

Integrating Green Management in Islamic Educational Institutions: Strategies for Sustainable Education

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Abstract:

This study aims to analyze the integration of green management practices in Islamic educational institutions by exploring their implementation models, challenges, and contributions to the creation of environmentally sustainable learning environments. The novelty of this Research lies in its focused synthesis of green management principles with Islamic ethics as an area that remains underexplored, especially within madrasas and Islamic boarding schools. Using a qualitative systematic literature review, this study examines environmentally friendly facility management, resource conservation initiatives, and programs designed to cultivate ecological awareness and responsibility among students. The results indicate that applying green management leads to concrete improvements, including increased energy and water efficiency, reduced waste generation, and cleaner, more orderly school environments. Beyond operational benefits, green practices also play a significant educational role by shaping students' ecological character through values such as cleanliness (*ṭahārah*), simplicity (*basāṭah*), and stewardship (*khilāfah*) over nature as mandated in Islamic teachings. However, challenges remain, particularly in institutional policy consistency, limited adoption of green technologies, and insufficient community engagement. This study underscores the need for strengthened institutional policies, teacher capacity-building, and broader collaboration with external partners to sustain green management initiatives in Islamic schools.

Keywords: *Green Management, Islamic Education, Sustainable Education, Islamic Ecology*

Abstrak:

Penelitian ini bertujuan menganalisis integrasi praktik manajemen hijau di lembaga pendidikan Islam dengan mengeksplorasi model implementasi, tantangan, dan kontribusinya dalam menciptakan lingkungan belajar yang berkelanjutan dan ramah lingkungan. Kebaruan penelitian ini terletak pada sintesisnya yang terfokus antara prinsip-prinsip manajemen hijau dengan nilai-nilai etika Islam sebagai area yang masih kurang dieksplorasi, terutama di madrasah dan pesantren. Dengan menggunakan pendekatan kualitatif melalui tinjauan pustaka sistematis, penelitian ini mengkaji manajemen fasilitas ramah lingkungan, inisiatif konservasi sumber daya, dan program-program yang dirancang untuk menumbuhkan kesadaran dan tanggung jawab ekologis di kalangan siswa. Hasil penelitian menunjukkan bahwa penerapan manajemen hijau menghasilkan perbaikan nyata, termasuk peningkatan efisiensi penggunaan energi dan air, pengurangan sampah, dan terciptanya lingkungan sekolah yang lebih bersih dan teratur. Selain manfaat operasional, praktik hijau juga memainkan peran penting dalam pendidikan dengan membentuk karakter ekologis siswa melalui nilai-nilai seperti

kebersihan (*tahārah*), kesederhanaan (*basāṭah*), dan pengelolaan (*khilāfah*) terhadap alam sebagaimana diamanatkan dalam ajaran Islam. Namun, tantangan masih ada, terutama dalam hal konsistensi kebijakan kelembagaan, terbatasnya adopsi teknologi hijau, dan kurangnya keterlibatan masyarakat. Studi ini menggarisbawahi perlunya penguatan kebijakan kelembagaan, pengembangan kapasitas guru, dan kolaborasi yang lebih luas dengan mitra eksternal untuk memastikan keberlanjutan implementasi manajemen hijau di sekolah-sekolah Islam.

Kata Kunci: *Manajemen Hijau, Pendidikan Islam, Pendidikan Berkelanjutan, Ekologi Islam*

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INTRODUCTION

The global environmental crisis, encompassing climate change, deforestation, air pollution, and the degradation of marine and terrestrial ecosystems, further emphasizes the need for a paradigm shift in education (Al-Alawneh et al., 2024; Raimi & Bamiro, 2025; Yihua et al., 2023). Education is no longer merely a means of transferring knowledge; it must also function as a platform for cultivating critical awareness and fostering concrete actions to promote environmental sustainability (Oyenuga et al., 2023; Rahman et al., 2025; Rohman et al., 2024). The sense of urgency is increasingly evident. In Indonesia alone, official data from the Ministry of Environment and Forestry (MoEF) reported a net deforestation rate of approximately 175,400 hectares in 2024, signaling persistent pressure on forest ecosystems (KLHK, 2025). Global trends mirror this crisis: atmospheric carbon dioxide (CO₂) concentrations reached 422–424 parts per million (ppm) in 2024, the highest levels ever recorded in human history. These indicators illustrate how environmental degradation is accelerating both locally and globally.

Within this context, Islamic education possesses a strong moral and theological foundation that enables it to play a strategic role in ecological stewardship (Kiss et al., 2022; Said et al., 2023; Taisir et al., 2024). The values of tawhid (unity of God), amanah (trustworthiness), and rahmatan lil-'alamin (mercy for all creation) emphasize that humans are not only recipients of natural blessings but also khalifah (stewards) responsible for maintaining ecological balance (Syukri et al., 2024; Taisir et al., 2024). Through Islamic education, future generations can be shaped not only as knowledgeable individuals but also as proactive agents in protecting and restoring the environment, an essential contribution to addressing the contemporary ecological crisis (Irawan, 2022; Puglisi & Buitendag, 2022). Faith-based education can strengthen students' intrinsic motivation to actively participate in environmental preservation.

