



Fostering Environmental Awareness among Santri through Religious Leadership and Local Cultural Wisdom: A Study in the Context of Pesantren Education

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Abstract

The global ecological crisis necessitates educational approaches that foster holistic environmental awareness. Islamic boarding schools as traditional religious institutions, hold strategic potential in shaping ecological behavior through Islamic values and local wisdom. This study aims to examine the role of religious leaders and the integration of cultural values in developing green economic education within the *Pondok Pesantren* (Islamic Boarding School) context. A qualitative approach was employed using a case study design at *Pondok Pesantren Lirboyo*, Kediri, East Java. Data collection techniques included in-depth interviews, participatory observation, and analysis of relevant documents. The findings reveal that the exemplary conduct of *Kiai* and *ustad* plays a crucial role in internalizing ecological values among *santri*. Islamic principles such as *khalifah*, *Amanah* and *tawazun* are embedded in daily practices, including water conservation during ablution, waste management, and collective clean-up activities. These practices are reinforced by local wisdom such as *guyub rukun*, *tirakat* and *nrimo ing pandum* which shape collective and sustainable ecological awareness. The study develops an *organic* and *contextual* model of green economic education rooted in the spirituality and cultural traditions of the *Pesantren* community. These findings confirm that environmental education does not necessarily rely on formal curricula but can emerge from grounded religious and social practices. This model offers a valuable contribution to the development of alternative sustainable education approaches, particularly in value-based and tradition-oriented communities such as *Pesantren*.

Keywords: *Green Economic Education; Islamic Boarding School; Environmental Awareness; Islamic Values; Local Wisdom.*

Membina Kepedulian Lingkungan di Kalangan Santri melalui Kepemimpinan Agama dan Kearifan Budaya Lokal: Studi Kasus di Pondok Pesantren Lirboyo, Kediri, Indonesia

Abstrak

Krisis ekologis global mendorong perlunya pendekatan pendidikan yang mampu menanamkan kesadaran lingkungan secara holistik. Pesantren sebagai institusi keagamaan tradisional memiliki potensi strategis dalam membentuk perilaku ekologis melalui nilai-nilai Islam dan kearifan lokal. Penelitian ini bertujuan mengkaji peran tokoh agama dan integrasi nilai budaya dalam membangun pendidikan ekonomi hijau di lingkungan Pesantren. Metode yang digunakan adalah pendekatan kualitatif dengan desain studi kasus di Pondok Pesantren Lirboyo Kediri Jawa Timur. Teknik pengumpulan data meliputi wawancara mendalam, observasi partisipatif dan analisis dokumen yang relevan. Hasil penelitian menunjukkan bahwa keteladanan Kiai dan ustad berperan penting dalam proses internalisasi nilai-nilai ekologis di kalangan santri. Nilai-nilai Islam seperti khalifah, amanah dan tawazun dihidupkan dalam praktik harian, seperti hemat air saat wudhu, pengelolaan sampah dan kegiatan kerja bakti. Praktik tersebut diperkuat oleh kearifan lokal seperti guyub rukun, tirakat, dan nrimo ing pandum yang membentuk

kesadaran ekologis secara kolektif dan berkelanjutan. Penelitian ini menghasilkan model pendidikan ekonomi hijau berbasis *Pesantren* yang bersifat organik, kontekstual dan berakar pada spiritualitas serta budaya komunitas. Temuan ini mengonfirmasi bahwa pendidikan lingkungan tidak harus berbasis kurikulum formal, melainkan dapat tumbuh dari praktik sosial keagamaan yang membumi. Model ini menjadi kontribusi penting dalam pengembangan pendekatan alternatif pendidikan berkelanjutan, khususnya di komunitas berbasis nilai dan tradisi seperti *Pesantren*.

Kata Kunci: Pendidikan Ekonomi Hijau; *Pesantren*; Kesadaran Ekologis; Nilai Islam; Kearifan Lokal.

INTRODUCTION

The current ecological crisis represents a tangible consequence of excessive natural resource exploitation and a development paradigm that often disregards environmental balance (Akter, [2024](#); Kodir & Mushoffa, [2017](#); Xiong et al., [2023](#)). This phenomenon has manifested not only at the global level—through extreme climate change and transboundary pollution—but also locally, as seen in deforestation, flash floods, prolonged droughts, and water and soil contamination in several regions across Indonesia and Malaysia (Kurniawan et al., [2024](#); Maqtan et al., [2022](#); Trembeczki, [2020](#); Zafirah et al., [2017](#)). The complexity of these challenges calls for responses that go beyond technocratic solutions and instead embrace transformative approaches grounded in moral, spiritual, and cultural values that can shape ecological awareness and behavior.

