



Islamic Ecotheology and Environmental Communication: Strengthening Ecological Awareness through Green Dakwah at Daarut Tauhiid Islamic Boarding School, Bandung

Agus Mubarak^{1*}, Awaludin Pimay², Ibnu Fikri³, Senki Nurachmadi⁴

^{1,2,3,4}Universitas Islam Negeri Walisongo Semarang, Indonesia

Email*: agus.mubarak@staidaaruttauhiid.ac.id

Received: September 9, 2026

Revised: September 13, 2026

Accepted: September 23, 2026

Abstract

This study develops an Integrative-Transformative Green Dakwah paradigm to strengthen the ecological awareness of *santri* at Daarut Tauhiid Boarding School, Bandung. Using a mixed-methods sequential exploratory design, qualitative data were collected through interviews, observation, and documentation, followed by a quantitative survey of 335 respondents using a Likert-scale questionnaire. The findings show that Green Dakwah is grounded in Islamic ecotheological values, particularly *tawhid*, *khalifah*, *amanah*, *mizan*, and *rahmah*, and communicated through education, role modeling, habituation, dialogue, participation, and direct ecological practices. Ecological awareness was very high in the epistemological ($M = 4.65$) and methodological ($M = 4.37$) dimensions, while the praxis dimension was lower ($M = 4.04$), indicating a knowledge-action gap. The study reconstructs Green Dakwah as a transformative process integrating Islamic ecotheology, participatory communication, value internalization, ecological awareness, ecological praxis, and pesantren ecological culture. The model offers theoretical and practical contributions to strengthening sustainable ecological culture in Islamic educational institutions.

Keywords: Boarding School; Ecological awareness; Green Dakwah; Islamic ecotheology; Participatory communication.

Publisher's Note:

Yayasan Darussalam Bengkulu stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright

© 2026 by the author(s).

2026 by the author(s).

License Yayasan Darussalam, Bengkulu, Indonesia.

This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0)

license (<https://creativecommons.org/licenses/by-sa/4.0/>).



INTRODUCTION

The ecological crisis of the twenty-first century has become increasingly complex, encompassing climate change, pollution, ecosystem degradation, deforestation, biodiversity loss, and growing waste generation. Human activities, particularly greenhouse gas emissions, energy use, land-use change, and unsustainable patterns of production and consumption, have contributed substantially to global warming, with the global surface temperature during 2011–2020 reaching approximately 1.1°C above the 1850–1900 level (Intergovernmental Panel on Climate Change [IPCC], 2023). These conditions indicate that environmental degradation cannot be addressed solely as a technical problem because it is also closely associated with the values and paradigms through which humans understand their relationship with nature (Andy, 2025). Within Muslim societies, Islamic ecotheology provides a normative framework that connects the relationship between God, humanity, and nature through principles such as *tawhid*, *khalifah*, *amanah*, and *mizan*. From this perspective, environmental stewardship constitutes not merely a social responsibility but also a moral and spiritual expression of religious commitment (Kafabihi et al., 2026; Karagiannis, 2022).

Nevertheless, theological values do not automatically produce environmentally responsible behavior. Research on Green Islam in Indonesia has questioned the assumption that Islamic religious frameworks necessarily translate directly into environmental activism, demonstrating a persistent gap between religious ecological norms and ecological practice (Fikri & Colombijn, 2021). Studies on *eco-pesantren* have similarly shown that Islamic boarding schools possess considerable potential to integrate Islamic values, sustainability education, and everyday environmental practices (Anabarja & Mubah, 2021; Fanan & Fauzi, 2024). However, previous scholarship has generally examined Islamic ecotheology, environmental education, environmental programs, and religious communication as relatively separate domains. Consequently, the mechanism through which theological values are communicated, internalized, and transformed into sustained ecological awareness and praxis remains insufficiently explained. Religious engagement with environmental issues is also strongly shaped by social context, institutional relations, lived experience, and collective strategies rather than by religious doctrine alone (Smith et al., 2024). This limitation constitutes a specific research gap concerning how Islamic ecotheological values move from the normative level to ecological consciousness and everyday practice through the process of *dakwah* communication.

This issue is particularly important in the context of boarding school because these institutions function not only as centers of Islamic knowledge transmission but also as social environments where values are cultivated through education, leadership, role modeling, habituation, collective activities, and everyday interactions. Environmental programs such as waste management, greening, water conservation, and environmentally responsible routines may provide important instruments for ecological education, but the existence of such programs alone does not necessarily indicate the formation of an ecological culture. The crucial question concerns how ecological values acquire religious meaning, become internalized by *santri*, and eventually influence habitual behavior. Daarut Tauhiid Boarding School Bandung provides a relevant empirical setting because religious education, *dakwah*, character formation, institutional culture, and ecological practices operate within the same educational environment. Therefore, examining ecological transformation in this setting is scientifically important for understanding the connection between religious meaning and environmental behavior and practically significant for developing a more sustainable ecological culture within Islamic educational institutions.



Accordingly, this study aims to analyze and reconstruct Islamic ecotheology-based *dakwah* communication as an approach to strengthening the ecological awareness of *santri* at Daarut Tauhiid Boarding School Bandung. More specifically, the study examines the construction and praxis of ecological *dakwah*, investigates its epistemological, methodological, and practical dynamics in relation to ecological awareness, and reconstructs an integrative and transformative Green Dakwah paradigm. Rather than conceptualizing *dakwah* merely as the transmission of environmental messages, this study approaches it as a transformative communication process through which Islamic ecological values are interpreted, communicated, exemplified, habituated, internalized, and translated into ecological action. Such an approach is necessary because the transformation from religious knowledge to environmental behavior involves interconnected communicative, educational, affective, cultural, and institutional processes rather than a simple linear relationship between religious teachings and ecological conduct.

The principal contribution of this study lies in developing an Integrative-Transformative Green Dakwah paradigm that connects Islamic ecotheology, *dakwah* communication, ecological awareness, and ecological praxis within a unified conceptual framework. Unlike previous studies that have predominantly addressed Islamic ecotheology, environmental *dakwah*, ecological education, or eco-pesantren practices separately, this study positions Green Dakwah as a transformative communication paradigm that explains how Islamic ecological values are communicated, internalized, and translated into ecological consciousness and behavior. The proposed framework therefore extends *dakwah* communication scholarship beyond the conventional transmission of religious messages by conceptualizing ecological responsibility as an integral dimension of Islamic religious consciousness and by explaining the process through which religious values become ecological praxis. Scientifically, this study contributes to the intersection of Islamic ecotheology, communication studies, and environmental scholarship; practically, it offers a framework for Islamic boarding schools and other Muslim educational institutions to transform ecological teachings into sustained values, practices, and institutional ecological culture.