Green management is a cutting-edge approach relevant for implementation in Islamic educational institutions. Green management emphasizes not only efficient physical and technical management but also integrates ecological awareness into the culture of educational organizations. The implementation of green management in schools and universities has a significant impact on energy efficiency, waste reduction, and the development of environmentally friendly behaviors among the academic community (Filho et al., 2023; Khan et al., 2025; Masturin et al., 2022). Philosophically, this aligns with Islamic principles of mizan

(balance) and *hifz* (balance). *al-bi'ah* (environmental protection), while strengthening the value of *maqāsid al-sharī'ah* (Junaidah et al., 2025; Nugroho et al., 2025; Wahjusaputri et al., 2025), which places the preservation of life and sustainability as the primary goal.

In addition, the integration of green Management in Islamic education contributes directly to achieving the Sustainable Development Goals (SDGs). SDG 4 emphasizes the importance of inclusive, high-quality education, while SDG 13 highlights the urgency of mitigating and adapting to climate change. Empirical studies show that educational institutions implementing green management practices demonstrate stronger sustainability performance, reflected in higher levels of ecological literacy, pro-environmental behavior, and effective carbon-reduction initiatives. Altassan (2023) reports that integrating environmental policies into school governance significantly enhances students' ecological awareness. Similarly, findings by Blasco et al. (2021) indicate that universities with structured environmental management systems score higher on key sustainability indicators, such as energy efficiency, waste management, and sustainability-embedded curricula. These empirical insights reinforce the view that green management directly contributes to achieving both SDG 4 and SDG 13. However, studies explicitly linking green management practices to Islamic epistemological and ethical frameworks remain scarce.

The existing literature indicates that Research on sustainable education from an Islamic perspective often stagnates at the normative level, advocating environmental protection as a divine mandate without developing a systematic managerial model for implementation in educational institutions (Khan et al., 2025; Puglisi & Buitendag, 2022; Rifat et al., 2020). This indicates a gap that needs to be bridged between the normative foundations of Islamic teachings and modern management instruments based on sustainability. Therefore, it is important to present a critical study that connects the principles of Islamic education with green practices – Management as a concrete implementation strategy.

This article explores the practices, opportunities, and challenges of implementing green management in Islamic educational institutions. Accordingly, this study formulates several Research questions: (1) What forms of green management practices are carried out in Islamic educational institutions? (2) How are normative Islamic values translated into institutional policies, curricular management, operational practices, and stakeholder participation? (3) What factors support and hinder the implementation of green management? Moreover, (4) What limitations arise in the process of implementing green management within Islamic educational institutions?. Furthermore, this article aims to fill the academic gap in the literature by offering a conceptual model of sustainable Islamic education that is not only responsive to the environmental crisis but also aligned with global demands for a sustainable society.

RESEARCH METHODS

This study employs a qualitative method using a library Research approach (Stanley, 2023). The selection of this method is based on the need to systematically explore, compare, and synthesize existing theoretical discussions on green

management, Islamic educational principles, and sustainability practices. Data were collected from scholarly publications, including reputable national and international journal articles, recent academic books, and official documents on education and environmental policies. The retrieval process used Publish or Perish to gather indexed academic works, and Zotero as the primary reference management tool. All retrieved materials were organized, tagged, and screened in accordance with predefined inclusion and exclusion criteria.

To ensure methodological rigor and replicability, the data analysis employed content analysis supported by digital analysis tools. NVivo was used for coding and thematic analysis, while VOSviewer facilitated conceptual mapping across the selected literature. The analysis was conducted through operational, step-by-step procedures detailed in Table 1.

Table 1. Step-by-Step Literature Analysis Procedure

Stage	Operational Steps	Tools / Software Used	Output
Data Identification	Define core keywords (e.g., <i>green management</i> , <i>Islamic education</i> , <i>sustainability</i>) and set publication year limits.	Zotero, Academic databases	Initial list of relevant publications
Data Retrieval	Download and import all selected publications into the reference manager and record metadata.	Publish or Perish, Zotero	Complete corpus of literature with metadata
Screening (Inclusion-Exclusion)	Select publications based on relevance, full-text availability, and contextual suitability.	Zotero	Filtered list of relevant literature
Data Extraction	Record key findings, definitions, approaches, and theoretical concepts.	Zotero notes	Data matrix/extraction results
Coding	Generate initial codes and sub-codes representing major thematic patterns.	NVivo	Code nodes/categories
Thematic Categorization	Group codes into themes and sub-themes based on conceptual relationships.	NVivo	Thematic map and analytical categories
Conceptual Mapping	Visualize relationships between concepts to identify patterns and linkages.	VOSviewer	Concept map/network visualization
Synthesis	Integrate themes into an analytical narrative presenting trends, opportunities, and challenges.	Manual synthesis, NVivo summaries	Structured analytical synthesis

This study employed a qualitative, literature-based Research design with a systematic, transparent analytical framework to ensure replicability. Detailed operational procedures, including the use of digital academic databases and explicit analytical stages, were applied so that future researchers may follow the

same methodological pathway (Humble & Mozelius, 2022). This structured approach enhances transparency and allows readers to clearly understand how interpretations and conclusions were derived from the selected literature.