In the Indonesian context, *Pesantren* traditional Islamic boarding schools, occupy a strategic position in nurturing character, spirituality, and local culture (Chuanchen & Zaini, [2023](#); Habibi & Tirmidzi, [2022](#); Kasman, [2025](#); Khayati, [2025](#)). Beyond their role in producing graduates with strong Islamic scholarship, *Pesantren* serve as influential social institutions that shape values, ethics, and everyday practices among students (*santri*) who are deeply embedded in local communities (Astika & Evisa, [2024](#); Muttaqin et al., [2024](#); Pulungan, [2025](#); Purwanto et al., [2021](#)). The central figure of the *Kiai* (religious leader) holds substantial moral authority,

providing legitimacy for both spiritual teachings and practical guidance in daily life—including messages related to environmental stewardship. Consequently, *Pesantren* hold unique potential as platforms for integrating Islamic environmental ethics into education and community engagement.

The concept of *green economic education* has thus emerged as a relevant framework to address the ecological crisis within the *Pesantren* setting (Anshori & Pohl, [2022](#); Athoillah et al., [2024](#); Mas et al., [2024](#)). Green economic education emphasizes sustainable economic growth that aligns with environmental preservation and social well-being (Grace et al., [2024](#); Mubarok, [2023](#); Rodiyah et al., [2023](#)). Nevertheless, its implementation requires contextual adaptation, taking into account the religious values, socio-cultural norms, and local wisdom embedded in the *Pesantren* community. Islamic teachings such as *tawazun* (balance), *khalifah* (stewardship of the earth), and *amanah* (responsibility) provide a strong normative foundation for shaping ecological consciousness and ethical behavior (Muid & Syofiyatin, [2021](#)). Similarly, local wisdom expressed through communal practices like *gotong royong* (mutual cooperation), modest living, and harmony with nature functions as essential social capital in fostering context-sensitive environmental responses (Fassina, [2015](#)).

Despite these potentials, previous studies have tended to remain at a conceptual or descriptive level, offering limited empirical exploration of how the role of the *Kiai* and

local cultural values interact within the practice of green economic education in *Pesantren* (Anwar & Hakim, 2025; Hafidloh, 2025; Kejora et al., 2025). There remains a research gap concerning the integration of Islamic values, local wisdom, and green economic principles within the *Pesantren* education system—particularly in major institutions such as *Pondok Pesantren Lirboyo*, which holds a significant position in Indonesia's Islamic educational landscape. Few studies have specifically examined how the *Kiai's* moral leadership and the *Pesantren's* value system contribute to cultivating students' ecological awareness, or how green economic education can be effectively embedded in the curriculum and daily routines of *Pesantren* life.

Therefore, this study aims to explore and analyze how *Pesantren*, through the leadership of *Kiai* and its educational structure, can function as agents of change in developing a generation of *santri* who are not only spiritually devout but also ecologically responsible. It further seeks to identify a model of green economic education that aligns with the cultural and environmental context of *Pesantren* communities, and to assess how Islamic values and local wisdom can strengthen the effectiveness of such education. The research focuses on the construction of values and educational practices that emerge from the interaction among religious texts, *Kiai's* moral example, and the local cultural environment of the *Pesantren*.

The novelty of this study lies in its transformative approach, which integrates green economic education, Islamic ethics, and local wisdom into a unified, context-based educational model. Using *Pondok Pesantren Lirboyo* as a case study, this research offers both conceptual insights and practical strategies to enhance *Pesantren's* contribution to building a sustainable and

ecologically just future through value-driven education. Globally, the findings of this study have the potential to contribute to the growing discourse on Islamic *ecopedagogy* and to serve as a reference for developing value-based environmental education models in diverse cultural and religious communities.

METHODS

This study employs a qualitative approach with a case study design, focusing on *Pondok Pesantren Lirboyo* in Kediri, East Java, as the primary research locus. The qualitative approach was chosen because it allows for an in-depth exploration and interpretation of meanings, social dynamics, and value constructions developed by individuals and groups within the context of Islamic-based green economic education and local wisdom (Chih-Pei & Chang, 2017). A case study design is considered particularly appropriate for capturing the phenomenon holistically and contextually, thus providing a nuanced understanding of the complexities inherent in environmental education practices within *Pesantren* communities.

