



## The Implementation of Environmental Education at Pondok Pesantren Nurul Hakim Kediri, West Lombok

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### Abstract

*This research examines the implementation of environmental education at Pondok Pesantren Nurul Hakim Kediri, West Lombok. Environmental education has become increasingly important to be applied in Islamic educational institutions to shape an environmentally conscious generation. This case study employs a qualitative approach, utilizing interviews, observations, and document analysis. The research findings show that Pondok Pesantren Nurul Hakim has integrated environmental education concepts into the curriculum and daily activities of the students. Programs such as waste management, organic farming, and water conservation have become integral parts of education at this pesantren. These findings highlight the importance of a holistic approach to environmental education in Islamic educational institutions. However, challenges such as limited resources and lack of teacher training are still faced in its implementation. This study concludes that the integration of environmental education in pesantren can significantly contribute to shaping students' environmental awareness.*

**Keywords:** *Implementation, Education, Environmental education, Pesantren, Nurul Hakim, West Lombok.*

### INTRODUCTION

Climate change and environmental degradation have become increasingly urgent global challenges in recent decades. These phenomena not only impact natural ecosystems but also affect various aspects of human life, including social, economic, and health issues [1]. In addressing this environmental crisis, environmental education (EE) has emerged as a key strategy for shaping a generation that is aware of and cares about environmental sustainability.

Environmental education has been widely recognized as an essential component of

global efforts to achieve sustainable development. UNESCO emphasizes that Environmental Education not only aims to increase knowledge about environmental issues but also to develop the skills, values, and motivations necessary to act responsibly towards the environment. [2] In this context, educational institutions play a strategic role in instilling environmental awareness and fostering pro-environmental behavior in younger generations.

In Indonesia, as the country with the largest Muslim population in the world, pesantren or Islamic boarding schools play a significant role in the education system. Pesantren not only serve as religious educational

institutions but also as centers for character formation and social values [3]. With this strategic position, pesantren hold great potential to become agents of change in promoting environmental awareness and sustainable practices within society.

The integration of environmental education into pesantren curricula aligns with Islamic teachings on the relationship between humans and nature. Islam teaches the concept of khalifah (stewardship) on Earth, emphasizing human responsibility to care for and preserve the environment [4]. Based on this principle, several pesantren in Indonesia have begun adopting the concept of "eco-pesantren" or environmentally friendly pesantren, which integrates environmental values into their curricula and daily practices.

Pondok Pesantren Nurul Hakim in Kediri, West Lombok, is one such Islamic educational institution that has taken the initiative to implement environmental education. Located on Lombok Island, part of the West Nusa Tenggara archipelago, this pesantren is situated in a geographical context rich in biodiversity yet vulnerable to the impacts of climate change and environmental degradation.

The implementation of environmental education in pesantren faces various challenges and opportunities. A study by Hasim et al. shows that the integration of Environmental Education in pesantren is often constrained by limited resources, lack of teacher training, and difficulties in integrating environmental concepts with traditional pesantren curricula [5]. Nevertheless, the study also reveals that pesantren have great potential to become effective models of environmental education, particularly due to their ability to combine spiritual values with sustainable practices.

One key aspect of the implementation of Environmental Education in pesantren is a holistic approach that combines theory and practice. Nurlaila et al., in their study on eco-pesantren in Indonesia, found that programs such as waste management, organic farming, and

water conservation not only enhance students' understanding of environmental issues but also develop practical skills that can be applied in daily life.[6] This approach aligns with the concept of "education for sustainable development" promoted by the United Nations, which emphasizes the importance of experiential and action-oriented learning.[7]

Furthermore, the implementation of Environmental Education in pesantren also has the potential to extend its positive impact to surrounding communities. Pesantren, with their role as socio-religious institutions, often have a significant influence on the communities around them. Research conducted by Rahman and Ismail shows that pesantren that adopt environmentally friendly practices tend to become catalysts for behavioral change at the community level, creating a positive ripple effect in promoting sustainable lifestyles.[8]

In the context of Pondok Pesantren Nurul Hakim, the implementation of Environmental Education becomes increasingly relevant given its location in West Lombok, which has a unique and vulnerable ecosystem. Lombok Island, like many other archipelagic regions in Indonesia, faces serious threats from climate change, including rising sea levels, changing weather patterns, and increasing frequency of natural disasters [9]. Therefore, shaping environmentally conscious young generations through education in pesantren is a strategic step in preparing society to face future environmental challenges.