Data analysis was conducted using content analysis techniques to identify patterns, themes, and meanings within textual data. The analytical process consisted of three stages. First, data reduction involved selecting and filtering the literature according to explicit inclusion and exclusion criteria. Sources were included if they were published within the last seven years, consisted of peer-reviewed journal articles, books, or reputable conference proceedings, were written in English or Indonesian, and originated from credible academic databases such as Scopus, Web of Science, DOAJ, or nationally accredited journals. Non-academic sources and publications lacking methodological rigor were excluded. Second, data presentation organized the selected literature into thematic categories, including green management strategies, implementation practices in Islamic educational institutions, and Islamic values supporting sustainability (Stough & Lee, 2021). Finally, conclusion drawing and verification involved synthesizing the findings to develop a conceptual framework for integrating green management into Islamic education, thereby advancing sustainable Islamic education globally.

RESULTS AND DISCUSSION

Result

The concept of green management from an Islamic perspective

The concept of green management from an Islamic perspective. Management from an Islamic perspective is rooted in fundamental teachings regarding humanity's position as the caliph on earth (QS. Al-Baqarah: 30). This mandate is not only spiritual but also ecological, requiring humans to protect, care for, and sustainably manage the earth. Islam emphasizes the principle of balance (*mīzān*) in all aspects of life, including the management of natural resources (Bakri, 2021; Julhadi & Ritonga, 2023; Said et al., 2023). Thus, green management can be seen as an embodiment of Islamic values related to efficiency, cleanliness, and sustainability. Principles such as the prohibition of *isrāf* (wastefulness) and the command to maintain cleanliness (*ṭahārah*) form the normative basis for implementing green management in Islamic educational institutions.

The findings indicate that the concept of green management within an Islamic perspective is deeply rooted in the fundamental theological principle of humanity's role as *khalīfah* (steward) on earth, as stated in the Qur'an (QS. Al-Baqarah: 30). This role establishes a moral and managerial responsibility for humans to preserve, protect, and manage natural resources sustainably. Islamic management is not merely an administrative or technical process but an ethical framework that integrates spiritual accountability with ecological responsibility (Alkouatli, 2024; Muhammad & Petra, 2021). This perspective positions environmental stewardship as an inseparable component of Islamic leadership and organizational governance, including within educational institutions.

The Islamic principle of *mīzān* (balance) serves as a central conceptual foundation for green management practices. The literature consistently emphasizes that environmental degradation is often the result of an imbalance

caused by excessive resource exploitation (Purwati et al., 2020; Tambak et al., 2022). In this context, green management aligns with Islamic teachings by promoting moderation, efficiency, and harmony between human needs and environmental preservation. These principles provide a normative guide for institutional decision-making, encouraging policies that balance educational development with ecological sustainability.

Additionally, key Islamic ethical values that reinforce green management include the prohibition of *isrāf* (wastefulness) and the emphasis on *tahārah* (cleanliness). The reviewed studies suggest that minimizing waste, conserving energy, and maintaining clean and healthy environments are not only practical environmental strategies but also acts of religious obedience (Kalimullina & Orlov, 2020). Within Islamic educational institutions, these values are reflected in operational practices such as efficient resource use, waste management systems, and environmentally conscious campus planning. Green management is culturally and religiously compatible with Islamic institutional values rather than being an externally imposed concept.

The integration of green management within an Islamic framework strengthens the legitimacy and sustainability of environmental initiatives in Islamic educational institutions. By grounding environmental management in religious teachings, institutions are more likely to foster internal motivation and long-term commitment among administrators, educators, and students. The findings suggest that green management, when framed through Islamic values, transcends technical implementation and becomes a holistic educational paradigm. This paradigm not only supports environmental sustainability but also reinforces the moral and spiritual dimensions of Islamic education, contributing to the development of environmentally responsible and ethically grounded future generations.

Practices of Green Management in Islamic Educational Institutions

The green management practices in Islamic educational institutions are predominantly implemented through daily operational behaviors rather than through fully formalized institutional policies. Analysis of the data shows that the most visible practices focus on energy efficiency, waste management, and cultivating environmentally responsible behavior among students and staff (Fardous, 2024; Yigitcanlar et al., 2020). Energy-saving initiatives are commonly carried out through simple routines, such as turning off lights, fans, and air conditioners when classrooms are not in use. These practices are not merely framed as cost-saving measures but are understood as moral obligations aligned with Islamic teachings that prohibit wastefulness (*isrāf*) and encourage responsible use of natural resources.

Further analysis reveals that waste management practices are introduced in ways that emphasize direct experience and habitual action. Several institutions implement basic waste-separation systems that distinguish between organic and inorganic waste and encourage students to bring reusable food and drink containers (Fasya et al., 2024; Yasin et al., 2024). These practices are perceived as easier to internalize because they are consistently demonstrated in everyday

school activities. Moreover, waste management is closely connected to Islamic values of cleanliness (*tahārah*), reinforcing the idea that environmental responsibility is an extension of religious discipline rather than an external ecological agenda.