The study draws on both primary and secondary data sources. Primary data were collected through in-depth interviews with key figures, including *Kiai* (religious leaders), *ustadz* (teachers), *Pesantren* administrators, and students (*santri*) actively engaged in environmental initiatives. In addition, participant observation was conducted to document everyday practices that reflect ecological values embedded in *Pesantren* life. Supporting documents—such as curricula, sermon materials, *Pesantren* bulletins, and records of environmental programs—were also analyzed to provide contextual depth and triangulate the findings.

Informants were selected purposively, based on their active involvement in environmental education and their

representativeness of different *Pesantren* elements. The snowball technique was employed to expand the network of informants until data saturation was reached, ensuring that the information collected adequately captured the diversity and depth of the phenomenon. Data collection was carried out iteratively and reflexively, allowing the researcher to trace changes and observe evolving social interactions throughout the study period.

Data were analyzed using thematic and inductive techniques, beginning with the coding of field data, followed by the identification of emerging patterns, value narratives, and social relations related to the integration of green economic education with religious and local values (Locke et al., 2022). This analytical process aimed to construct key themes that represent the social constructions and educational practices of environmental awareness within the *Pesantren* context, as well as to reveal the mechanisms through which ecological values are internalized and behavioral transformations among students occur.

To ensure the credibility and transferability of the findings, data validation was conducted through triangulation of sources, methods, and time, along with member checking involving key informants. Dependability and confirmability were maintained through systematic documentation of the research process and critical reflection on researcher bias. Such rigor enhances the trustworthiness of the study and supports the interpretation of results as contextually grounded rather than universally prescriptive.

Through this methodological framework, the study seeks to generate findings that are valid, context-sensitive, and theoretically meaningful, offering significant contributions to the development of Islamic-based green economic education models. Ultimately, this

approach enables a deeper understanding of how *Pesantren* can evolve into centers of ecological education rooted in spirituality and local wisdom, and how such models may be adapted and replicated in other *Pesantren* communities as part of broader sustainable development efforts.

RESULTS AND DISCUSSIONS

This study uncovers significant insights into the pivotal role of Islamic boarding schools, particularly *Pondok Pesantren Lirboyo* in Kediri, in cultivating ecological awareness through green economy education rooted in Islamic ethical principles and local wisdom. The findings reveal that religious leaders (*Kiai*) occupy a central position of moral and spiritual authority that shapes the perspectives, attitudes, and social behaviors of the *santri* (students), including their engagement with environmental concerns. Through exemplary leadership (*uswah hasanah*), fundamental Islamic values such as *amānah* (trustworthiness), *khalifah fī al-arḍ* (stewardship of the earth), and *tawāzun* (balance) are effectively internalized and manifested in the students' daily practices. These practices encompass participation in religious study sessions (*pengajian*), maintaining personal and communal cleanliness, and independently managing waste within the *Pesantren* environment. This embodiment of environmental ethics demonstrates how faith-based moral education can serve as a transformative force for ecological consciousness, positioning *Pesantren* as vital agents in promoting sustainability grounded in spirituality and community values.

The Religious Leadership of *Pesantren* Figures in Cultivating Ecological Awareness among *Santri*

The findings of this study affirm that

religious leaders at *Pondok Pesantren Lirboyo*, particularly the *Kiai*, play a highly significant role in shaping students' ecological awareness. Their influence extends beyond the transmission of religious doctrines; they serve as moral exemplars and spiritual symbols who provide ethical direction and behavioural models in the everyday life of the *Pesantren* (Purwowododo & Zaini, 2024; Sarkowi et al., 2025; Sartini, 2025). The *Kiai's* symbolic authority lends strong legitimacy to the values they promote, including those related to environmental stewardship.

One of the most strategic aspects of this leadership is reflected in how the *Kiai* convey Islamic teachings regarding humanity's responsibility toward nature. Values such as *khalifah fī al-arḍ* (human beings as stewards of the earth), *amānah* (trustworthiness), and *tawāzun* (balance) are consistently emphasized across various religious forums, ranging from *pengajian kitab kuning* (traditional text study sessions) and Friday sermons to informal guidance offered during daily communal activities. However, what proves most influential is not merely the verbal articulation of these values but their embodiment in the lived practices of the *Kiai* themselves.

Behavioral exemplarity (*uswah ḥasanah*) serves as a primary instrument for the internalization of environmental values among students. The *Kiai* not only teach about cleanliness and the avoidance of wastefulness (*mubazir*), but also demonstrate these principles through daily actions, using water modestly during ablution, maintaining the cleanliness of their rooms and the mosque, and avoiding littering. Such lived examples possess a far greater pedagogical impact than normative instruction alone, as students tend to emulate what they observe rather than what they are told.

