

Eco-Pesantren-Based Islamic Education Management

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ABSTRACT

The concept of eco-pesantren, or environment-based Islamic education management, is an innovative educational model that integrates Islamic values with environmental sustainability principles within Islamic boarding schools. This study aims to analyze the challenges and strategic approaches to implementing eco-pesantren in a holistic and sustainable manner. Despite its relevance, the implementation of eco-pesantren faces various obstacles, such as low environmental awareness, limited institutional resources, and entrenched habits that are not eco-friendly. Using a qualitative-descriptive method, this research explores the integration of environmental values into curriculum development, institutional culture, facility management, and daily practices. The study also emphasizes the role of Islamic theological foundations, leadership, and community engagement in supporting eco-pesantren initiatives. Findings reveal that effective implementation requires consistent environmental education, curriculum integration, role-modeling by educators, and partnerships with external stakeholders. Ultimately, this study contributes to the discourse on sustainable Islamic education and proposes eco-pesantren as a strategic model for nurturing environmentally conscious, spiritually grounded, and socially responsible generations.

Keywords: Islamic education management, eco-pesantren, environmental awareness.

INTRODUCTION

Environmental issues have become an urgent global concern, along with increasing ecosystem damage, climate change, and natural resource degradation. In the context of education, various approaches have emerged that integrate sustainability principles, one of which is the eco-school concept. In the Islamic educational environment, this concept has begun to be adapted in the form of eco-pesantren, which is a model of Islamic education management that combines Islamic values with concern for environmental sustainability¹.

Several previous studies have discussed environmental management in Islamic boarding schools, such as research by Aulia et al.² who studied environmental conservation practices at the SPMAA Lamongan Islamic boarding school, as well as Diavano³ which highlights the partnership of Islamic boarding schools in raising environmental issues. However, the majority of research still focuses on technical practices, without delving deeply into the managerial

¹ Umi Arifah, Ahmad Fauzan Hidayatullah, and Anif Rizqianti Hariz, "Program Eco-Pesantren Dalam Pelestarian Lingkungan," *Jurnal Kesehatan Lingkungan: Jurnal dan Aplikasi Teknik Kesehatan Lingkungan* 19, no. 1 (2022): 105–114.

² Rihlah Nur Aulia et al., "Pengelolaan Pendidikan Lingkungan Berbasis Pesantren : (Studi Kasus Di Pondok Pesantren SPMAA Lamongan, Jawa Timur)," *Jurnal Ilmiah Pendidikan Lingkungan dan Pembangunan* 19, no. 1 (March 31, 2018): 73–88, <https://doi.org/10.21009/PLPB.191.05>

³ Adam Diavano, "Program Eco-Pesantren Berbasis Kemitraan Sebagai Upaya Memasyarakatkan Isu-Isu Lingkungan Melalui Pendidikan," *Jurnal Litbang Sukowati : Media Penelitian dan Pengembangan* 5, no. 2 (May 23, 2022): 113–125, <https://doi.org/10.32630/sukowati.v5i2.312>

aspects and systematic strategies for integrating environmental values into the Islamic education system holistically.

The research gap lies in the lack of studies analyzing how Islamic education management can be optimized to support the sustainable implementation of eco-pesantren. Additionally, few studies have linked the concept of eco-pedagogy in pesantren with Islamic theological foundations, necessitating strengthening from the philosophical teachings, curriculum structure, and stakeholder involvement perspectives. Therefore, this study aims to answer the main question: What are the challenges and strategies in implementing environmentally-based Islamic education management (eco-pesantren)? This study not only identifies the obstacles faced in applying this concept but also offers a solution-based approach rooted in Islamic management principles and eco-pedagogical values.

The research was conducted using a descriptive-qualitative approach, exploring the concept of eco-pesantren from the perspectives of curriculum, institutional culture, the role of educators, and educational facility management. The focus is on identifying strategies that can strengthen the integration of ecological values in every aspect of Islamic education in pesantren. Thus, this study aims to provide conceptual and practical contributions to the development of Islamic education management oriented toward environmental sustainability, as well as to strengthen the position of pesantren as centers of education that are not only religious but also ecological.

RESULTS AND DISCUSSION

Islamic Education Management

Based on the environment (eco-pesantren) in this journal, the author briefly discusses Islamic education management. Islamic education management is a comprehensive management process of various aspects of the Islamic education system, aimed at achieving educational goals in accordance with the principles and values of Islamic teachings. In this context, management encompasses the stages of planning, organizing, implementing, and evaluating all educational activities, both academic and non-academic, based on Islamic principles⁴. The core objective of Islamic education management is to produce individuals who are not only intellectually intelligent, but also uphold noble character, possess strong spirituality, and are caring and responsible towards their social environment.

