



Transformation of Ecology-Based Islamic Education in Pesantren Communication Aalysis in Internalizing Environmental Values

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ABSTRACT

This study investigates how internal communication patterns in Eco Pesantren Daarut Tauhiid Bandung a nationally recognized Adiwiyata-awarded institution shapes the transformation of Islamic ecological doctrine into embodied social practice. Employing communication ethnography (three weeks of participant observation, in-depth interviews with ten purposively selected informants across hierarchical positions, and systematic analysis of twenty-three institutional documents), data were analyzed through Hymes' SPEAKING model, reflective thematic analysis, and Rogers' diffusion of innovation framework. Three dominant communication patterns emerge: (1) religious hierarchical communication, through which the kiai's spiritual authority legitimizes ecological values via theological framing, generating compliance but producing structural dependency; (2) horizontal collaborative communication, which encourages participatory innovation but remains vulnerable to voice suppression; and (3) ritualization of environmental communication, which integrates ecological messages into Islamic rituals and daily practice but risks ritual hollowing when meaning renewal is absent. The study also maps specific forms of institutional resistance theological skepticism, selective compliance, and instrumentalization of eco-religious framing alongside the structural conditions that produce communicative failures. These findings demonstrate that sustained behavioral change is highest under conditions of integrated spiritual legitimacy, participatory ownership, and ongoing meaning renewal. Theoretically, the study contributes a Triadic Model of Islamic Ecological Education Communication Spiritual Legitimacy, Social Participation, and Value Ritualization that extends organizational communication theory to faith-based hierarchical contexts. Practically, the model offers replicable guidelines for green pesantren program design, emphasizing distribution of communicative legitimacy, institutionalization of participatory forums, and systematic renewal of ecological ritual meaning.

Keyword: Green Pesantren, Communication Ethnography; Ecological Value Internalization

INTRODUCTION

The global ecological crisis manifested in climate change, biodiversity loss, and accelerating environmental degradation has prompted urgent calls for value-rooted responses that go beyond technocratic fixes. These conditions are most acutely felt in rural and peri-urban communities precisely where the majority of Indonesia's approximately 36,000 *pesantren* are concentrated. The global ecological crisis has prompted urgent calls for value-rooted responses that transcend technocratic fixes. Religious institutions, with their deep moral authority and community embeddedness, are increasingly recognized as indispensable agents in cultivating the ethical foundations of ecological responsibility. Jenkins, Berry, and Kreider demonstrate that religion functions not merely as a cultural supplement to environmental advocacy but as a primary locus of moral formation, collective identity, and behavioral motivation in the face of ecological crisis.¹ Kearns similarly argues that faith-based environmentalism represents one of the most organizationally robust and motivationally deep currents in contemporary ecological movements.²

¹ W. Jenkins dkk., "Religion and climate change," *Annual Review of Environment and Resources* 44 (2019): 85–108, <https://doi.org/10.1146/annurev-environ-102017-025855>.

² L. Kearns, "Faith-based environmentalism," *Globalizations* 17, no. 6 (2020): 1004–18, <https://doi.org/10.1080/14747731.2020.1779773>.

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Within the Indonesian context, *pesantren* stands as a uniquely positioned institution: simultaneously a site of spiritual formation, cultural reproduction, and social transformation. With millions of *santri* across the archipelago disproportionately concentrated in communities most vulnerable to ecological degradation, *pesantren's* potential to become engines of ecological consciousness formation at the grassroots level is both immense and insufficiently actualized.³ Islam offers a theologically rich framework for engaging the environmental crisis. Abdelzaher and Abdelzaher demonstrate that Islamic ecological principles *khalifah* (stewardship), *amanah* (trust), *mizan* (balance) carry significant potential for building environmental ethics not merely as institutional programs but as lived moral commitments.⁴

Previous scholarship has examined green *pesantren* from multiple angles. Purnomo et al. examine the prophetic approach in environmental education and community empowerment in sustainable *pesantren*.⁵ Karman, Anwar, and Hakim demonstrate how Qur'anic learning grounded in Islamic eco-theology can inspire environmentally conscious communities.⁶ Kasanah, As Sajjad, and Rohmatullah analyzed management of Islamic boarding schools responsive to environmental sustainability.⁷ Yet these studies collectively share a significant limitation: they describe *what* values *pesantren* should promote, or catalogue *which* programs have been implemented, without examining *how* ecological values are actually communicated, contested, negotiated, and internalized in the daily social reality of *pesantren* life. Moser notes that communication research on sustainability must account not only for effective message delivery but for the complex social processes through which meanings are collectively constructed and contested.⁸

Research on the communicative dynamics of green *pesantren* remains limited across three dimensions. First, the knowledge-awareness dimension: Nurkhin et al. demonstrated that green-labelled programs increase student environmental knowledge scores, but did not investigate the organizational communication channels through which that knowledge is transmitted, nor why it fails to translate consistently into behavior.⁹ Second, the organizational communication dimension: Suparna et al. analyzed communication patterns in Green School Bali's MBKM program, but their institutional context a progressive private school, not a *pesantren* means that the hierarchical, authority-centred, and ritual-saturated communicative culture distinctive to Islamic boarding schools remains unexamined.¹⁰ Third, the value-transmission dimension:

³ R. W. Hefner, *Islamic education and social change* (Princeton University Press, 2019), <https://doi.org/10.1515/9780691194325>.

⁴ D. Abdelzaher dan A. Abdelzaher, "Beyond environmental regulations: Exploring the potential of 'eco-Islam' in boosting environmental ethics within SMEs in Muslim societies," *Journal of Business Research* 124 (2021): 655–64, <https://doi.org/10.1016/j.jbusres.2020.09.031>.