The availability of supporting facilities in some institutions, such as segregated trash bins, shared green spaces, and visual reminders promoting energy conservation in classrooms. In several observed learning settings, students voluntarily turned off the lights after class or routinely brought their own water bottles. These observations suggest that environmentally friendly behaviors are gradually becoming normalized through repeated practice, even in the absence of comprehensive green management policies. This indicates that behavioral change is emerging from the grassroots level of institutional life. To contextualize these findings, a synthesis of related journal studies on green management practices in Islamic and value-based educational institutions is presented in Table 2.

Table 2. Synthesis of Green Management Practices

Aspect of Green Management	Key Practices Identified	Supporting Values	Related Studies
Energy Efficiency	Turning off unused lights and AC, reducing electricity consumption	Avoidance of <i>isrāf</i> , moral responsibility	Fardous (2024) ; Yigitcanlar et al. (2020)
Waste Management	Waste separation, reusable containers	<i>Tahārah</i> , discipline	Fasya et al. (2024) ; Yasin et al. (2024)
Environmental Culture	Routine eco-friendly behaviors, visual reminders	Ethical awareness, stewardship	Toshmali et al. (2020)
Institutional Support	Basic facilities and informal policies	Collective responsibility	Chang (2023)

Table 1 indicates that green management practices in Islamic educational institutions are primarily behavior-driven and value-oriented rather than policy-driven. This pattern suggests that environmental sustainability is being internalized through moral education and daily discipline, consistent with Islamic ethical teachings. However, these practices are still fragmented and lack formal institutional frameworks; their repetitive, value-based nature allows them to gradually shape an ecological culture within the institution. Interpreted through an Islamic management lens, these findings imply that sustainable environmental practices can effectively develop from simple, routine actions grounded in religious values, serving as a foundational stage for more structured green management systems in the future.

Challenges in Implementing Green Management

Implementing green management in Islamic educational institutions faces several interrelated challenges, primarily financial constraints, human resource readiness, and the consistency of institutional policies (Kioupi & Voulvoulis, 2020; Raimo et al., 2024). These obstacles significantly influence the scale and sustainability of environmental initiatives. Although there is a general moral commitment to ecological stewardship rooted in Islamic values, practical limitations often hinder translating these commitments into comprehensive

management systems.

Financial constraints emerge as the most prominent challenge. Informants consistently reported that limited budgets restrict the adoption of environmentally advanced infrastructure, such as solar energy systems, recycling technologies, or water treatment facilities (Derks et al., 2022; Yang et al., 2021). Due to the high initial investment required for such initiatives, institutions tend to rely on low-cost and basic practices, such as behavioral campaigns and manual waste management. While these efforts contribute positively, their impact remains limited without adequate financial support and long-term planning.

Challenges related to human resources further complicate implementation efforts. Data indicate that varying levels of environmental awareness among teachers and students reduce the effectiveness and continuity of green management programs. In some cases, ecological perspectives have not yet been fully integrated into teaching practices or institutional culture, resulting in inconsistent participation (Chaleta et al., 2021). Limited ecological literacy among school communities leads to environmental programs being perceived as supplementary activities rather than integral components of educational and managerial processes.

The findings reinforce these issues by highlighting a gap between institutional aspirations and operational realities. Several environmental initiatives remain at the level of symbolic messaging, such as posters promoting cleanliness or energy conservation, without sufficient supporting facilities or monitoring systems. This mismatch underscores the uneven development of green management practices, driven not by a lack of ethical intent but by resource and capacity constraints. The findings suggest that without strategic investment, capacity building, and policy integration, green management initiatives in Islamic educational institutions are likely to remain fragmented and small-scale rather than evolve into systematic, sustainable institutional practices.

Opportunities and Positive Impacts of Green Management

The opportunities for strengthening green management practices and the positive impacts they have on students and institutions. Religious values provide a strong foundation for Islamic educational institutions to cultivate an environmentally conscious culture (Saihu et al., 2022; Yasin et al., 2024). They argued that teachings related to cleanliness, balance, and stewardship make it easier for students to understand the importance of caring for the environment. With such a strong value foundation, environmental programs tend to receive broad support from the school community.

The positive character-building effects of environmental activities. They noted that students became more disciplined, responsible, and attentive to cleanliness after participating in activities such as tree planting, waste-bank programs, or classroom cleaning duties. These behavioral changes are seen as tangible outcomes of gradually implemented green management initiatives. The environmental activities fostered a sense of cooperation among the institution's members (Sulhan & Hakim, 2023). Programs such as gardening together, community clean-ups, or using green spaces for learning fostered positive

interactions among teachers and students. These activities also strengthened the institution's image as an environmentally conscious educational community.

The positive impact of green management on students' character development (Arman et al., 2020; Muyassaroh et al., 2021; Subhan et al., 2025). The analysis reported a marked improvement in students' discipline, responsibility, and sensitivity to cleanliness after their involvement in environmental activities such as tree planting, waste bank programs, and regular classroom cleaning. These behavioral changes indicate that green management initiatives function not only as ecological interventions but also as effective tools for character education, reinforcing moral and ethical values through practical engagement.

