

The Effectiveness of the Eco-Pesantren Program in Creating Economic Value Through Green Product Development at Baitul Hikmah Islamic Boarding School, Tempurejo, Jember

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Abstract

This study examines the implementation of the eco-pesantren concept in integrating green economy principles at Pondok Pesantren Baitul Hikmah Tempurejo, Jember. Environmental degradation, climate change, and socioeconomic inequality have increased the need for sustainable development based on Islamic values, where humans are regarded as *khalifah fil-ardh* with the responsibility to preserve nature. Using a descriptive qualitative approach, data were collected through observations, in-depth interviews, documentation, and source triangulation to ensure credibility. The findings indicate that the eco-pesantren program effectively integrates environmental education into the pesantren curriculum, promotes waste management practices, and develops students' entrepreneurial skills through the Santri Tani Milenial program. Green products, including organic agricultural products and recycled goods, contribute to strengthening the pesantren's economic independence while equipping students with practical competencies in environmentally friendly agribusiness. Furthermore, partnerships with local communities, government institutions, and business stakeholders support the sustainability of green enterprises by providing financial assistance, technical guidance, and market access. These findings demonstrate that the eco-pesantren model offers a sustainable framework for integrating Islamic education, environmental stewardship, and local economic development.

Keywords

Eco-Pesantren; Green Economy; Economic Value; Green Products; Islamic Education.



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INTRODUCTION

Global environmental issues have become increasingly urgent due to the continuous degradation of natural resources, climate change, biodiversity loss, and widening socioeconomic inequalities (Hasid et al., 2022; Humaida, 2024). These challenges have encouraged governments, educational institutions, and communities

worldwide to adopt sustainable development strategies that balance economic growth, environmental conservation, and social welfare (Pradita & Mubarakah, 2026). One of the most widely recognized approaches is the green economy, which promotes efficient resource utilization, environmentally friendly production systems, and inclusive economic development. According to the United Nations Environment Programme, a green economy is defined as an economic system that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcity. In recent years, the concept of sustainable development has gained greater prominence as environmental degradation continues to threaten ecological balance and human welfare (Maghfiroh & Lestari, 2026). Consequently, environmental sustainability has become not only an ecological concern but also an educational, economic, and social responsibility.

From an Islamic perspective, environmental preservation is closely related to the concept of humans as *khalifah fil-ardh*, who are entrusted with the responsibility of managing and protecting the Earth responsibly (Tarigan et al., 2024). Environmental stewardship is also consistent with the objectives of *maqashid sharia*, particularly the preservation of life, wealth, and the common good (*maslahah*). Islamic teachings emphasize that environmental conservation should not merely be viewed as a technical or scientific issue but also as a moral and spiritual obligation. Therefore, the cultivation of environmental awareness should begin through educational institutions that are capable of integrating religious values with sustainable practices in everyday life. Education plays a strategic role in shaping environmentally responsible behavior because it develops knowledge, attitudes, and practical skills necessary for sustainable living (Pratama, 2019).

Among Islamic educational institutions in Indonesia, Islamic boarding schools (*pesantren*) possess considerable potential to contribute to environmental sustainability. *Pesantren* have historically functioned not only as centers for Islamic learning but also as institutions for character formation, community empowerment, and socioeconomic development. Long before the emergence of modern educational systems, *pesantren* had become an integral component of Indonesian society, providing religious education while simultaneously addressing social and economic needs (Nasirwan et al., 2024). Although Islamic sciences remain the primary focus of *pesantren* education (Suresman et al., 2025), many *pesantren* have expanded their educational activities to include entrepreneurship, community development, agriculture, and environmental management (Rahmansyah, 2023). This

multidimensional role enables pesantren to become strategic agents in promoting sustainable development based on Islamic values.

Indonesia currently has more than 36,000 pesantren accommodating approximately 4.8 million students (santri) (Ministry of Religious Affairs, 2023). Such a large educational network provides enormous opportunities for integrating environmental education and green economic principles into daily educational activities. One important innovation emerging from this movement is the concept of the eco-pesantren, which combines Islamic education with environmental conservation, sustainable resource management, and community economic empowerment. The eco-pesantren model encourages environmentally friendly practices such as waste management, organic farming, renewable energy utilization, water conservation, and the development of environmentally friendly business activities. These initiatives reflect the integration of ecological responsibility with Islamic ethical values while promoting sustainable livelihoods for surrounding communities.