In practice, Islamic education management uses values such as honesty, justice, trustworthiness, and deliberation as the main pillars in the decision-making process and implementation of various programs. Leaders of Islamic educational institutions play a crucial role in formulating policies and establishing a work culture aligned with Islamic teachings. On the other hand, teachers and educational staff are not only tasked with imparting knowledge but also serve as moral and spiritual guides for students. Islamic education management also integrates a curriculum that combines general knowledge with religious teachings, enabling students to develop their full potential in a balanced manner. With good management, Islamic educational institutions are able to create a conducive learning environment, uphold Islamic ethical values, and produce graduates who can contribute positively to society and the community.

⁴ Hermawansyah, "Manajemen Lembaga Pendidikan Sekolah Berbasis Digitalisasi Di Era Covid 19," *Fitrah : Jurnal Studi Pendidikan* 12, no. 1 (2021): 28–46.

Basic concepts and objectives of Eco-Pesantren

Eco-pesantren is a concept for the development of Islamic educational institutions, particularly pesantren, which integrates values of environmental awareness into all aspects of education, life, and institutional management⁵. This concept was born as a response to various environmental issues that are increasingly concerning, such as pollution, water scarcity, massive deforestation, and global climate change, which are essentially triggered by human lifestyles and actions that are not in line with the principles of sustainability. In the context of Islamic education, this crisis must be taken seriously, as Islamic teachings themselves have emphasized the importance of preserving and sustaining the earth as part of Allah's trust to humanity⁶.

The basic concept of eco-pesantren is rooted in Islam's view of the relationship between humans and nature⁷. In Islam, humans are given the role of caliphs on earth, responsible for preserving and maintaining harmony in nature. The Qur'an and hadith clearly condemn all forms of environmental destruction and teach the importance of living simply, frugally, and maintaining cleanliness. Therefore, Islamic boarding schools rooted in Islamic values hold a strategic position to lead the way in designing educational models that prioritize environmental sustainability⁸.

Environmental awareness in eco-pesantren is not only taught as a subject, but is also embodied in daily practices and culture that are ingrained in the lives of pesantren residents⁹. All activities, ranging from learning, resource utilization, waste management, to social interaction, are directed to be in line with the principles of environmental conservation. The educational curriculum is also developed contextually so that students not only understand Islamic values theoretically, but are also able to apply them in protecting and preserving the surrounding environment¹⁰.

The main objective of eco-pesantren is to shape a generation of Muslims who are not only spiritually devout and morally upright, but also highly environmentally conscious. Students are expected to grow into individuals who care about the environment, have an eco-friendly lifestyle, and are capable of becoming agents of change in society. Additionally, the eco-pesantren aims to establish a sustainable educational management system, encompassing curriculum design, facility management, and the lifestyle of all pesantren residents¹¹. By implementing this concept, Islamic boarding schools not only reinforce their function as religious educational institutions, but also take an active role as centers of environmental education that contribute significantly to addressing the global ecological crisis. Eco-pesantren

⁵ Sri Rahayu Pudjiastuti, Herinto Sidik Iriansyah, and Yuliwati Yuliwati, "Program Eco-Pesantren Sebagai Model Pendidikan Lingkungan Hidup," *Jurnal Abdimas Prakasa Dakara* 1, no. 1 (2021): 29–37.

⁶ Pudjiastuti, Iriansyah, and Yuliwati, "Program Eco-Pesantren Sebagai Model Pendidikan Lingkungan Hidup."

⁷ Agus Junianto, Syamsuddin Rs, and Asep Iwan Setiawan, "Pemberdayaan Lingkungan Melalui Eco-Pesantren" 10, no. November 2024 (2025): 21–42.

⁸ Arifah, Hidayatullah, and Hariz, "Program Eco-Pesantren Dalam Pelestarian Lingkungan."

⁹ F Khairunnisaa, "Eco Pesantren Di Kabupaten Bandung Barat," *Jurnal ARSTEKTUR* (2016): 1–8.

¹⁰ Rihlah Nur Aulia et al., "Pengelolaan Lingkungan Berbasis Pesantren (Studi Kasus Di Pondok Pesantren SPMAA Lamongan, Jawa Timur)," *Jurnal Pendidikan Lingkungan dan Pembangunan Berkelanjutan* 19, no. 1 (2018): 73–88.

