

Enhancing Sustainable Development and Environmental Ecotheology Principle in Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School of Parepare

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ABSTRACT

Environmental challenges require educational approaches that integrate sustainability principles with religious values. This community service program aimed to improve students' understanding and awareness of sustainable development and ecotheology at Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare. The program employed a Participatory Action Research approach consisting of planning, action, observation, and reflection. Its implementation included preparation, material presentation, interactive discussion, question-and-answer sessions, practical activities, and evaluation. Before the program, students generally understood environmental responsibility only as maintaining cleanliness, disposing of waste properly, and caring for the boarding school environment. After participating in the activities, students demonstrated a broader understanding of the relationship between environmental conservation, sustainable development, and Islamic values. They recognized that conserving water and electricity, reducing plastic use, managing waste, and caring for plants represent practical applications of sustainable development and human responsibility as *khalifah fi al-ard*. The program also identified several challenges, including limited initial knowledge, insufficient learning resources, limited implementation time, and the absence of systematic integration of sustainability materials into boarding school learning. The program contributes a contextual learning model that combines Education for Sustainable Development with Islamic ecotheological principles. Continuous mentoring, institutional integration, and collaboration are required to maintain its long-term impact.

1. Introduction

Sustainable development is a development effort aimed at meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (Muthmainnah et al., 2021). Implementing sustainable development early on is crucial

because development focused solely on economic growth has been shown to cause serious environmental damage (Chotimah et al., 2022). This concept emphasizes the importance of intergenerational equity, so natural resources need to be managed rationally to ensure they remain available for the future. Education about sustainable development needs to be instilled from an early age so that the public understands the importance of maintaining ecosystem balance (Ayatina et al., 2021). Ecotheology, on the other hand, is a form of constructive theology that examines the reciprocal relationship between religion and nature, particularly in the context of concern for environmental issues (Setiawan et al., 2022). This concept stems from the view that the way humans understand spirituality and religion is closely related to environmental damage, thus religious reflection is seen as crucial in responding to the ecological crisis. Ecotheology has a strong alignment with the concept of sustainable development because they both emphasize the importance of sustainability, ecological balance, and the rejection of human domination over nature (Alabi et al., 2024). This connection is also evident in the relevance of ecotheological values to the pillars of the SDGs, particularly on the issues of clean water, energy, and climate change. Thus, ecotheology can be understood as an approach that strengthens sustainable development by providing a moral and spiritual foundation for environmental conservation efforts.

Sustainable development and ecotheology are two interrelated concepts that are crucial for maintaining the sustainability of human life and the environment. Ecotheology integrates religious values with environmental concerns, enabling humans to preserve nature more meaningfully and responsibly (Wiratanaya & Simon, 2023). From an ecological perspective, ecotheology fosters human awareness to preserve and conserve nature and prevent excessive resource exploitation (Tefnay et al., 2022). From an economic and social perspective, sustainable development implements the Triple Bottom Line concept, encompassing economic development or profit, social welfare or people, and environmental protection (Nazar et al., 2023). From a spiritual perspective, ecotheology fosters theological awareness that humans act as caliphs on earth and are responsible for preserving nature (Vella & Rizal, 2024). The practical application of ecotheology can create jobs and improve people's quality of life. Thus, sustainable development can be strengthened through ecotheology as a theological and ethical foundation.

Sustainable development is based on the principle of meeting present needs without compromising the ability of future generations to meet their own needs. Theoretically, this concept encompasses three main aspects: economic growth, social welfare, and environmental protection. The integration of these three aspects forms a comprehensive approach within a country's development framework (Budiman & Objantoro, 2022). Meanwhile, ecotheology is understood as a theological perspective that connects religious faith with efforts to maintain and preserve the universe. From an Islamic perspective, the ecotheology of the Qur'an encompasses three main concepts: *khalifah fi al-ard*, which places humans as God's representatives on earth, *taskhîr*, which explains the use of nature for human benefit, and *islâh*, which emphasizes the obligation to maintain and improve the environment (Poceratu, 2021). The application of these two concepts is becoming increasingly important because the ecological crisis can be understood as a reflection of the spiritual crisis of modern humans who ignore God's presence in their relationship with nature, while misunderstandings of the nature

of nature can encourage exploitative behavior (Mahzumi, 2018). Therefore, the integration of ecotheology and sustainable development is necessary to realize development that takes into account the spiritual, economic, social and ecological dimensions as a whole.

Training to improve sustainable development and ecotheology literacy plays a crucial role in responding to the increasingly complex environmental crisis. This crisis requires a new paradigm that integrates theological perspectives with sustainable development principles (Purnomo, 2020). In this context, interfaith ecotheological leadership is needed to evaluate and change human misperceptions and behaviors in environmental management. An ecotheological approach is relevant because various environmental leadership concepts that have been developed have not yet fully provided comprehensive solutions for achieving sustainable development. The urgency of this training is also supported by the low ecological awareness of the community, including in religious education settings (Lakawa, 2023). Some individuals still view ecological issues as social problems unrelated to faith and spirituality. This situation demonstrates the need for training that integrates ecotheological values into the educational process. Furthermore, understanding eco-literacy has been shown to improve community knowledge, attitudes, and behavior in supporting education for sustainable development (Neina et al., 2023). Thus, the dissemination of ecotheological materials through training can be one of the main means of translating theological understanding into concrete actions that support environmental preservation and sustainable development.