These findings align with previous studies emphasizing that Islamic spirituality can

serve as a robust ethical foundation for environmental consciousness (Hasan, 2022; Mashadi, 2025; Stamova et al., 2021). Within the framework proposed by Safdar & Shamsur-Rehman (2021), the modern environmental crisis is rooted in a deeper spiritual crisis, a rupture in humanity's sacred relationship with nature. Consequently, Sufi-inspired ethics and moral refinement are seen as essential pathways for fostering profound ecological awareness. In the context of *Pesantren Lirboyo*, the enactment of these values manifests in a harmonious relationship between humans and their environment, nurtured through spiritual practices and communal living.

In conclusion, this study suggests that *Pesantren* function not merely as institutions of Islamic learning, but as potential agents of eco-social transformation capable of internalizing environmental ethics through faith-based education and moral exemplarity. Within this framework, the role of religious leaders becomes the central driving force in facilitating value transformation and advancing the vision of a sustainable green economy education.

Integration of Islamic Values and Local Wisdom in Green Economy Education

The integration of Islamic teachings and local wisdom at *Pondok Pesantren Lirboyo* is clearly reflected in the daily practices of *santri* (students), who combine spiritual principles with Javanese cultural values. A prominent example is the routine communal work activity known as *roan*, which involves all students and administrators. This practice is not merely regarded as a social obligation but as a form of collective worship aimed at maintaining environmental cleanliness and harmony. The activity embodies the local value of *guyub rukun*, a deep sense of solidarity and communal cooperation in addressing shared responsibilities, including

environmental stewardship (Atmaja & Mutia, 2024; Susanto et al., 2025; Wilis et al., 2025).

Another notable example is the *Pesantren*'s culture of reuse, where used materials are repurposed rather than discarded (Azliana et al., 2024). Students are encouraged to reuse plastic bottles as plant pots or convert food waste into compost. This practice is rooted in the Islamic prohibition against *isrāf* (wastefulness) and the moral value of *amānah* (responsibility) toward the blessings granted by Allah SWT. Such attitudes resonate with Javanese local wisdoms such as *tirakat* (spiritual self-restraint) and *nrimo ing pandum* (acceptance and gratitude for one's share), which promote simplicity, moderation, and contentment (Ratnawati et al., 2021; Sitepu & Nurhayati, 2025). The synergy between religious and local values thus cultivates a strong, intrinsic ecological character among students—one that develops organically without the need for rigid formal curricula.

Islamic principles such as *tawāzun* (balance between humans, nature, and God), *khalīfah fī al-arḍ* (humans as stewards of the earth), and *amānah* (moral responsibility) are not taught as abstract theoretical concepts. Rather, they are contextualized through religious learning sessions (*pengajian kitab kuning*), daily advice, and the exemplary conduct of *Pesantren* leaders. This reflects the *Pesantren*'s methodological flexibility in embedding environmental education through culturally and spiritually grounded approaches (Ihsan et al., 2021). Effective environmental education, as (Judson, 2019) argues, is *place-based*—connecting learning processes to the social and cultural realities of the local community.

Furthermore, this approach reinforces the notion that sustainable education must integrate social systems, ecological understanding, and cultural values (Kioupi & Voulvoulis, 2019; Suprpto et al., 2025).

Pondok Pesantren Lirboyos successfully frames ecological issues not as purely technical problems, but as spiritual and moral responsibilities embedded within religious and communal life. This distinguishes the *Pesantren*'s model of environmental education from technocratic approaches, which often operate in a top-down manner and lack moral depth.

In summary, the integration of Islamic values and local wisdom within the *Pesantren* setting serves as an effective vehicle for cultivating ecological awareness. It demonstrates that environmental education can evolve organically and transformatively when grounded in tradition, spirituality, and local culture. The *Pesantren* thus emerges as a strategic community-based educational institution capable of fostering sustainable ecological behavior through deeply internalized values and practices.

The Ideal Model of *Pesantren*-Based Green Economy Education

The findings of this study have led to the formulation of a contextual and organic model of *Pesantren*-based green economy education. The model is “organic” in that it is developed from within—rooted in the social, cultural, and spiritual fabric of the *Pesantren* community, rather than being adapted from secular, technocratic education systems. It reflects lived practices observed at *Pondok Pesantren Lirboyo*, emphasizing local authenticity and community-driven transformation. The model comprises four interrelated elements that collectively strengthen the process of developing ecological consciousness among *santri* (students).