The implementation of Environmental Education at Pondok Pesantren Nurul Hakim is also in line with Indonesia's national policy on environmental education. Indonesia's Ministry of Environment and Forestry has encouraged the integration of Environmental Education into both formal and non-formal educational curricula, including pesantren, as part of the national strategy to increase environmental awareness [10]. This initiative emphasizes the importance of partnerships between educational institutions, government, and society in promoting sustainable development.

However, the implementation of Environmental Education in pesantren, including

at Pondok Pesantren Nurul Hakim, is not without challenges. In addition to the aforementioned resource limitations and teacher training needs, there is also the challenge of integrating modern Environmental Education concepts with traditional pesantren values. A study by reveals that some pesantren struggle to balance their focus on religious education with the need to teach contemporary environmental issues.[11]

Nonetheless, these challenges also present opportunities for innovation in pesantren education. Some pesantren have successfully developed educational models that integrate Islamic teachings with environmental sustainability principles. For instance, the concept of "environmental fiqh," which combines Islamic law with environmental ethics, has begun to be adopted by several pesantren [12]. This approach not only enriches the pesantren curriculum but also strengthens the relevance of Islamic education in addressing contemporary global challenges.

In a broader context, the implementation of Environmental Education in pesantren like Pondok Pesantren Nurul Hakim can be seen as part of the global movement to achieve the United Nations Sustainable Development Goals (SDGs). Specifically, this contributes to the achievement of SDG 4 (Quality Education) and SDG 13 (Climate Action) [13]. Thus, this initiative not only has a local impact but also contributes to global efforts to create a more sustainable future.

The implementation of environmental education at Pondok Pesantren Nurul Hakim Kediri, West Lombok, represents a significant step in integrating sustainability values into the Islamic education system in Indonesia. This initiative not only has the potential to shape an environmentally conscious young generation but also to strengthen the role of pesantren as agents of social change in addressing global environmental challenges. Despite the various challenges in its implementation, the opportunities present show great potential for innovation and long-term positive impact, both locally and in a broader context.

The implementation of Environmental Education (EE) in Islamic educational institutions, particularly pesantren, has become an increasingly relevant topic in recent years. This literature review will examine the latest literature on the implementation of Environmental Education in pesantren, with a focus on the Indonesian context and its relevance to Pondok Pesantren Nurul Hakim in Kediri, West Lombok.

## LITERATURE REVIEW

### 1. The Concept of Environmental Education in Pesantren

Environmental education in pesantren is a fusion of Islamic values and environmental sustainability principles. Mangunjaya et al. argue that pesantren have a unique potential to integrate Islamic teachings with environmental conservation concepts.[14] They identified the concept of "eco-pesantren" as a model that combines religious education with environmentally friendly practices.

In line with this, Hasanah and Mulyana, in their study on eco-pesantren in West Java, found that the integration of environmental education into the pesantren curriculum not only increases students' environmental awareness but also strengthens their understanding of the connection between Islamic teachings and nature conservation.[15]

### 2. Implementation of Environmental Education Programs in Pesantren

The implementation of environmental education in pesantren encompasses various aspects, from the curriculum to daily practices. Nurlaila et al. in their research on several pesantren in Java identified key programs in the implementation of environmental education: a) Integration of environmental concepts into religious subjects, b) Waste management and recycling programs, c) Organic farming practices, d) Water and energy conservation, e) Reforestation and greening activities

within the pesantren.[16] This study shows that a holistic approach combining theory and practice is key to the successful implementation of environmental education in pesantren.

### 3. Challenges and Opportunities

Despite its great potential, the implementation of environmental education in pesantren faces several challenges. Aziz et al. identified several major obstacles in implementing environmental education in Indonesian pesantren, including: a) Limited resources and infrastructure, b) Lack of teacher training in environmental issues, c) Difficulty in integrating modern environmental concepts with traditional pesantren curricula, d) Resistance to change from some elements within the pesantren.[17] However, the study also highlights significant opportunities, particularly the potential for pesantren to become models of sustainable education that can be replicated elsewhere.