Contemporary *dakwah* scholarship has increasingly moved beyond a linear conception of religious communication in which a *da'i* transmits religious messages to passive audiences. Instead, *dakwah* can be understood as a contextual and dynamic communication process involving communicators, messages, media, audiences, institutions, social norms, and cultural environments. At the grand-theoretical level, this study adopts a systems perspective on communication, which views communication as an interconnected process in which changes in one component may influence other elements within the wider social system. This perspective is particularly relevant to ecological *dakwah* because environmental responsibility cannot be produced by messages alone; it emerges through interactions among religious leaders, *santri*, educational structures, institutional rules, social practices, media, and environmental conditions. Ecological communication therefore operates through reciprocal relationships in which religious meanings may influence social norms, repeated practices may develop into institutional habits, and institutional habits may eventually constitute an ecological culture (Miller, 2022). Within this framework, Green Dakwah is conceptualized not merely as the inclusion of environmental themes in religious preaching, but as a communication system that connects Islamic values, ecological problems, social interaction, and behavioral transformation.

At the middle-range level, the study integrates transformative *dakwah* communication with participatory communication to explain the mechanism of ecological transformation.

Transformative *dakwah* provides the orientation of change by explaining how religious communication develops changes in knowledge, meaning, attitudes, and behavior, while participatory communication explains how such transformation occurs through dialogue, interaction, and collective engagement among institutional actors. Therefore, these perspectives are integrated to understand Green Dakwah as a communication process in which Islamic ecological values are collectively interpreted, internalized, and translated into ecological practices. Participatory communication complements this transformative orientation by explaining the mechanism through which change occurs. Rather than treating *mad'u* as passive recipients, participatory communication positions community members as subjects who possess experience, knowledge, and agency and who participate in defining problems, exchanging meanings, making decisions, and implementing solutions (Servaes & Servaes, 2021). In an ecological context, the synthesis of these perspectives suggests that environmental *dakwah* becomes transformative when ecological problems are discussed through dialogue, connected with lived experience, reinforced through education and role modeling, and translated into collective practices. Thus, transformative *dakwah* provides the orientation of change, while participatory communication provides the dialogical and participatory mechanism through which such transformation can occur.

Islamic ecotheology provides the axiological foundation of this theoretical framework. It situates the human–nature relationship within humanity's relationship with God and consequently regards environmental responsibility as an integral dimension of religious responsibility. The principles of *tawhid*, *khalifah*, *amanah*, *mizan*, and the prohibition of *fasad* provide an ethical structure for understanding ecological responsibility. *Tawhid* establishes the spiritual interconnectedness of creation; *khalifah* defines human responsibility for managing the Earth; *amanah* emphasizes moral accountability; *mizan* requires the preservation of balance; and the prohibition of *fasad* establishes an ethical boundary against environmental destruction (Mawardi & Samidjo, 2021; Nur et al., 2025). Importantly, the concept of *khalifah* should not be interpreted as unlimited human domination over nature but as an ethical mandate for responsible stewardship (Rakhmat, 2022). Contemporary Islamic environmental ethics similarly emphasizes that nonhuman life and ecological systems possess moral significance and therefore cannot be reduced to resources for unrestricted human exploitation (Mohamed, 2025). Within Green Dakwah, these theological concepts are transformed from normative doctrines into communicable values that provide religious meaning to ecological practices.

Ecological awareness constitutes the transitional dimension within this framework, explaining how communicated Islamic ecological values move from cognitive understanding toward behavioral commitment and ecological action. Thus, ecological awareness functions as the link between the communicative process of Green Dakwah and its ecological outcomes, rather than merely representing an individual psychological condition. Environmental knowledge does not necessarily lead directly to pro-environmental behavior because the relationship is mediated by attitudes and behavioral intentions (Liu et al., 2020). Similarly, values influence ecological behavior, but conflicting values can create a discrepancy between willingness to act and actual environmental practice (Tolppanen & Kang, 2021). These findings explain the value–action gap, in which individuals may recognize environmental problems and even endorse ecological values without consistently translating them into behavior. In the context of boarding school, internalization therefore becomes critical. Islamic ecological values must move from externally communicated teachings toward personally accepted meanings and repeated practices. When this

process is reinforced through education, role modeling, habituation, interpersonal interaction, institutional rules, and direct ecological experience, individual awareness can gradually develop into pro-environmental behavior and eventually into collective ecological culture.

Previous studies provide important empirical foundations for this framework. Anabarja and Mubah (2021), through a conceptual-descriptive analysis of Islamic environmentalism and eco-boarding school initiatives in Indonesia, showed that sustainable development principles can be integrated with Islamic values through boarding school curricula and educational activities. Their study established the institutional potential of *eco-pesantren*, but concentrated primarily on the integration of sustainability principles rather than the communication process through which those principles become internalized behavior. Liu et al. (2020), using a nationally representative survey of 2,824 respondents and structural equation modeling, found that environmental knowledge did not directly predict pro-environmental behavior; its influence was fully mediated by environmental attitudes and behavioral intentions. This finding is important for the present study because it demonstrates empirically that knowledge transmission alone is insufficient to generate ecological practice. Tolppanen and Kang (2021), using questionnaire measures and carbon-footprint assessments among 207 pre-service teachers, similarly demonstrated that combinations of values influenced environmental attitudes and carbon footprints and that conflicting values could prevent willingness to act from becoming actual behavior. Together, these studies support the need to examine the transformation and internalization mechanisms that connect ecological knowledge and values with practice.

