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MANAGEMENT *OF THE* ECO-PESANTREN PROGRAM BASED ON ISLAMIC ECOTHEOLOGY IN BUILDING A *GREEN* ISLAMIC CULTURE AT THE AR-ROHMAN TEGALREJO ISLAMIC BOARDING SCHOOL

Amilia Rofi'atul Muna*[1] Nur Rahmi Sonia[2] Fitri Amalia Majid[3] Muhammad Haikal[4]
UIN Kiai Ageng Muhammad Besari Ponorogo[1&2], STIT Muhammadiyah Kediri[3], Universidad de Cordoba[4]
e-mail: amilliarofiatul@gmail.com, nur.rahmi.sonia@uinponorogo.ac.id, famaliamajid@gmail.com, z92haham@uco.es

*Corresponding author: Email: amilliarofiatul@gmail.com

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Abstract

This study aims to analyze the management of the Eco Pesantren Program, based on Islamic eco-theology, in fostering a culture of Green Islam *at the Ar-Rohman Tegalrejo Islamic Boarding School. The background of this study stems from the importance of the role of Islamic boarding schools in addressing environmental issues through an Islamic educational approach that is not only normative but also applicable in daily life. The Eco Pesantren Program is understood as an institutional strategy to foster ecological awareness among pesantren residents.The pesantren implements planned and participatory environmental management programs. These programs are grounded in the values of the Qur'an and Sunnah. This study employs a qualitative approach using a case study design. Data collection techniques were conducted through in-depth interviews, field observations, and a documentary study of environmental policies, resource conservation programs, environment-based curricula, and supporting documents for the Eco Pesantren. Data were analyzed through the stages of data reduction, data presentation, and drawing conclusions, while data validity was strengthened through triangulation of sources and techniques. The research findings indicate that the management of the Eco Pesantren Program at the Ar-Rohman Tegalrejo Islamic Boarding School*

is carried out through four primary management functions: planning, organizing, actuating, and controling. This study concludes that the Eco Pesantren Program, grounded in Islamic ecotheology, plays a crucial role in fostering a culture of Green Islam *that reflects environmental concern, discipline, spiritual responsibility, and ecological behavior within pesantren life.*
Keywords: *Eco Pesantren, Islamic Ecotheology, Green Islam, Program Management*

Abstrak

Penelitian ini bertujuan untuk menganalisis pengelolaan Program Eco Pesantren berbasis ekoteologi Islam dalam membangun budaya Green Islam *di Pondok Pesantren Ar-Rohman Tegalrejo. Latar belakang penelitian ini didasari oleh pentingnya peran pesantren dalam menanggapi masalah lingkungan melalui pendekatan pendidikan Islam yang tidak hanya bersifat normatif, tetapi juga aplikatif dalam kehidupan sehari-hari. Program Eco Pesantren dipahami sebagai strategi kelembagaan dalam membentuk kesadaran ekologis warga pesantren melalui pengelolaan lingkungan yang terencana, partisipatif, dan yang berlandaskan nilai-nilai Al-Qur'an serta Al-Sunnah. Penelitian ini menggunakan pendekatan kualitatif dengan jenis studi kasus. Teknik pengumpulan data dilakukan melalui wawancara mendalam, observasi lapangan, dan studi dokumentasi terhadap kebijakan lingkungan, program penghematan sumber daya, kurikulum berbasis lingkungan, serta dokumen pendukung Eco Pesantren. Data dianalisis melalui tahapan reduksi data, penyajian data, dan penarikan kesimpulan, sedangkan keabsahan data diperkuat melalui triangulasi sumber dan teknik. Hasil penelitian menunjukkan bahwa pengelolaan Program Eco Pesantren di Pondok Pesantren Ar-Rohman Tegalrejo dilaksanakan melalui empat fungsi utama manajemen, yaitu perencanaan, pengorganisasian, pelaksanaan, dan evaluasi. Penelitian ini menyimpulkan bahwa Program Eco Pesantren berbasis ekoteologi Islam berperan penting dalam membangun budaya* Green Islam *yang mencerminkan kepedulian lingkungan, kedisiplinan, tanggung jawab spiritual, dan perilaku ekologis dalam kehidupan pesantren.*
Kata kunci: *Eco Pesantren, ekoteologi Islam, Green Islam, manajemen program*

INTRODUCTION

At the turn of the 21st century, the global environmental crisis is no longer merely an ecological issue into an existential threat to the survival of human civilization. Phenomena like climate change, land degradation, biodiversity loss, and plastic waste have now become urgent humanitarian problems. (Ali & Rahman, 2024). This crisis is actually not just a technical issue, but also a moral and spiritual one. This is where religion, especially Islam through the principles of balance (mīzān) and human stewardship, plays an important role in shaping ecological awareness. These principles then develop into Islamic eco-theology, a theological approach that emphasizes the harmonious relationship between humans, God, and nature as an inseparable unity

(Jamal, 2025)

Pesantren, as traditional Islamic educational institutions, hold significant potential for instilling eco-theological values in students. Beyond serving as centers for the transmission of Islamic knowledge, pesantren also function as social spaces that shape students' character, culture, and mindset in daily life. In their development, a number of pesantren have begun integrating environmental values into their educational systems and management through the concept of "eco-pesantren" or "green Islam." This program encompasses not only curricular aspects but also practical initiatives such as waste management, greening, water conservation, and sustainable living practices. However, the implementation of the Green Islam program in pesantren still faces various challenges, whether from managerial, resource, or collective awareness perspectives among the pesantren community (Jumarddin, 2013) . With over 36,000 pesantren spread across Indonesia, the potential of pesantren as a driving force for the environmental movement is immense (Kemenag, 2023).

Over the past decade, a new phenomenon has emerged in the form of the *Green Pesantren* movement an ecological initiative rooted in religious values that integrates Islamic teachings into environmental management practices. This movement has been further strengthened by policy support from the Ministry of Environment and Forestry (KLHK) through the Eco-Pesantren program (KLHK, 2022). One of the institutions implementing this initiative is Pesantren Ar Rohman Tegalrejo, Semen, Nguntoronadi, Magetan, which has begun developing this program through various educational activities and the daily routines of its students.