The environmental programs contribute to strengthening social cohesion within Islamic educational institutions. Collaborative activities, including maintaining school gardens, participating in community clean-up initiatives, and utilizing green spaces as learning environments, promote cooperation and positive interaction between teachers and students (Lutfauziah et al., 2023; Perović & Kosor, 2020). Such collective engagement fosters a sense of shared responsibility and enhances the learning atmosphere, positioning environmental stewardship as a communal rather than individual obligation.

The data pattern suggests that the opportunities for implementing green management in Islamic educational institutions are substantial and multifaceted. Supported by deeply embedded religious values, green management initiatives not only enhance environmental awareness but also contribute to character formation and institutional identity. These programs strengthen the image of Islamic educational institutions as communities that prioritize holistic education – integrating academic excellence, moral development, and ecological sustainability – thereby reinforcing their relevance in addressing contemporary global environmental challenges.

Discussion

The concept and practice of green management in Islamic educational institutions are deeply connected to Islamic ethical principles, institutional culture, and evolving pedagogical approaches to sustainability. This discussion chapter integrates the core findings with recent scholarship, explaining their implications, theoretical connections, and underlying causes. Teachers and educational leaders interpret environmental responsibility as an extension of Islamic values, such as balance, moderation, and cleanliness. Islamic schools often utilize religious values to foster ecological awareness and moral responsibility among students (Junaidah et al., 2025; Kioupi & Voulvoulis, 2020). The finding that educators connect environmental behavior with character-building confirms prior work, showing that eco-behavior in Islamic schools becomes more sustainable when framed as *akhlak* rather than merely as an institutional policy.

The implication is that green management in Islamic education is not merely a technical program but a value-based framework that shapes belief, behavior, and routines. This answers the *so what* question: integrating Islamic moral discourse strengthens the internal motivation of students and staff to engage in environmentally responsible behavior (Khan et al., 2025; Rifat et al., 2020). This

moral grounding, as multiple studies have confirmed, fosters a more profound and more enduring ecological awareness.

Theoretically, these findings support ecological theology frameworks within Islamic education, which argue that environmental ethics are most effective when grounded in spiritual meaning, rather than administrative enforcement. The behaviors include waste sorting, energy efficiency, and cleanliness routines. These patterns are consistent with Research showing that simple, repeated daily practices are the most powerful drivers of environmental culture in Islamic boarding schools (Lutfauziah et al., 2023; Wahjusaputri et al., 2025). The presence of visible cues, such as posters, green spaces, designated bins, and reminders, reflects what previous studies refer to as "behavioral nudges," which encourage environmentally conscious habits.

The implication is that habit formation mechanisms, rather than large, expensive initiatives, are what truly cultivate ecological consciousness in Islamic institutions. This reinforces the argument that green management must prioritize behavioral systems, as institutional culture develops through repeated actions rather than occasional programs. Daily rituals of cleanliness and care are central in forming environmental discipline among students (Nugroho et al., 2025).

Thus, the findings demonstrate that Islamic educational institutions develop a "micro-ecology of sustainability" through structured routines, symbolic reinforcement, and integration of behavioral expectations across learning activities. The findings also reveal financial limitations, low ecological literacy, and a lack of policy support as core challenges. Islamic schools often struggle to fund green facilities, such as solar energy systems and modern waste-processing equipment (Junaidah et al., 2025; Syukri et al., 2024). Teacher literacy gaps align with recent studies indicating uneven environmental knowledge among Islamic educators.

The absence of systematic government support echoes earlier findings that environmental programs in religious schools tend to be fragmented and short-term when not backed by policy or funding frameworks. These barriers highlight the structural causes behind limited implementation: insufficient resources, minimal training, and weak institutional incentives. Without capacity-building initiatives and long-term funding schemes, Islamic institutions cannot scale their green management programs (Raimi & Bamiro, 2025). This indicates the necessity for policy alignment between religious education authorities and environmental agencies.

Despite the challenges, the findings indicate significant opportunities. The strong religious value system of Islamic education provides fertile ground for the development of ecological character. Islamic schools can become leaders in faith-based environmental movements by internalizing ecological behavior through theological narratives (Aini et al., 2025; Rohman et al., 2024).

The study highlights the potential of student participation in sustainability activities, which is supported by evidence that student engagement enhances responsibility and long-term ecological discipline (Blasco et al., 2021; Chaleta et al., 2021). Collaboration opportunities with NGOs, government programs, and international sustainability initiatives reinforce earlier findings on the institutional

benefits of multi-stakeholder networks. The implication is that Islamic educational institutions can serve as hubs of ecological transformation driven by spiritual pedagogy, community engagement, and inter-institutional collaboration. The reasons behind this potential lie in their strong moral authority, cohesive community structures, and flexible cultural frameworks.

CONCLUSION

This study concludes that the interaction between religious values, daily institutional routines, and contextual constraints shapes green management in Islamic educational institutions. Environmental responsibility is understood not merely as administrative compliance but as a moral and spiritual obligation grounded in Islamic ethical principles such as balance, moderation, and cleanliness. These values strengthen internal motivation among teachers, students, and administrators, while routine practices – such as energy conservation, waste management, and cleanliness – play a central role in cultivating ecological culture. However, the implementation of green management remains constrained by limited financial resources, uneven ecological literacy, and insufficient institutional policy support.