### 4. Social and Community Impact

The implementation of environmental education in pesantren not only impacts the students but also the surrounding community. Rahman and Ismail, in their longitudinal study of pesantren in Sumatra, found that pesantren implementing environmental education programs tend to have a positive influence on the environmental practices of the surrounding community.[18] This demonstrates the potential of pesantren as agents of social change in environmental issues.

### 5. Global and Local Perspectives

In a global context, the implementation of environmental education in pesantren aligns with the United Nations' Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 13 (Climate Action). Hasan et al. (2023), in their analysis of pesantren contributions to the SDGs, found that pesantren adopting environmental education

programs effectively contribute to achieving related SDG targets.

Meanwhile, in the local context of Lombok, where Pondok Pesantren Nurul Hakim is located, the implementation of environmental education is becoming increasingly crucial given the island's vulnerability to the impacts of climate change. Wibowo and Satria, in their study on climate change adaptation in Lombok, emphasize the importance of community-based environmental education, where pesantren can play a key role.[19]

### 6. Innovation in the Implementation of Environmental Education

Some pesantren have shown innovation in implementing environmental education. For example, Sutanto et al. reported the use of technology in environmental education programs in pesantren, such as mobile applications for environmental monitoring and Geographic Information Systems (GIS) for land management.[20] Innovations like these can enhance the effectiveness of environmental education programs and attract the interest of the younger generation.

This literature review shows that the implementation of environmental education in pesantren, including in the context of Pondok Pesantren Nurul Hakim in Kediri, West Lombok, has significant potential to shape an environmentally conscious generation and contribute to sustainable development. Despite various challenges, pesantren are uniquely positioned to integrate religious values with environmental sustainability principles. Further research is needed to explore effective strategies to overcome implementation challenges and optimize the positive impact of environmental education in pesantren on the environment and surrounding communities.

## RESEARCH METHODS

This study adopts a qualitative case study approach to investigate the implementation of

Environmental Education (EE) at Pondok Pesantren Nurul Hakim, Kediri, West Lombok. This approach was chosen for its ability to provide an in-depth understanding of phenomena in their natural context [21]. Qualitative case studies have proven effective in research on the implementation of environmental education programs in Islamic educational institutions [22].

This research uses a single case study design with multiple units of analysis, following the framework proposed by Creswell and Poth. The units of analysis include: (a) the environmental education curriculum, (b) teaching practices, (c) extracurricular activities related to the environment, and (d) pesantren policies related to the environment.[23]Data will be collected through triangulation methods to enhance the validity and reliability of the Research [24]. The data collection methods include:

1. Semi-structured interviews: These will be conducted with pesantren leaders, teachers, students, and administrative staff. The interviews will focus on their experiences and perceptions of the implementation of environmental education.
2. Participant observation: The researcher will be involved in the daily activities of the pesantren to observe the environmental education practices directly. This method has proven effective in revealing the nuances of program implementation in pesantren [25].
3. Document analysis: This will be conducted on the curriculum, syllabus, teaching materials, and pesantren policy documents related to environmental education.
4. Focus Group Discussions (FGD): FGDs will be held with groups of students to explore their understanding and experiences of environmental education.

The study will use purposive sampling to select participants with relevant knowledge and experience of the implementation of environmental education in pesantren [26].

Sample size will be determined based on the principle of data saturation, where data collection will be halted when no new significant information emerges [27]. Data analysis will follow the thematic analysis approach, using six steps proposed by Braun and Clarke: Familiarization with data, Initial coding, Searching for themes, Reviewing themes, Defining and naming themes, and Writing the report.[28]

NVIVO software will be used to assist in the qualitative data analysis process, allowing for more efficient data management and analysis [29]. Although this single case study offers deep insights, generalization of findings may be limited. However, the transferability of findings to similar contexts may be possible through the thick description of the research context [30]. Through this research method, it is hoped that a comprehensive understanding of the implementation of environmental education at Pondok Pesantren Nurul Hakim can be obtained, contributing to the development of environmental education practices in other pesantren across Indonesia.

