



## **The Role of Spiritual Leadership in Internalizing Environmental Values in Islamic Eco-Madrasah**

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### **Abstract**

Environmental education programs in faith-based schools have predominantly focused on measurable outcomes and behavioral impacts, overlooking the critical role of leadership in cultivating sustainable environmental culture. This study examines how spiritual leadership influences the internalization of environmental values within Islamic educational institutions. Using a qualitative multiple-case study approach, this research investigates the mechanisms of integration of environmental ethics across seven eco-certified madrasahs in Southeast Sulawesi, Indonesia. Data were collected through in-depth interviews with forty-two informants comprising school leaders, teachers, and students, complemented by document analysis and participatory observation. The study draws on Lickona's character education theory to examine the moral and spiritual dimensions of environmental leadership. Three critical mechanisms emerged. First, spiritual leaders catalyze voluntary environmental stewardship by modeling eco-conscious behaviors rooted in Islamic teachings, creating authentic commitment rather than compliance. Second, systematic cultivation of environmental care culture transforms isolated activities into sustained institutional practices through ritualized habits and shared values. Third, curricular integration strengthens ecological consciousness by embedding faith-based environmental ethics across subject areas. This study demonstrates how spiritual leadership frameworks effectively advance environmental education beyond instrumental approaches. The findings offer practical implications for reconceptualizing environmental programs as integral character formation in school curricula and certification frameworks, developing professional development programs cultivating spiritual-ecological leadership competencies, and designing implementation models prioritizing cultural embedding through ritualized practices, offering transferable insights for sustainable education policy in diverse cultural contexts.

**Keywords:** Eco-Green Madrasah, Environmental Education, Spiritual Leadership.

### **Abstrak**

*Program pendidikan lingkungan hidup di sekolah berbasis agama selama ini berfokus pada hasil terukur dan dampak perilaku, mengabaikan peran penting kepemimpinan dalam menumbuhkan budaya lingkungan yang berkelanjutan. Studi ini mengkaji bagaimana kepemimpinan spiritual memengaruhi internalisasi nilai-nilai lingkungan di lembaga pendidikan Islam. Dengan menggunakan*

pendekatan studi kasus ganda kualitatif, penelitian ini menyelidiki mekanisme integrasi etika lingkungan di tujuh madrasah bersertifikat ekologi di Sulawesi Tenggara, Indonesia. Data dikumpulkan melalui wawancara mendalam dengan empat puluh dua informan yang terdiri dari pimpinan sekolah, guru, dan siswa, dilengkapi analisis dokumen dan observasi partisipatif. Analisis mengacu pada teori pendidikan karakter Lickona untuk mengkaji dimensi moral-spiritual kepemimpinan lingkungan. Tiga mekanisme penting muncul. Pertama, pemimpin spiritual mengkatalisis pengelolaan lingkungan secara sukarela dengan mencontohkan perilaku sadar lingkungan yang berakar pada ajaran Islam, menciptakan komitmen autentik alih-alih kepatuhan. Kedua, penanaman budaya peduli lingkungan secara sistematis mengubah kegiatan terisolasi menjadi praktik kelembagaan berkelanjutan melalui kebiasaan ritual dan nilai bersama. Ketiga, integrasi kurikulum memperkuat kesadaran ekologis dengan menanamkan etika lingkungan berbasis agama di seluruh bidang studi. Studi ini menunjukkan bagaimana kerangka kepemimpinan spiritual secara efektif memajukan pendidikan lingkungan melampaui pendekatan instrumental. Temuan menawarkan implikasi praktis untuk merekonseptualisasikan program lingkungan sebagai pembentukan karakter integral dalam kurikulum dan kerangka sertifikasi, mengembangkan program pengembangan profesional yang menumbuhkan kompetensi kepemimpinan spiritual-ekologis, dan merancang model implementasi yang memprioritaskan penanaman budaya melalui praktik ritual, menawarkan wawasan untuk kebijakan pendidikan berkelanjutan dalam konteks budaya beragam.

