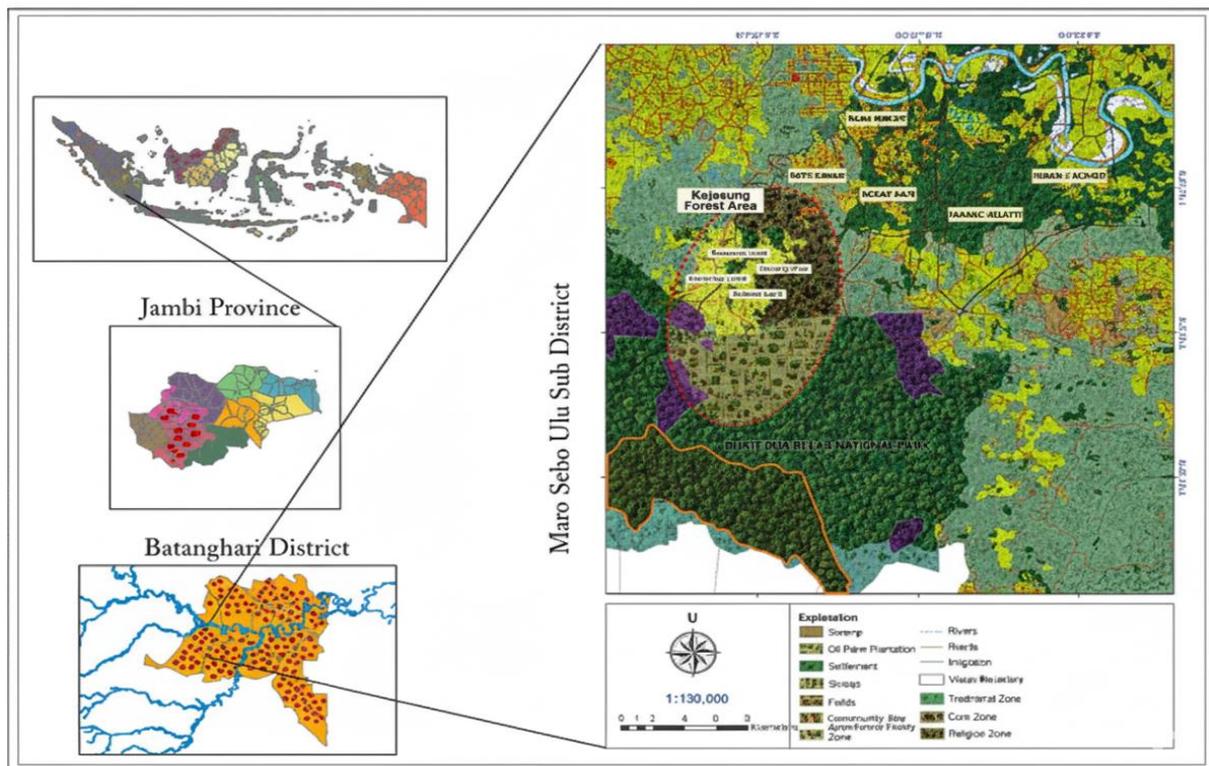


Figure 1: Study sites

### Data Collection Methods

Data collection was conducted during an intensive one-month field period to ensure prolonged engagement, which is essential for building trust and gaining deep understanding. Method triangulation was applied to enhance data validity and richness (Lincoln et al., 2018). In-depth and semi-structured interviews were the primary data collection methods, with interview guides tailored for each participant group (Kvale & Brinkmann, 2015). Specifically, the interview guide was designed not only to explore ecological practices and beliefs but also to investigate the processes, challenges, and opportunities in transmitting this knowledge, as well as participants' perceptions regarding the integration of Islamic values with local wisdom in a learning context. Participant observation was conducted by engaging in daily community activities, such as foraging trips into the forest, ritual ceremonies, practical learning processes from parents to children, and religious gatherings. Detailed field notes were made to document non-verbal cues, interactions, naturally occurring pedagogical situations, and practical engagement with the environment (Spradley, 2016). Document analysis involved collecting and analyzing relevant documents such as customary law manuscripts, local

government reports, existing local teaching materials, and NGO reports to provide contextual and corrective evidence for primary data related to education and conservation.

### **Data Analysis**

The collected data were analyzed using a thematic analysis approach, following the systematic process outlined by Braun and Clarke (2006). This process involves phases such as familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Specifically, the coding and theme discovery process not only focused on patterns of value integration but also deliberately extracted pedagogical elements, knowledge transmission mechanisms, and potential learning forms from each finding. The analysis wove a coherent narrative, using anonymized quotes from the data to illustrate each theme. The final stage of analysis was specifically aimed at synthesizing thematic findings into a conceptual model of culture-based conservation education, where relationships between identified themes were mapped to form a comprehensive pedagogical framework. The coding and thematic organization process was conducted systematically, using analytical matrix techniques and concept diagrams to visualize relationships between elements in the developed model.