⁵ Joko Purnomo dkk., "Prophetic Approach in Environmental Education and Community Empowerment: a Case Study of Sustainable Pesantren Development," *Revista de Gestao Social e Ambiental* 18, no. 8 (2024): 1–26, <https://doi.org/10.24857/rgsa.v18n8-047>.

⁶ Karman dkk., "the Qur'Anic Learning Based on Islamic Eco-Theology At Pesantren," *Jurnal Pendidikan Islam* 9, no. 2 (2023): 169–86, <https://doi.org/10.15575/jpi.v9i2.24933>.

⁷ Nur Khasanah. Winda Realista, "Transformation of Islamic education in the digital age: Challenges and opportunities," *Tadiba Islamika: Journal of Holistic Education* 4, no. Table 10 (2024): 4–6, <https://doi.org/10.28918/tadibia.v4i2.8964>.

⁸ S. C. Moser, "Reflections on climate change communication research," *WIREs Climate Change* 11, no. 1 (2020), <https://doi.org/10.1002/wcc.631>.

⁹ A. Nurkhin dkk., "Green-Pesantren and Environmental Knowledge and Awareness: Case Study at Pondok Pesantren As Salafy Al Asror Semarang," *IOP Conference Series: Earth and Environmental Science* 1248, no. 1 (2023), <https://doi.org/10.1088/1755-1315/1248/1/012003>.

¹⁰ Putu Suparna dkk., "Pola Komunikasi Organisasi Dalam Implementasi Program Merdeka Belajar Kampus Merdeka (MBKM) Dan Praktek Kerja Lapangan (PKL) Di Green School Bali," *Scientific Journal of Reflection: Economic, Accounting, Management and Business* 7, no. 3 (2024): 868–83, <https://doi.org/10.37481/sjr.v7i3.910>.

Nurdin has documented that *pesantren* communication cultures shape member values through mechanisms of authority and habituation, yet this body of work does not address the specific challenge of ecological value internalization.¹¹ Ramadaniar made the most direct attempt to address this gap, finding that eco-religious communication plays a critical role in building ecological value consciousness; however, that study remained descriptive, did not map communicative failures and resistances, and did not produce an analytical model applicable beyond a single site.¹²

The study's novelty operates across three dimensions. Methodologically, it employs communication ethnography SPEAKING model observation, semi-structured interviews, document analysis rather than the surveys or program evaluations characteristic of prior green *pesantren* research, accessing the communicative texture of daily institutional life including informal interactions and resistances invisible to other methods. Analytically, it attends specifically to communicative failures and resistances theological skepticism, selective compliance, instrumentalization of eco-religious framing that normative literature systematically underreports. Theoretically, it produces a Triadic Model Spiritual Legitimacy, Social Participation, Value Ritualization that extends Lewis's organizational communication theory to faith-based hierarchical institutions, positioning communication theory, Islamic education theory, and environmental communication in systematic dialogue.

The study integrates three theoretical traditions. Islamic education theory grounds the normative goal: *tarbiyah* (Alkouatli), *ta'dib* (Halstead), and the formation of *insan kamil* (Tafsir) together establish ecological responsibility as constitutive of Islamic educational purpose rather than supplementary to it. Islamic eco-theology supplies the moral content: the principles of *khalifah* (stewardship), *amanah* (trusteeship), *mizan* (balance), and prohibition of *fasad* (Foltz; Khan) provide the theological vocabulary that communicative actors deploy to frame environmental practice as religious obligation. Communication theory explains the social processes through which these normative goals become embodied practice: Lewis's organizational communication theory illuminates how vertical, horizontal, and networked structures shape institutional transformation; Hymes' SPEAKING model provides systematic tools for analyzing communicative events in their full situational complexity; and Rogers' diffusion of innovation framework maps how ecological practices move through social systems through communicative stages of knowledge, persuasion, decision, implementation, and confirmation. The three theoretical traditions are applied sequentially rather than simultaneously: Islamic education and eco-theology inform interpretation of what is at stake in the *pesantren* context, while the SPEAKING model and diffusion framework guide systematic data coding and analysis.

METHOD

This study employs a qualitative research design grounded in communication ethnography, following Hymes' approach to studying communication as culturally embedded practice. Saville-Troike emphasizes that ethnographic analysis of communication attends to the full social context within which communication events are embedded, revealing how communicative practices reproduce, challenge, and transform institutional cultures.¹³ The study was conducted at Eco Pesantren Daarut Tauhiid Bandung, selected through purposive criterion sampling: its Adiwiyata-awarded green *pesantren* status; complex hierarchical structure enabling

¹¹ Ali Nurdin, "Tradisi Komunikasi di Pesantren," *KARSA: Jurnal Sosial dan Budaya Keislaman* 23, no. 2 (2016): 276, <https://doi.org/10.19105/karsa.v23i2.727>.

¹² Ramadaniar, "Eco-religious communication in pesantren," *Bricolage Journal*, 2026.

¹³ M. Saville-Troike, *The ethnography of communication* (Wiley-Blackwell, 2021), <https://doi.org/10.1002/9781118786093>.

multi-level communication analysis; longitudinal program implementation; and diversity of environmental program components (waste management, hydroponics, energy conservation, water management). The persistence of communicative failures even in this exemplary context constitutes stronger evidence of structural tensions than equivalent findings from poorly resourced institutions.