¹¹ adam Diavano, "Program Eco-Pesantren Berbasis Kemitraan Sebagai Upaya Memasyarakatkan Isu-Isu Lingkungan Melalui Pendidikan," *Jurnal Litbang Sukowati : Media Penelitian dan Pengembangan* 5, no. 2 (2022): 113–125.

ultimately become a model of holistic, integrative, and contextual Islamic education, capable of responding to the challenges of the times while remaining grounded in divine values.

The basis of Islamic teachings on environmental awareness

Environmental awareness is a value that is strongly emphasized in Islamic teachings. Islam teaches its followers to care for the earth as a trust given by Allah SWT. Islamic principles regarding the importance of protecting the environment can be found in the Qur'an and Hadith, which encourage Muslims to maintain the balance of nature, preserve natural resources, and avoid environmental destruction¹². In the Quran, Allah SWT states in Surah Al-Baqarah verse 164: "Indeed, in the creation of the heavens and the earth, the alternation of night and day, the ships that sail the seas providing benefit to humanity, the water that Allah sends down from the sky to revive the earth after its death, the various kinds of animals roaming the earth, and the rotation of winds and clouds controlled between the heavens and the earth, there are signs of Allah's greatness for those who reflect." This verse shows that everything on earth is Allah's creation and should be valued and preserved. The universe and all its contents are signs of God's greatness that should be maintained, not destroyed¹³.

In addition, Islam also teaches its followers not to cause destruction on earth. In Surah Al-A'raf verse 31, Allah SWT says: "O children of Adam, wear your beautiful clothes in every mosque and eat and drink, but do not be excessive. Indeed, He does not like those who are excessive"¹⁴. This verse reminds Muslims to use natural resources wisely and not excessively, because greed and wastefulness can cause damage to the environment. In addition, the hadith of the Prophet Muhammad SAW also emphasizes the importance of protecting the environment¹⁵. One of the famous hadiths states: "If the Day of Judgment comes and one of you has a seedling in his hand, then if he is able to plant it before the Day of Judgment arrives, let him plant it." This hadith illustrates the great value of preserving nature, even in the final moments, trees must still be planted. It teaches that caring for plants and preserving the sustainability of nature is the responsibility of every Muslim¹⁶.

Concern for the environment in Islam is also reflected in the principle of fair and sustainable management of natural resources. Islam encourages its followers to use natural resources wisely without causing damage. In this context, Islam supports various conservation efforts, such as tree planting, efficient water management, and waste reduction¹⁷. Overall, Islamic teachings on environmental awareness instruct followers to maintain the balance of nature, refrain from damaging natural resources, and use everything wisely. Islam emphasizes the importance of viewing nature as a trust from Allah that must be protected and preserved, not as personal property that can be controlled or exploited without limits. Therefore, every

¹² Ica Cahyaningsih, Khozin K, and Moh. Kamal, "Pembentukan Karakter Peduli Lingkungan Melalui Pendidikan Agama Islam Di Sekolah Dasar," *Dirasat: Jurnal Manajemen dan Pendidikan Islam* 8, no. 1 (2022): 102–116.

¹³ Pudjiastuti, Iriansyah, and Yuliwati, "Program Eco-Pesantren Sebagai Model Pendidikan Lingkungan Hidup."

¹⁴ Maulana Muhammad Ali, *Al Qur'an Terjemah Dan Tafsir* (Darul Kutubil Islamiyah, 2015).

¹⁵ Uswatun Hasanah Uswatun Hasanah and Ida Faridatul Hasanah Ida Faridatul Hasanah, "Internalisasi Pemahaman Moderasi Multikultural Dalam Pendidikan Islam Masa New Normal," *Attanwir: Jurnal Keislaman dan Pendidikan* 12, no. 1 (2021): 32–50.

¹⁶ Dian Chrisna Wati and Dikdik Baehaqi Arif, "Penanaman Nilai-Nilai Religius Di Sekolah Dasar Untuk Penguatan Jiwa Profetik Siswa," no. November (2017).

¹⁷ Cahyaningsih, K, and Kamal, "Pembentukan Karakter Peduli Lingkungan Melalui Pendidikan Agama Islam Di Sekolah Dasar."

Muslim is expected to have a high level of awareness to preserve the earth for the common good.