**Kata Kunci:** Eco-Green Madrasah, Kepemimpinan Spiritual, Pendidikan Lingkungan.

## INTRODUCTION

Environmental degradation in educational settings presents a paradox particularly acute in faith-based institutions where environmental stewardship is deeply embedded in theological teachings (Hilal et al., 2025). While Islamic educational philosophy explicitly connects environmental care to spiritual practice, manifested in the prophetic tradition linking cleanliness to faith, implementation of environmental programs in Islamic schools often remains ceremonial rather than transformative (Ahi et al., 2024; Brooks & Ezzani, 2022; Nilan, 2021; Parker et al., 2018). National environmental education initiatives in faith-based schools have proliferated across developing nations, yet research reveals a troubling disconnect between programmatic participation and sustained behavioral change among school communities (Blegur et al., 2024; L. Hakim, 2021; Nellitawati et al., 2024; Prabawa-Sear, 2018). This gap between religious environmental ethics and institutional practice raises critical questions about the mechanisms through which environmental values become internalized rather than merely performed (Aryasutha et al., 2025; Norzaman et al., 2025; Srinio et al., 2025).

Despite widespread adoption of environmental programs in Islamic educational institutions, three critical gaps persist in current scholarship. First, existing studies predominantly focus on implementation processes and measurable outcomes while inadequately addressing the leadership dynamics that differentiate cosmetic environmental initiatives from transformative institutional culture (Hermawan et al., 2025; Ma`arif et al., 2025; Yuliana et al., 2025). Second, the literature overwhelmingly treats environmental programs as discrete institutional activities rather than examining their integration within broader spiritual and moral formation frameworks (Agustin & Kistoro, 2024; Fathoni et al., 2024; Fettahlioğlu et al., 2025; Salamah et al., 2025). Third, systematic analysis of how spiritual leadership, as distinct from administrative or instructional leadership (Hannan et al., 2025; Ningsih et al., 2025), influences the depth and authenticity of environmental value internalization remains critically absent (Halomoan et al., 2023; Huda et al., 2025; Miao et al., 2025; Rohmah et al., 2023). The central research problem is: How does spiritual leadership catalyze authentic environmental commitment in Islamic educational institutions and through

what specific mechanisms does it translate faith-based environmental ethics into sustained institutional practice and student character formation?

This study addresses these scholarly gaps by integrating spiritual leadership theory with Lickona's character education framework as its analytical lens (Atstsaury et al., 2024; Nellitawati et al., 2024; Ningsih et al., 2025; Widiana et al., 2023). Spiritual leadership theory posits that leaders who embody values rooted in transcendent purpose activate intrinsic motivation among followers by aligning organizational action with spiritual identity. Lickona's character education framework, encompassing moral knowing (cognitive understanding), moral feeling (affective motivation), and moral acting (behavioral manifestation), provides systematic structure for analyzing how values become internalized (Lickona, 2022). The integration of these frameworks enables examination of how spiritual leaders leverage faith-based environmental ethics to influence the cognitive, affective, and behavioral dimensions of environmental value internalization (Aminudin & Hasan, 2025; Ikhwan et al., 2025; Jahne, 2019; Mufrihah et al., 2025; Susilowati et al., 2025). This theoretical synthesis positions environmental education not as isolated programmatic activity but as integral to character formation where environmental stewardship becomes embedded in spiritual identity.

Unlike previous studies that examine environmental programs in isolation, this research investigates three interconnected processes through which spiritual leadership catalyzes environmental transformation: *first*, how exemplary modeling by school leaders generates voluntary environmental stewardship by bridging theological principle with observable practice (Li et al., 2025; Syed et al., 2026); *second*, how systematic cultivation of environmental care culture embeds sustainability practices into institutional routines through ritualized behaviors that reinforce moral feeling and moral acting; and *third*, how curricular integration of faith-based environmental ethics strengthens ecological consciousness by cultivating moral knowing across subject areas. By analyzing these mechanisms through the integrated theoretical framework, this study explicates the pathways through which spiritual leadership translates religious environmental teachings into lived institutional practice, offering insights for reconceptualizing school environmental programs as character formation endeavors with transferable implications for sustainable education policy in diverse cultural contexts where faith and environmental values intersect.

## METHOD

This study employed a qualitative research design using a multiple case study approach (Creswell, 2014). The case study strategy was selected as most appropriate for examining how spiritual leadership operates within bounded systems, specifically eco-certified Islamic schools, where leadership practices are embedded in institutional, cultural, and environmental contexts. This research investigated seven madrasahs that have achieved national environmental recognition through the Adiwiyata certification program in Southeast Sulawesi Province, Indonesia.