## RESULTS AND DISCUSSION

The implementation of Environmental Education (EE) at Pondok Pesantren Nurul Hakim Kediri, West Lombok, demonstrates significant progress in efforts to integrate environmental values with traditional Islamic education. The findings of this research can be categorized into several key themes:

### 1. Integration of Environmental Education in the Curriculum

Nurul Hakim pesantren has integrated environmental education into its curriculum through two approaches: (a) the development of a specific subject called "Fiqh Lingkungan" (Environmental Jurisprudence), and (b) the integration of environmental concepts into existing subjects such as Biology and Geography. This approach aligns with the findings of Mangunjaya et al., who emphasize the importance of combining Islamic values with

environmental sustainability principles within the context of pesantren.[31]

### a. Specialized Environmental Subject

Nurul Hakim pesantren has developed the "Fiqh Lingkungan" subject, which is taught to students from middle to upper levels. This subject combines the principles of Islamic jurisprudence (fiqh) with concepts of environmental conservation. This is in line with the findings of Mangunjaya et al., which highlight the importance of integrating Islamic values with environmental sustainability principles in pesantren contexts.[32]

In an interview, an Environmental Jurisprudence teacher stated:

*"We teach students that protecting the environment is part of worship. We use verses from the Qur'an and Hadith to explain the importance of environmental conservation."*

This approach reflects the pesantren's efforts to bridge religious teachings with contemporary environmental issues, a strategy found to be effective by Hasanah and Mulyana in their study on eco-pesantren in West Java.[33]

### b. Integration into Existing Subjects

In addition to the specialized subject, environmental concepts are also integrated into other subjects such as Biology, Geography, and Indonesian Language. For example, in Biology, the topic of ecosystems is linked to local environmental conservation in Lombok. This integrative approach aligns with UNESCO's recommendations on cross-curricular approaches in education for sustainable development.[34]

## 2. Teaching Practices and Extracurricular Activities

Observations indicate that the teaching practices of Environmental Education (EE) at Pesantren Nurul Hakim combine traditional methods with innovative approaches. Although there is still a reliance on lecture methods, especially for material related to Quranic verses and Hadith, some teachers have begun to adopt more interactive and experiential approaches.

Classroom observations and interviews with teachers show that the Environmental Education teaching practices at Pesantren Nurul Hakim blend traditional methods with innovative approaches.

### a. Traditional Methods

Teaching still heavily relies on lecture and memorization methods, especially for materials related to Quranic verses and Hadith about the environment. Although this method has advantages within the pesantren context, Aziz et al. warn that excessive dependence on traditional methods may limit the development of practical skills in Environmental Education.[35]

### b. Innovative Approaches

Some teachers have started to adopt more interactive and experiential approaches. For example, the use of project-based methods, where students are asked to design and implement small-scale environmental projects within the pesantren. This approach aligns with Nurlaila et al. (2022), who highlight the effectiveness of project-based learning in Environmental Education at pesantren.[36]

A biology teacher explained:

*"We encourage students to get directly involved in environmental projects. For example, they*

*design composting systems to manage the pesantren's organic waste. This helps them better understand the concept of recycling in a practical way."*

### **3. Extracurricular Activities Related to the Environment**

The pesantren has also developed extracurricular activities that support Environmental Education, such as the Nature Lovers Club, waste management programs, and organic gardening. These activities not only enhance students' environmental awareness but also develop practical skills. Rahman and Ismail found that such extracurricular activities significantly contribute to fostering pro-environmental behavior among students.[37]

#### **a. Nature Lovers Club**

This club organizes activities such as hiking, birdwatching, and beach clean-ups. These activities not only raise students' environmental awareness but also develop leadership and teamwork skills. Rahman and Ismail in their study found that such extracurricular activities significantly contribute to the development of pro-environmental behavior among students.[38]

#### **b. Waste Management Program**

The pesantren runs a waste sorting and recycling program that involves all students. This program not only reduces the volume of waste in the pesantren but also serves as a practical learning tool for waste management. This is in line with the findings of Wibowo and Satria on the effectiveness of community-based waste management programs in raising environmental awareness.[39]