Data were collected through three methods. First, three weeks of participant observation (averaging 8–10 hours per day), documented in structured daily field notes organized around SPEAKING model categories, covering daily activities, religious rituals (Friday sermon, halaqah), environmental program sessions (Green Friday, unit coordination meetings), and informal social interactions. Formal sessions were audio-recorded with consent; reflective memos distinguished observational data from interpretation. The observer effect was addressed through extended residence enabling normalization of the researcher's presence, explicit behavioral monitoring, and systematic comparison across formal and informal settings. The three-week observation period was supplemented by document analysis of longitudinal program records spanning 2021–2023, providing a broader temporal perspective to compensate for the limited scope of fieldwork. Second, in-depth semi-structured interviews were conducted with ten informants purposively selected to capture the full hierarchical range, temporal variation in experience, and at least one critical outsider perspective. Table A below presents the anonymized informant profile.

Table 1. Anonymized informant profile

Code	Role	Experience	Position	Institution Tenure
KI-1	Kiai	>20 years	Institutional leader	Formal & informal observation, interview
US-1	Senior Ustadz	8 years	Teaching & program oversight	Interview, observation
US-2	Senior Ustadz	6 years	Environmental unit liaison	Interview, observation
PM-1	Program Manager	5 years	Waste management unit	Interview, document review
PM-2	Program Manager	3 years	Hydroponics & energy unit	Interview, observation
SA-1	Santri (early stage)	<1 year	Program participant	Interview, observation
SA-2	Santri (early stage)	<1 year	Program participant	Interview, observation
SA-3	Santri (advanced)	4 years	Peer accountability role	Interview, observation
SA-4	Santri (advanced)	3 years	Unit coordinator	Interview, observation
FS-1	Former Santri	Left after 2 years	Critical external perspective	Interview

Third, systematic document analysis was conducted on twenty-three institutional documents, including program design documents, organizational circulars, WhatsApp group

archives from three environmental units (2021–2023), two annual evaluation reports, twelve months of pesantren bulletins, and Adiwiyata certification documentation. Documents were coded using Bowen's protocol for communicative intent, framing strategies, and program adaptation evidence. Data saturation was confirmed through thematic redundancy across the final two interviews. Data analysis proceeded in three sequential stages to prevent conceptual overlap. Stage one: open-coding of field notes and transcripts using SPEAKING model categories to identify structural features of communicative events. Stage two: mapping coded events against Rogers' five diffusion stages (knowledge, persuasion, decision, implementation, confirmation) to analyze adoption dynamics. Stage three: reflective thematic analysis attending to dominant patterns, deviant cases, and communicative breakdowns. Trustworthiness was established through triangulation across observation, interview, and document sources; member-checking at mid-fieldwork and post-analysis points with three key informants; peer debriefing with an Islamic education specialist; and an audit trail research log documenting all analytical decisions. Ethical procedures included verbal informed consent from all informants explaining voluntary participation, right to withdrawal, research-only data use, and anonymization; institutional consent from pesantren leadership; role-designation-only identification of informants; and password-protected data storage

RESULT AND DISCUSSION

Ecological Transformation of Islamic Education: From Doctrine to Praxis

The ecological transformation of Islamic education at Eco Pesantren Daarut Tauhiid Bandung represents a fundamental reorientation of educational purpose from transmission of religious knowledge to formation of ecological consciousness as an integral dimension of Muslim identity. This transformation occurs across three analytically distinct but empirically interwoven dimensions, as summarized in table.

Table 1. Dimensions of Ecological Transformation in Islamic Education at Daarut Tauhiid

Dimension	Description	Primary Communication Vehicle	Observable Practice	Limitations Observed
Cognitive	Acquisition of Islamic-grounded environmental knowledge	Lectures, halaqah, Qur'anic study	Santri articulate khalifah fil ardh in environmental discussions	Knowledge does not automatically translate to behavior change
Affective	Development of emotional-spiritual care for natural world	Kiai exemplary behavior, ritual integration	Santri express sense of moral obligation toward environmental stewardship	Affective engagement varies significantly by individual and cohort
Behavioral	Habitual ecological practices integrated into daily routines	Habituation, peer accountability, reward systems	Waste sorting, water conservation, composting participation	Behavioral compliance declines without ongoing communicative reinforcement

This three-dimensional framework aligns with Sahin's argument that critical Islamic education generates not passive recipients of doctrine but active moral agents capable of translating faith commitments into transformative social practice.¹⁴ However, the field data reveal a crucial qualification: the movement from cognitive understanding to affective concern to behavioral practice is neither automatic nor unidirectional. A senior santri (SA-3) interviewed during observation articulated this tension directly:

"Kami tahu bahwa menjaga lingkungan itu wajib, itu sudah diajarkan kiai. Tapi jujur, tidak semua teman-teman melakukannya setiap hari. Ada yang paham tapi tetap buang sampah sembarangan kalau tidak ada yang lihat." (We know that protecting the environment is obligatory, the kiai has taught us this. But honestly, not all our friends practice it every day. Some understand but still litter when no one is watching.)