### **Data Validity and Rigor**

To ensure the research's credibility, transferability, dependability, and confirmability, several strategies were rigorously applied (Lincoln et al., 2018). Credibility was achieved through prolonged engagement in the field, persistent observation, triangulation of data sources and methods, and member checking by sharing initial findings and interpretations of the formulated conservation education model with participants for verification of accuracy and contextual relevance. Transferability was enhanced by providing detailed and "thick" contextual descriptions of the observed pedagogical processes and knowledge transmission dynamics. Dependability was maintained by keeping a reflective journal and an audit trail documenting the analytical decision-making process from raw data to model formulation. Confirmability was ensured by demonstrating that the findings and the resulting model are rooted in the data and through peer debriefing with colleagues to reduce researcher bias.

### **Ethical Considerations**

This research adheres to research ethics guidelines and has obtained approval from the relevant institutional review board. Key ethical protocols include obtaining informed consent in writing or recorded form after providing a complete explanation of the research purpose, including the exploration of educational aspects of the value integration being studied; guaranteeing the anonymity and confidentiality of all participants by using pseudonyms; and prioritizing cultural sensitivity and respect by working collaboratively with community gatekeepers (e.g., *Tumenggung*) and respecting local customs (American Anthropological Association, 2020). The principles of beneficence and non-maleficence were applied to minimize potential harm and ensure that the research process and the resulting education model could provide tangible benefits to the community, while safeguarding the integrity of their knowledge systems and values.

## RESULTS AND DISCUSSION

### Learning Resources and Pedagogical Values in the Conservation Practices of Suku Anak Dalam

This research reveals that the ecological practices of SAD not only represent an effective conservation system but also contain rich learning resources and pedagogical values for developing a culture-based conservation education model. The findings show that the integration between Eco-Islamic values and indigenous local wisdom has created a unique and contextual learning landscape. The practice of *hompongan* (customary forest enclosures), for example, not only functions as a traditional conservation zoning system but also teaches learning principles about boundaries, sustainability, and collective responsibility. From an educational perspective, this practice offers a project-based learning model where learners can engage in planning and maintaining conservation zones. Similarly, the concept of sacred *tanah peranakan* (ancestral land) provides a foundation for value education about respect for land and history through a place-based education approach. The *besale* ritual, aimed at restoring natural balance, presents a profound dimension of experiential learning and values education, showing how ecological values can be transmitted through sensory and symbolic approaches.

The integration of Eco-Islamic values into these practices further enriches their educational dimension. The concepts of *kalifah* (stewardship) and *amanah* (trust) provide a strong ethical framework for character education, while the principle of *mizan* (balance) offers a holistic perspective on human-nature relations. This integration process did not occur forcibly but through dynamic dialogue between traditional knowledge holders and religious figures, creating a new form of knowledge that remains rooted in local wisdom yet relevant to the evolving religious context. This harmonious synthesis is summarized in Table 1, which shows the convergence between indigenous knowledge, Eco-Islamic values, and their pedagogical implications.

Table 1. Integration of Indigenous Knowledge and Eco-Islamic Principles: A Pedagogical Perspective

SAD Ecological Aspect	Cultural Meaning	Eco-Islamic Principle	Pedagogical Implication
<i>Hompongan</i>	Protects the forest and marks the community's ecological territory	<i>Kalifah</i> (stewardship of the earth)	Project-based learning model on conservation zoning; simulation of managing limited resources
<i>Tanah Peranakan</i>	Sacred land of origin, its fertility is maintained	<i>Amanah</i> (responsibility towards creation)	Place-based education about history and identity; learning the value of respect for the land
<i>Besale Ritual</i>	Ceremony to restore human-nature balance	<i>Mizan</i> (balance)	Experiential learning through symbolism; affective education of ecological values
Prohibition on Felling <i>Sialang</i> Trees	Respecting honey bee habitats	<i>'adl</i> (ecological justice)	Case study on ecological justice; learning about the rights of living creatures
<i>Rumah Godong</i>	Environmentally friendly and natural architecture	<i>Zuhd</i> (simplicity)	Design thinking for sustainable living; learning about simplicity and ecological innovation

Table 1 clearly maps how each traditional ecological practice of SAD contains pedagogical value that can be developed into innovative learning models. Integration with Eco-Islamic values not only enriches the ethical dimension but also opens opportunities for adaptation in broader educational contexts, creating a holistic educational approach where cognitive, affective, and spiritual aspects are harmoniously integrated.