Although various studies on green pesantren have demonstrated significant contributions to strengthening ecological practices rooted in Islamic values, conceptual and implementation gaps remain that have not been comprehensively addressed. Research by Nur Kasanah, for example, places greater emphasis on technical-operational aspects in establishing regulations for the management of green Islamic boarding schools, such as the management of economically valuable waste, wastewater conversion, the use of environmentally friendly construction, energy and water efficiency, and the development of renewable energy (Kasanah et al., 2023) . Meanwhile, a study conducted by Muhtadi Abdul Mun'im focuses on the integration of ecological values in waste management based on *the green economy*, as well as its impact on social, economic, and public awareness aspects. Both studies tend to emphasize the practical dimensions and program impacts, both from technical and socio-economic perspectives (Mun'im & Alias, 2026) .

However, there have been few in-depth studies examining how Islamic eco-theological values are systematically internalized within the framework of program management from planning, implementation, to evaluationwithin the pesantren environment. Therefore, this study aims to fill this gap by examining the implementation of Islamic eco-theology in the management of the *Eco Pesantren*

program in a more holistic and integrated manner, particularly at Pesantren Ar Rohman. This study is expected to strengthen the literature on Islamic educational management and provide a practical model for the development of environmentally friendly Islamic boarding schools.

RESEARCH METHOD

This study employs a qualitative approach using a case study design, aimed at providing an in-depth explanation of how Islamic eco-theological values are internalized and operationalized through program management within the pesantren environment. The qualitative approach was chosen because it allows the researcher to explore meanings, actors' experiences, and management processes that are not easily measured quantitatively, as well as to provide a rich contextual narrative regarding environmental practices in Islamic boarding schools (Moleong, 2021).

The research location was set at the Ar Rohman Islamic Boarding School in Tegalrejo, Semen Nguntoronadi, Magetan, which has initiated an environmental program based on Islamic values. Research subjects included one caregivers or clerics (kiai), one boarding school leaders, two environmental program coordinators, three teachers, and ten active student representatives in green activities, informants were selected purposively based on their involvement and knowledge in environmental program management.

Data collection techniques included semi-structured in-depth interviews, participatory observation along 3 months, and program documentation (including the program's organizational structure, environmental curriculum, activity reports, and documentary photos). Interviews were designed to explore the actors' understanding of Islamic eco-theological values (such as khalîfah, amanah, mizan, and ayat kauniyah) as well as how these values are translated into each stage of program management (planning, organizing, implementation, and control). Observations were conducted to observe actual practices in the field, such as pesantren gardens and waste banks, while documentation provided supplementary data and a reconstruction of institutional policies.

Data analysis was conducted using an interactive model developed by (Miles et al., 2014), which comprises three main components: data reduction, data presentation, and drawing conclusions. In the data reduction stage, all interview transcripts, field notes, and documents were coded and organized into units of meaning relevant to the eco-theological and program management frameworks for example, the category of trust in planning, students as khalîfah, and environmental control indicators. Next, the data presentation stage displays the results through matrices, thematic networks, selected narratives, and flowcharts that facilitate an understanding of the context and patterns of relationships. Finally, conclusions are drawn by testing the validity of the data through source triangulation (interviews, observations, and documents).

The overall research design was conceived as *a single-case* study because it focuses on the internal processes of environmental program management within a single pesantren institution that has already implemented the *Green* Islam initiative.

Ar-Rohman Islamic Boarding School was chosen as the research location because it is one of the boarding schools that consistently implements the eco peantren program and has received an environmental award from the East Java provincial government in the Pratama category in 2024.

No.	Code	Category	Definition	Manifestation in Eco-Pesantren
1	**Khalīfah خَلِيفَة**	Islamic Eco-Theology	Human beings as God's vicegerents/stewards on Earth, entrusted with maintaining creation.	Foundation for shaping students' ecological leadership; cited as theological basis for planning and environmental ownership.
2	**Amanah أَمَانَة**	Islamic Eco-Theology	Sacred trust to care for and preserve Allah's creation; implies moral accountability.	Guides resource conservation, environmental management, and the assignment of responsibilities in program structures.
3	**Mīzān مِيزَان**	Islamic Eco-Theology	The principle of balance and proportionality in creation; prohibition against upsetting natural equilibrium.	Underpins programs targeting balanced resource use — water, electricity, and land conservation.
5	**Fasād فَسَاد**	Islamic Eco-Theology	Corruption or destruction of the Earth — forbidden in the Qur'an; motivates prohibition against environmental	Cited to justify prohibitions on littering, burning waste, and irresponsible consumption; used in

			harm.	environmental ethics education.
7	**Planning** *(Perencanaan)*	Program Management	Setting organizational goals and formulating relevant actions to achieve them.	Systematic formulation of the Eco-Pesantren vision, environmental policies, HR training, task force formation, and curriculum integration.
8	**Organizing** *(Pengorganisasian)*	Program Management	Assigning tasks, authority, and responsibilities to ensure focused implementation.	Formation of the Environmental Task Force and Eco Team with designated units for electricity, water, curriculum, and eco-activities.
9	**Actuating** *(Pelaksanaan)*	Program Management	Execution of planned programs through concrete activities and daily routines.	Conservation activities, 3R campaigns, waste sorting, cleanup, wastewater management, and greening programs in daily pesantren life.
10	**Controlling** *(Pengawasan)*	Program Management	Monitoring, assessment, and corrective measures to ensure alignment with program objectives.	Routine supervision by supervisors and senior students; assessment of student discipline in cleanliness, conservation, and ecological behavior.