Research within Islamic and communication contexts further demonstrates the importance of social and institutional mechanisms. Arofah et al. (2025) employed textual analysis and in-depth interviews with social media managers of EcoDeen Indonesia and Kader Hijau Muhammadiyah to investigate mediatized eco-religious movements. They found that digital platforms facilitate the negotiation of Islamic identity and environmentalism through visibility, networking, and mobilization, indicating that religious environmental messages are shaped through communication processes rather than theological content alone. Khoirurrijal et al. (2025), using an exploratory sequential mixed-methods design in two Indonesian *eco-pesantren*, found high ecological awareness among students but only a weak relationship between religiosity and ecological awareness ($r = .178, p < .05$). Their findings confirm that religiosity can provide an ethical foundation but does not automatically generate strong ecological awareness or behavior without adequate ecological literacy and institutional practices. Adzillah et al. (2025), through a qualitative phenomenological study involving 14 participants, semi-structured interviews, participatory observation, and document analysis, found that formal cleanliness regulations did not automatically become ecological behavior. Students' ecological awareness developed through layered processes involving personal considerations, peer-based collective responsibility, and the religious interpretation of cleanliness as *amanah*, *adab*, and *khalifah*. Tian et al. (2025) further examined interpersonal environmental communication through three cross-sectional and longitudinal studies involving adolescents and adults and found that interpersonal environmental communication had robust and sustained positive effects on pro-environmental behavior across different groups. These findings collectively indicate that ecological behavior emerges through interaction among knowledge, religious meaning, communication, social relationships, institutional settings, and repeated experience rather than through a single causal factor.

Despite these advances, important theoretical and empirical gaps remain. Theoretically, Islamic ecotheology studies have largely concentrated on the normative relationship between God, humanity, and nature, while environmental-behavior research has focused on knowledge, attitudes, values, intentions, and behavioral outcomes. Eco-pesantren studies have primarily examined curricula, environmental programs, religiosity, institutional policies, and educational practices, whereas communication studies have emphasized interpersonal or digital mechanisms. These research streams therefore remain insufficiently integrated into a framework capable of explaining how Islamic ecological values are constructed as dakwah messages, communicated and negotiated within a religious institution, internalized by santri, and transformed into repeated ecological praxis and institutional culture. Empirically, previous studies reveal persistent discrepancies between religiosity and ecological awareness, between knowledge and behavior, and between formal institutional rules and everyday practices. Existing studies also provide limited explanation of how these gaps operate through the combined processes of religious communication, role modeling, habituation, participation, and institutional reinforcement within a specific boarding school environment. Consequently, the central gap is not merely the limited number of studies on Islam and environmental sustainability, but the absence of an integrative communication framework explaining the transition from theological value to ecological consciousness and from ecological consciousness to sustained praxis.

This study addresses these limitations by proposing an Integrative-Transformative Green Dakwah framework in which Islamic ecotheology functions as the value foundation, transformative *dakwah* establishes the orientation toward individual and social change, participatory communication provides the mechanism of dialogue and engagement, and ecological-awareness theory explains the transition from knowledge and values toward intention and behavior. Conceptually, the framework proposes a transformation pathway from Islamic ecotheological values → ecological dakwah communication → dialogical participation and meaning-making → value internalization → ecological awareness → ecological praxis → institutional ecological culture. This contribution extends existing scholarship by linking theological, communicative, behavioral, and institutional dimensions within a single analytical framework. Accordingly, Green Dakwah is positioned not simply as environmental preaching but as a sustained process through which Islamic ecological values are communicated, experienced, practiced, institutionalized, and reproduced within the everyday life of the boarding school.

METHODS

This study employed a mixed-methods approach with a sequential exploratory design (Qual → Quan). The design was selected because the research problem required an in-depth exploration of the meanings, experiences, values, communication processes, and ecological practices within the boarding school, followed by quantitative measurement of *santri* ecological awareness. The qualitative phase was conducted first to examine the construction and praxis of Islamic ecotheology-based *dakwah* communication. Its findings were subsequently used to refine the conceptual indicators and develop the quantitative instrument. The quantitative phase then provided empirical measurement of ecological awareness, while the findings from both phases were integrated to reconstruct an integrative-transformative Green Dakwah paradigm.

The study was conducted at Daarut Tauhiid Boarding School, Bandung, Indonesia, from August 1, 2025, to July 30, 2026. The site was selected because its educational environment



integrates religious *dakwah*, character formation, daily habituation, institutional culture, and environmental activities, providing an appropriate setting for examining how Islamic ecological values are communicated, internalized, and translated into ecological practices.

Participants were selected according to the requirements of each research phase. In the qualitative phase, informants were selected using purposive sampling based on their knowledge, experience, institutional position, and involvement in *dakwah* communication and environmental activities. Informants included boarding school leaders and administrators, *ustadz/da'i*, educators, environmental program managers, and *santri* involved in Green Dakwah practices. The number of informants was determined by the adequacy and depth of information obtained during fieldwork. In the quantitative phase, the study population comprised 1,570 *santri*. The minimum sample size was calculated using the Slovin formula with a 5% margin of error, resulting in a minimum requirement of 319 respondents. Because the population consisted of different educational groups, proportionate stratified random sampling was used to maintain representation across the population strata. During data collection, 335 respondents ultimately participated and were included in the quantitative analysis, exceeding the calculated minimum sample requirement.

Qualitative participants were recruited purposively based on their direct involvement in *dakwah* and environmental activities, with data collection continuing until recurring information was sufficient to represent the main themes. The quantitative sample was considered adequate because the final number of respondents exceeded the minimum calculated requirement and maintained proportional representation across population strata.

Qualitative data were collected through observation, in-depth interviews, and documentation. Observation was used to examine *dakwah* communication, learning activities, role modeling, habituation, and ecological practices in the boarding school environment. In-depth interviews explored participants' perceptions, experiences, interpretations, communication strategies, and processes of internalizing Islamic ecotheological values. Documentation was used to complement these data through institutional records, environmental programs, learning materials, policies, archives, and other relevant documents. In the qualitative phase, the researcher served as the primary instrument, supported by interview, observation, and documentation guides. Quantitative data were collected using a Likert-scale questionnaire developed from theoretical constructs of ecological awareness and findings from the qualitative phase. The instrument measured the epistemological, methodological, and praxis dimensions of ecological awareness. Before its use in the main survey, the questionnaire was subjected to validity and reliability testing to ensure that the items appropriately and consistently measured the intended constructs.