The seven madrasahs were purposefully selected as information-rich cases based on three criteria: demonstrated success in implementing comprehensive environmental programs, achievement of varying Adiwiyata certification levels (district/city, provincial, and national), and willingness to participate in the research. The variation in certification levels was strategically important for data richness, as it enabled examination of how spiritual leadership mechanisms operate across different organizational maturity stages in environmental education implementation. District-level certified madrasahs provided insights into initial cultural transformation processes, provincial-level cases revealed intermediate institutionalization patterns, and nationally certified madrasahs demonstrated sustained environmental culture embedding. This purposeful maximum variation sampling enhanced

analytical depth by capturing diverse leadership practices across institutional contexts while maintaining focus on successful implementation cases. The selected institutions comprised MI/MTs/MA Pesantren Ummushabri, MA Asyafiah, MAN Insan Cendekia, MTsN 1 Kendari, MTsN 2 Konawe, MIN 1 Bau Bau City, and MTsN 1 Bau Bau City.

Furthermore, the flow of the research framework is outlined in the scheme below:



**Figure 1.** Research Scheme

The conceptual framework guiding this research positions madrasah as educational institutions characterized by Islamic worldview, where all individual activities and social interactions are grounded in Islamic teachings. The study examines how spiritual leadership translates this worldview into environmental practice through the Adiwiyata program. Figure 1 illustrates the research framework, depicting the relationship between spiritual leadership, Islamic values as institutional foundation, Lickona character education dimensions (moral knowing, moral feeling, moral acting), and the realization of eco-green madrasah culture through top-down implementation from school leaders to all madrasah community members.

Data analysis followed the iterative process recommended by Miles & Huberman, involving three concurrent activities: data reduction, data display, and conclusion drawing/verification. Initial analysis began during data collection through memoing and preliminary coding to identify emerging patterns. Following data collection completion, all transcripts and field notes were systematically coded using both deductive codes derived from Lickona's character education theory, specifically examining moral knowing (environmental awareness and ethical understanding), moral feeling (environmental concern and motivation), and moral acting (behavioral manifestation of environmental values), and inductive codes emerging from the data itself. Coded data were organized into thematic matrices to facilitate within-case and cross-case pattern analysis.

Ethical protocols were rigorously maintained throughout the research process. Prior to data collection, formal approval was obtained from relevant educational authorities and individual madrasah administrations. All participants provided informed consent after receiving comprehensive explanation of research purposes, procedures, potential risks, and benefits. Participation was entirely voluntary with explicit right to withdraw at any time without consequences. To ensure anonymity and confidentiality, participant identities were protected through pseudonyms in transcripts and publications, with identifying information removed from all research materials. Interview recordings and transcripts were securely stored with access limited to the research team, and will be destroyed following completion of the research dissemination period according to institutional data management protocols.

Data trustworthiness was established through multiple strategies. Triangulation of multiple data sources (interviews, observations, documents) enhanced credibility by cross-

validating findings across different evidence types. Member checking was conducted with key informants to verify interpretations and ensure findings accurately represented participants' experiences and perspectives. Peer debriefing sessions with colleagues familiar with qualitative methodology and Islamic education contexts provided external checks on analytical interpretations. Detailed audit trails documenting methodological decisions, coding processes, and analytical reasoning were maintained to ensure dependability and confirmability of findings.

## RESULTS AND DISCUSSION

### Results

This section presents the empirical findings on how spiritual leadership operates within the *adiviyata* environmental program across seven madrasahs in Southeast Sulawesi. The analysis reveals four interconnected mechanisms through which spiritual leadership catalyzes authentic environmental commitment, organized according to Lickona's character education framework (moral knowing, moral feeling, and moral acting).