11	**Reduce**	Environmental Practice	Minimizing generation of waste and reducing use of single-use items.	Students encouraged to minimize disposable items; stationery conservation programs promote paper efficiency.
12	**Reuse**	Environmental Practice	Repurposing still-usable items to extend their functional lifespan.	Reuse of bottles, containers, and paper in student activities; documented through photographic evidence (Figure A.8).
13	**Recycle**	Environmental Practice	Processing waste or used materials for a new productive purpose.	Organic waste composting; inorganic waste collection and processing within the pesantren waste bank system.
14	**Water Conservation** *(Konservasi Air)*	Environmental Practice	Responsible use and preservation of water resources.	Water-saving automatic pumps; regulated use for bathing, wudu, and cleaning; monitored by the electricity/water conservation sub-team.
15	**Energy Conservation** *(Konservasi*	Environmental Practice	Reducing electricity consumption through disciplined, needs-	Turning off lights/fans/electronics when not in use; duty officers monitor

	Energi)		based usage.	compliance; dedicated sub-team oversees implementation.
16	**Waste Sorting** *(Pemilahan Sampah)*	Environmental Practice	Separation of organic and inorganic waste at source for appropriate downstream management.	Food scraps/leaves sorted from plastic/paper; separate bins provided; documented in Figure A.5.
17	**Greening** *(Penghijauan)*	Environmental Practice	Planting trees, ornamentals, and productive crops on unused land to improve the environment.	Students involved in planting and caring for vegetation on vacant land; Ar Rohman Green program targets long-term reforestation.
18	**Wastewater Management** *(Pengelolaan Limbah)*	Environmental Practice	Treatment and management of liquid waste from daily activities to prevent environmental pollution.	Pesantren manages wastewater from bathing, kitchen, and cleaning; drainage systems maintained; documented in Figure A.11.
19	**Eco Pesantren**	Institutional Structure	A model of Islamic boarding school that integrates environmental management with Islamic educational values.	The overarching program label for all environmental initiatives at Ar-Rohman; policy-supported by KLHK (2022).

20	**Green Islam** *(Islam Hijau)*	Institutional Structure	A cultural orientation that embeds environmental awareness and responsibility into Islamic identity and daily practice.	Target culture to be built through all management functions; measured by students' ecological behavior, discipline, and spiritual responsibility.
21	**Islamic Eco-Theology** *(Ekoteologi Islam)*	Institutional Structure	A theological framework emphasizing the harmonious, inseparable relationship among humans, God, and nature.	Serves as both normative foundation and managerial framework for the entire Eco-Pesantren program.
22	**Environmental Task Force** *(Satgas Lingkungan)*	Institutional Structure	An institutional team of teachers and students tasked with executing and monitoring environmental programs.	Divided into three sub-units: electricity conservation, water conservation, and office supply conservation; oversees daily compliance.
23	**Eco Team / Working Groups** *(Tim Eco Pesantren)*	Institutional Structure	Steering body with cross-functional working groups managing policy, curriculum, activities, and capacity-building.	Includes Eco-Friendly Policy WG, Islam-Environment Curriculum WG, Nature Reflection WG, and Eco-Activities WG; student council involved as active agents.

RESULTS

1. Planning the Eco Pesantren Program at Ar Rohman Tegalrejo Islamic Boarding School

Planning is one of the key stages in the management process that plays a major role in achieving organizational goals. Planning can be understood as the process of setting organizational goals while formulating actions deemed relevant to realizing those goals. In the context of management, planning serves as the basis for decision-making regarding future activities. This process also aims to manage and utilize various resources effectively and efficiently to achieve results in line with expectations (Arifudin & Sholeha, 2021) .

To foster a *green* Islamic culture, the Ar-Rohman Tegalrejo Islamic Boarding School has an "Eco Pesantren" program aimed at empowering the entire boarding school community to improve environmental quality based on the values of the Qur'an and Sunnah. This program aims to foster knowledge, awareness, and concern among boarding school residents regarding environmental protection and management. Additionally, the Eco-Pesantren initiative encourages the application of Islamic teachings on environmental conservation in daily life, both within the boarding school environment and in interactions with the surrounding community.

Through this program, Ar-Rohman Tegalrejo Islamic Boarding School strives to create a clean, healthy, and environmentally friendly boarding school environment. Eco Pesantren is also designed to develop various boarding school activities that provide added value economically, socially, and ecologically for both the boarding school community and the surrounding community. Thus, Ar-Rohman Tegalrejo Islamic Boarding School is expected to become a model for Islamic-based environmental education that can be emulated by both the boarding school community and the broader public.

Planning for the *Green* Islam program at the Ar Rohman Islamic boarding school began with 1) preparing human resources by involving teachers in training and workshops on sustainability concepts, environmental education, and eco-friendly educational practices to be incorporated into their curriculum, 2) Forming the " " an environmental task force consisting of teachers and students to organize environmental program activities such as composting and organic fertilizer production, efforts to conserve electricity and water, cleaning the boarding school grounds, and 3R (reduce, reuse, recycle) campaigns 3) Integrating Islamic eco-theological values into the curriculum.

Based on an interview with Kiai Muhammad Ghufron Abrori, the Green Pesantren initiative is not merely understood as a technical effort to maintain environmental cleanliness, but also as a form of humanity's spiritual responsibility in caring for the earth. He explained that the boarding school strives to shape a generation with ecological awareness through the reinforcement of Islamic values such as humanity's responsibility as *khalīfah*, the prohibition against causing *fasād* or destruction on Earth, the principle *of mīzān* or balance, and love for nature as part of Allah's signs in creation. Based on observational data, the planning of the *Green* Islam

Program at Ar Rohman Islamic Boarding School is conducted in a well-thought-out, focused, and participatory manner. Each environmental program is formulated through regular consultations involving teachers, boarding school administrators, and senior students. These consultations serve as a forum to identify the boarding school's environmental needs, evaluate ongoing programs, and establish strategies and activity priorities in line with the institution's sustainability vision. This process demonstrates that planning is not merely a formality but involves active idea exchange grounded in field data, such as hygiene conditions, facility needs, and student capacity.