The training on improving literacy in sustainable development and ecotheology at the Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare aims to increase students' understanding and awareness of the importance of environmental protection based on the principles of sustainable development and Islamic values. This activity also aims to foster a responsible attitude in managing natural resources, prevent exploitative behavior, and encourage the implementation of concrete actions such as waste management, water and energy conservation, and maintaining environmental cleanliness. Through this training, students are expected to become advocates for environmental conservation within the Islamic boarding school and the community.

2. Method

The community service program was initiated through preliminary research using a Participatory Action Research (PAR) approach. This method was employed to identify the community's conditions, needs, and local potential before determining the most suitable activities. The PAR process consisted of four main phases: planning, action, observation, and reflection. Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School was selected as the location of the community service program based on an initial assessment of its available resources and development potential. Following the identification of the community's needs and potential, the implementation team formulated an activity plan and submitted it to the school management to obtain official approval for the proposed training program.

The program was conducted through three primary phases: preparation, implementation, and evaluation. During the preparation phase, the team developed the activity schedule, recruited prospective participants, prepared the training materials, and arranged the venue and supporting facilities. The implementation phase commenced with an opening ceremony,

followed by remarks from representatives of the boarding school and the university. The main session consisted of material presentations, interactive discussions, question-and-answer sessions, and practical exercises that enabled participants to apply the knowledge they had acquired. The evaluation phase was conducted at the conclusion of the program by reassessing participants' understanding of online marketing. This assessment was essential for measuring the effectiveness of the training, identifying areas that required further improvement, and determining appropriate follow-up actions to ensure the continuity and sustainability of the program.

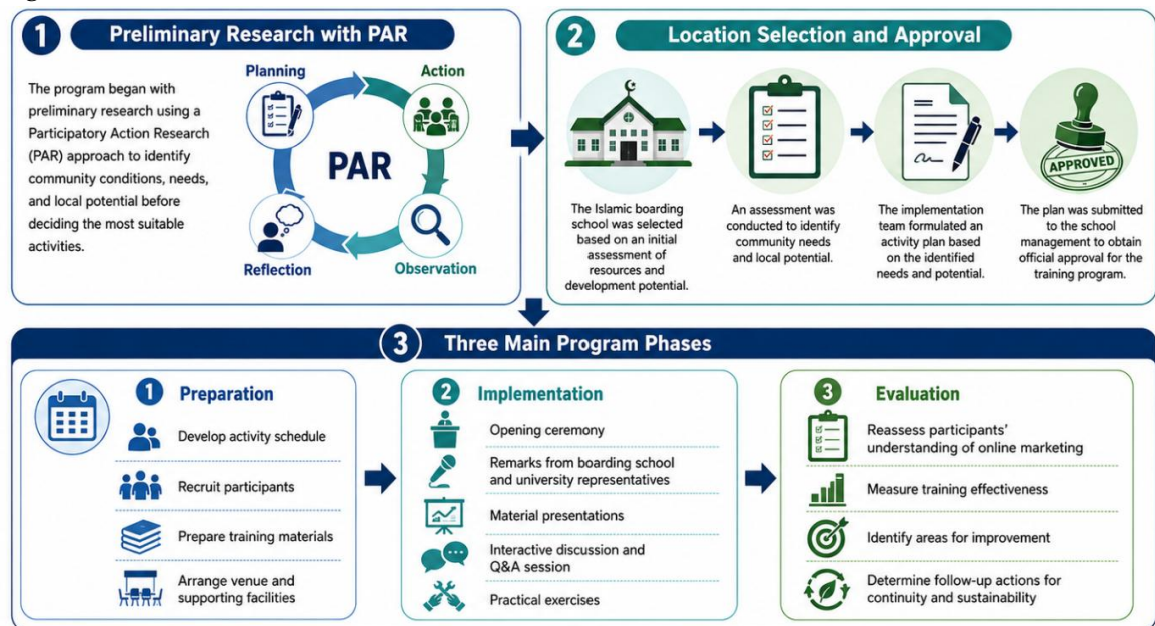


Figure 1. Community Service Framework

3. Results and Discussion

Based on the results of community service activities carried out at the Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare, it was discovered that the students' initial understanding of sustainable development and ecotheology was still relatively limited. Some students were familiar with several forms of environmental stewardship behavior, such as disposing of trash properly, maintaining cleanliness of the Islamic boarding school environment, and conserving water. However, these behaviors were not yet fully understood as part of the concept of sustainable development, which encompasses environmental, social, economic, and spiritual dimensions.