### Learning Processes and Knowledge Transmission in the Community

The process of knowledge transmission within the SAD community occurs through complex and multi-dimensional mechanisms. The research reveals that learning happens through four main pathways: learning through observation and direct participation, learning through narrative and stories, learning through spiritual experience, and learning through guided hands-on practice. These learning mechanisms show alignment with social learning theory where knowledge is transmitted through modeling and participation in communities of practice. Learning through observation and participation is the backbone of the knowledge transmission process, where children and youth learn by observing and gradually engaging in daily ecological activities. This learning process occurs naturally and contextually, where knowledge is taught precisely when needed and in real situations.

However, the research also reveals serious challenges in this knowledge transmission process. SAD youth are increasingly disconnected from traditional learning mechanisms due to lifestyle changes, formal education, and economic pressures. Many SAD youth prefer seeking work in oil palm plantations over learning traditional forest knowledge. It is here that integration with Eco-Islamic values offers a smart adaptation strategy. By providing religious justification for traditional conservation practices, Eco-Islamic values make traditional knowledge more relevant to youth increasingly exposed to Islamic values. This process of value reinterpretation does not erase the essence of traditional knowledge but strengthens it by providing new, contextual meaning. The complex dynamics affecting this process of value and knowledge integration are shown in Table 2, which analyzes supporting and hindering factors from various dimensions.

Table 2. Supporting and Hindering Factors for Eco-Islam Integration in the SAD Community

Category	Supporting Factors	Hindering Factors	Impact on Learning Process
Social	Dialogue between customary and religious leaders; support from surrounding communities	Stigma from outside viewing customs as "animistic"	Increases cultural self-confidence and opens space for knowledge integration
Ecological	Dependence on forest resources	Deforestation and expansion of oil palm plantations	Reduces space for direct ecological learning practices in the natural environment
Religious	Moderate and contextual interpretation of Islam	Textual interpretation that rejects customs	Occurs hybridization of values that enriches learning content
Educational	Access to madrasahs and customary training	Lack of education based on local ecology	Opens opportunities for developing integrative curricula
Economic	CSR initiatives and forest-based ecotourism	Dependence on external markets	Encourages innovation in developing learning models based on ecological economics

Table 2 provides a comprehensive analysis of the dynamics influencing the learning process within the SAD community. From an educational perspective, this table reveals how social, ecological, religious, educational, and economic factors interact to shape a unique learning landscape. Interestingly, factors that appear to be hindrances can be transformed into learning opportunities when managed with a creative and contextual approach, demonstrating high educational resilience within the SAD community.

### Culture-Based Conservation Education Model: An Integrative Synthesis

Based on the research findings, we propose a Culture-Based Conservation Education Model that integrates three main pillars: Indigenous Knowledge, Eco-Islamic values, and modern pedagogical principles. This model was developed through an in-depth analysis of existing practices within the SAD community, which were then synthesized with theoretical frameworks of conservation education. The model consists of five interconnected core components: content based on local wisdom, spiritual-ecological values, experiential learning methods, curriculum contextualization, and community participation. Content based on local wisdom forms the foundation of this model, where traditional ecological practices serve as the main learning material. Spiritual-ecological values from the Eco-Islamic tradition provide an ethical and spiritual framework that enriches the affective dimension of learning.

Experiential learning methods are a hallmark of this model, where learning is conducted through direct experience and reflection. This approach aligns with the traditional way the SAD community transmits knowledge, while also conforming to modern pedagogical principles of effective learning. Curriculum contextualization ensures that learning is always relevant to local conditions, both ecologically, culturally, and socially. Active community participation in the entire learning process guarantees the sustainability and acceptability of this model at the grassroots level. The conceptual framework underlying this model is presented in Table 3, which shows the systematic integration between Indigenous Knowledge and Eco-Islamic values in every educational dimension.