Furthermore, the regular coordination meetings held between the asatidzah and senior student leaders demonstrate the existence of a collaborative planning mechanism. Based on meeting documentation, each unit ranging from sanitation, student health, to green curricular activities presents reports and program proposals, which are then discussed to reach a collective decision. This participatory approach reflects the pesantren's democratic management culture, while also affirming that *Green* Islam planning is not decided *top-down*, but rather through a shura process that gathers perspectives from various levels. The involvement of senior " " students in the planning process also demonstrates that the pesantren is not only developing environmental programs but simultaneously building ecological leadership among the younger generation.

This well-thought-out planning process demonstrates consistency between Islamic eco-theological values particularly the principles of musyawarah (consultation), *khalīfah* (stewardship), and Amanah (trust) and managerial practices on the ground. It is this alignment between theological values and operational planning mechanisms that forms the foundation for the sustainability of the *Green* Islam program at Pesantren Ar Rohman.

Documentation shows that these plans are recorded in official records, including the environmental vision, success indicators, and long-term programs such as Ar Rohman Green and water conservation. The integration of this data indicates that the Green Pesantren planning has been developed with a strong theological and pedagogical awareness, rather than as a temporary response to environmental issues.

2. Organization of the *Green* Islam Program at Ar Rohman Islamic Boarding School in Tegalrejo

In management, organization is the process of assigning tasks, authority, and responsibilities so that the implementation of the organization's plans proceeds in a focused manner toward the achievement of its goals. The research findings indicate that the organization of the *Green* Islam program at the Ar Rohman Tegalrejo Islamic boarding school has been systematically designed by establishing an institutional structure specifically responsible for environmental management. Based on document reviews and interviews with administrators, the pesantren has two main structures

that form the foundation of the organization: the Ar Rohman Pesantren 2025 Environmental Task Force and the Pesantren Eco Team. These structures serve as a coordinating framework to ensure that all policies, activities, and environmentally friendly practices align with the pesantren's sustainability vision. This structure is not merely symbolic but reflects a clear division of tasks, complete with designated leaders, members, and thematic units that address specific environmental aspects.

In an interview, the head of the environmental task force, Ustadz Muhammad Nur Ruba'i, explained that the task force was formed to ensure that the students' ecological behavior could be consistently monitored and nurtured. He stated, "We formed this task force so that all student activities would have a clear standard of cleanliness and discipline. We want behavioral changes to occur not only during major events but to become daily habits." This statement demonstrates that the organization is not merely structural but functions as an instrument for shaping the students' ecological habits. During the documentation study, the environmental task force's structure revealed a detailed division of labor across three main focuses: electricity conservation**,** water conservation, and office supply conservation**.** Each focus area has a coordinator and members tasked with educating the students and overseeing the implementation of energy and resource conservation practices. For example, in the electricity conservation sub-section, the team is responsible for ensuring electricity is used only as needed, turning off lights during the day, turning off electronic devices when not in use, and optimizing the role of duty officers in monitoring. A similar division of tasks is evident in the water conservation and office supplies sub-sections, all of which prioritize the principles of using resources only as needed, discipline, and scheduled monitoring. This structure demonstrates that environmental organization is carried out not only at the policy level but extends to daily operational actions.

In addition to the environmental task force, the pesantren eco-team serves as the steering body for environmental programs, featuring a broader structure that includes leadership, teachers, student council members, and support units. This team comprises several *working groups (WGs)*, such as the eco-friendly policy WG**,** the Islam- and environment-based curriculum WG**,** the nature reflection activities WG, and the pesantren eco-activities WG**.** Each working group has members and a coordinator responsible for developing a green curriculum, designing environment-based activities, and conducting capacity-building for the pesantren community. The involvement of the student executive body as activity supporters demonstrates that students are not merely the recipients of environmental education but also active agents driving the program forward.

On the other hand, the Head of the Eco Pesantren Team, Ustadz Astu Fadhila Rohman, emphasized that the formation of working groups ranging from the Eco-Friendly Policy Working Group to the Nature Contemplation Working Group is a strategy to align all programs with the values of Islamic eco-theology. He stated, "We want all pesantren activities whether learning, worship, or daily routines to have an eco friendly orientation. Therefore, we established task forces so that each aspect can be managed with focus and professionalism." This statement indicates that the

organization *of Green* Islam is not merely practical but also integrates spiritual and managerial dimensions.

Overall, these findings indicate that the organization of the *Green* Islam program at Ar Rohman Islamic Boarding School proceeds through structured, collaborative mechanisms that are responsive to the boarding school's environmental needs. Clear division of labor, cross-unit support, and the active involvement of students and teachers reflect the organization's effectiveness in fostering an environmentally friendly and sustainable boarding school culture.

3. Actuating of the *Eco-Pesantren* Program at Ar Rohman Islamic Boarding School in Tegalrejo

In practice, the actuating of the Eco Pesantren Program at the Ar-Rohman Islamic Boarding School is carried out through several key activities. First, the boarding school implements a resource conservation program, particularly regarding the use of water, electricity, and stationery. Water conservation is achieved by encouraging the use of water only as needed, whether for bathing, wudu, washing, or other hygiene activities. Electricity conservation is implemented by encouraging students to turn off lights, fans, and electrical appliances when not in use. Meanwhile, stationery conservation is achieved by promoting the wise use of paper, reusing paper that is still usable, and avoiding waste in administrative and learning activities. These activities demonstrate that the boarding school is striving to foster a culture of simple, frugal living and responsible stewardship of available resources.



Figure A.2 Use of Water-Saving Automatic Water Pumps at Ar Rohman Islamic Boarding School
Source: Researcher's Documentation, 2026

Second, the actuating of the Eco Pesantren Program is also evident through the application of the principles *of reduce, reuse,* and *recycle*. The principle *of reduce* is applied by minimizing the use of single-use items and encouraging pesantren residents to be more mindful in generating waste. The principle *of reuse* is practiced by repurposing items that are still usable, such as bottles, containers, paper, or specific

supplies used in students' activities. The *"recycle"* principle is realized through efforts to process waste or used items so they can serve a new purpose. The application of this principle plays a crucial role in shaping the students' mindset that waste does not always have to be discarded but can be managed and utilized more productively.