The implementation of eco-pesantren in Indonesia has been strengthened by collaborative policies between the Ministry of Religious Affairs and the Ministry of Environment through Joint Agreement Number B17/DEP.VI/LH/XII/2006 and Number DJ.II/511E/E/2006 concerning the Development of the Role of Islamic Educational Institutions in Environmental Management. Ecologically, eco-pesantren encompasses several essential components, including efficient material utilization, biodiversity conservation, sustainable energy systems, and integrated waste management. Previous studies have demonstrated that pesantren possess substantial potential to cultivate environmental awareness and sustainable lifestyles among students. Environmental conservation within pesantren is therefore not solely intended to create clean and attractive surroundings but also represents the practical implementation of Islamic teachings concerning stewardship, responsibility, and moderation in resource utilization.

In practice, several pesantren have successfully developed green business initiatives through organic agriculture, waste recycling, compost production, and environmentally friendly products. These activities contribute not only to environmental preservation but also to improving institutional financial independence and providing entrepreneurial education for students. Rohimah (2022) reported that eco-pesantren implementation enhanced environmental awareness while simultaneously strengthening economic self-reliance through green product development. Likewise, Hidayat and Nasution (2021) found that partnerships

between pesantren and local communities significantly improved the sustainability of environmental programs by facilitating market access, technical assistance, and collaborative economic activities. These findings indicate that environmental sustainability and economic development can complement each other when supported by appropriate institutional strategies and community partnerships (Nasution et al., 2021).

One institution that has actively implemented this concept is Pondok Pesantren Baitul Hikmah Tempurejo Jember, East Java. The pesantren has established various environmentally friendly business initiatives, including organic farming and recycled products, while integrating environmental education into its institutional activities. Nevertheless, empirical studies examining the economic effectiveness of these initiatives remain limited. Existing research has predominantly emphasized environmental education and behavioral change, whereas the contribution of green products to institutional economic value and the role of local economic partnerships in ensuring business sustainability have received relatively little scholarly attention. This limitation represents an important research gap that warrants further investigation.

Based on these considerations, this study aims to analyze the effectiveness of the eco-pesantren model in integrating green economy principles at Pondok Pesantren Baitul Hikmah Tempurejo Jember. Specifically, the research examines three interrelated aspects: the effectiveness of integrating green economy principles into pesantren activities, the contribution of green products to the pesantren's economic value, and the role of local partnerships in supporting the sustainability of green business development. The findings are expected to contribute both theoretically and practically by providing a comprehensive understanding of how Islamic educational institutions can simultaneously promote environmental stewardship, economic resilience, and sustainable community development through the eco-pesantren framework.

METHODS

This study employed a qualitative research approach with a descriptive case study design to examine the effectiveness of the eco-pesantren program in creating economic value through the development of green products at Pondok Pesantren Baitul Hikmah Tempurejo, Jember (Gerring, 2017). A qualitative approach was considered the most appropriate because the study sought to obtain an in-depth understanding of the implementation of eco-pesantren, the integration of green economy principles into educational activities, the contribution of environmentally

friendly products to the pesantren's economic development, and the role of partnerships with local economic actors. Rather than measuring variables quantitatively, this research emphasized exploring participants' experiences, perceptions, and institutional practices within their natural setting. The descriptive case study enabled a comprehensive investigation of a single institution that has successfully implemented environmentally oriented educational and entrepreneurial programs.

The research was conducted at Pondok Pesantren Baitul Hikmah Tempurejo, Jember, East Java, which has actively implemented the eco-pesantren concept through environmental education, organic farming, waste management, and the production of environmentally friendly products. The pesantren was purposively selected because it represents one of the Islamic boarding schools that consistently integrates ecological awareness with entrepreneurial activities and community empowerment. This institutional context provides a suitable setting for examining how green economy principles are translated into educational practices and economic initiatives within an Islamic educational institution.

The study involved several key informants selected through purposive sampling, a technique commonly used in qualitative research to identify participants who possess relevant knowledge and experience regarding the phenomenon under investigation. The participants included the head of the pesantren, administrators responsible for environmental and business programs, teachers involved in eco-pesantren implementation, coordinators of the Santri Tani Milenial program, students participating in green entrepreneurship activities, and representatives of local community partners collaborating with the pesantren. These participants were chosen because they were directly involved in planning, implementing, managing, or supporting eco-pesantren activities and therefore could provide comprehensive information regarding the effectiveness of the program.

Data were collected using three complementary techniques, namely observation, semi-structured interviews, and documentation. Observation was conducted to obtain direct information regarding environmental management practices, green production activities, waste management systems, organic farming, and students' participation in eco-pesantren programs. During the observation process, the researcher recorded field notes concerning daily educational activities, environmental conservation practices, and entrepreneurial initiatives implemented within the pesantren.