This acknowledgment of the gap between ecological knowledge and ecological behavior resonates with Kollmuss and Agyeman's research on the mind-behavior gap in environmental education, which finds that knowledge acquisition is a necessary but insufficient condition for sustained behavioral change.¹⁵ Bamberg further demonstrates that bridging this gap requires not only cognitive and affective engagement but communicative environments that generate consistent social norms and peer accountability.¹⁶

Religious Hierarchical Communication: Legitimation, Authority, and Its Limits

The first and most foundational communication pattern is religious hierarchical communication a form of vertical, authority-mediated communication that channels ecological values through the established spiritual hierarchy of the *pesantren*. Sudarsono and Muaddin highlight the central leadership role of the *kiai* in green *pesantren* in forming a moderate society for environmental conservation.¹⁷ At Eco Pesantren Daarut Tauhiid, this hierarchical communication pattern functions as the primary mechanism of theological legitimation, ensuring that the ecological program is perceived not as a secular imposition but as an authentic expression of Islamic responsibility. During the observed Friday sermon, the kiai explicitly connected waste reduction practices to the Qur'anic injunction against *israf* (extravagance), drawing on classical tafsir to demonstrate that the obligation to minimize waste is not an environmental slogan but a divine command. The ustadz interviewed immediately after the sermon (US-1) confirmed the impact:

"Kalau kiai yang bicara langsung, efeknya berbeda. Santri tidak bisa abaikan. Hari itu, tempat sampah penuh dengan pilahan yang benar lebih baik dari biasanya." (When the kiai speaks directly, the effect is different. The santri cannot ignore it. That day, the waste bins were properly sorted better than usual.)

Ibrahim, Mulyo, and Fatimah demonstrate that the Qur'an and Hadith provide a rich and authoritative basis for environmental stewardship.¹⁸ The *kiai* at Eco Pesantren Daarut Tauhiid

¹⁴ L. Busetto dkk., "How to use and assess qualitative research methods," *BMC Health Services Research* 20 (2020): 1–10, <https://doi.org/10.1186/s12913-020-05266-8>.

¹⁵ A. Kollmuss dan J. Agyeman, "Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior?," *Environmental Education Research* 8, no. 3 (2002): 239–60, <https://doi.org/10.1080/13504620220145401>.

¹⁶ Sebastian Bamberg, "Changing environmentally harmful behaviors: A stage model of self-regulated behavioral change," *Journal of Environmental Psychology* 34 (Juni 2013): 151–59, <https://doi.org/10.1016/j.jenvp.2013.01.002>.

¹⁷ Sudarsono dan Akhmad Muaddin, "Green Pesantren Leadership: Shaping a Moderate Society for Environmental Conservation," *Idarah (Jurnal Pendidikan dan Kependidikan)* 8, no. 1 (2024): 1–12, <https://doi.org/10.47766/idarrah.v8i1.1381>.

¹⁸ Rustam Ibrahim dkk., "Konsep Ramah Lingkungan dalam Perspektif Alquran, Hadis, dan Kitab Kuning di Pesantren," *Madania: Jurnal Kajian Keislaman* 21, no. 2 (2017): 209, <https://doi.org/10.29300/madania.v21i2.578>.

systematically employs this textual authority, connecting specific environmental practices to core Islamic theological concepts: *shadaqah jariyah* (ongoing charity) frames tree planting; *amanah* frames water conservation; *la israf* frames waste reduction. However, field observation and interviews also revealed the structural fragility of this communication pattern. When the *kiai* was absent during an inter-pesantren leadership conference observed during fieldwork, environmental compliance visibly declined. A program manager (PM-1) described this dependency candidly:

"Program kami sangat bergantung pada kewibawaan kiai. Kalau beliau sedang tidak ada atau tidak menyebut soal lingkungan, beberapa ustadz juga jadi tidak aktif mendorong. Seolah-olah legitimasinya hilang sementara." (Our program relies heavily on the kiai's authority. When the kiai is absent or does not mention environmental matters, some ustadz also become less active in encouraging it. It is as if the legitimacy temporarily disappears.)

This finding reveals what Lewis terms *authority dependency* a structural vulnerability in organizations where institutional legitimacy is concentrated in a single charismatic leader rather than distributed across systems and norms.¹⁹ Shah's research on authority and leadership in Islamic education confirms this dynamic, noting that the *karisma kiai* can be both the most powerful driver of institutional change and its most significant point of vulnerability.²⁰ Nurdin's research on communication traditions in Islamic boarding schools identifies similar dynamics, noting that *pesantren* communication cultures shape member values through mechanisms that are simultaneously authoritative and formative.²¹

Horizontal Collaborative Communication: Participatory Innovation and Its Frictions

The second dominant communication pattern is horizontal collaborative communication a more egalitarian and participatory form of interaction within and between environmental program units. Hisyam and Noviar demonstrate that bidirectional communication between managers, teachers, students, and external parties is essential in the successful implementation of *pesantren* program strategies.²² At Eco Pesantren Daarut Tauhid, this pattern is most visible in the operational environmental units: the waste management team, the hydroponics group, and the energy conservation unit. Observation of the waste management team's weekly coordination meeting revealed a communicative culture markedly different from the formal hierarchy of the broader *pesantren*. Senior and junior santri, a young ustadz, and the program coordinator (PM-1) engaged in genuine dialogical exchange. A junior santri's suggestion (SA-1) to redesign the placement of sorting bins was debated seriously and ultimately adopted:

"Di sini, tidak ada yang terlalu junior untuk punya ide bagus. Kalau usulmu masuk akal dan bisa dicoba, kita coba. Nanti kita evaluasi bersama." (Here, no one is too junior to have a good idea. If your proposal makes sense and can be tried, we try it. Then we evaluate together.) [PM-1]

Nurkhin et al. note that direct environmental education and routine ecologically oriented activities, facilitated through collaborative communication, significantly increase student environmental awareness and participation.²³ Lisnawati et al. highlight the critical importance of

¹⁹ L. K. Lewis, *Organizational change and communication* (Routledge, 2020), <https://doi.org/10.4324/9780429490125>.