Table 1. Spiritual Leadership Mechanisms in Environmental Education Implementation

Leadership Mechanism	Moral Dimension (Lickona)	Manifestation in Practice	Frequency Across Cases (n=7)
Exemplary Modeling	Moral Acting	Principal participates directly in environmental activities (cleaning, planting, waste management)	7/7 (100%)
	Moral Knowing	Principal articulates Islamic environmental ethics in speeches and policies	7/7 (100%)
	Moral Feeling	Principal demonstrates personal commitment beyond administrative duties	6/7 (86%)
Cultural Cultivation	Moral Acting	Regular environmental routines (Clean Friday, waste reduction campaigns)	7/7 (100%)
	Moral Feeling	Environmental competitions with recognition/rewards	5/7 (71%)
	Moral Knowing	Environmental awareness campaigns using Islamic narratives	7/7 (100%)
Teacher Engagement	Moral Acting	Teachers model eco-conscious behaviors (reusable bottles, waste sorting)	7/7 (100%)
	Moral Feeling	Teachers voluntarily lead environmental activities	6/7 (86%)
	Moral Knowing	Teachers integrate environmental themes in subject teaching	5/7 (71%)
Curricular Integration	Moral Knowing	Environmental education embedded across subjects (Science, Islamic Studies, Arts)	7/7 (100%)
	Moral Acting	Hands-on environmental projects (hydroponics,	6/7 (86%)

Moral Feeling	recycling, composting) Use of madrasah environment as learning laboratory	5/7 (71%)
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*Note: Data derived from interview transcripts, observation field notes, and document analysis across seven madrasahs (August 2023-January 2024).*

Based on the table above, it is evident that spiritual leadership operates through four interconnected mechanisms with varying degrees of implementation consistency across the seven madrasahs. The data reveal three critical patterns. First, behavioral dimensions (moral acting) demonstrate universal implementation, with all seven madrasahs exhibiting principal direct participation, regular environmental routines, teacher modeling behaviors, and curricular integration of environmental education, suggesting that visible leadership actions form the foundational layer of spiritual leadership effectiveness. Second, cognitive dimensions (moral knowing) similarly show high consistency, with all cases documenting principals' articulation of Islamic environmental ethics and environmental awareness campaigns, indicating successful integration of faith-based environmental literacy. Third, affective dimensions (moral feeling) display moderate variation, with personal commitment demonstrations, environmental competitions, voluntary teacher leadership, and experiential learning approaches present in five to six of seven cases, suggesting that cultivating intrinsic motivation represents the most challenging yet critical aspect of authentic environmental value internalization. This pattern aligns with Lickona's framework, where moral acting and moral knowing establish necessary conditions, but moral feeling determines whether environmental values become internalized commitments rather than performative compliance.

### ***Spiritual Leadership Through Exemplary Modeling***

The most consistent finding across all seven cases was principals' direct participation in environmental activities as a form of spiritual leadership. Rather than merely issuing directives, principals positioned themselves as role models who embodied Islamic environmental teachings through observable actions. This pattern aligns with the concept of *uswah hasanah* (exemplary modeling) in Islamic leadership tradition.

Principal at MTsN 1 Kendari articulated this approach explicitly:

*"As a leader, I must be an example for all members of the madrasah in protecting the environment...*

*I personally try to be active in management activities starting from making policies, supervising implementation in the field, even being directly involved in cleaning activities, planting trees... If I do it, of course students and teachers will be more easily moved to follow."*

This exemplary modeling operated across all three dimensions of Lickona's framework: (1) Moral Knowing: Principals consistently articulated the theological basis for environmental stewardship, connecting practical actions to Islamic teachings about *khalifah fil ard* (vicegerency on earth) and prophetic traditions linking cleanliness to faith (*al-nadharatu min al-iman*). (2) Moral Feeling: Leaders demonstrated authentic personal commitment rather than performative compliance, often participating in routine maintenance activities alongside students and staff. Observations documented principals engaging in mundane tasks such as picking up litter during school assemblies and personally supervising composting facilities. (3) Moral Acting: Direct involvement in environmental activities translated abstract values into concrete behaviors. Document analysis revealed that madrasahs with principals who maintained consistent visible participation achieved higher staff and student engagement rates in voluntary environmental activities.



**Figure 2.** illustrates collective participation in the 1000 Trees Planting program, demonstrating how principal involvement mobilizes broader community engagement.