Integration of environmental values into the pesantren curriculum

The integration of environmental values into the pesantren curriculum is a crucial step in educating the younger generation about the importance of nature conservation. As an Islamic educational institution that plays a major role in shaping the character and morals of the community, pesantren have enormous potential to instill awareness and concern for the environment in their students¹⁸. Islamic teachings that promote respect for nature and maintaining the balance of the earth can be used as a basis for integrating environmental values into the pesantren curriculum. This is not only relevant in a religious context, but also supports environmental conservation efforts in the face of the challenges of global climate change¹⁹.

In the pesantren curriculum, environmental values can be incorporated through various approaches, both directly and indirectly. The first approach is to include material about the environment in existing subjects, such as Aqidah, Fiqh, and Tafsir. For example, in Aqidah lessons, students can be taught that the earth and the entire universe are creations of Allah SWT that must be protected and respected. This concept aligns with Islamic teachings that view the earth as a trust that must be cared for to the best of our ability. In this context, Islamic boarding schools can emphasize that damaging the environment constitutes a violation of the trust bestowed by Allah.

Furthermore, in Fiqh lessons, pesantren can teach about Islamic laws related to natural resource management. For example, in the law on zakat, it can be explained that part of the zakat collected can be used for environmental conservation activities, such as tree planting, clean water management, or ecosystem maintenance. Thus, students not only understand the obligation to pay zakat but are also taught how to contribute to maintaining the sustainability of nature. This also teaches students that preserving nature is part of worshiping Allah, which can earn them rewards²⁰.

It is also important to incorporate environmental values into lessons on interpretation, which explain the meaning of verses in the Qur'an related to nature. Many verses in the Quran teach about the importance of caring for nature and maintaining its balance, such as in Surah Al-Baqarah verse 164, which mentions the signs of Allah's greatness that can be seen in the creation of the heavens, the earth, and all that they contain. Islamic boarding schools can study these verses in greater depth and encourage students to understand that protecting the environment is a form of practicing religious teachings²¹.

The second approach is to develop extracurricular activities directly related to environmental conservation. Islamic boarding schools can organize activities that teach students how to maintain the cleanliness of the environment around the school, such as reforestation programs, river clean-ups, and waste management. In this case, Islamic boarding

¹⁸ Darul Qutni, "Efektivitas Integrasi Kurikulum Dalam Pembentukan Karakter Peserta Didik (Studi Di SMP Daarul Qur'an Internasional Tangerang Internasional Pesantren Tahfizh Daarul Qur'an)," *TAHDZIBI: Jurnal Manajemen Pendidikan Islam* 3, no. 2 (2018): 101–116.

¹⁹ Amirah Al May Azizah, "Integrasi Nilai-Nilai Keislaman Dalam Pembelajaran Ips Pada Kurikulum 2013," *Elementaris : Jurnal Ilmiah Pendidikan Dasar Islam* 3, no. 1 (2021): 23.

²⁰ Pesantren Nurussalam, Desa Mentayan, and Bantan Kabupaten Bengkalis, "62-Article Text-90-1-10-20230528" (2023): 147–153.

²¹ Zulfikar Zulfikar, Al Husaini M Daud, and Agus Salim Salabi, "Integrasi Nilai-Nilai Kearifan Lokal Dalam Manajemen Pendidikan Pesantren: Studi Pada Dayah Raudhatul Ma'arif Al-Aziziyah Cot Trueng," *ITQAN: Jurnal Ilmu-ilmu Kependidikan* 15, no. 1 (2024): 53–64.

schools can collaborate with environmental organizations to provide training or workshops on practical ways to protect the environment. Such activities not only teach students about theory but also provide them with skills that can be directly applied in their daily lives²².

In addition, Islamic boarding schools can also integrate environmental values into daily life. For example, boarding schools can teach students how to manage water wisely, conserve energy, and reduce plastic use. Boarding schools with gardens or farmland can also involve students in organic and environmentally friendly farming activities. In this way, boarding schools provide a direct example to students that living sustainably and environmentally friendly is not just a theory, but can be applied in daily life²³.

Integrating environmental values into the pesantren curriculum can also strengthen the character of santri as individuals who care for others and the natural environment. In Islam, maintaining the balance of nature is part of ensuring the well-being of humanity. Therefore, by instilling environmental awareness, Islamic boarding schools not only produce students with a strong understanding of religion but also students with social responsibility and a sense of duty toward the earth. This aligns with one of the goals of Islamic education, which is to create individuals who are not only spiritually connected to Allah but also socially connected to others and the environment²⁴.