Figure A.3 Reusing used bottles as flowerpots
and reduce the use of single-use items and minimize waste generation efforts
Source: Researcher's Documentation, 2026

Third, the pesantren sorts organic and inorganic waste as part of its environmental management efforts. Organic waste, such as food scraps, leaves, and other natural materials, is separated from inorganic waste such as plastic, bottles, paper, and packaging. This separation aims to ensure that waste is managed according to its type and characteristics. Organic waste can be directed for further processing, such as into compost, while inorganic waste can be collected, reused, or recycled. This activity serves as an educational tool for students to understand the importance of taking responsibility for managing waste right from the source.



Figure A.4 : Student separation of Organic and Non-Organic Waste at Ar Rohman Islamic Boarding School
Source: Researcher's Documentation 2026

Fourth, the actuation of environmental cleanup programs has become a routine activity in fostering a clean and healthy pesantren culture. This activity involves

students, administrators, and the pesantren community in cleaning dormitory areas, classrooms, the mosque, courtyards, bathrooms, drainage systems, and the surrounding environment of the pesantren. The cleanup program aims not only to create a comfortable environment but also serves as a means of fostering discipline, collective responsibility, and a commitment to cleanliness. From the perspective of Islamic eco-theology, this activity aligns with Islamic teachings that regard cleanliness as an integral part of faith and social piety.



Figure A.5 Efforts to Maintain Cleanliness at the Mosque and class in the Ar Rohman Islamic Boarding School

Source: Researcher's Documentation, 2026

Fifth, Islamic boarding schools also manage wastewater as part of their efforts to protect the environment. Wastewater generated from daily activities at the pesantren such as bathing, washing, kitchen use, and cleaning must be managed to prevent pollution or disruption to the surrounding environment. This wastewater

management demonstrates an awareness that the pesantren's intensive activities must be balanced with a sound environmental management system. Thus, the pesantren not only focuses on surface-level cleanliness but also strives to minimize the negative impact of liquid waste on the environment.



Figure A.6 Wastewater Management at Ar Rohman Islamic Boarding School
Source: Researcher's Documentation, 2026

Sixth, the actuation of the Eco Pesantren Program at the Ar-Rohman Islamic Boarding School is also realized through greening efforts on vacant land. These greening activities involve utilizing unused areas to plant trees, ornamental plants, shade trees, or productive crops. This initiative aims to create a cooler, more beautiful, and healthier boarding school environment. Additionally, the greening efforts serve an educational purpose, as students are involved in the process of planting, caring for, and maintaining the plants. Through these activities, students learn that caring for the environment involves not only cleaning up trash but also nurturing life and maintaining the balance of nature.



Figure A.7 Greening Program at Ar Rohman Islamic Boarding School

Source: Researcher's Documentation, 2026

Overall, the actuation of the Eco Pesantren Program at the Ar-Rohman Islamic Boarding School demonstrates the integration of environmental programs with Islamic values. Resource saving activities, the application *of the "reduce, reuse,* and *recycle*" *principles*, waste sorting, environmental cleanup, wastewater management, and reforestation are concrete examples of the implementation of Islamic eco-theology in the life of the boarding school. This program demonstrates that concern for the environment is not merely a technical responsibility but also part of a moral and spiritual duty. Thus, Ar-Rohman Islamic Boarding School strives to foster an ecological culture that not only creates a clean and healthy physical environment but also cultivates students who possess awareness, concern, and a sense of responsibility toward environmental sustainability.



Figure A.8 Final Waste Disposal Site at the Ar Rohman Islamic Boarding School
Source: Researcher's Documentation, 2026

4. Controlling of the *Green* Islam Program at Ar Rohman Islamic Boarding School in Tegalrejo

Research findings indicate that the controlling process is not only conducted to assess the success of technical aspects such as environmental cleanliness, resource conservation, waste sorting, and greening initiatives but also to gauge the extent to which Islamic ecological values have been internalized in the behavior of students and the pesantren community. Thus, evaluation in this program is not merely administrative in nature but also educational, spiritual, and cultural.

In practice, supervision is carried out routinely by boarding school supervisors, teachers, boarding school administrators, and senior students who are responsible for cleanliness and the environment. This supervision takes the form of controlling students' discipline in maintaining the cleanliness of their rooms, classrooms, the

mosque, the courtyard, bathrooms, and the boarding school's common areas. Additionally, evaluations are conducted regarding water and electricity usage, the management of organic and inorganic waste, the implementation of community service activities, and the sustainability of the greening program. This process demonstrates that the controlling mechanism within the Eco Pesantren Program serves not only as a corrective measure but also as a means of guidance to help students develop the habit of practicing environmentally friendly behavior as an integral part of Islamic ethics.

5. Program Enablers and Barriers

The implementation of the Eco Pesantren Program, based on Islamic eco-theology, at the Ar-Rohman Tegalrejo Islamic Boarding School is supported by several key factors. The primary factor ensuring the program's sustainability is the commitment of the boarding school's administrators to instill values of environmental stewardship as an integral part of Islamic teachings. The support of the kiai, asatidzah, and boarding school administrators serves as vital social capital in motivating students to participate in various environmental activities. Additionally, the existence of environmental policy documents, resource conservation programs, routine cleaning activities, waste sorting, and greening initiatives demonstrates that this program has a sufficiently clear institutional direction.

Nevertheless, the research findings also indicate that the implementation of this program still faces a number of obstacles. One of the main challenges is the uneven level of awareness among the students. Some students have demonstrated concern for cleanliness, water and electricity conservation, and waste sorting, but others still require ongoing guidance and supervision. This situation indicates that the internalization of Green Islam values has not yet fully become the collective culture of the entire pesantren community. Additionally, limitations in technical human resources also pose a challenge in managing environmental programs, particularly regarding waste processing, wastewater management, and the maintenance of environmental facilities. Pesantrens still require staff or mentors with technical expertise to ensure that environmental programs can operate more effectively and sustainably.