Qualitative data were analyzed through data condensation, data display, conclusion drawing, and verification. The analysis focused on identifying patterns and themes concerning Islamic ecotheology, ecological *dakwah* messages, communication strategies, value internalization, and ecological praxis. Qualitative trustworthiness was strengthened through source, technique, and time triangulation as well as member checking. The qualitative findings were then used to support the development and interpretation of the quantitative phase. Quantitative data from the 335 respondents were checked, coded, tabulated, and analyzed using descriptive statistics to identify the level and pattern of ecological awareness across the measured dimensions. The qualitative and quantitative findings were subsequently integrated by examining convergence, relationships, and differences between the two datasets. The reconstruction process began by identifying key qualitative themes related to Islamic ecotheological values, *dakwah* communication practices, value

internalization, and ecological praxis. These themes were then connected with quantitative findings on ecological awareness across epistemological, methodological, and praxis dimensions. The integration of both findings provided the empirical foundation for reconstructing Green Dakwah as a transformative process linking Islamic values, communication mechanisms, ecological awareness, and ecological practices.

The questionnaire was evaluated to ensure that its indicators appropriately represented the measured dimensions and provided consistent responses. Mixed-methods integration was conducted by comparing qualitative themes with quantitative patterns across the epistemological, methodological, and praxis dimensions, with areas of convergence and divergence used to support interpretation and reconstruction of the Green Dakwah paradigm.

Ethical principles were maintained throughout the study through voluntary participation, appropriate participant information, and protection of confidentiality during data collection and reporting. Additional consideration was given to participants requiring consent or protection appropriate to their age and status.

RESULTS AND DISCUSSION

Results

Construction and Praxis of Islamic Ecotheology-Based Green Dakwah

The qualitative findings demonstrate that ecological *dakwah* at Daarut Tauhiid Boarding School is constructed through the integration of Islamic theological values, institutional culture, communication practices, and everyday ecological activities. The principal theological foundations comprise *tawhid*, *khalifah*, *amanah*, *mizan*, *rahmah*, and the prohibitions of *fasad* and *israf*. These values position environmental stewardship not merely as a matter of cleanliness or institutional discipline but as part of Muslim religious responsibility. *Tawhid* establishes the spiritual relationship between God, human beings, and creation; *khalifah* and *amanah* define human responsibility for the Earth; *mizan* emphasizes ecological balance; *rahmah* establishes an ethic of care; and the prohibitions of *fasad* and *israf* provide ethical boundaries against environmental destruction and excessive consumption.

These theological values are translated into concrete ecological messages through the institutional culture of Daarut Tauhiid, particularly the BR-3T principle—Bersih, Rapi, Tertib, Teratur, dan Terpelihara (Clean, Neat, Orderly, Organized, and Well-Maintained). Ecological messages are communicated not only through religious lectures and formal instruction but also through interpersonal mentoring, role modeling, visual and digital media, environmental regulations, habituation, and direct ecological practices. Leadership, ustadz, mentors, environmental program managers, and santri constitute an interconnected communication network. The role of institutional figures was particularly important because ecological values were strengthened through direct examples and daily practices. Rather than functioning only as sources of religious instruction, leaders and educators became models through which ecological responsibility was communicated and internalized by santri. This orientation reflects the transformative character of *dakwah* at Daarut Tauhiid, where religious communication is directed toward behavioral change. As stated by one of the pesantren leaders:



“Dakwah in Daarut Tauhiid is not only about making people knowledgeable in religion, but also about encouraging them to become better in their everyday lives.” (Pesantren administrator interview, 2025).

The empirical findings indicate that the effectiveness of this communication system depends strongly on the interaction between religious meaning and lived experience. Ecological values become more tangible when santri encounter them through cleaning routines, waste management, resource conservation, environmental maintenance, greening activities, and collective work. This process of value internalization was reflected in the experiences of santri, who perceived environmental activities as part of their daily religious and social practices. One santri explained:

“Environmental activities such as BR-3T collective cleaning activities and waste management have made us accustomed to caring for the surrounding environment.” (Santri interview, 2026).

This statement illustrates that Green Dakwah operates through experiential and participatory processes, where ecological values are reinforced through repeated practices and collective involvement. Thus, environmental responsibility is gradually transformed from religious understanding into everyday ecological behavior.

The communication process begins with Islamic theological values that are translated into ecological messages. These messages are then developed into understanding through religious instruction and reinforced by role modeling and direct experience. Repeated exposure to these practices encourages habituation and greater participation, which gradually contributes to the formation of ecological behavior. Supporting conditions were evaluated very positively, with an overall mean of 4.68. The strongest perceived support was a clean and comfortable boarding school environment ($M = 4.83$), followed by role modeling from *ustadz*, administrators, and leaders ($M = 4.76$). Islamic teachings on environmental protection scored 4.67, religious responsibility 4.61, and environmental activities that encouraged habituation 4.55.

Nevertheless, implementation barriers remained evident. The overall barrier score was 3.67, indicating that the transformation process had not been completed uniformly among all *santri*. The strongest challenge was the continued dominance of verbal environmental preaching ($M = 3.79$), followed by ecological awareness that had not fully developed from personal motivation ($M = 3.78$) and an ecological culture that had not yet become habitual for all *santri* ($M = 3.76$). These findings suggest that although institutional support for Green Dakwah is strong, some ecological behavior still depends on regulations, supervision, peer influence, available facilities, and the immediate boarding school environment.

Ecological Awareness of Santri

The quantitative findings reported in the study were based on 335 respondents, consisting of 189 female respondents (56.4%) and 146 male respondents (43.6%). Respondents represented different educational and institutional groups, with junior secondary school students comprising 38.2%, STAI students 26.9%, *Santri Karya*/foundation members 19.1%, and senior secondary students 15.5%. This distribution provides evidence from different educational and experiential levels within the Daarut Tauhiid environment.

The overall pattern shows high to very high ecological awareness, although the three dimensions differed substantially.

Table 1

Descriptive Summary of Santri Ecological Awareness across Epistemological, Methodological, and Praxis Dimensions

Dimension	Mean	Category	Highest Indicator	Lowest Indicator
Epistemological	4.65	Very high	Environmental protection as part of Islamic teachings (4.78)	Understanding <i>khalifah fil ardh</i> as ecological responsibility (4.47)
Methodological	4.37	Very high	Participation in BR-3T and collective environmental work (4.48)	Maintaining environmentally responsible behavior outside the boarding school (4.22)
Praxis	4.04	High	Active involvement in ecological activities (4.51)	Daily cleanliness and waste-management habits (3.61)

The epistemological dimension ($M = 4.65$) was the strongest dimension. The highest indicator was the understanding that protecting and preserving the environment forms part of Islamic teachings ($M = 4.78$), followed by the perception of environmental stewardship as an act of worship ($M = 4.77$). The concept of *khalifah fil ardh* obtained the lowest score within this dimension ($M = 4.47$), although it remained within the very high category. Consistently, 82.5% of respondents strongly agreed and 16.7% agreed that environmental protection is part of Islamic teaching, while 89.3% strongly agreed and 10.7% agreed that ecological responsibility constitutes a form of worship. These findings indicate that the religious framing of environmental responsibility has been strongly established at the cognitive and spiritual levels.