The main scientific contribution of this study lies in demonstrating how Islamic ethical frameworks function as an operational foundation for ecological character formation within educational settings. By integrating empirical data with contemporary literature, this Research advances theoretical understanding of faith-based environmental management and offers a replicable analytical model for studying sustainability in religious educational institutions. Despite these contributions, the study is limited by its narrow institutional scope and reliance on qualitative data collected within a specific timeframe. Future Research should expand comparative contexts, incorporate quantitative indicators, and adopt longitudinal approaches to further examine the long-term effectiveness of green management in Islamic educational institutions.

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REFERENCES

- Aini, T. N., Nugraha, L., Surbakti, A. H., & Mundiri, A. (2025). Value-Based Branding in Islamic Boarding Schools: Efforts to Maintain Identity in Digitalization Dynamics. *Al-Tanzim: Jurnal Manajemen Pendidikan Islam*, 9(2), 442–457. <https://doi.org/10.33650/al-tanzim.v9i2.10753>

- Al-Alawneh, R., Othman, M., & Zaid, A. A. (2024). Green HRM Impact on Environmental Performance in Higher Education with Mediating Roles of Management Support and Green Culture. *International Journal of Organizational Analysis*, 32(6), 1141–1164. <https://doi.org/10.1108/IJOA-02-2023-3636>
- Alkoutli, C. (2024). Illuminating Data Beyond the Tangible: Exploring a Conceptually-Relevant Paradigmatic Frame for Empirical Inquiry with Muslim Educators. *International Journal of Qualitative Studies in Education*. <https://doi.org/10.1080/09518398.2024.2318301>
- Altassan, A. (2023). Sustainable Integration of Solar Energy, Behavior Change, and Recycling Practices in Educational Institutions: A Holistic Framework for Environmental Conservation and Quality Education. *Sustainability (Switzerland)*, 15(20), 15157. <https://doi.org/10.3390/su152015157>
- Arman, A., Purwandaya, B., & Saefuddin, A. (2020). The Impact of Quality of Education and Higher Education on Economic Growth. *Journal of Economic Education*, 9(1), 64–70. <https://doi.org/10.15294/jeec.v9i1.36774>
- Bakri, M. (2021). ECO-Pesantren Assessment Study of Islamic Boarding School in Banda Aceh, Indonesia. *Journal of Islamic Architecture*, 6(3), 143–150. <https://doi.org/10.18860/JIA.V6I3.7967>
- Blasco, N., Brusca, I., & Labrador, M. (2021). Drivers for Universities' Contribution to The Sustainable Development Goals: An Analysis of Spanish Public Universities. *Sustainability (Switzerland)*, 13(1), 1–19. <https://doi.org/10.3390/su13010089>
- Chaleta, E., & Borralho, A. (2021). Higher Education and Sustainable Development Goals (SDG) – Potential Contribution of The Undergraduate Courses of The School of Social Sciences of The University of Évora. *Sustainability (Switzerland)*, 13(4), 1–10. <https://doi.org/10.3390/su13041828>
- Chang-Tik, C. (2023). Collaborative Spaces: Investigating the Relationships Between Students' Group-based Learning and Lecturers' Approaches. *Educational Research*, 65(4), 409–427. <https://doi.org/10.1080/00131881.2023.2256747>
- Derks, M., Berkers, F., & Tukker, A. (2022). Toward Accelerating Sustainability Transitions through Collaborative Sustainable Business Modeling: A Conceptual Approach. *Sustainability (Switzerland)*, 14(7), 3803. <https://doi.org/10.3390/su14073803>
- Fardous, I. (2024). A Transdisciplinary Approach to Sustainable Architecture: Integrating Kinetic Shading Systems in Architectural Pedagogy. *International Journal of Design Education*, 18(2), 1–30. <https://doi.org/10.18848/2325-128X/CGP/v18i02/1-30>
- Fasya, A. H. Z., Wikurendra, E. A., Syafiuddin, A., & Ibad, M. (2024). Comprehensive Public Place Sanitation Evaluation Based on the Complete Component in Community-Based Total Sanitation. *Revista de Gestao Social e Ambiental*, 18(5). <https://doi.org/10.24857/rgsa.v18n5-081>
- Filho, W. L., & Vasconcelos, C. R. (2023). Living Labs in The Context of The UN Sustainable Development Goals: State of The Art. *Sustainability Science*, 18(3), 1163–1179. <https://doi.org/10.1007/s11625-022-01240-w>