²⁰ Saeeda Shah, "Educational perspective leadership : an Islamic," *British Educational Research Journal* 32, no. 3 (2013): 363–85, <https://doi.org/10.2307/30000004>.

²¹ Ali Nurdin, "Tradisi Komunikasi Di Pesantren," *KARSA: Jurnal Sosial dan Budaya Keislaman* 23, no. 2 (2016): 276, <https://doi.org/10.19105/karsa.v23i2.727>.

²² Radithya Zahid Hisyam dan Tri Nur Aini Noviar, "Komunikasi Door-to-Door Sebagai Upaya Pengembangan Program One Pesantren One Product," *Bandung Conference Series: Public Relations* 5, no. 1 (2025): 311–18, <https://doi.org/10.29313/bcspr.v5i1.18313>.

²³ Nurkhin dkk., "Green-Pesantren and Environmental Knowledge and Awareness: Case Study at Pondok Pesantren As Salafy Al Asror Semarang."

communication between educators, students, and broader stakeholders in ensuring participation in eco-friendly initiatives.²⁴ Yet horizontal communication also generates its own forms of friction. Not all ustadz are equally committed to or competent in facilitating the participatory communication that ecological programs require. A santri (SA-4) described a recurring pattern of frustration:

"Ada beberapa ustadz yang kalau kita usul, langsung bilang 'sudah, ikuti saja aturannya.' Mereka tidak mau dengar ide baru. Akhirnya, anak-anak yang punya kreativitas jadi malas usul lagi." (There are some ustadz who, when we propose something, immediately say 'just follow the rules.' They do not want to hear new ideas. Eventually, santri who have creative ideas stop proposing them.)

This pattern what organizational communication scholars term *voice suppression* represents a significant constraint on the innovative potential of horizontal communication in the *pesantren* context. Wenger and Wenger-Trayner's research on communities of practice demonstrates that effective collaborative learning requires not only structural space for participation but a communicative culture in which voice is actively solicited and genuinely considered.²⁵ A further friction point emerged in the relationship between horizontal and vertical communication channels: on two occasions observed during fieldwork, innovative solutions developed collaboratively in program units were blocked at the level of senior management, not on grounds of feasibility or resource constraints but because they were perceived as departures from established *pesantren* practice.

Communication Ritualization: Sacred Practice and the Risk of Empty Ritual

The third and most culturally distinctive communication pattern is the ritualization of environmental communication the systematic integration of ecological values and messages into the religious rituals and daily practices of *pesantren* life. Karman, Anwar, and Hakim demonstrate that eco-theology-based Qur'anic learning can inspire environmentally conscious communities through the integration of religious practice and environmental consciousness.²⁶ Purnomo et al. underscore that the prophetic approach to environmental education integrates spiritual and transcendent elements that catalyze both societal change and individual character development.²⁷

Observation of the Green Friday ritual at Eco Pesantren Daarut Tauhiid provided direct evidence of the communicative power of ritualization. The weekly collective tree-planting, cleanup, and environmental awareness session framed explicitly as communal worship generated visible enthusiasm and collective engagement. Participants (SA-3, SA-4) consistently reported experiencing the ritual as spiritually meaningful rather than merely programmatic:

"Green Friday itu beda rasanya dari piket biasa. Kita melakukannya bersama-sama, dengan niat ibadah. Ada rasa tenang dan bangga." (Green Friday feels different from regular cleaning duties. We do it together, with the intention of worship. There is a sense of calm and pride.)

Hjarvard's research on the mediatization of religion demonstrates that religious rituals do not merely express pre-existing values but actively constitute them through repeated embodied

²⁴ Lisnawati dkk., "Komunikasi Organisasi di Bina Madani Islamic Boarding School," *Karimah Taubid* 3, no. 8 (2024): 8836–49, <https://doi.org/10.30997/karimahtauhid.v3i8.14546>.

²⁵ Ashrafal Alam dan Etienne Nel, "Migration, emerging multiculturalism and planning in rural and small town Aotearoa New Zealand," *Australian Planner* 58, no. 3–4 (2022): 132–42, <https://doi.org/10.1080/07293682.2023.2169724>.

²⁶ Rosihon Anwar Karman dan Lukman Hakim, "The Qur'anic Learning Based on Islamic Eco-Theology at Pesantren," *Jurnal Pendidikan Islam* 9, no. 2 (2023): 169–86, <https://doi.org/10.15575/jpi.v9i2.24933>.

²⁷ Purnomo dkk., "Prophetic Approach in Environmental Education and Community Empowerment: a Case Study of Sustainable Pesantren Development."

performance.²⁸ Haluza-DeLay's cross-cultural research similarly finds that religious communities that successfully integrate ecological concern into their ritual life develop more durable and intrinsically motivated environmental behaviors than those that treat environmental programs as supplementary to core religious identity.²⁹ Nisbet's research on environmental communication framing demonstrates that ecological messages are most effectively internalized when they connect to pre-existing value frameworks and identity commitments.³⁰ Corner et al. confirm that behavior change communication is most effective when it engages values that are already central to people's sense of identity.³¹ However, the field data also revealed a significant risk: the routinization of ecological rituals can produce what Hjarvard terms *ritual hollowing* a process whereby repeated performance becomes mechanical rather than meaningful. An experienced *ustadz* (US-2) voiced this concern directly:

"Saya khawatir Green Friday sudah mulai jadi rutinitas tanpa jiwa. Santri ikut karena absen, bukan karena niat. Kita perlu cara untuk memperbaharui maknanya setiap minggu." (I am worried that Green Friday has begun to become a soulless routine. Santri participate because of attendance records, not out of conviction. We need a way to renew its meaning every week.) [US-2]

Taylor's research on religion and ecological ethics suggests that sustainable faith-based environmentalism requires ongoing theological reflection that refreshes the meaning of ecological practices, preventing their reduction to behavioral routines.³²

Communication Strategy and the Architecture of Ecological Value Internalization

The three communication patterns identified above are embedded within a deliberate communication strategy that moves ecological values through three progressive stages of internalization. Table 3 maps this architecture.