The methodological dimension ($M = 4.37$) also reached the very high category. Participation in BR-3T and collective environmental activities received the highest score ($M = 4.48$), followed by ecological mentoring that encouraged environmentally responsible behavior without constant supervision ($M = 4.44$). Routine activities scored 4.39, while practical environmental activities scored 4.32. The lowest methodological indicator concerned maintaining environmentally responsible behavior beyond the boarding school environment ($M = 4.22$). At the individual-item level, 51.3% of respondents strongly agreed and 41.8% agreed that role modeling by *ustadz* and boarding school leaders increased their environmental concern. Similarly, 57.9% strongly agreed and 40.6% agreed that Green Dakwah activities enhanced their ecological awareness, while 46% strongly agreed and 49% agreed that Green Dakwah methods contributed to behavioral change.

The praxis dimension ($M = 4.04$) remained high but was substantially lower than the two preceding dimensions. Active participation in BR-3T and collective environmental work obtained the highest score ($M = 4.51$), followed by responsibility for environmental cleanliness and preservation ($M = 4.34$). However, independently maintaining environmentally responsible behavior without supervision declined to 3.98, consistent ecological behavior outside the boarding school to 3.74, and routine cleanliness and waste-management behavior to 3.61. Although 54% strongly agreed and 43.3% agreed that they actively participated in BR-3T activities, the lower behavioral means demonstrate that participation in institutionally structured activities is stronger than autonomous ecological behavior.

The Knowledge–Action Gap

Comparison across the three dimensions revealed a systematic decline from understanding to action. The difference between epistemological and methodological scores was 0.28, between methodological and praxis scores 0.33, and between epistemological understanding and ecological praxis 0.61. Thus, the principal empirical problem is not insufficient ecological knowledge but incomplete transformation of knowledge into consistent behavior.

This pattern was also visible in the contrast between collective and individual ecological practices. Participation in organized ecological activities was high ($M = 4.51$), whereas environmental behavior without supervision ($M = 3.98$), consistency outside the boarding school ($M = 3.74$), and routine waste-management behavior ($M = 3.61$) were lower. The results therefore indicate a knowledge–action gap: Islamic ecological values are strongly understood and positively accepted, but their internalization into autonomous and context-independent behavior remains incomplete.

Reconstruction of the Green Dakwah Paradigm

Table 2

Integration of Qualitative and Quantitative Findings

Qualitative finding	Quantitative pattern	Integration
Strong religious ecological meaning	Epistemological $M = 4.65$	Convergence
Role modeling, habituation, and participation	Methodological $M = 4.37$	Convergence
Behavior remains partly dependent on supervision and institutional context	Praxis $M = 4.04$; outside boarding school $M = 3.74$	Complementarity / discrepancy

The integration of qualitative and quantitative findings resulted in the reconstruction of an Integrative-Transformative Green Dakwah paradigm. The reconstruction was derived from the empirical patterns identified in both research phases. The qualitative findings revealed that Islamic ecological values were communicated through education, role modeling, habituation, dialogue, and participation, while the quantitative findings demonstrated strong ecological understanding but relatively lower ecological praxis among santri. These findings indicate that the transformation process requires an intermediate mechanism connecting religious values and ecological action. Therefore, the reconstructed paradigm positions value communication, internalization, and participation as essential processes linking Islamic ecotheology with ecological praxis.

The integrated findings showed convergence between the qualitative evidence of strong religious meaning, role modeling, habituation, and participation and the quantitative pattern of high ecological understanding but comparatively lower ecological praxis. This convergence indicates that Green Dakwah has effectively strengthened ecological awareness, although the transformation into autonomous and consistent ecological behavior remains incomplete.

The process begins with Islamic ecotheology as the foundational value system, which is translated into ecological *dakwah* messages. These messages are then communicated through dialogical and participatory approaches and reinforced through education, role modeling, and habituation. This process facilitates value internalization, which subsequently strengthens ecological awareness. Ecological awareness is then expressed through ecological praxis, and when these practices are sustained and supported institutionally, they contribute to the formation of an ecological culture within the boarding school. The model is not interpreted as a rigid linear



sequence. Rather, ecological culture provides feedback to subsequent processes of communication and socialization, making Green Dakwah cyclical and sustainable. The reconstructed paradigm therefore shifts *dakwah* from an informative to a transformative orientation, from monological to dialogical-participatory communication, from positioning *santri* as recipients to positioning them as ecological agents, and from emphasizing knowledge to emphasizing internalization, praxis, and institutional culture.

Discussion

Islamic Ecotheology as a Religious Foundation for Ecological Responsibility

The very high epistemological score indicates that Islamic ecological meanings have become firmly embedded in the religious understanding of *santri*. Environmental protection is not perceived as an external secular agenda but as an expression of Islamic responsibility. This finding corresponds with Islamic environmental ethics, which positions stewardship as an ethical and religious obligation grounded in the relationship between God, humanity, and the natural world (Gada, 2024). Similarly, Widiastuty and Anwar (2025) emphasize the relevance of *tawhid*, *khalifah*, *amanah*, and ecological balance for the development of environmental ethics within contemporary Islamic thought.

The contribution of the present findings lies in demonstrating how these theological concepts function communicatively. Ecotheology provides the normative foundation, but religious values acquire transformative capacity only when they are translated into understandable messages and connected to concrete ecological experiences. In this sense, Green Dakwah extends Islamic ecotheology from a primarily normative discourse toward an operational communication paradigm. The finding that environmental stewardship as an Islamic teaching ($M = 4.78$) and as an act of worship ($M = 4.77$) scored higher than understanding of *khalifah fil ardh* ($M = 4.47$) is also meaningful. It suggests that ecological teachings are particularly effective when communicated through religious meanings that are immediately relevant to everyday worship and morality, whereas more abstract theological concepts may require further contextual interpretation. This interpretation is consistent with Rohmah et al. (2026), who position *khalifah fil ardh* as an ecological mandate requiring concrete ethical implications rather than merely conceptual recognition.