Prior to the community service activities, the students at the Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare's understanding of sustainable development and ecotheology was limited. Students generally only understood environmental awareness as maintaining cleanliness, disposing of trash properly, and caring for the school's environment. They did not yet understand the connection between environmental sustainability, sustainable development, and religious values. After participating in the activities, the students' understanding improved. They began to understand that protecting the environment is part of human responsibility as *khalifah fi al-ard* (vicegerents on earth). They also realized that behaviors such as conserving water and electricity, reducing plastic use, managing waste, and

caring for plants are forms of implementing sustainable development and practicing ecotheological values in everyday life.



Figure 2. The Opening of Community Service Program

The results of the activity showed that the students' initial understanding of sustainable development and ecotheology was still limited to the practice of maintaining environmental cleanliness (Wiratanaya & Simon, 2023). After the activity was carried out, the students began to understand that saving water and electricity, reducing plastic waste, and maintaining the Islamic boarding school environment are part of sustainable behavior. Empirically, the integration of Education for Sustainable Development in learning can increase students' knowledge and awareness of environmental sustainability (Lestari, 2022). In addition, increased understanding is also seen in the students' ability to connect environmental protection behavior with religious values, explaining that ecotheology emphasizes the harmonious relationship between God, humans, and nature and integrates spiritual, social, economic, and ecological dimensions in sustainable development (Gule, 2020).



Figure 3. The Process of Community Service Program

Community service activities at the Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare develop students' understanding of sustainable development and ecotheology through learning that is linked to real-world conditions within the school. The material focuses on fostering awareness, critical thinking, and environmentally friendly behaviors, such as maintaining cleanliness, conserving water and electricity, reducing plastic waste, and caring for plants. This development is carried out through interactive material delivery, the use of learning media, discussions, and observations of the surrounding environment (Khery et al., 2022). This approach aligns with empirical studies showing that the integration of Education for Sustainable Development, ecopedagogy, innovative learning media, and outdoor activities can increase students' awareness and behavior in sustainability. However, the implementation of this development still faces several obstacles. Students' initial understanding of sustainable development and ecotheology is relatively low, necessitating simple and contextual explanations. Furthermore, sustainability material has not been

specifically integrated into Islamic boarding school learning activities, learning media and resources are still limited, and activities are often carried out within a limited timeframe. Differences in students' levels of understanding and daily habits also pose challenges in encouraging consistent adoption of environmentally friendly behaviors.

In the long term, community service activities at the Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare are expected to foster students' awareness that environmental protection is part of their religious responsibility. This understanding has the potential to foster environmentally friendly habits, such as conserving water and energy, reducing waste, and maintaining the cleanliness and sustainability of the Islamic boarding school environment (Ernas et al., 2023). Ecotheology can strengthen spiritual awareness while also serving as a foundation for sustainable development encompassing social, economic, and ecological aspects. To maintain the impact of these activities, the Islamic boarding school can integrate ecotheological and sustainable development values into the students' learning, regulations, and daily activities (Syauki et al., 2024). Other efforts can be made through the establishment of cleanliness and greening programs, regular mentoring, evaluation of behavioral changes, and ongoing collaboration between the Islamic boarding school, universities, the government, and the community (Mardiana et al., 2024). These activities emphasize the importance of collaboration, monitoring, evaluation, and the integration of sustainable development goals into community service programs.

In fact, this community service activity increases the students' understanding of the relationship between sustainable development, environmental conservation, and Islamic values. Students no longer interpret environmental awareness as merely maintaining cleanliness, but begin to understand that conserving water and electricity, reducing plastic waste, managing waste, and caring for plants are all forms of human responsibility as *khalifah fi al-ard* (vicegerents of God). This shift in understanding forms the basis for developing more consistent environmentally friendly behavior within the Islamic boarding school environment.

4. Conclusion

The community service program at Zubdatul Asrar Nahdlatul Ulama Islamic Boarding School in Parepare indicated an improvement in students' understanding of sustainable development and ecotheology. Before the program, students primarily associated environmental awareness with cleanliness and proper waste disposal. Following the activities, they developed a broader understanding that environmental protection is connected to sustainable development and Islamic responsibility as *khalifah fi al-ard*. Students also recognized water and energy conservation, plastic reduction, waste management, and plant care as practical forms of sustainable and ecotheological behavior. The main contribution of this program lies in the contextual integration of Education for Sustainable Development and Islamic ecotheology within an Islamic boarding school environment. However, the program was constrained by limited implementation time, learning resources, differences in students' initial understanding, and the lack of systematic integration of sustainability topics into regular learning activities. Therefore, the long-term impact of the program should be maintained through the integration of ecotheological values into learning, boarding school regulations, daily student activities, cleanliness and greening programs, regular mentoring, behavioral

evaluation, and continued collaboration among the boarding school, universities, government, and local communities.

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