In addition, limited environmental funding is another factor affecting the program's sustainability. Certain activities, such as providing recycling bins, repairing drainage systems, treating wastewater, supplying plant seedlings, and developing eco-friendly facilities, require adequate financial support. Thus, although the Eco Pesantren Program at the Ar-Rohman Tegalrejo Islamic Boarding School has established a foundation of values, institutional support, and community participation, its success still needs to be strengthened through increased awareness among students, capacity building for technical staff, optimization of green spaces, and the provision of a more planned and sustainable environmental budget.

In addition, limited operational funds and a shortage of green open spaces also pose challenges to the sustainability of the Eco Pesantren program. Budget documents

show that environmental funding remains a secondary priority after formal educational needs, while the annual increase in the number of students demands improved sanitation facilities, drainage, and waste management. The location of the pesantren within residential areas also limits the expansion of green spaces ideal for seedling propagation and reforestation activities. Nevertheless, these findings do not diminish the program's success; rather, they demonstrate that Green Pesantren Ar Rohman thrives through collaborative efforts between leadership, pesantren culture, and community commitment in overcoming structural limitations. Thus, these supporting factors and obstacles reveal the real dynamics of the implementation of Islamic eco-theology in Islamic boarding schools, which continue to move toward a more mature sustainability.

DISCUSSION

The findings of this study can be analyzed systematically through the POAC management framework (*Planning, Organizing, Actuating, Controlling*), which has proven relevant as an analytical instrument for examining the management of the Islamic ecotheology-based Eco-Pesantren Program at Ar-Rohman Tegalrejo Islamic Boarding School.

First, regarding the planning dimension, the Eco-Pesantren Program is formulated through routine participatory deliberation (*musyāwarah*) involving the *kiai*, *asatidzah*, administrators, and senior students, and is subsequently documented in the pesantren's official environmental policy instruments. This planning process is not merely technical-administrative in nature; rather, it is theologically grounded in Islamic ecotheological values, particularly the concept of *khalīfah*, the obligation of *amānah*, and the principle of *mīzān*. As such, it reflects an integrative alignment between modern management principles and Islamic theological values.

Second, regarding the organizing dimension, the pesantren constructs a functional environmental organizational structure through two primary entities: the environmental task force (*satgas lingkungan*), which focuses on the conservation of electricity, water, and stationery supplies, and the Eco-Pesantren team, which comprises several thematic working groups (*pokja*), including the environmental policy working group, the Islamic and environmental curriculum working group, and the eco-friendly activities working group. The clear distribution of responsibilities and the active involvement of santri within the organizational structure transform environmental management into a collective institutional responsibility, while simultaneously serving as an instrument for cultivating ecological leadership imbued with the values of *khalīfah* and *amānah*.

Third, regarding to the actuating dimension, the program is realized through six concrete activities embedded in the daily life of the pesantren community: resource

conservation, application of the principles of reduce, reuse, and recycle, separation of organic and inorganic waste, routine environmental cleaning activities, wastewater management, and the greening of unused land. The *kiai*, as the central authority figure, functions as the primary driving force who encourages santri to internalize environmental activities not merely as technical obligations, but as acts of worship and as a lived expression of their responsibility as *khalīfah fil ardh*, as well as a concrete manifestation of the avoidance of *fasād*.

Fourth regarding to the controlling dimension, multilayered supervision is conducted by the *kiai*, *asatidzah*, and senior students, covering cleanliness discipline, resource use efficiency, waste sorting practices, and the continuity of greening programs. What distinctively characterizes the controlling function in this context is the presence of a spiritual dimension of control, namely the consciousness of *murāqabah*, or the awareness of Allah's continuous oversight. This spiritual consciousness motivates santri to engage in environmentally responsible behavior not solely because of institutional supervision, but because of the deeper awareness that caring for the natural environment constitutes a form of spiritual accountability before Allah

This study bears strong relevance while simultaneously possessing distinctive characteristics when compared to two prior studies addressing similar themes, namely the research conducted by Kasanah, As Sajjad, and Rohmatullah (2023) and that of Mun'im and Alias (2026). A holistic comparison of these three studies encompasses five principal aspects: research focus, methodological approach, theoretical framework, key findings, and scholarly contribution.

First, in terms of research focus, all three studies share the broad thematic concern of Islamic values-based environmental management within the pesantren context, yet each emphasizes distinctly different dimensions of that concern. Kasanah et al. (2023) concentrate their inquiry on macro-level regulatory mapping and Green Pesantren governance, identifying five operational dimensions that pesantren should ideally implement in realizing their environmental programs, namely organic and inorganic waste management, wastewater conversion, energy-efficient green architecture-based construction, energy conservation, and the development of renewable energy sources. Their central focus is on how national policy and external institutional support can drive pesantren toward becoming institutions that are genuinely responsive to environmental sustainability. Mun'im and Alias (2026) direct their attention toward the integration of Islamic values in Green Economy-based waste management at Annuqayah Islamic Boarding School Lubangsa, emphasizing how the values of cleanliness, ecological spirituality, and material environmental reality drive the transformation of waste into economically valuable resources while simultaneously positioning the pesantren as an agent of social change for the surrounding community. The present study by Amillia Rofi'atul Muna and Sonia, by contrast, concentrates on a more specific dimension that neither of the two prior studies has sufficiently addressed, namely how the management of the Eco-Pesantren Program is systematically operationalized through the POAC framework grounded in

Islamic ecotheological values at Ar-Rohman Tegalrejo Islamic Boarding School. Accordingly, this study fills a conceptual gap left unaddressed by both Kasanah et al. and Mun'im and Alias, specifically the dimension of internal managerial processes that explicitly connect theological values to organizational functions in a concrete and structured manner.