From Message Transmission to Participatory and Experiential Dakwah

A second major finding concerns the importance of how ecological messages are communicated. Green Dakwah at Daarut Tauhiid operates through an ecology of communication involving verbal teaching, interpersonal interaction, leadership example, institutional regulations, visual and digital media, collective routines, and direct experience. The high methodological score ($M = 4.37$) and particularly the strong score for BR-3T participation ($M = 4.48$) indicate that ecological awareness develops more effectively when communication is combined with participation and experience.

This supports Nurajijah's (2026) finding that environmental awareness is strengthened when learning incorporates reflection and direct engagement with the environment rather than relying exclusively on information transmission. It also supports Sulaeman and Amin's (2026) eco-spiritual educational approach, in which environmental literacy requires the integration of meaning, experience, reflection, and religious consciousness. Consequently, the findings challenge a purely transmission-oriented model of *dakwah*. A sermon can establish normative understanding, but behavioral transformation requires an environment in which the message is repeatedly experienced.

Role modeling is particularly important in this process. The high evaluation of leadership example ($M = 4.76$ as a supporting factor) suggests that consistency between religious messages and the behavior of *kiai*, *ustadz*, mentors, and administrators gives ecological messages social credibility. In the boarding school context, authority is therefore not merely a channel for transmitting information; it becomes a mechanism for demonstrating what religious ecological responsibility looks like in practice. This finding has an important theoretical implication: communication through action (*dakwah bil-hal*) should be regarded as a central rather than supplementary component of ecological *dakwah*.

The results also indicate that vertical and horizontal communication perform different but complementary functions. Religious authority provides theological legitimacy and normative direction, while peer communication and collective participation create spaces for ownership, reinforcement, and innovation. This provides the basis for shifting *santri* from passive audiences toward ecological actors. Kadir (2025) similarly argues that boarding school can function as centers of sustainable community empowerment when community members are developed as participants rather than merely program beneficiaries.

The Knowledge–Action Gap and the Limits of Institutional Compliance

The most important critical finding is the 0.61-point gap between epistemological understanding and ecological praxis. The data show that *santri* know and accept Islamic ecological principles at a very high level, yet their independent and consistent practices are weaker. This pattern supports Nurmu'minah et al. (2023), who found that environmental knowledge and cognitive competence do not automatically translate into environmental attitudes and behavior. Knowledge requires mediating processes involving values, attitudes, experience, social norms, and behavioral reinforcement.

Given the descriptive and cross-sectional nature of the quantitative analysis, the 0.61-point difference should be interpreted as a descriptive knowledge–action discrepancy rather than a statistically established gap. The pattern nevertheless indicates that ecological understanding was consistently higher than autonomous ecological practice among respondents.

The specific pattern observed in this study provides further insight. The strongest praxis indicator was participation in organized ecological activities ($M = 4.51$), whereas maintaining behavior without supervision ($M = 3.98$) and outside the boarding school ($M = 3.74$) were lower. This suggests that environmental behavior is partly sustained by the institutional environment. Rules, schedules, supervision, peer expectations, facilities, and collective routines provide an ecological scaffold that makes environmentally responsible behavior easier to perform. When that scaffold is weakened outside the boarding school, behavioral consistency declines.

This distinction is theoretically important because institutional compliance should not automatically be equated with complete value internalization. Compliance represents an important stage of behavioral formation, but the intended outcome of transformative Green Dakwah is autonomous ecological responsibility. In other words, the key question is whether *santri* maintain environmentally responsible behavior because the institution requires it or because ecological responsibility has become part of their moral and religious identity.

This finding is compatible with Mahfud's (2025) discussion of environmentally responsible *santri* habitus, in which ecological dispositions are formed through repeated spiritual discipline and everyday practice. It is also consistent with Billah and Alwiyah (2026), who argue that a sustainable green boarding school culture requires the internalization of ecotheology through educational



management rather than isolated environmental programs. The present study advances these arguments by empirically identifying the point at which the transformation weakens: from high religious understanding and effective institutional methods toward autonomous and transferable ecological practice.

Green Dakwah as an Integrative-Transformative Communication Paradigm

The reconstructed model responds directly to this gap. Rather than assuming that theological knowledge automatically produces ecological behavior, the model explains transformation through a sequence of communicative and social mechanisms. Islamic ecotheology supplies the value foundation; ecological *dakwah* messages contextualize those values; participatory communication provides space for meaning-making; education and role modeling reinforce understanding; habituation converts values into repeated practice; internalization transforms external norms into personal orientations; ecological awareness provides cognitive, affective, and moral commitment; praxis manifests this commitment behaviorally; and institutional culture stabilizes and reproduces the practice.

This reconstruction represents more than the introduction of environmental content into conventional *dakwah*. Its theoretical significance lies in changing the unit of analysis from message transmission to value transformation. The effectiveness of *dakwah* is consequently not measured solely by whether an ecological message has been delivered or understood, but by whether it progresses through internalization and participation toward sustainable praxis.

The model also identifies a seven-stage transformation mechanism—awareness, understanding, internalization, habituation, participation, action, and transformation. These stages connect cognitive, affective, conative, social, and institutional dimensions rather than treating ecological awareness as an individual psychological condition. This is important because the empirical findings demonstrate that ecological transformation occurs within a social system. Individual behavior is shaped by leadership, peers, rules, facilities, educational programs, and institutional culture. Green Dakwah should therefore be conceptualized simultaneously as religious communication, environmental education, character formation, and institutional cultural transformation.

These stages represent an interpretive synthesis of the qualitative themes and quantitative patterns rather than a statistically tested causal sequence. Their empirical basis lies in the recurring processes of religious understanding, role modeling, habituation, participation, and ecological practice identified across both phases of the study.