This figure (2) documents collective participation in the 1000 Trees Planting program at one of the participating madrasahs, illustrating the embodied spiritual leadership mechanism in practice. The photograph captures school principals, teachers, and students engaged simultaneously in tree planting activities on the madrasah grounds, demonstrating how principal direct involvement serves as exemplary modeling that mobilizes broader community engagement. The visible presence of school leadership working alongside students in routine environmental activities exemplifies the Islamic leadership concept of *uswah hasanah* (exemplary modeling), where leaders translate abstract theological principles of environmental stewardship (*khilafah fil ard*, vicegerency on earth) into observable, participatory actions.

#### ***Systematic Cultivation of Environmental Care Culture***

Beyond individual modeling, spiritual leadership manifested through systematic cultivation of institutional culture that ritualized environmental care. Data analysis identified four primary cultural practices implemented across cases:

*First*, Clean Friday Programs (7/7 madrasahs): Weekly collective cleaning activities that transformed environmental maintenance from custodial work to communal worship. As one teacher explained: "This activity is not only carried out by students, but also involves teachers... under the direction of the madrasah head who wants to make the madrasah environment clean, green, and beautiful."

*Second*, Plastic Reduction Policies (7/7 madrasahs): Systematic campaigns replacing single-use plastics with reusable alternatives. Principal at SDIT Al Qalam Kendari described policy implementation: "We made a policy requiring reduction in plastic waste use in the madrasah environment, collaborating with canteens to minimize selling snacks that use plastic wrappers. We also direct students to bring lunch from home."

*Third*, Waste Sorting Infrastructure (7/7 madrasahs): Strategic placement of labeled waste bins coupled with persuasive education. Principal at MTs Pesri noted: "At first it took time to get all students used to it... However, with a persuasive approach, consistent campaigns, and examples from teachers and other students, slowly better habits began to form."

*Fourth*, Classroom Hygiene Competitions (5/7 madrasahs): Structured competitions fostering collective responsibility and peer accountability. These competitions combined

extrinsic motivation (awards, recognition) with intrinsic formation of environmental consciousness.

*Fifth*, Resource Conservation Campaigns (7/7 madrasahs): Targeted initiatives promoting efficient water and energy use through visual reminders, policy adjustments (energy-efficient lighting, minimized air conditioning), and behavioral monitoring.

The cultural cultivation mechanism operated primarily through *moral feeling* (fostering intrinsic motivation) and *moral acting* (establishing ritualized behaviors). Cross-case analysis revealed that madrasahs combining multiple cultural practices demonstrated more sustained environmental engagement beyond program requirements.

### ***Teacher Leadership and Peer Influence***

While principal leadership established institutional direction, teacher engagement functioned as the critical intermediary mechanism translating leadership vision into daily student experience. Analysis revealed that teacher participation operated through three pathways: *First*, Behavioral Modeling: Teachers consistently demonstrating eco-conscious practices in daily interactions. As teacher at MTsN 1 Kendari emphasized: "Role models are very important for us teachers because whatever we do will certainly be an inspiration and example for our students... We should not only prohibit them from using plastic waste, but we still do it." *Second*, Activity Facilitation: Teachers voluntarily organizing and leading environmental projects beyond formal job requirements. Interview data indicated that 86% of participating madrasahs (6/7) had teachers who initiated supplementary environmental activities without administrative mandates. *Third*, Pedagogical Integration: Teachers embedding environmental themes within subject instruction, creating curricular coherence around environmental ethics. This integration operated across diverse subjects including science, Islamic studies, and arts education.

The teacher leadership mechanism proved particularly potent because of teachers' sustained proximity to students. While principals provided symbolic leadership, teachers translated values into daily habits through consistent reinforcement and immediate feedback.

### ***Curricular Integration of Environmental Ethics***

All seven madrasahs demonstrated systematic integration of environmental education into formal curriculum, though implementation depth varied. Three integration approaches emerged: *First*, Subject-Specific Projects (6/7 madrasahs): Hands-on environmental initiatives embedded within particular subjects. Notable examples included hydroponics projects in Arts and Skills courses (MTsN 1 Kendari), recycling workshops in Science classes, and waste management studies connected to Islamic teachings on *ibsan* (excellence) and resource stewardship. *Second*, Environmental Laboratory Approach (5/7 madrasahs): Utilizing madrasah grounds as active learning sites. Principal at MAN IC Kendari described: "We invite students to learn not only from books, but also from the environment around the madrasah... This allows students to understand science subject material more deeply and practically." *Third*, Cross-Curricular Thematic Integration (7/7 madrasahs): Embedding environmental awareness across multiple subjects through coordinated themes. Islamic studies courses explored Quranic verses on environmental stewardship, Arabic language classes practiced environmental vocabulary, and social studies examined environmental policies.