In the face of increasingly severe global environmental challenges, integrating environmental values into the pesantren curriculum can make a significant contribution to creating a younger generation that is more concerned about environmental sustainability. Students educated with environmental awareness will be better equipped to become agents of change in society, focusing not only on personal interests but also on collective interests and the sustainability of the Earth. Therefore, Islamic boarding schools, as educational institutions with significant influence among the Muslim community, play a highly strategic role in shaping the character and environmental awareness of future generations.

The role of leaders and educators in implementing environmental values

The implementation of environmental values in an educational institution is highly dependent on the role of leaders and educators. Both have a great responsibility to ensure that environmental awareness is not just theory but is also applied in real life. School or pesantren leaders and educators have the opportunity to provide concrete examples to students on how we should protect and care for the earth, as well as how to manage natural resources wisely. Their role is crucial in shaping environmental awareness among the younger generation, who will eventually become the successors of life on this earth²⁵.

The leaders of educational institutions, whether they are school principals, boarding school administrators, or other educational institutions, play a key role in designing and establishing policies related to environmental conservation. As leaders, they serve as the first example for educators and students in applying environmental values. Visionary leadership will recognize the importance of integrating environmental aspects into every school activity²⁶.

²² Pendidikan Pesantren and Moderasi Beragama, "Maroso (Persatuan Yang Kuat) Dalam Membangun" 2 (n.d.): 269–274.

²³ Zulfikar, Daud, and Salabi, "Integrasi Nilai-Nilai Kearifan Lokal Dalam Manajemen Pendidikan Pesantren: Studi Pada Dayah Raudhatul Ma'arif Al-Aziziyah Cot Trueng."

²⁴ Pudjiastuti, Iriansyah, and Yuliwati, "Program Eco-Pesantren Sebagai Model Pendidikan Lingkungan Hidup."

²⁵ Muchammad Musa Alfaruk Musa, "Strategi Kepala Sekolah Dalam Menciptakan Sekolah Sehat Melalui Program Zero Waste," *Jurnal Kependidikan Islam* 12, no. 1 (2022): 72–81.

²⁶ Arifah, Hidayatullah, and Hariz, "Program Eco-Pesantren Dalam Pelestarian Lingkungan."

Leaders who care about environmental issues will motivate all elements of educational institutions to engage in various environmentally friendly activities, such as tree planting, waste management, or energy conservation programs. This policy will not only lead to increased environmental awareness, but also create a school culture that cares about the preservation of the earth²⁷.

In addition, leaders are also responsible for providing facilities and infrastructure that support environmental programs. For example, providing separate trash bins for organic and inorganic waste, ensuring the availability of recycling facilities, and providing green open spaces within the school environment. Leaders who are concerned about the environment will also involve external parties such as environmental communities or non-governmental organizations to collaborate in educational activities and greening programs. With clear policies and adequate resource support, leaders can create an educational environment that supports the development of character and environmental awareness among students²⁸.

Meanwhile, educators play a very important role in instilling environmental awareness values through classroom learning and extracurricular activities. Educators are at the forefront of providing knowledge about the importance of preserving nature²⁹. They not only teach students about the importance of environmental conservation in a theoretical context, but also guide them in applying it in their daily lives. In this regard, educators can utilize various interactive and engaging learning media, such as discussions, environmental projects, or field activities that teach students ways to reduce their negative impact on the environment³⁰.

In addition to imparting knowledge, educators must also be able to guide students in practicing these values. For example, by encouraging students to start simple habits such as saving energy, reducing plastic waste, or cleaning up the school environment. In this regard, educators can serve as good role models by incorporating eco-friendly habits into their personal lives, such as using reusable water bottles or bringing eco-friendly lunch boxes from home. In this way, educators not only teach through words but also through concrete actions that students can emulate³¹.

The importance of collaboration between leaders and educators in implementing environmental values cannot be overlooked. Leaders who care about the environment will provide clear direction, while educators involved in daily educational activities have the opportunity to implement these policies. They can collaborate in designing activities that foster environmental awareness, such as plastic waste reduction campaigns, recycling competitions, or school greening programs. Collaboration between school leaders and educators will create a conducive environment for students to learn about the importance of caring for the Earth³².

Overall, the role of leaders and educators in implementing environmental values is very significant. Educational institution leaders must be able to establish policies that support

²⁷ Oktamia Anggraini Putri, "Jurnal Pendidikan Dan Konseling," *Jurnal Pendidikan dan Konseling* 4, no. 20 (2022): 1349–1358.