Table 3. Integrative Model of the “Eco-Islamic Indigenous Framework” in Conservation Education

Dimension	Indigenous Knowledge (IK)	Eco-Islamic Values (EI)	Synergistic Outcome (Education Model)
Ontology	Nature as spirit and ancestor	Nature as God’s creation	Nature as an integrated spiritual and ecological learning space
Epistemology	Knowledge based on experience and ritual	Knowledge based on revelation and ethics	Reflective knowledge combining experience, reason, and spiritual values
Axiology	Preservation through taboos and rituals	Preservation through worship and trust ( <i>amanah</i> )	Preservation as meaningful and transformative learning practice
Social	Community cooperation ( <i>gotong royong</i> )	<i>Ukhuwah</i> and <i>Ummah</i> (brotherhood)	Collaborative and inclusive learning community
Adaptive	Flexible towards social change	Dynamic in interpreting religious law ( <i>syariat</i> )	Educational model responsive to contextual changes

Table 3 presents the conceptual framework underlying the Culture-Based Conservation Education Model. This framework shows how the integration between Indigenous Knowledge and Eco-Islamic values creates a new synthesis in every educational dimension. Most importantly, this framework demonstrates an ability to create an educational approach that

remains rooted in local values yet is open to developments and changing contexts, offering a solution to the challenges of conventional conservation education, which is often overly standardized and alienated from local contexts.

## Discussion

The findings of this research make an important contribution to the discourse on conservation education by offering a new perspective on the integration of indigenous knowledge and faith-based ecology. The results confirm the findings of Ardoin & Bowers (2020) regarding the effectiveness of contextual and value-based environmental education approaches, but this study goes further by showing how such contextualization can be achieved through the integration of local knowledge systems and spiritual values. The resulting model aligns with the concept of culturally responsive pedagogy but offers a new nuance by emphasizing the spiritual-ecological dimension often overlooked in multicultural education discourse.

The integration of Eco-Islamic values into the traditional conservation practices of SAD proves the findings of Reyes-García & Benyei (2019) regarding the potential of indigenous knowledge in conservation, while strengthening the argument of Druker-Ibáñez & Cáceres-Jensen (2022) about the importance of integrating local knowledge in sustainability education. However, this study identifies that such integration does not occur automatically but through a complex process of cultural negotiation, where religious values function as a cultural broker facilitating the adaptation of traditional knowledge in a modern context. This finding enriches our understanding of cultural resilience (Marshall et al., 2019) by showing specific mechanisms of how indigenous communities transform their traditional knowledge without losing cultural identity.

From an educational perspective, the proposed model responds to the criticism by Purwanti et al. (2025) regarding the lack of integration of local values in the implementation of the Merdeka Curriculum. Through place-based education and experiential learning approaches, this model not only accommodates local wisdom but also empowers it as an authentic learning resource. This aligns with the findings of Rayne et al. (2020) on the effectiveness of culture-based approaches in conservation, but this study successfully operationalizes it into a systematic pedagogical framework. The successful integration of Eco-Islam and indigenous knowledge in the SAD community also provides empirical support for the concept of *al-wasatiyyah* (the middle path) in Eco-Islam (Wijsen & Anshori, 2023). The dialogical process between traditional knowledge holders and religious figures shows how the principle of religious moderation can be realized in conservation practice, while offering a model to address the gap between theological idealism and ecological practice identified by Fikri & Colombijn (2021).

However, implementing this model on a broader scale faces significant challenges. As identified in the research by Anggraeni et al. (2024), integrating indigenous knowledge into education policy requires not only political commitment but also adequate institutional capacity. The findings of this study strengthen that argument by showing that the success of integration within the SAD community heavily relies on the role of cultural mediators (customary and religious figures) who may not be available in different contexts. The limitations of this research lie primarily in its context-specific nature, so generalizing the findings must be done cautiously. Yet, within this limitation lies an important theoretical

contribution: this research shows that conservation education approaches must be developed contextually, considering the specific cultural-spiritual dynamics in each community. This finding supports the argument of Reyes-García & Benyei (2019) about the importance of a biocultural approach in conservation, while offering an operational framework to realize it through education.

Overall, this research has successfully demonstrated that integrating indigenous knowledge and faith-based ecology is not only possible but can also create synergies that enhance the effectiveness of conservation education. The resulting model offers an alternative to conventional conservation education approaches, which are often too technical and alienated from local cultural contexts, while paving the way for developing education that is more inclusive and respectful of Indonesia's cultural diversity.

### **Research Implications**

The findings of this research have several important implications theoretically, policy-wise, and practically. Theoretically, this research successfully expands the discourse of environmental ethics by presenting an integrative perspective between Eco-Islam and Indigenous Knowledge through the development of the Eco-Islamic Indigenous Framework Model. This model not only enriches the treasury of conservation education studies but also makes a significant contribution to cultural resilience studies by showing dynamic cultural adaptation mechanisms through educational processes. This finding strengthens the thesis of Marshall et al. (2019) on environmental resilience by providing empirical evidence of how cultural and spiritual values can function as effective adaptation mechanisms in facing social and ecological changes. From a policy perspective, this research offers a conservation education model that can be implemented in various formal and non-formal educational settings. For education policymakers, this model can serve as a reference for developing culture-based conservation curricula aligned with the principles of Merdeka Belajar and strengthening the Pancasila Student Profile. Local governments can utilize these findings to formulate more inclusive and local wisdom-based conservation policies. For religious institutions like MUI, these findings can be a reference for developing more applicable environmental fatwas at the community level, while strengthening the role of religion in supporting the sustainable development agenda.