The **first element** is the exemplary leadership of religious figures who occupy a strategic role within the *Pesantren*'s social structure. The *Kiai* and *ustadz* serve not only as conveyors of religious knowledge but also as moral exemplars whose conduct is

emulated by students. Ecological virtues such as energy conservation, cleanliness, and simplicity are demonstrated through their daily practices. This aligns with Gottlieb (2006) argument that the restoration of environmental awareness must begin with the renewal of spirituality and the reinforcement of authoritative moral leadership within religious communities.

The **second element** is the internalization of Islamic values into students' everyday lives. Through habits such as maintaining cleanliness, sorting waste, and conserving water, the values of *tawāzun* (balance), *amānah* (responsibility), and *zuhd* (ascetic simplicity) are not only verbally taught but actively lived. Environmental education in this context becomes part of moral cultivation (*akhlaq*), rather than a set of technical instructions. This reflects the principles of transformative, *values-based learning*, which emphasizes moral and ethical formation as the foundation of behavioral change (Huang et al., 2021).

The **third element** involves the integration of local wisdom into the *Pesantren's* collective activities. Javanese cultural values such as *guyub rukun* (communal harmony), *tirakat* (spiritual discipline), and *nrimo ing pandum* (grateful acceptance) are embedded in daily routines, including communal clean-up activities, shared maintenance duties, and recycling projects. These practices illustrate how spirituality and local culture function as powerful resources for environmental education. As Giroux & Bosio (2021) note, the *critical pedagogy of place* framework is crucial for designing education that is locally rooted and attentive to the cultural heritage of the community.

The **fourth element** emphasizes the active participation of *santri* in community-based environmental initiatives—from managing the *Pesantren* garden and waste bank to engaging

in faith-based ecological training. This participation fosters a sense of ownership and collective responsibility toward nature, while nurturing ecological leadership from a young age. In this sense, the *Pesantren* operates as a social space that facilitates *ecosocialization*—the internalization of ecological values and practices through everyday social interaction (Keto & Foster, 2021).

This model explicitly rejects technocratic approaches that isolate ecological action from moral and spiritual dimensions. Instead, it advances a spirituality-based *ecopedagogy* that treats environmental awareness as an integral component of worship and moral responsibility. The novelty of this model lies in its bottom-up orientation, emerging organically from the internal dynamics and potential of the *Pesantren*, rather than being imposed through external or normative policy interventions.

Theoretically, this model deepens the understanding of how environmental education can be transformed through informal and community-based pathways often overlooked by conventional education systems. Practically, it offers a replicable framework for other *Pesantren* across Indonesia that share similar cultural characteristics, positioning them as active contributors to the achievement of the Sustainable Development Goals (SDGs), particularly Goal 13 (Climate Action) and Goal 4 (Quality Education).

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Conflicts of Interest

The authors declare no conflict of interest.

CONCLUSION

This study reveals that *Pondok Pesantren Lirboyo Kediri* has successfully developed a model of green economy education grounded in Islamic values and local wisdom through a contextual, participatory, and transformative approach. Religious leaders, particularly *Kiai*, play a pivotal role in shaping students' ecological awareness through exemplary leadership and the internalization of key Islamic principles such as *khalifah* (stewardship), *amānah* (trust), and *tawāzun* (balance), which harmonize with Javanese cultural traditions like *guyub rukun* and *tirakat*. This model evolves organically from the community's daily spiritual and moral life, rather than from external curricular imposition, enabling the formation of long-term, equitable, and sustainable ecological behavior. The model's strength lies in its community-based foundation, which fosters bottom-up transformation without dependence on formal curricula or external intervention. However, the model also faces challenges, particularly its reliance on charismatic leadership and the limited modular documentation that constrains broader replication. Future research should explore similar models in other *Pesantren*, develop more structured green curricula, and advocate for policy integration in environmental education.

The implications of these findings are particularly significant for the broader Islamic-Malay cultural sphere, where *Pesantren* serve as custodians of both cultural and ecological values within a spiritual tradition deeply connected to nature. This

approach reaffirms the relevance of Islamic-Malay values in addressing contemporary ecological crises through faith-based and culturally grounded education. Globally, the model offers an effective paradigm for multi-cultural and interfaith communities, enriching the discourse on inclusive, locally grounded sustainability education, and strengthening the role of religious institutions as agents of socio-ecological transformation on an international scale.

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