Theoretical and Practical Contributions

The principal theoretical contribution of this study is the formulation of Green Dakwah as an integrative communication paradigm that explains the transformation process from Islamic ecological values to ecological praxis. Beyond the specific context of Daarut Tauhiid Islamic Boarding School, this framework contributes to broader discussions on religious environmentalism by demonstrating how faith-based values can function as communicative resources for fostering ecological awareness and sustainable practices. By linking Islamic ecotheology as the value foundation, *dakwah* communication as the transformation mechanism, ecological awareness as the internalization process, and ecological praxis as the behavioral outcome, this framework extends previous discussions on eco-pesantren and environmental *dakwah* that have largely focused on ecological programs or message delivery. The paradigm also offers a transferable analytical perspective for understanding how religious institutions can transform environmental teachings into



collective ecological practices across diverse Muslim educational and social contexts. This framework expands *dakwah* communication scholarship beyond anthropocentric religious communication by incorporating responsibility for the relationship among human beings, God, and nature. It also provides an empirical explanation for why theological understanding does not automatically produce environmental behavior, thereby positioning internalization, participation, habituation, and institutional reinforcement as essential mediating mechanisms.

The practical contribution lies in shifting boarding school environmental programs from isolated activities toward an institution-wide ecological system. Green Dakwah should be incorporated into formal teaching, religious mentoring, the hidden curriculum, leadership practices, daily routines, infrastructure, environmental management, institutional evaluation, and community engagement. Ecological programs should also provide greater opportunities for *santri* to identify environmental problems, formulate solutions, lead activities, and evaluate their outcomes. Such participation is necessary to transform institutionally driven behavior into ecological ownership and personal responsibility. In this sense, the boarding school can develop from an internal educational setting into a wider center of ecological learning and community empowerment.

Limitations and Future Research

The chapters on which this article is based do not present a separate formal limitations section. However, several limitations are evident from the research design and findings. First, the empirical context is concentrated in a single boarding school with a distinctive institutional culture, particularly Manajemen Qalbu and BR-3T; therefore, the transferability of the reconstructed paradigm to boarding school with different traditions requires further examination. Second, the quantitative findings are primarily descriptive and based on respondents' self-reported perceptions and behavior, so they cannot establish causal relationships between Green Dakwah and ecological behavior. Third, the lower score for behavior outside the boarding school indicates the need to examine whether ecological practices persist after *santri* leave the institutional environment.

Future studies should therefore test the Green Dakwah framework across multiple boarding school and different Islamic educational settings, employ longitudinal designs to examine behavioral persistence, and combine self-reported measures with direct behavioral observations. Further research may also examine the roles of leadership style, peer norms, environmental facilities, digital *dakwah*, and *santri* participation as mediating or moderating factors between Islamic ecotheological understanding and ecological praxis. Such studies would help determine which components of the reconstructed model are institution-specific and which can be generalized as broader mechanisms of Islamic ecological communication.

CONCLUSION

This study demonstrates that ecological *dakwah* at Daarut Tauhiid Boarding School is constructed through the integration of Islamic ecotheological values, particularly *tawhid*, *khalifah*, *amanah*, *mizan*, *rahmah*, and *maslahah*, with religious communication, role modeling, habituation, dialogue, participation, and direct ecological practices. These values are translated into everyday environmental responsibilities, including cleanliness, waste management, resource conservation, environmental maintenance, and the prevention of ecological damage. The findings indicate that Green Dakwah gradually transforms *santri* from passive recipients of religious messages into participants and ecological actors. Quantitatively, the epistemological dimension achieved the highest mean ($M = 4.65$), followed by the methodological dimension ($M = 4.37$) and the praxis



dimension ($M = 4.04$). This pattern confirms that Islamic ecological understanding and communication mechanisms are strongly established, while the principal challenge lies in converting such understanding into autonomous, consistent, and sustainable ecological behavior.

The findings have both theoretical and practical implications. Theoretically, they demonstrate that Islamic ecotheology alone does not automatically produce ecological praxis; theological values require communication, meaning-making, internalization, habituation, participation, and institutional reinforcement before they become sustained behavior. Green Dakwah therefore extends the function of *dakwah* from religious message transmission toward a participatory and transformative communication process that connects faith with ecological responsibility. Practically, boarding school should strengthen ecological values not only through religious instruction but also through consistent leadership example, mentoring, daily routines, environmental programs, participatory activities, and institutional evaluation. Particular attention should be directed toward strengthening independent ecological behavior beyond supervision and ensuring that environmentally responsible practices continue outside the boarding school environment.

The principal scientific contribution of this study is the reconstruction of an Integrative-Transformative Green Dakwah paradigm that systematically connects Islamic ecotheology as the normative foundation, participatory communication as the transformation mechanism, value internalization and ecological awareness as intermediate processes, and ecological praxis and institutional culture as transformational outcomes. Accordingly, Green Dakwah is conceptualized not merely as *dakwah* containing environmental messages, but as a paradigm that transforms Islamic values into ecological consciousness, ecological consciousness into sustained action, and repeated ecological action into a collective ecological culture. This reconstruction broadens the scope of *dakwah* communication scholarship by positioning ecological responsibility as an integral manifestation of Islamic religiosity.

Future research should examine the applicability of this paradigm across boarding school with different institutional, educational, cultural, and geographical characteristics. Comparative and longitudinal studies are particularly needed to determine whether ecological behavior remains consistent over time and when *santri* move beyond the institutional environment. Further studies should also develop and validate Islamic value-based ecological awareness instruments and empirically test the relationships among ecotheological understanding, participatory communication, internalization, ecological behavior, and institutional culture. Such research would strengthen the empirical foundation and generalizability of the Green Dakwah paradigm.

REFERENCES

- Adzillah, S. N. I., Ratnasari, D., Jannata, T., Adzibah, S. I., & Dwinandita, A. S. (2025). Eco-pesantren and Islamic environmental education: A phenomenological study in boarding cultures. *Indonesian Journal of Action Research*, 4(2), 79–91. <https://doi.org/10.14421/ijar.2025.42-07>
- Anabarja, S., & Mubah, A. S. (2021). The Islamic environmentalism in eco-pesantren initiatives: Integrating the sustainable development values in Islamic boarding school. *Journal of International Studies on Energy Affairs*, 2(1), 75–90. <https://doi.org/10.51413/jisea.Vol2.Iss1.2021.75-90>
- Andy, A. M. (2025). Konstruksi pengetahuan ekologis: Pendekatan epistemologi Arne Naess dalam memahami hubungan manusia dengan alam. *Jurnal Ekologi, Masyarakat dan Sains*, 6(2),