Curricular integration operated primarily through *moral knowing* (developing environmental literacy) while providing contexts for *moral acting* (applying knowledge through projects). Cross-case comparison indicated that madrasahs employing multiple integration strategies demonstrated stronger student environmental consciousness in interview responses.

### **Cross-Case Pattern Analysis**

Comparative analysis across the seven madrasahs revealed three critical factors influencing spiritual leadership effectiveness in environmental transformation: (1) Leadership Consistency: Madrasahs where principals maintained visible, sustained participation over multiple years (4+ years) demonstrated deeper cultural embedding of environmental values compared to institutions with recent leadership changes. (2) Teacher Autonomy: Institutions granting teachers flexibility to design environmental activities within curriculum frameworks showed higher teacher engagement and more creative environmental initiatives. (3) Community Collaboration: Madrasahs that involved students in decision-making about environmental programs (through student councils or environmental committees) reported stronger student ownership of initiatives.

## **Discussion**

### ***Advancing Spiritual Leadership Theory in Environmental Education Contexts***

This research advances spiritual leadership theory by demonstrating its distinctive operational mechanisms in environmental education, extending beyond organizational productivity frameworks prevalent in corporate settings to character formation domains where values internalization constitutes primary institutional purpose (Apologia et al., 2024; S. F. N. Hakim & Salim, 2024; Rokhman et al., 2025). The central theoretical contribution lies in explicating how spiritual leadership simultaneously activates Lickona's three moral dimensions, moral knowing through faith-based environmental literacy, moral feeling through intrinsic religious motivation, and moral acting through ritualized institutional behaviors, creating authentic environmental commitment rather than compliance-based participation documented in secular environmental programs (Ar et al., 2025; Ma`arif et al., 2024; Miftahuddin et al., 2024).

Previous spiritual leadership scholarship, predominantly focused on organizational contexts (Haq & Roesminingsih, 2024; Musrifah et al., 2024), inadequately addressed educational settings where moral formation is explicit institutional mission. This study fills this gap by revealing that spiritual leaders in eco-madrasahs operate through embodied modeling that bridges Islamic theological principles (*khalifah, amanah, ihsan*) with observable environmental practices, contrasting with administrative leadership that relies primarily on policy directives (Balqis et al., 2025; Campbell, 2026; Najah et al., 2025). Furthermore, the research demonstrates that environmental transformation requires distributed spiritual leadership across multiple institutional levels, principals establish legitimacy through exemplary modeling, teachers translate vision into daily reinforcement, and students exercise autonomous stewardship, advancing understanding beyond hierarchical leadership models.

International comparison reveals both convergences and distinctions. Environmental education research in Western secular schools emphasizes external incentives, competitive achievements, and policy enforcement (Maharromiyati et al., 2024; Ningsih et al., 2025), while studies of faith-based environmental initiatives, including Christian creation care programs in North America, Buddhist ecological education in East Asia, and Islamic eco-*pesantren* across Southeast Asia (Juwaini et al., 2025; Triyono et al., 2023), document similar patterns where theological frameworks position environmental stewardship as spiritual obligation rather than institutional achievement. This cross-cultural convergence suggests spiritual leadership mechanisms may offer transferable insights across diverse faith traditions, though critical tensions emerged between spiritual formation approaches and competitive certification systems that inadvertently incentivize performative compliance over authentic transformation (Azizah & Mardiana, 2024; Tsani & Ali, 2024; Yusuf et al., 2024).

Comparative research from Malaysian and Turkish Islamic schools documents similar

challenges translating environmental ethics into practice yet reports less consistent spiritual leadership integration than observed in this Indonesian study, suggesting effectiveness may depend on broader educational policy contexts (Khuadthong et al., 2025). International environmental education programs in Finland and Costa Rica emphasize intrinsic value formation over competitive certification, offering models for policy reform that could enhance Indonesia's Adiwiyata program by incorporating spiritual leadership development while reducing competitive elements undermining authentic transformation.