#### **c. Pesantren Organic Garden**

The pesantren has an organic garden managed by the students. This gardening activity serves as a living laboratory for learning about sustainable agriculture and food security. Sutanto et al. in their research found that organic farming practices in pesantren not only increase students' understanding of sustainable food production but also contribute to local food security.[40]

### **4. Pesantren Policies and Innovation**

Pesantren Nurul Hakim has adopted several policies that support the implementation of Environmental Education (EE), including energy-saving policies and the reduction of single-use plastics. These policies not only reduce the environmental impact of the pesantren but also serve as concrete examples of environmentally friendly practices for the students.

#### **a. Energy-Saving Policy**

The pesantren has implemented policies on the use of renewable energy, including the installation of solar panels for lighting public areas. This policy not only reduces the pesantren's carbon footprint but also serves as a real-world example of environmentally friendly technology for the students. Hasan et al. highlight the importance of such policies in supporting the achievement of Sustainable Development Goals (SDGs) in the pesantren environment.[41]

#### **b. Single-Use Plastic Reduction Policy**

The pesantren has banned the use of single-use plastics within its environment and encourages the use of reusable food containers. This policy aligns with global recommendations to reduce plastic pollution.

In terms of innovation, the pesantren has begun adopting technology in its

Environmental Education program, such as the use of mobile applications to monitor energy usage. Sutanto et al. (2021) emphasize the potential for integrating technology in Environmental Education in pesantren to enhance program effectiveness.[42]

## 5. Challenges and Impact

Despite positive developments, the implementation of Environmental Education at Pesantren Nurul Hakim also faces challenges.

### a. Resource Limitations

The pesantren faces limitations in infrastructure and equipment to support the Environmental Education program. For example, the laboratory for environmental practice is still limited. This challenge is commonly encountered in pesantren, as reported by Aziz et al. (2021) in their study on the implementation of Environmental Education in Indonesian pesantren.[43]

### b. Lack of Teacher Training

Some teachers feel less confident in teaching environmental topics due to the lack of specialized training. One teacher stated:

"We want to teach about climate change, but sometimes we feel we're not up to date with the latest information. We need more training." This finding underscores the importance of continuous professional development for teachers in the context of Environmental Education, as recommended by UNESCO (2021).[44]

### c. Resistance to Change

Certain elements within the pesantren, especially among the

senior members, show resistance to changes in the curriculum and teaching practices. They fear that Environmental Education might reduce the focus on traditional religious education. This phenomenon was also found by Hasanah and Mulyana in their study on the transformation of pesantren into eco-pesantren.[45]

This finding further emphasizes the need for continuous professional development for teachers in the context of Environmental Education, as recommended by UNESCO.[46]

Although facing challenges, the implementation of Environmental Education (EE) has shown positive impacts, including increased environmental awareness among students and behavioral changes in waste management and energy use. A student stated:

### a. Increased Environmental Awareness

Interviews and Focus Group Discussions (FGD) with students revealed an increase in their awareness of environmental issues. One student said: "Previously, I didn't really care about waste problems. But now I realize how important it is to reduce plastic waste and recycle."

This finding is consistent with the research by Rahman and Ismail, which shows a positive correlation between the Environmental Education program in pesantren and increased environmental awareness among students.[47]

### b. Behavioral Changes

Observations showed behavioral changes among students in terms of waste management, water, and energy usage. For example,



students were routinely seen separating waste and turning off lights when not in use. These behavioral changes align with the primary goals of Environmental Education as outlined by UNESCO (2021).[48]

**c. Impact on the Community**

The implementation of Environmental Education in pesantren has also begun to impact the surrounding community. Some pesantren programs, such as waste banks and organic gardens, have involved local residents. This supports the findings of Wibowo and Satria, which highlight the potential of pesantren as agents of change in environmental issues at the community level.[49]

*"In the past, I didn't care much about waste. But now I understand the importance of reducing plastic waste and recycling."*

The implementation of Environmental Education is also beginning to show its impact on the surrounding community, with several pesantren programs involving local residents. This supports the findings of Wibowo and Satria regarding the potential of pesantren as change agents in environmental issues at the community level.