Table 3. Stages of ecological value internalization through communication

Stage	Communication Strategy	Primary Activities	Internalization Outcome	Communicative Challenges Observed
Cognitive (Knowing)	Multi-channel socialization	Lectures, Qur'anic study, announcements, bulletins	Environmental knowledge grounded in Islamic theology	Information overload; inconsistent message across <i>ustadz</i>
Affective (Caring)	Participatory training and experiential learning	Workshops, field practice, hydroponics, composting	Emotional-spiritual engagement	Variable <i>ustadz</i> facilitation quality; some resist experiential methods

²⁸ Stig Hjarvard, "Three forms of mediatized religion: Changing the public face of religion," *Gosudarstvo, Religii, Tserkov' v Rossii i za Rubezhom/State, Religion and Church in Russia and Worldwide* 38, no. 2 (2020): 41–75, <https://doi.org/10.22394/2073-7203-2020-38-2-41-75>.

²⁹ R. Haluza-DeLay, "Religion and environmental responsibility," *American Behavioral Scientist* 64, no. 8 (2020): 1–15, <https://doi.org/10.1177/0002764220919141>.

³⁰ M. C. Nisbet, "Framing climate change communication," dalam *Oxford Research Encyclopedia*, preprint, 2019, <https://doi.org/10.1093/acrefore/9780190228620.013.412>.

³¹ A. Corner, "Climate change communication and behavior change," *Nature Climate Change* 10 (2020): 304–8, <https://doi.org/10.1038/s41558-020-0824-2>.

³² B. Taylor, "Religion, nature, and environmental ethics," dalam *Oxford Research Encyclopedia of Religion*, preprint, 2021, <https://doi.org/10.1093/acrefore/9780199389414.013.615>.

			with ecological responsibility		
Behavioral (Practicing)	Habituation and ritual integration	Daily routines, Green Friday, reward systems	Sustained ecological practices as expressions of Islamic identity	Compliance without reinforcement; hollowing risk	drops ritual

Gunawan et al. identify that effective communication strategies in green pesantren include socialization, training, and habituation of environmentally friendly behavior through routine activities and direct education.³³ Muhardi et al. note that internal initiatives and the creativity of managers are significant factors supporting program success.³⁴ The training dimension reflects findings that educational programs on sustainable practices significantly improve both environmental awareness and student competencies. At Eco Pesantren Daarut Tauhiid, training in waste management, water conservation, energy efficiency, and organic farming is designed to be experiential and participatory.³⁵ However, observation revealed a structural constraint: some senior ustadz resist experiential training methodologies, preferring traditional didactic instruction. One ustadz (US-2) articulated this resistance in terms of pedagogical conviction:

"Metode ceramah sudah terbukti berhasil selama ratusan ratusan tahun di pesantren. Kenapa harus diganti dengan 'learning by doing' yang belum tentu cocok untuk semua materi?" (The lecture method has been proven successful for hundreds of years in pesantren. Why replace it with 'learning by doing' that may not be suitable for all content?)

This resistance represents not mere conservatism but a genuine epistemological commitment to traditional pedagogical forms. Alkouatli's research on *tarbiyah* pedagogy suggests that Islamic tradition itself contains resources for this integration, insofar as the classical method of *kiai* exemplary modeling is itself a form of experiential learning mediated by relationship and observation.³⁶ Nurkhin et al. emphasize the centrality of habituation in building authentic environmental culture, noting that behavioral compliance is highest in the immediate aftermath of *kiai*-endorsed programs and declines significantly during periods of reduced leadership engagement.³⁷ This finding is consistent with Steg and Vlek's research on the relationship between values, norms, and environmental behavior, which identifies that sustained behavioral change requires not only initial value activation but ongoing normative reinforcement through social interaction.³⁸

Critical Analysis: Resistance, Failure, and the Structural Tensions of Ecological Transformation

³³ Adi Gunawan dkk., "Asistensi 'Green Education From' Pesantren," *ALKHIDMAH: Jurnal Pengabdian dan Kemitraan Masyarakat* 2, no. 3 (2024): 09–17, <https://doi.org/10.59246/alkhidmah.v2i3.953>.

³⁴ Muhardi Muhardi dkk., "Building Pesantren Entrepreneurship Through Internal Initiative and External Development," *Ta dib : Jurnal Pendidikan Islam* 10, no. 1 (2021): 97–110, <https://doi.org/10.29313/tipi.v10i1.8133>.

³⁵ Yuni Lestari et al., "Pemanfaatan Lahan Sempit dengan Hidroponik Dutch Bucket System," *Soeropati* 2, no. 1 (2019): 71–86.

³⁶ C. Alkouatli, "Pedagogy of tarbiyah and moral development," *Journal of Muslim Minority Affairs* 40, no. 1 (2020): 1–15, <https://doi.org/10.1080/13602004.2020.1737410>.