²⁸ S.E. Putri, S.S. Zenien, and Amirullah, "Penguatan Sikap Peduli Lingkungan Melalui Integrasi Nilai Nilai Islam Dalam Mata Pelajaran Ipa Materi Keseimbangan Ekosistem Kelas 6 Sekolah Dasar," *Jurnal Pendidikan dan Pembelajaran IPA Indonesia* 12, no. 2 (2022): 81–87.

²⁹ S.E. Putri, S.S. Zenien, and Amirullah, "Penguatan Sikap Peduli Lingkungan Melalui Integrasi Nilai Nilai Islam Dalam Mata Pelajaran Ipa Materi Keseimbangan Ekosistem Kelas 6 Sekolah Dasar."

³⁰ Nofriza Efendi, Refli Surya Barkara, and Yanti Fitria, "Implementasi Karakter Peduli Lingkungan Di Sekolah Dasar Lolong Belanti Padang (Implementation of Character Cares About The Environment in Elementary School Lolong Belanti Padang)," *Jurnal Komunikasi Pendidikan* 4, no. 2 (2020): 1–10.

³¹ S.E. Putri, S.S. Zenien, and Amirullah, "Penguatan Sikap Peduli Lingkungan Melalui Integrasi Nilai Nilai Islam Dalam Mata Pelajaran Ipa Materi Keseimbangan Ekosistem Kelas 6 Sekolah Dasar."

³² Efendi, Barkara, and Fitria, "Implementasi Karakter Peduli Lingkungan Di Sekolah Dasar Lolong Belanti Padang (Implementation of Character Cares About The Environment in Elementary School Lolong Belanti Padang)."

environmental conservation, provide adequate facilities, and create an environmentally friendly school culture. Meanwhile, educators have the responsibility to instill knowledge and skills in students regarding the importance of protecting the environment, as well as setting a good example in their daily lives. With solid cooperation between leaders and educators, environmental education can be implemented to its fullest potential, producing a generation that is not only concerned about the environment but also capable of becoming agents of change in creating a better and more sustainable world.

Developing an environmentally conscious santri culture

Developing an environmentally conscious santri culture is a strategic step in creating a young Islamic generation that is not only spiritually religious but also responsible for the preservation of nature. As an important part of the Islamic educational community, santri have great potential to become agents of change in preserving and caring for the earth. A healthy environment is part of a balanced way of life, and Islam itself strongly emphasizes the importance of maintaining that balance. Therefore, fostering an environmentally conscious culture among santri is not only relevant but also part of the implementation of Islamic values in real life³³.

The process of developing an environmentally conscious culture in Islamic boarding schools certainly requires a planned and sustainable approach. This can begin with instilling the awareness that the earth and all its contents are creations of Allah SWT that have been entrusted to humans. This awareness must be strengthened in every student from an early age through education, habit formation, and real-life examples in daily life at the boarding school. When students realize that preserving nature is part of worship and a moral responsibility as stewards of the earth, a sense of love and concern for the environment will naturally develop³⁴.

Clean living habits, water conservation, not littering, and preserving plants can be cultivated through daily activities in the pesantren environment. For example, by implementing a mutual cooperation program to clean the environment, plant trees, or create a beautiful pesantren garden. Such activities not only build discipline but also train students to work together in maintaining the cleanliness and beauty of their environment. A clean and green boarding school environment also creates a more comfortable and conducive learning atmosphere, as well as supporting the physical and mental health of the students.

In addition to habit formation, the role of caregivers and teachers is also crucial in instilling environmental values. Students tend to emulate what their caregivers do. Therefore, if teachers and caregivers demonstrate an environmentally friendly lifestyle, such as reducing the use of single-use plastics, conserving energy, or bringing their own water bottles, students will be encouraged to follow suit. Setting a good example is a highly effective educational tool in shaping character, including in terms of environmental awareness³⁵.

On the other hand, Islamic boarding schools can also develop thematic programs that focus on the environment, such as Islamic Boarding School Environment Day, waste recycling competitions, or seminars on climate change issues and the role of Muslims in overcoming them. Such programs will provide students with a broader understanding that environmental issues are not solely the responsibility of the government or environmental organizations, but

³³ Analysis Of et al., "Analisis Karakter Peduli Lingkungan Pada Santri" 8, no. 2 (2024): 89–94.