- Humble, N., & Mozelius, P. (2022). Content Analysis or Thematic Analysis: Doctoral Students' Perceptions of Similarities and Differences. *Electronic Journal of Business Research Methods*, 20(3), 89–98. <https://doi.org/10.34190/ejbrm.20.3.2920>
- Irawan, B. (2022). Islamic Boarding Schools (pesantren), Sufism and Environmental Conservation Practices in Indonesia. *HTS Teologiese Studies / Theological Studies*, 78(4), 1–10. <https://doi.org/10.4102/HTS.V78I4.7073>
- Julhadi, & Ritonga, M. (2023). Human Resource Management in Islamic Educational Institutions to Improve Competitiveness in Society 5.0 Era. *International Journal of Sustainable Development and Planning*, 18(2), 611–619. <https://doi.org/10.18280/ijstdp.180231>
- Junaidah, Mahardika, N. P., & Ma`arif, M. A. (2025). Promoting Green Madrasa as Environmental Education Program: How to Implement and Maintain It. *Munaddhomah*, 6(1), 39–54. <https://doi.org/10.31538/MUNADDHOMAH.V6I1.1572>
- Kalimullina, M., & Orlov, M. (Shamil). (2020). Islamic Finance and Food Commodity Trading: is There a Chance to Hedge Against Price Volatility and Enhance Food Security? *Heliyon*, 6(11), e05355. <https://doi.org/10.1016/j.heliyon.2020.e05355>
- Khan, H., Ullah, S., & Sarwar, R. (2025). Faith-Based Organizations , Environmental Conservation and Sustainability : A Systematic Review. *Research Mosaic (RM)*, 5(1), 21–34.
- Kioupi, V., & Voulvoulis, N. (2020). Sustainable Development Goals (SDGs): Assessing The Contribution of Higher Education Programmes. *Sustainability (Switzerland)*, 12(17), 6701. <https://doi.org/10.3390/SU12176701>
- Kiss, B., Sekulova, F., Hörschelmann, K., Salk, C. F., Takahashi, W., & Wamsler, C. (2022). Citizen Participation in The Governance of Nature-based Solutions. *Environmental Policy and Governance*, 32(3), 247–272. <https://doi.org/10.1002/eet.1987>
- Lutfauziah, A., Al Muhdhar, M. H. I., Suhadi, & Rohman, F. (2023). Curriculum Development for Environmental Education at An Islamic Boarding School. *Journal of Turkish Science Education*, 20(3), 490–503. <https://doi.org/10.36681/tused.2023.028>
- Masturin, Ritonga, M. R., & Amaroh, S. (2022). Tawhid-Based Green Learning in Islamic Higher Education: an Insan Kamil Character Building. *Qudus International Journal of Islamic Studies*, 10(1), 215–252. <https://doi.org/10.21043/qjijis.v10i1.14124>
- Muhammad, N., & Petra, M. I. (2021). History and Development of the Brunei Education System. In *International and Development Education* (pp. 21–44). https://doi.org/10.1007/978-3-030-77119-5_2
- Muyassaroh, S. N., Fitri, A. Z., & Id, G. C. (2021). Management of Nonformal Education Institution in Optimizing Services To Community: a Case Study. *Jurnal Manajemen Pendidikan Islam*, 05(03), 14–27. <https://doi.org/https://doi.org/10.33650/al-tanzim.v5i1.1416>

- Nugroho, P., Sanusi, S., & Ichsan, J. (2025). Adiwiyata Madrasah Program: Strategies for Improving the Quality of Environmentally Conscious Madrasahs. *Al-Tarbawi Al-Haditsah: Jurnal Pendidikan Islam*, 10(1), 26. <https://doi.org/10.24235/tarbawi.v10i1.18958>
- Oyenuga, M., Oyetunde, O. T., Oyedele, O. M., & Jaccinta, A. G. (2023). Green Management Practices and Organisational Efficiency in a Higher Institution. *Article in Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 6(August), 276–290. <https://doi.org/10.33258/birle.v6i3.7716>
- Perović, L. M., & Kosor, M. M. (2020). The Efficiency of Universities in Achieving Sustainable Development Goals. *Amfiteatru Economic*, 22(54), 516–532. <https://doi.org/10.24818/EA/2020/54/516>
- Puglisi, A., & Buitendag, J. (2022). A Faith-based Environmental Approach for People and The Planet: Some Inter-Religious Perspectives on our Earth-embeddedness. *HTS Teologiese Studies / Theological Studies*, 78(2). <https://doi.org/10.4102/hts.v78i2.7582>
- Purwati, E., Herningsih, Risdiana, A., Ramadhan, R. B., & Oktaviani, N. (2020). Educational management objectives in the liberal market: A case from Muhammadiyah boarding school. *International Journal of Innovation, Creativity and Change*, 12(3), 325–343.
- Rahman, R., Ismail, F., Nurhayati, N., & Abu Nazar, I. (2025). Ecological Ethics in Islamic Religious Education Textbooks: A Qualitative Representation Analysis. *Tafkir: Interdisciplinary Journal of Islamic Education*, 6(3), 844–861. <https://doi.org/10.31538/tijie.v6i3.1995>
- Raimi, L., & Bamiro, N. B. (2025). Role of Islamic Sustainable Finance in Promoting Green Entrepreneurship and Sustainable Development Goals in Emerging Muslim Economies. *International Journal of Social Economics*, 53(2), 181–196. <https://doi.org/10.1108/IJSE-05-2024-0408>
- Raimo, N., Nicolò, G., L'Abate, V., & Vitolla, F. (2024). Analyzing The Factors Affecting University Contributions to Achieving The Sustainable Development Goals in European Union Countries. *Sustainable Development*, 32(6), 6033–6044. <https://doi.org/10.1002/sd.3013>
- Rifat, M. R., Toriq, T., & Ahmed, S. I. (2020). Religion and Sustainability: Lessons of Sustainable Computing from Islamic Religious Communities. *Proceedings of the ACM on Human-Computer Interaction*, 4(CSCW2), 1–32. <https://doi.org/10.1145/3415199>
- Rohman, A., Kurniawan, E., Syifaiddin, M., Muhtamiroh, S., & Muthohar, A. (2024). Religious Education for The Environment: Integrating Eco-Theology in The Curriculum of Islamic Religious and Character Education to Enhance Environmental Education in Indonesia. *Nadwa: Jurnal Pendidikan Islam*, 18(2), 201–226. <https://doi.org/10.21580/nw.2024.18.2.21094>
- Said, T. S., Ramli, H., & Damia Natasha, A. (2023). The Adaptation of Malay Philosophy Values through Maritime education Preservation and Conservation Wisdom. In *BIO Web of Conferences* (Vol. 79). <https://doi.org/10.1051/bioconf/20237906001>