Second, in terms of methodological approach, notable differences are observable across the three studies. Kasanah et al. (2023) employ a library research approach with descriptive analysis, drawing their data from legislation, books, religious legal opinions (*fatwa*), and prior research findings. While this approach yields a comprehensive conceptual portrait of the ideal Green Pesantren model, it does not incorporate empirical field data drawn from actual institutional practices at any specific pesantren. Mun'im and Alias (2026) adopt a descriptive qualitative approach with a case study design at Annuqayah Lubangsa, collecting data through interviews, observation, and documentation, which are subsequently analyzed through data condensation, data display, and conclusion drawing. The present study by Amillia Rofi'atul Muna and Sonia similarly employs a qualitative approach with a single case study design at Ar-Rohman Tegalrejo, using data collection techniques that include semi-structured in-depth interviews, three-month participatory observation, and documentation studies covering environmental policies, resource conservation programs, and institutional Eco-Pesantren documents. The methodological advantage of Amillia's study over that of Mun'im and Alias lies in the greater intensity and duration of field observation, as well as the more explicit deployment of source and technique triangulation to ensure data validity. Compared to Kasanah et al., Amillia's study offers substantially richer empirical data by drawing directly from actual institutional practices observed in the field.

Third, in terms of theoretical framework, the three studies exhibit markedly different theoretical orientations. Kasanah et al. (2023) ground their analysis in environmental governance theory and public policy regulation, employing the concept of Green Pesantren as a theoretical umbrella that draws on the literature of LPBI NU, Islamic environmental jurisprudence (*fiqih lingkungan*), and relevant environmental legislation. Mun'im and Alias (2026) employ a more eclectic combination of theoretical lenses, incorporating Green Economy theory, Circular Economy theory, value theory according to Spranger and Kluckhohn, Ralph Linton's social role theory, ecotheological theory as developed by Abdul Majid An-Najjar, and Rogers' diffusion of innovations theory to explain the dissemination of pesantren environmental practices to wider communities through social media. The present study by Amillia Rofi'atul Muna and Sonia, in contrast, consistently applies two theoretical frameworks in an integrative manner: POAC management theory (*Planning, Organizing, Actuating, Controlling*) as the managerial analytical lens, and Islamic ecotheology as the normative foundation, drawing specifically on the concepts of *khalīfah*, *amānah*, *mīzān*, the prohibition of

fasād, and *āyāt kawniyyah*. This integration of two frameworks constitutes the theoretical distinctiveness of Amillia's study that is absent from both comparative studies, as it explicitly bridges modern management science and Islamic environmental theology within a single coherent analytical framework.

Fourth, in terms of key findings, the three studies produce findings that are mutually complementary, albeit different in orientation and depth. Kasanah et al. (2023) find that Green Pesantren requires five technical governance components that must be supported by government policy, MUI *fatwa*, and external institutional partnerships such as LAZISNU, RMI NU, LPBI NU, and Bank Mega Syariah in order for the program to be implemented comprehensively and sustainably at the national level. Mun'im and Alias (2026) find that the integration of three Islamic values cleanliness, ecological spirituality, and material environmental reality in Green Economy-based waste management at Annuqayah Lubangsa has produced tangible outcomes including behavioral change among santri, the formation of ecological solidarity movements, waste-based social entrepreneurship generating revenues of up to five million rupiah, and the emergence of the pesantren as a center of ecological education referenced by other pesantren across the Madura region. The present study by Amillia Rofi'atul Muna and Sonia finds that the management of the Eco-Pesantren Program at Ar-Rohman Tegalrejo operates through four POAC functions that are consistently grounded in Islamic ecotheological values. At the planning stage, the program is formulated through participatory institutional deliberation and documented in the pesantren's official environmental policies. At the organizing stage, an environmental task force (*satgas lingkungan*) is established with three primary foci electricity conservation, water conservation, and stationery conservation alongside an Eco-Pesantren team comprising several thematic working groups (*pokja*). At the actuating stage, the program is realized through six concrete activities: resource conservation, application of 3R principles, waste sorting, environmental cleaning activities, wastewater management, and the greening of unused land. At the controlling stage, routine supervision is conducted by the *kiai*, *asatidzah*, and senior students. These findings specifically affirm that Islamic ecotheological values do not remain confined to the normative level or moral discourse alone, but have been successfully operationalized across every stage of institutional program management.

Fifth, in terms of scholarly contribution, the three studies offer different yet mutually reinforcing contributions to the development of eco-pesantren literature and Islamic educational management. Kasanah et al. (2023) contribute at the macro-institutional level by providing policy recommendations for the Ministry of Religious Affairs and relevant stakeholders to issue national regulations governing Green Pesantren governance. Mun'im and Alias (2026) contribute at the meso-social level by documenting how a pesantren with well-established waste management infrastructure can transform itself into an environmental change agent with far-reaching impact on surrounding communities. The present study by Amillia Rofi'atul Muna and Sonia contributes at the micro-managerial level by uncovering the internal management mechanisms of the eco-pesantren program that explicitly connect Islamic

ecotheological values to the POAC management functions, while simultaneously demonstrating that this integrative model can be effectively implemented in a mid-scale pesantren operating under conditions of limited resources. When these three contributions are viewed cumulatively, Amillia's study complements what Kasanah et al. leave unaddressed in terms of empirical data and internal management processes, and likewise complements what Mun'im and Alias leave unaddressed in terms of a structured managerial analytical framework. Taken together, therefore, these three studies form a comprehensive body of knowledge on eco-pesantren, spanning the levels of national policy, socioeconomic and community impact, and internally grounded managerial mechanisms rooted in Islamic ecotheological values