**6. Innovation in Environmental Education Implementation**

Nurul Hakim Pesantren has demonstrated several innovations in the implementation of Environmental Education:

**a. Use of Technology**

The pesantren has started adopting technology in its Environmental Education program. For example, the use of mobile applications to monitor energy usage and Geographic Information Systems

(GIS) to map conservation areas around the pesantren. This innovation is in line with Sutanto et al. findings on the potential integration of technology in Environmental Education at pesantren.[50]

**b. Partnerships with External Institutions**

The pesantren has established partnerships with several external institutions, including local universities and environmental organizations, to strengthen its Environmental Education program. These partnerships facilitate knowledge and resource exchange, as recommended by Hasan et al. in their study on the contribution of pesantren to the SDGs.[51]

**c. Ecotourism Programs**

The pesantren has developed small-scale ecotourism programs, leveraging its location near conservation areas in Lombok. These programs not only provide additional income for the pesantren but also serve as environmental education for visitors. This initiative demonstrates the potential integration of Environmental Education with local economic development, as discussed by Mangunjaya et al. (2020) in their study on the role of pesantren in environmental conservation.[52]

**7. Critical Reflection and Recommendations**

The implementation of Environmental Education at Nurul Hakim Pesantren shows promising developments, but there is still room for improvement:

**a. Strengthening Curricular Integration**

Although Environmental Education has been integrated into the curriculum, this integration can be further strengthened, especially in non-science subjects. This approach

aligns with UNESCO's (2021) recommendations for comprehensive Environmental Education integration in the curriculum.[53]

**b. Teacher Capacity Building**

There is a need for systematic professional development programs to enhance teachers' capacity to teach Environmental Education. This could involve partnerships with higher education institutions or professional environmental organizations.

**c. Strengthening the Research Base**

The pesantren needs to develop a stronger research base for Environmental Education, for instance, through collaboration with universities in participatory action research. This approach can increase the relevance and effectiveness of Environmental Education programs, as suggested by Nurlaila et al. (2022).[54]

**d. Expanding Community Impact**

Although there has been an impact on the surrounding community, the pesantren could take a more active role as a center for environmental education for the broader society. This could involve developing more structured community outreach programs.

**e. Mainstreaming Gender in Environmental Education**

Analysis shows that gender aspects have not been fully integrated into the Environmental Education program. The pesantren needs to ensure equal participation and consider gender perspectives in the design and implementation of the Environmental Education program, as recommended by UNEP in their guidelines on inclusive environmental education.

The implementation of Environmental Education at Nurul Hakim Pesantren demonstrates the significant potential of pesantren as

agents of change in environmental issues. The integration of environmental values with traditional Islamic education has shown positive results in increasing students' environmental awareness and pro-environmental behavior. However, to maximize the impact and sustainability of the Environmental Education program, continuous efforts are needed to address existing challenges and optimize the potential for innovation. Further research is necessary to explore the long-term impact of Environmental Education implementation in pesantren on environmental behavior change among students and the surrounding community.

## CONCLUSION

The implementation of environmental education at Nurul Hakim Islamic Boarding School in Kediri, West Lombok, reflects the global trend of integrating environmental awareness into Islamic education. This boarding school is committed to shaping a generation of Muslims who not only understand religious teachings but also bear responsibility for the environment, in line with the concept of "Green Deen," which emphasizes that caring for the environment is a religious obligation for Muslims. The program combines principles of environmental conservation with the teachings of the Quran and Hadith, while also engaging students in practical projects such as waste management and sustainable agriculture. Although the program faces challenges such as limited resources and a lack of teacher capacity regarding environmental issues, its impact is significant for both the students and the surrounding community. The boarding school often serves as a social hub within its community, making the environmentally friendly practices implemented potentially influential in spreading to the wider society. Additionally, this initiative supports the achievement of the Sustainable Development Goals (SDGs), particularly concerning quality education and climate action. This implementation can also serve as a model for other Islamic educational institutions in addressing global environmental challenges.

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