Practically, this research provides a tangible contribution to the development of conservation education in indigenous communities. For the SAD community and other indigenous peoples, these research findings can strengthen their bargaining position in maintaining traditional knowledge while opening opportunities for developing creative economies based on educational ecotourism. For education practitioners, the resulting model can be adapted for developing contextual learning modules and teaching materials. Implementing this model at the community level can contribute to achieving the Sustainable Development Goals, particularly Goal 4 (quality education) and Goal 15 (life on land), and support biodiversity conservation efforts through culturally and locally-based approaches.

### **Limitations and Suggestions for Future Research**

Although providing significant contributions, this research has several limitations that need acknowledgment. First, the research scope limited to one SAD community in Bukit

Duabelas means the findings may not be generalizable to other indigenous communities with different socio-cultural characteristics. Second, the qualitative approach used, while providing analytical depth, does not allow for quantitative measurement of the impact of the proposed education model. Third, the limited research period prevented this study from observing the long-term dynamics of the value integration process within the community, including how this model will adapt to increasingly rapid social changes.

Based on these limitations, future research is suggested to: (1) Conduct comparative studies among indigenous communities with different socio-cultural characteristics to test the applicability of the resulting model; (2) Develop mixed-methods research combining qualitative and quantitative approaches to measure the effectiveness of the culture-based conservation education model; (3) Conduct longitudinal studies to understand the dynamics of knowledge transmission and value transformation in the long term; (4) Explore the development of appropriate assessment instruments to measure the impact of culture-based conservation education; and (5) Investigate the potential for digitizing indigenous knowledge to strengthen sustainable education in the digital era.

Further research is also needed to develop learning modules based on this model and to explore institutional mechanisms that can facilitate the adoption of this model within the formal education system. Exploration of the role of digital technology in preserving and transmitting indigenous knowledge is also a promising area for future research, given the rapid technological development and digital disruption challenges faced by indigenous communities. Additionally, research on the effectiveness of this model in the context of inclusive education and other special needs education also requires further attention.

## CONCLUSION

This research concludes that the integration of Eco-Islamic values and the local wisdom of the SAD in Jambi has given rise to an effective Culture-Based Conservation Education Model, where traditional ecological practices such as *hompongan*, *tanah peranakan*, and the *besale* ritual not only represent a sustainable conservation system but also contain pedagogical values relevant to modern educational principles. This integration creates an *Eco-Islamic Indigenous Framework* that shows epistemological, theological, and axiological synergy between local wisdom and Islamic spiritual values, while forming an adaptive cultural resilience mechanism through the reinterpretation of ancestral values within a contextual Islamic framework. Despite facing modernization and deforestation challenges, the SAD community successfully maintains its traditional knowledge through intelligent transformation by holistically blending spiritual, cultural, and ecological dimensions. Therefore, this research affirms that ecological sustainability and cultural resilience can only be achieved when conservation education approaches recognize and utilize the synergy between religious ethics and local wisdom, thereby resulting in inclusive, equitable, and locally-based conservation policies.

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### **AI Usage Declaration**

The authors declare that during the preparation of this work, artificial intelligence (AI) tools were used solely for language enhancement and editorial assistance, including grammar checking and improving readability. Specifically, AI-assisted tools were employed to refine sentence structure and ensure clarity of expression. All intellectual content, including the research conceptualization, methodology design, data collection and analysis, interpretation of findings, development of the Eco-Islamic Indigenous Framework, and the formulation of the culture-based conservation education model, was exclusively generated by the authors. The authors take full responsibility for the originality, integrity, and accuracy of the entire work and confirm that no AI tools were used to generate or replace substantive research content, data analysis, or scholarly arguments. Following the use of these tools, the authors thoroughly reviewed and edited the manuscript content as needed.

### **Author Contribution Statement**

Pahmi Pahmi: Conceptualization, Methodology, Formal Analysis, Investigation, Writing – Original Draft, Writing – Review & Editing, Project Administration, corresponding author.

Alhusni: Conceptualization, Validation, Investigation, Resources, Writing – Review & Editing, Supervision.

Khaidir Ali: Methodology, Validation, Formal Analysis, Data Curation, Writing – Review & Editing.

Mukhlas Nugraha: Investigation, Data Curation, Visualization, Writing – Review & Editing.

All authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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