### ***Reconceptualizing Environmental Programs: From Achievement Metrics to Character Formation***

The findings challenge current environmental education frameworks that measure success through infrastructure development and documented activities (Arsawan et al., 2022; Ezzani et al., 2023; Javid et al., 2024). Authentic transformation should be assessed through evidence of value internalization: voluntary stewardship beyond requirements, student-initiated projects, and sustained behavioral change beyond certification periods, outcomes documented in this study through independent environmental clubs, teacher-developed curriculum enhancements, and extended home practices (Aguayo & Eames, 2023; Gull et al., 2025; Nada Nabilah et al., 2024).

Three practical implications emerge. First, professional development should prioritize spiritual formation alongside environmental knowledge, cultivating leaders' capacity as credible role models authentically integrating faith and environmental ethics (Juwaini et al., 2025; Zinnah et al., 2025). Second, program design should emphasize ritualized practices creating normative institutional culture rather than episodic events generating visible achievements, the Clean Friday programs and systematic waste sorting succeeded through repeated behavioral patterns, not spectacular demonstrations. Third, environmental education should be positioned as integral character formation within spiritual frameworks, activating intrinsic motivation rooted in religious identity rather than external incentives (Herlanti et al., 2025; Makruf et al., 2022).

### ***Limitations and Future Research Directions***

This study examined successful Adiwiyata-certified madrasahs in Southeast Sulawesi during August 2023-January 2024, limiting generalizability. Future research should investigate struggling implementations, conduct longitudinal studies tracking sustainability beyond certification periods and leadership transitions, employ follow-up studies assessing whether school-based formation influences adult environmental behaviors, and undertake comparative research across diverse regional contexts and faith traditions. Additionally, incorporating systematic behavioral observation, environmental impact assessment, and objective resource conservation metrics would triangulate self-reported findings and strengthen evidence for spiritual leadership effectiveness in generating measurable environmental outcomes beyond cultural transformation.

This research demonstrates that spiritual leadership operates as a powerful mechanism for environmental education when leaders authentically integrate faith-based ethics with observable modeling, cultural cultivation, and curricular integration, offering transferable insights for religious traditions contributing to global sustainability efforts.

## CONCLUSION

This research reveals that spiritual leadership in Islamic educational institutions catalyzes authentic environmental commitment through embodied modeling rather than administrative mandates. Three critical findings challenge prevailing environmental education assumptions. First, principals who consistently participated in routine environmental activities generated significantly higher voluntary engagement than leaders who merely issued directives, demonstrating that program success depends more on leadership authenticity than infrastructure investment. Second, ritualized environmental practices proved more effective for sustained behavioral change than episodic events, shifting focus from measurable outputs to cultural embedding and value internalization. Third, environmental transformation operates through multi-level leadership mechanisms, with teacher voluntary engagement and student-initiated projects emerging independently of formal mandates. These findings advance scholarship by explicating how spiritual leadership influences environmental values via Lickona's moral knowing-feeling-acting pathways, challenging competitive certification systems that incentivize cosmetic improvements over cultural transformation, and introducing "spiritual-ecological leadership" as a distinctive approach integrating exemplary modeling, cultural cultivation, and curricular integration with transferable applicability across diverse faith-based contexts.

This study acknowledges limitations: examining certified madrasahs in Southeast Sulawesi during a specific period limits generalizability across struggling implementations and diverse regional contexts. Future research should employ comparative designs across successful and struggling cases, longitudinal studies tracking sustainability beyond leadership transitions, and cross-faith comparative research incorporating systematic behavioral observation and environmental impact assessment. Despite these limitations, this research demonstrates that spiritual leadership operates as a powerful mechanism when leaders authentically integrate faith-based environmental ethics with observable practices. By reconceptualizing environmental programs as character formation rather than institutional achievements, this research provides pathways for religious traditions worldwide to contribute meaningfully to sustainability efforts. The spiritual-ecological leadership framework suggests faith-based institutions possess inherent advantages through theological frameworks positioning environmental stewardship as spiritual obligation rather than external compliance, offering critical insights for developing transformative educational approaches that cultivate deep ecological consciousness across diverse cultural and religious contexts globally.

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