³⁷ A. Nurkhin dkk., "Green-pesantren and environmental knowledge and awareness: Case study at Pondok Pesantren As Salafy Al Asror Semarang," *IOP Conference Series: Earth and Environmental Science* 1248, no. 1 (2023), <https://doi.org/10.1088/1755-1315/1248/1/012003>.

³⁸ Nayab Riaz, "Values and norms as drivers of pro-environmental behavior in tourists: A sustainable tourism perspective," *Journal of Management Science (JMAS)* 8, no. 2 (2025): 494–503.

A commitment to thick description requires attending not only to the successes of communication at Eco Pesantren Daarut Tauhiid but to its failures, resistances, and unresolved tensions. Three forms of resistance were systematically documented. The most structurally significant form of resistance was theological skepticism about ecological relevance a pattern in which some senior community members questioned whether environmental programs represent a legitimate priority for an Islamic educational institution. One long-serving ustadz (US-1) articulated this position clearly during an informal conversation:

"Tugas utama pesantren adalah mencetak ulama yang faham ilmu agama. Kalau terlalu banyak waktu untuk program lingkungan, khawatir santri kurang dalam ilmu fiqh dan tafsir. Apakah ini memang prioritas pesantren?" (The main task of pesantren is to produce scholars who understand religious knowledge. If too much time is devoted to environmental programs, I worry santri will be weak in fiqh and Qur'anic interpretation. Is this really a pesantren priority?)

This resistance represents a genuine and historically grounded concern about institutional mission. Hefner's research on Islamic education and social change documents the historical tension between *pesantren's* role as transmitters of classical Islamic knowledge and their role as agents of social transformation a tension that requires ongoing communicative negotiation rather than mere assertion of compatibility.³⁹ A second significant form of resistance emerged at the level of student compliance. Field observation documented a pattern of selective participation: santri who participated enthusiastically in environmental activities during formal program sessions reverted to environmentally negligent behavior in informal contexts when sorting bins were not immediately proximate. A program coordinator (PM-1) who had been with the pesantren for five years described the evolution of their understanding:

"Awalnya, kami pikir ini masalah informasi santri tidak tahu aturannya. Lalu kami pikir masalah motivasi perlu lebih banyak dorongan. Sekarang kami sadar ini masalah budaya perubahan budaya butuh waktu bertahun-tahun, bukan bulan." (Initially, we thought this was an information problem santri did not know the rules. Then we thought it was a motivation problem more encouragement was needed. Now we realize it is a cultural problem cultural change takes years, not months.)

This sophisticated institutional self-reflection is consistent with Bamberg's finding that environmental behavioral change is fundamentally a cultural process operating on timescales that exceed most institutional program cycles.⁴⁰ Kollmuss and Agyeman's research on the mind-behavior gap confirms that the persistence of environmentally negligent behavior even among environmentally knowledgeable individuals reflects deeply habituated patterns of convenience and social norm.⁴¹ A third tension and perhaps the most theoretically significant emerges from the relationship between the authenticity and the instrumentalization of Islamic eco-theological framing. Field observation and interviews revealed instances in which some community members experienced ecological programs as primarily serving institutional reputation (Adiwiyata certification, green pesantren awards) rather than genuine theological commitment. One candid santri (SA-2) voiced this concern:

"Kadang saya merasa program lingkungan ini lebih untuk nama pesantren di luar daripada karena kita benar-benar percaya. Ceramah kiai memang bagus, tapi kalau setelahnya program dijalankan karena target sertifikasi, rasanya berbeda." (Sometimes I feel environmental programs are more for the pesantren's external reputation than because we genuinely believe in them. The kiai's lectures are indeed good, but if afterward the program is run because of certification targets, the feeling is different.)

³⁹ Hefner, *Islamic education and social change*.

⁴⁰ Bamberg, "Changing environmentally harmful behaviors: A stage model of self-regulated behavioral change."

⁴¹ Kollmuss dan Agyeman, "Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior?"

This observation captures a fundamental communicative dilemma in faith-based environmental programs: the risk that institutional incentives colonize the communicative space of theological meaning, transforming eco-religious communication from an authentic expression of values into an instrumental performance of values. Gade's comparative research on Muslim environmentalisms confirms that the most durable ecological transformations in Islamic communities are those in which environmental practice is genuinely constitutive of religious identity.⁴² Mandra and Ismail identified similar challenges in South Sulawesi eco-pesantren, including limited environmental awareness among some students and the need to strengthen teacher competence.⁴³

A Triadic Model of Communication for Ecological Islamic Education: Components, Interactions, and Critical Dialogue with Global Literature

Based on the empirical findings and their integration with the theoretical framework, this study proposes a triadic model of communication for ecological Islamic education. This model is both analytically descriptive mapping the communication patterns at Daarut Tauhiid and normatively prescriptive, offering a replicable framework for green pesantren implementation with honest attention to its structural vulnerabilities. The three pillars of the model are synergistically interrelated rather than independently operative: Spiritual Legitimacy enables and sustains Social Participation by providing a shared theological framework within which collaborative innovation is meaningful; Social Participation generates practical knowledge and adaptive solutions that enrich and give credibility to Spiritual Legitimacy; and Value Ritualization consolidates and deepens the internalization achieved through hierarchical and collaborative communication, embedding ecological values in the daily lived experience of the pesantren community.