³⁴ Pesantren Putri, Walisongo Cukir, and Universitas Hasyim, "Melalui Budaya Gotong Royong Dan Bantuan Infaq (Studi Kasus di Pondok" (n.d.).

³⁵ of Et Al., "Analisis Karakter Peduli Lingkungan Pada Santri."

also part of the responsibility of every Muslim individual. Students will learn that protecting the environment is a tangible expression of gratitude for the blessings Allah has bestowed³⁶.

Environmental awareness can also be incorporated into the extracurricular curriculum of Islamic boarding schools, for example through nature clubs, farmer communities, or organic farming activities. Through these activities, students are not only taught theory but are also encouraged to interact directly with nature. Hands-on experiences in caring for plants, managing waste, or reusing discarded items will shape a caring and responsible attitude toward the environment. This applied environmental education is crucial for reinforcing students' understanding that the environment is an integral part of human life.

In the long term, developing an environmentally conscious culture among students will have a significant impact on society at large. Students equipped with knowledge and experience about the importance of preserving nature will become environmental ambassadors in their communities when they return to their respective hometowns. They can spread the positive values they have learned at the pesantren, encouraging the surrounding community to be more mindful of cleanliness and environmental sustainability. In this way, the pesantren is not only a center for religious education but also a driving force for social change in building a more environmentally conscious society³⁷.

The development of an environmentally conscious culture among santri is essentially an effort to produce a complete generation of Muslims: those who understand their religious teachings, have noble character, and possess social and ecological responsibility. In a world increasingly facing environmental crises, this effort becomes increasingly important and relevant. Pesantren, as educational institutions with a strong foundation in religious values, hold a strategic position in instilling a spirit of environmental love rooted in Islamic teachings themselves. Through holistic education, students will grow into individuals who are not only spiritually devout but also caring and active in preserving the earth as part of their worship and devotion to Allah SWT.

Environmental-friendly management of pesantren facilities

Environmental-friendly management of pesantren facilities is a crucial step in creating a healthy, sustainable, and Islam-aligned educational environment. As an Islamic educational institution, the boarding school is not only responsible for educating students spiritually and intellectually but also for instilling awareness of the importance of preserving nature as part of Allah SWT's trust. Therefore, boarding school facilities must be managed in such a way as to support the development of students' environmental consciousness and responsibility for its sustainability³⁸.

One important aspect of environmentally friendly facility management is spatial planning that balances buildings and green spaces. Islamic boarding schools can provide gardens, orchards, or trees that not only provide beauty and comfort, but also serve as educational tools for students. These green spaces can serve as hands-on learning environments for organic farming, plant care, and natural recycling systems. Additionally, open green spaces help maintain air quality, reduce pollution, and strengthen students' connection with nature³⁹.

Water management is also a vital aspect in creating an environmentally friendly Islamic boarding school. Efficient use of clean water can be achieved by installing water-saving

³⁶ Kelembagaan Bank Syariah and Graha Ilmu, "No Title" 2, no. september 2016 (n.d.): 1–6.

³⁷ European Comission, "No Title No Title No Title" 4, no. 1 (2016): 1–23.

³⁸ Rihlah Nur Aulia, Dian Elvira Nanda Isnaini, and Umi Khumairoh, "Pengelolaan Lingkungan Berbasis Pesantren (Studi Kasus Di Pondok Pesantren Nurul Hakim Lombok)," *Hayula: Indonesian Journal of Multidisciplinary Islamic Studies* 1, no. 2 (2017): 119.

³⁹ Aulia et al., "Pengelolaan Lingkungan Berbasis Pesantren (Studi Kasus Di Pondok Pesantren SPMAA Lamongan, Jawa Timur)."

irrigation systems, utilizing rainwater for non-consumption purposes, and educating students not to waste water. This is in line with Islamic teachings that strongly emphasize the importance of moderation, even in using water for wudhu. On the other hand, waste management systems must also be given serious attention. Boarding schools can develop programs for separating organic and inorganic waste, composting kitchen waste to produce natural fertilizer, and recycling items that can still be reused⁴⁰.

Energy also needs to be managed wisely in the pesantren environment. Electricity consumption can be reduced through the implementation of environmentally friendly technologies, such as installing solar panels, using energy-efficient lighting, and optimizing natural lighting and ventilation within buildings. Students should also be involved in energy-saving campaigns and electricity conservation efforts, so they become accustomed to living efficiently and responsibly. With environmentally friendly facility management, boarding schools are not only places for learning religious and general knowledge but also serve as real-life laboratories for sustainable living practices. This will strengthen environmental awareness values in students' lives and make them agents of change for the future of the Earth.