- Arofah, K., Dewayanti, A., Eliyanah, E., & Rakhmani, I. (2025). Mediatized eco-religious movements in Indonesia: Negotiating religiosity and environmentalism in digital Islam. *Inter-Asia Cultural Studies*, 26(3), 530–551. <https://doi.org/10.1080/14649373.2025.2489888>
- Billah, A. A., & Alwiyah, L. (2026). Internalisasi ekoteologi melalui manajemen pendidikan untuk membangun kultur Green Pesantren berkelanjutan di Pondok Pesantren Al-Kahfi Cirebon. *TANZHIMUNA: Jurnal Manajemen Pendidikan Islam*, 6(1), 108–119.
- Fanan, M. A., & Fauzi, F. (2024). Mainstreaming Islamic ecotheology through participatory action research: Restoring santri's environmental awareness in an Indonesian pesantren. *Tafkir: Interdisciplinary Journal of Islamic Education*, 5(4), 804–816.
- Fikri, I., & Colombijn, F. (2021). Is Green Islam going to support environmentalism in Indonesia? *Anthropology Today*, 37(2), 15–18.
- Gada, M. Y. (2024). *Islam and environmental ethics*. Cambridge University Press.
- Intergovernmental Panel on Climate Change. (2023). *Climate change 2023: Synthesis report: Summary for policymakers*. Intergovernmental Panel on Climate Change.
- Kadir, A. (2025). Peran pesantren sebagai pusat pemberdayaan masyarakat dalam mendukung pembangunan berkelanjutan (SDGs) di Indonesia. *AL-AMIYAH: Jurnal Ilmiah Multidisiplin*, 2(3), 275–288.
- Kafabihi, A., Saihu, M., & Nurbaiti, N. (2026). Epistemologi etika ekologis dalam Tafsir Al-Mishbah karya Muhammad Quraish Shihab: Epistemology of ecological ethics in Tafsir Al-Mishbah by Muhammad Quraish Shihab. *Ulumul Qur'an: Jurnal Kajian Ilmu Al-Qur'an dan Tafsir*, 6(1), 132–151.
- Karagiannis, E. (2022). *Why Islamists go green: Politics, religion and the environment*. Edinburgh University Press.
- Khoirurrijal, M. F., Ala, A., & Huda, H. (2025). Integrating religious and environmental education in Indonesian eco-pesantren: Does student religiosity enhance environmental awareness? *Environmental Education Research*. <https://doi.org/10.1080/13504622.2025.2600602>
- Liu, P., Teng, M., & Han, C. (2020). How does environmental knowledge translate into pro-environmental behaviors? The mediating role of environmental attitudes and behavioral intentions. *Science of the Total Environment*, 728, 138126. <https://doi.org/10.1016/j.scitotenv.2020.138126>
- Mahfud, M. (2025). Habitus santri ramah lingkungan: Etnografi pembentukan kesadaran ekologis melalui disiplin spiritual di Pesantren Hidayatul Muhtadiin. *Jurnal Studi Pendidikan Agama Islam*, 1(1), 64–83.
- Mawardi, M., & Samidjo, G. S. (2021). *Teologi lingkungan: Etika pengelolaan lingkungan perspektif Islam*. UMY Press.
- Miller, J. A. (2022). Demoralizing: Integrating J. D. Peters' communication “chasm” with Niklas Luhmann's ecological communication to analyze climate change mitigation inaction. *Kybernetes*, 51(5), 1775–1799.
- Mohamed, N. Y. (2025). Towards a contemporary Islamic environmental ethics: The nature and moral status of animals. *Journal of Islamic Ethics*, 9(1–2), 135–168.
- Nur, A., Husin, H. B., & Yasir, M. (2025). Qur'anic ecotheology and the ethics of forest protection in Indonesia. *Jurnal Studi Ilmu-Ilmu Al-Qur'an dan Hadis*, 26(2), 351–382.
- Nurajijah, S. (2026). Penguatan kesadaran ekologis siswa melalui pembelajaran reflektif berbasis lingkungan. *Jurnal Terapan Pendidikan Dasar dan Menengah*, 6(2), 489–504.
- Nurmu'minah, S. H., Ramadhan, B., & Nuranti, G. (2023). Korelasi pengetahuan dan keterampilan kognitif dengan sikap dan perilaku literasi lingkungan. *Jurnal Bioeducation*, 11(1), 10–15.
- Rakhmat, A. (2022). Islamic ecotheology: Understanding the concept of khalifah and the ethical responsibility of the environment. *Academic Journal of Islamic Principles and Philosophy*. <https://doi.org/10.22515/ajipp.v3i1.5104>

- Rohmah, A. N., Nabil, M., & Aulazain, M. F. (2026). Manifestasi *khalifah fi al-ardh*: Tinjauan ekoteologis terhadap Sunnah Nabawiyah. *FIQHUL HADITS: Jurnal Kajian Hadits dan Hukum Islam*, 4(1), 24–40.
- Servaes, L., & Servaes, J. (2021). Participatory communication for social change. In S. R. Melkote & A. Singhal (Eds.), *Handbook of communication and development* (pp. 120–141). Edward Elgar Publishing.
- Smith, J. D., Adam, R., & Maarif, S. (2024). How social movements use religious creativity to address environmental crises in Indonesian local communities. *Global Environmental Change*, 84, 102772.
- Sulaeman, S., & Amin, M. (2026). *Ekospiritualitas dalam pendidikan agama Islam: Integrasi meaningful, mindful, dan joyful learning untuk literasi lingkungan peserta didik*. PT Sonpedia Publishing Indonesia.
- Tian, J., Gong, Y., Zeng, C., Tian, X., Li, Y., Zheng, X., & Sun, Y. (2025). Interpersonal environmental communication promotes pro-environmental behaviors: A systematic examination across time and groups. *Journal of Environmental Management*, 389, 126191. <https://doi.org/10.1016/j.jenvman.2025.126191>
- Tolppanen, S., & Kang, J. (2021). The effect of values on carbon footprint and attitudes towards pro-environmental behavior. *Journal of Cleaner Production*, 282, 124524. <https://doi.org/10.1016/j.jclepro.2020.124524>
- Widiastuty, H., & Anwar, K. (2025). Ekoteologi Islam: Prinsip konservasi lingkungan dalam Al-Qur'an dan Hadits serta implikasi kebijakannya. *Risâlah: Jurnal Pendidikan dan Studi Islam*, 11(1), 465–480.