This study has several limitations that should be acknowledged. First, the research was conducted exclusively at Ar-Rohman Tegalrejo Islamic Boarding School as a single research site, which constrains the generalizability of the findings to other pesantren contexts with different socio-cultural, geographical, and institutional characteristics. Second, the study relied solely on a qualitative approach without quantitative data support, meaning that the observed phenomenasuch as the extent of green culture internalization among santri could not be measured or verified through statistical instruments, thereby limiting the precision and comparability of the results. Third, the possibility of researcher bias cannot be entirely eliminated, as the interpretive nature of qualitative inquiry means that the researcher's perspectives, values, and prior assumptions regarding Islamic ecotheology may have, consciously or unconsciously, influenced the processes of data collection, coding, and analysis. Fourth, informant bias also represents a potential concern, particularly given that santri and ustadz may have provided socially desirable responses in the presence of institutional authority, thus potentially skewing the authenticity of the data gathered through interviews and observations. Finally, this study has not yet measured the long-term impact of the Eco-Pesantren program on participants' environmental attitudes and behaviors beyond the duration of the research period, leaving open the question of whether the green Islamic culture cultivated within the pesantren environment is sustained after santri graduate and reintegrate into broader society. Future research is therefore encouraged to adopt a mixed-methods design, expand the scope to multiple pesantren sites, and employ longitudinal approaches to more comprehensively evaluate the sustainability and transferability of Eco-Pesantren program outcomes

CONCLUSION

Based on the research findings, it can be concluded that the management of the Eco Pesantren Program based on Islamic eco-theology at the Ar-Rohman Tegalrejo Islamic Boarding School has been implemented through management functions that include planning, organizing, executing, and evaluating. In the planning stage, the

program was formulated systematically through environmental policies, institutional deliberations, and the integration of Islamic eco-theological values, such as the concept of humanity as *khalīfah*, the trust to care for the earth, the prohibition against causing *fasād*, and the principle *of mīzān*. In the organizing stage, the program involves clerics, teachers, boarding school administrators, senior students, and the entire boarding school community in the division of tasks and environmental responsibilities. Program implementation is realized through water, electricity, and stationery conservation activities; the application of the principles *of reduce, reuse,* and *recycle*; the separation of organic and inorganic waste; environmental cleanup activities; wastewater management; and the greening of vacant land. Meanwhile, evaluation is conducted through routine monitoring, student guidance, and assessments of the program's sustainability. Thus, the Eco Pesantren Program at Ar-Rohman Tegalrejo Islamic Boarding School functions not only as an environmental management program but also as a medium for Islamic-based ecological education capable of fostering a culture *of Green Islam*. This culture is reflected in the growth of awareness, discipline, spiritual responsibility, and environmentally friendly behavior in the daily life of the pesantren.

This study also highlights the understanding that Islamic boarding schools have great potential as centers of ecological transformation, provided that visionary leadership, curriculum, and daily practices go hand in hand. However, these findings also reveal certain limitations: uneven awareness among students, a shortage of technical personnel, a lack of green open spaces, and limited environmental budgets. These limitations are not merely obstacles but serve as prerequisites for understanding that strengthening pesantren capacity requires policy support, external partnerships, and innovative environmental programs.

Theoretically, this study expands the understanding that Islamic eco-theology can serve as a managerial framework, not merely a moral one. Practically, this study presents the Green Islam model at the Ar Rohman Islamic Boarding School as a best practice that can be replicated in other boarding schools. Given the urgency of the environmental crisis and the relevance of Islamic values in addressing it, further research should focus on comparative studies, the development of eco-theological evaluation tools, and the formulation of green pesantren policies at the regional and national levels. Thus, the contribution of this study goes beyond merely describing the program; it paves the way for the development of a more ecological, sustainable, and transformative Islamic education system.

To strengthen the sustainability of the Eco-Pesantren Program, the pesantren needs to prioritize the allocation of a dedicated environmental budget while simultaneously enhancing human resource capacity through technical training in environmental management for both institutional managers and santri. In addition, the pesantren is encouraged to develop a more structured and measurable monitoring and evaluation system as an instrument for assessing the consistency and effectiveness of program implementation across all POAC stages. Furthermore, the

establishment of strategic partnerships with local government agencies and relevant environmental institutions is strongly recommended, as such collaboration would provide access to technical assistance, capacity-building support, and sustainable funding mechanisms that would substantially reinforce the long-term continuity and scalability of the Eco-Pesantren Program. Collectively, these measures would not only address the current structural limitations identified in this study but would also position Ar-Rohman Tegalrejo Islamic Boarding School as a replicable and transferable model of Islamic ecotheology-based environmental governance that can serve as a practical reference for other pesantren institutions across Indonesia.

REFERENCES

Ali, I., & Rahman, A. (2024). Environmental Degradation: Causes, Effects, and Solutions. *International Journal for Multidisciplinary Research*, *6*(3), 1–10.

Indonesia, K. A. R. (2023). *Statistical Data on Pesantren Education in 2023*. Ministry of Religious Affairs of the Republic of Indonesia.

Jamal, S. (2025). Konsep dan implementasi ekoteologi dalam kurikulum pendidikan agama Islam. *Advances In Education Journal*, *2*(1), 136-147.

Kasanah, N., As Sajjad, M. H., & Rohmatullah, D. M. (2023). Responsive Islamic Boarding School Management to Environmental Sustainability Through the Green Pesantren Program: Nur Kasanah, Muhammad Husain, As Sajjad, Dawam, Multazamy, Rohmatullah. *Muslim Heritage*, *8*(2). https://doi.org/10.21154/muslimheritage.v8i2.5017

La Fua, J. (2013). Eco-pesantren; model pendidikan berbasis pelestarian lingkungan. *Al-TA'DIB: Jurnal Kajian Ilmu Kependidikan*, 113-125.

IPCC. (2023). Climate Change 2023: Synthesis Report. IPCC.

Ministry of Environment and Forestry (KLHK). (2022). Eco-Pesantren Program. KLHK

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. Sage Publications.

Moleong, L. J. (2021). *Qualitative Research Methods*. PT Remaja Rosdakarya.

Mun'im, M. A., & Alias, N. A. (2026). AL-AFKAR: Journal for Islamic Studies. Integrating Islamic Values into Green Economy-Based Waste Management in Islamic Boarding Schools. *Al Afkar*, *9*(2). https://doi.org/110.31943/afkarjournal.v9i2.3387.Integration

Testriono. (2024). *The Green Islam Movement in Indonesia: Actors, Strategies, and Networks*. UIN Jakarta Press.

UNEP. (2023). Turning Off the Tap: How the World Can End Plastic Pollution and Create a Circular Economy. UNEP