Challenges and strategies for implementing environmental management

The implementation of environmental management in Islamic educational institutions such as boarding schools is an important step in achieving harmony between education, spirituality, and environmental conservation. However, in practice, there are various challenges that need to be addressed to ensure the program runs effectively and sustainably. One of the main challenges is the low awareness of the importance of environmental issues among administrators, educators, and students. Many still view environmental matters as secondary, not part of the pesantren's primary responsibilities, which have traditionally focused on religious education and moral development⁴¹.

Another challenge is limited resources, both in terms of finances and supporting facilities. Implementing environmental management often requires initial investment, such as in the procurement of separate waste bins, waste management systems, or the installation of alternative energy sources such as solar panels. For Islamic boarding schools with limited budgets, this poses a serious obstacle. Additionally, the lack of environmental experts who can provide guidance also hinders the design and implementation of programs aligned with environmentally friendly principles⁴².

Changing habits also poses a challenge. The culture of littering, wasting water, and using single-use plastics is still common in Islamic boarding schools. These deeply rooted habits are not easy to change without a consistent and comprehensive approach. Meanwhile, the lack of internal regulations that bind all boarding school residents to adopt an environmentally friendly lifestyle further slows down the process of changing these habits.

To address these challenges, a targeted and sustainable strategy is needed. The first step that can be taken is to build awareness and commitment among all elements of the pesantren regarding the importance of good environmental management. This can be started through educational activities such as lectures, training, group discussions, and environmental-themed

⁴⁰ Pudjiastuti, Iriansyah, and Yuliwati, "Program Eco-Pesantren Sebagai Model Pendidikan Lingkungan Hidup."

⁴¹ Dini Fajriyani et al., "Tantangan Kompetensi SDM Dalam Menghadapi Era Digital (Literatur Review)," *Jurnal Ekonomi Manajemen Sistem Informasi* 4, no. 6 (2023): 1004–1013.

⁴² Muh Ibnu Sholeh, "Strategi Manajemen Organisasi Pendidikan Islam Dalam Menghadapi Tantangan Global," *Edu Journal Innovation in Learning and Education* 1, no. 1 (2023): 1–27.

competitions that actively involve the santri. The example set by leaders and teachers is also very important, as santri tend to imitate the behavior of those they respect.

The next strategy is to integrate environmental values into the boarding school curriculum. Values such as cleanliness, energy conservation, love for nature, and environmental responsibility can be taught in religious studies or extracurricular activities. The boarding school can also establish internal policies governing waste management, water and energy use, and the treatment of green open spaces⁴³. In addition, strengthening collaboration with external parties such as non-governmental organizations, environmental agencies, or higher education institutions can also be an effective solution. Through this collaboration, Islamic boarding schools can obtain technical assistance, training, and even facility support for the implementation of environmental management. Another important strategy is to utilize local potential, such as involving students in organic farming activities, utilizing kitchen waste for composting, or managing waste banks. With the implementation of the right strategies and strong commitment from all components of the boarding school, the challenges in achieving environment-based management can be overcome gradually. The success of this management implementation not only creates a healthy and comfortable boarding school environment but also shapes the character of students to be responsible, caring toward nature, and capable of becoming agents of change in society.

CONCLUSION

Islamic education management based on the environment, or what is known as the eco-pesantren concept, is a strategic and integral approach to managing Islamic educational institutions that not only focuses on spiritual and intellectual aspects but also cares about environmental sustainability. This concept emphasizes that preserving nature is an integral part of Islamic teachings that must be implemented in daily life, including within the pesantren education system. By integrating environmental values into the curriculum, pesantren culture, and facility management, eco-pesantren serves as an effective means of shaping the character of students who are not only religious but also socially and ecologically responsible. Through planned, educational, and sustainable management, pesantren can create a clean, healthy, and environmentally conscious learning environment. Challenges such as limited resources, low awareness, and changes in habits are indeed obstacles, but they can be overcome with appropriate strategies such as education, setting a good example, collaborating with external parties, and strengthening internal policies. Therefore, environmentally-based Islamic education management is an important step toward creating holistic, sustainable educational institutions that contribute meaningfully to the preservation of the earth as a form of worship to Allah SWT.

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⁴³ Fajriyani et al., "Tantangan Kompetensi SDM Dalam Menghadapi Era Digital (Literatur Review)."

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