The model also requires explicit attention to the structural tension between its three pillars. Spiritual Legitimacy is by definition hierarchical and authority-dependent; Social Participation requires egalitarian and participatory conditions; Value Ritualization requires both communal coordination (which implies hierarchy) and genuine meaning engagement (which requires personal agency). Managing these tensions requires what Lewis terms *communicative flexibility* the institutional capacity to move adaptively among different communication modes depending on the phase of the transformation process.⁴⁴

The model diverges significantly from models of environmental education that rely primarily on cognitive-scientific framing. Jenkins, Berry, and Kreider demonstrate that faith-based environmental engagement generates motivational resources meaning, identity, community, moral urgency that secular scientific communication cannot replicate.⁴⁵ The model diverges significantly from models of environmental education that rely primarily on cognitive-scientific framing. Jenkins, Berry, and Kreider demonstrate that faith-based environmental engagement generates motivational resources meaning, identity, community, moral urgency that secular scientific communication cannot replicate.⁴⁶ The triadic model operationalizes these theoretical insights by demonstrating the specific communicative mechanisms hierarchical legitimization, collaborative participation, and ritual integration through which faith-based

⁴² Taylor, "Religion, nature, and environmental ethics."

⁴³ Adam Gemar, "Parental Influence and Intergenerational Transmission of Religious Belief, Attitudes, and Practices: Recent Evidence from the United States," *Religions* 14, no. 11 (2023), <https://doi.org/10.3390/rel14111373>.

⁴⁴ Ibro Chekaraou dan Nana Aicha Goza, *Teachers Implementing an Educational Policy and Implications for Pupils' (Especially Girls') Access, Performance and Retention*, 15, no. 3 (2013): 169–85.

⁴⁵ Jenkins dkk., "Religion and climate change."

⁴⁶ Kearns, "Faith-based environmentalism."

motivational resources are generated and sustained in the specific cultural context of Indonesian pesantren. Haluza-DeLay's cross-cultural research confirms that the most durable faith-based ecological transformations are precisely those that achieve what the triadic model describes: the integration of spiritual authority, communal participation, and ritual embodiment.⁴⁷

The model extends and enriches Suparna et al.'s wheel communication model at Green School Bali,⁴⁸ which identifies information-flow patterns but does not address the theological dimension of legitimation or the ritual dimension of value embodiment. Badrun's emphasis on madrasah-based management's role in curriculum integration and stakeholder collaboration is consistent with the Social Participation pillar of the triadic model.⁴⁹

CONCLUSION

This study has revealed that the ecological transformation of Islamic education at Eco Pesantren Daarut Tauhiid Bandung is fundamentally a communicative achievement accomplished through three synergistic but tension-laden patterns: religious hierarchical communication, horizontal collaborative communication, and ritualization of environmental communication. These patterns work together to legitimate ecological values theologically, generate practical innovation participatorily, and internalize environmental responsibility as a dimension of Islamic identity but they do so imperfectly, incompletely, and in the face of genuine resistances that normative green pesantren literature has largely ignored. The central novelty of this study lies in two complementary contributions. First, it shifts the analytical lens from normative prescription to communicative mechanism, revealing how Islamic environmental doctrine is transformed from theological teaching into embodied social practice through the specific communicative culture of pesantren. Second, it maps the structural tensions, resistances, and communicative failures kiai authority dependency, voice suppression, ritual hollowing, theological skepticism, selective compliance, instrumentalization risk that complicate this transformation and reveal where institutional investment is most urgently needed.

Theoretically, the study contributes a Triadic Model of Communication for Ecological Islamic Education Spiritual Legitimacy, Social Participation, and Value Ritualization that extends and enriches existing organizational communication theory by demonstrating how hierarchical authority, participatory innovation, and ritual embodiment interact synergistically within faith-based institutional contexts. Practically, communication training for ustadz and program managers, the deliberate cultivation of horizontal communication spaces with genuine voice legitimacy, and the systematic renewal of ecological ritual meaning are identified as priority areas. This study is limited by its single-case design and the local specificity of Eco Pesantren Daarut Tauhiid's organizational culture as a nationally recognized institution, which may present conditions more favorable than those in less established institutions. Comparative research across traditional, semi-traditional, and modern pesantren implementing green programs would significantly extend the generalizability of the findings. Longitudinal research tracking the evolution of communication patterns across multiple program phases would reveal how the triadic model's tensions are managed over time. Mixed-methods research quantifying the

⁴⁷ Haluza-DeLay, "Religion and environmental responsibility."

⁴⁸ Putu Suparna dkk., "Pola Komunikasi Organisasi Dalam Implementasi Program Merdeka Belajar Kampus Merdeka (Mbkm) Dan Praktek Kerja Lapangan (Pkl) Di Green School Bali," *SCIENTIFIC JOURNAL OF REFLECTION: Economic, Accounting, Management and Business* 7, no. 3 (2024): 868–83, <https://doi.org/10.37481/sjr.v7i3.910>.

⁴⁹ Badrun, "Enhancing Islamic Education: The Role of Madrasah-Based Management in Islamic Boarding Schools," *AL-ISHLAH: Jurnal Pendidikan* 16, no. 2 (2024): 2772–80, <https://doi.org/10.35445/alishlah.v16i2.5153>.

relationship between specific communication patterns and ecological behavior outcomes would complement the interpretive depth of the ethnographic approach employed here.

In conclusion, the ecological transformation of pesantren is not primarily a technical or managerial problem but a communicative and cultural one. The pathway from Islamic ecological doctrine to sustainable environmental practice runs through the communicative culture of pesantren in all its complexity: through the authority of the kiai and its structural fragility, through the creativity of collaborative units and the frustrations of voice suppression, through the power of ritual to constitute ecological identity and the risk of ritual becoming empty routine. Attending honestly to this complexity is the necessary foundation for designing communication strategies that can sustain ecological transformation across the full arc of institutional change.

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