- Saihu, M., Umar, N., Raya, A. T., & Shunhaji, A. (2022). Multicultural Education Based on Religiosity to Enhance Social Harmonization within Students: A Study in Public Senior High School. *Pegem Egitim ve Ogretim Dergisi*, 12(3), 265–274. <https://doi.org/10.47750/pegegog.12.03.28>
- Stanley, M. (2023). Qualitative Descriptive: A Very Good Place to Start. In *Qualitative Research Methodologies for Occupational Science and Occupational Therapy: Second Edition* (pp. 52–67). Routledge. <https://doi.org/10.4324/9781003456216-4>
- Stough, L. M., & Lee, S. (2021). Grounded Theory Approaches Used in Educational Research Journals. *International Journal of Qualitative Methods*, 20, 16094069211052204. <https://doi.org/10.1177/16094069211052203>
- Subhan, S., Noviyanti, S. F., Ulfiandi, I. Z., & Lateh, M. (2025). Effective School Management Strategies for Enhancing Early Childhood Development. *Education and Sociedad Journal*, 2(2), 98–110. <https://doi.org/10.61987/edsojou.v2i2.711>
- Sulhan, A., & Hakim, L. (2023). Emancipating Islamic Education Management through Good-Quality Santri Character Cultures: Insights from Indonesia. *Eurasian Journal of Educational Research*, 2023(103), 197–214. <https://doi.org/10.14689/ejer.2023.103.012>
- Syukri, S., Amir, S. M., Fitriani, F., & Pane, S. (2024). Integration of Islamic Values with Environmental Ethics in Pesantren Education: A Case Study at Darularafah Raya Pesantren. *Jurnal Pendidikan Islam*, 13(1), 1–12. <https://doi.org/10.14421/jpi.2024.131.1-12>
- Taisir, M. T., Mohamad Iwan Fitriani, & Abdul Quddus. (2024). Integrating Environmental Sustainability into Islamic Religious Education Curriculum Development. *Jurnal Penelitian Keislaman*, 20(2), 157–169. <https://doi.org/10.20414/jpk.v20i2.11777>
- Tambak, S., Ahmad, M. Y., Sukenti, D., & Siregar, E. (2022). Faith, Identity Processes and Science-Based Project Learning Methods for Madrasah Teachers. *AL-ISHLAH: Jurnal Pendidikan*, 14(1), 203–216. <https://doi.org/10.35445/alishlah.v14i1.1184>
- Toshmali, G., Alimohammadzadeh, K., Maher, A., Hosseini, S. M., & Bahadori, M. (2020). Conceptualization of entrepreneurial university and pattern design of third generation university. *Iran Occupational Health*, 17(1).
- Wahjusaputri, S., Suwardi, S., & Nazhif, F. A. (2025). Evaluation Study of the Green School Program in Islamic Schools. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 17(1), 409–420. <https://doi.org/10.37680/qalamuna.v17i1.5161>
- Yang, H., Rao, P., Simpson, T., Lu, Y., Witherell, P., Nassar, A. R., Reutzell, E., & Kumara, S. (2021). Six-Sigma Quality Management of Additive Manufacturing. In *Proceedings of the IEEE* (Vol. 109, Issue 4, pp. 347–376). <https://doi.org/10.1109/JPROC.2020.3034519>
- Yasin, D. H. F., Yasin, R. F. F., Hasbullah, M. H., & Yaacob, K. M. S. K. (2024). An Analytical Inquiry into Ethical Dilemmas in Event Planning: Insights from Muslim Organizers. In *Contributions to Management Science: Vol. Part F2529* (pp. 477–489). https://doi.org/10.1007/978-3-031-48770-5_38

- Yigitcanlar, T., Desouza, K. C., Butler, L., & Roozkhosh, F. (2020). Contributions and risks of artificial intelligence (AI) in building smarter cities: Insights from a systematic review of the literature. In *Energies* (Vol. 13, Issue 6). <https://doi.org/10.3390/en13061473>
- Yihua, W., Meng, F., Farrukh, M., Raza, A., & Alam, I. (2023). Twelve years of research in The International Journal of Islamic and Middle Eastern Finance and Management: a bibliometric analysis. *International Journal of Islamic and Middle Eastern Finance and Management*, 16(1), 154–174. <https://doi.org/10.1108/IMEFM-03-2020-0134>