Semi-structured interviews constituted the primary source of qualitative data. An interview guide was prepared to ensure consistency while allowing participants to elaborate on their experiences and perspectives. The interviews explored several major themes, including the implementation of green economy principles, the effectiveness of environmental education, the development of green products, economic benefits generated by eco-friendly businesses, institutional challenges, and the role of partnerships with local communities, government agencies, and private organizations. The flexible nature of semi-structured interviews enabled participants to provide detailed explanations while allowing the researcher to probe emerging issues during the conversation.

In addition, document analysis was employed to strengthen and validate the findings obtained through interviews and observations. The documents reviewed included institutional reports, eco-pesantren program guidelines, curriculum documents, financial reports related to green business activities, partnership agreements, photographs of environmental programs, training materials, and other supporting documents relevant to the research objectives. These documents provided additional evidence regarding the implementation process and contributed to a more comprehensive understanding of the eco-pesantren model.

The credibility of the research findings was enhanced through source triangulation, whereby information obtained from one participant or data source was compared with information collected from other participants and documentary evidence. Triangulation allowed the researcher to verify the consistency of the findings and minimize potential bias. In addition, prolonged engagement in the research setting and continuous comparison of emerging themes contributed to improving the trustworthiness of the analysis.

The collected data were analyzed using the interactive model of qualitative data analysis proposed by Miles, Huberman, and Saldaña, consisting of four interconnected stages: data collection, data condensation, data display, and conclusion drawing with verification. During the first stage, all interview transcripts, observation notes, and documents were systematically organized. The second stage involved selecting, coding, categorizing, and reducing the data according to themes relevant to the research objectives. The third stage consisted of presenting the data in narrative descriptions and thematic matrices to facilitate interpretation and comparison among different sources of information. Finally, conclusions were drawn by identifying recurring patterns, relationships, and themes while continuously

verifying interpretations through triangulation and repeated examination of the collected data.

The analysis focused on three principal dimensions: (1) the effectiveness of the eco-pesantren program in integrating green economy principles into educational and institutional activities, (2) the contribution of green products to the economic value and financial sustainability of the pesantren, and (3) the role of local economic partnerships in supporting the long-term sustainability of green business initiatives. Through this analytical framework, the study provides a comprehensive understanding of how environmental education, Islamic values, entrepreneurship, and community collaboration collectively contribute to the development of a sustainable eco-pesantren model. The findings are expected to serve as a practical reference for other Islamic educational institutions seeking to integrate environmental sustainability with economic empowerment while maintaining their religious and educational missions.

FINDINGS AND DISCUSSION

The Effectiveness of Eco-Pesantren in Integrating Green Economy Principles at Pondok Pesantren Baitul Hikmah Tempurejo, Jember

The findings of this study demonstrate that the Eco-Pesantren program at Pondok Pesantren Baitul Hikmah Tempurejo Jember has effectively integrated green economy principles into educational activities, environmental management, and productive economic initiatives. Rather than functioning as an isolated environmental campaign, the program has become an integral part of the pesantren's institutional culture and daily practices. Environmental sustainability is implemented through a wide range of activities, including organic farming, compost production from organic waste, environmentally friendly waste management, reduction of environmentally harmful materials, and the development of green products that contribute to the pesantren's financial sustainability. The active participation of pesantren leaders, teachers, administrators, students, and surrounding communities indicates that environmental responsibility has evolved into a shared institutional value rather than a temporary project.

The effectiveness of the Eco-Pesantren program is reflected not only in the number of environmental activities conducted but also in the observable transformation of students' environmental awareness and behavior. Interview findings reveal that students have developed a deeper understanding of environmental stewardship as an integral component of Islamic teachings. More importantly, this understanding has been translated into practical actions through

daily environmental management, agricultural activities, and participation in green entrepreneurship programs. These findings suggest that the Eco-Pesantren model successfully promotes behavioral change by encouraging students to apply ecological values in their everyday lives. Consequently, environmental education becomes experiential rather than merely theoretical, enabling students to develop sustainable habits while simultaneously acquiring practical economic skills.

These findings are consistent with the Eco-Pesantren concept promoted by the Indonesian Ministry of Environment, which defines Eco-Pesantren as an Islamic educational institution that integrates religious education with environmental conservation and sustainable resource management. According to this framework, pesantren serve as centers for developing environmentally responsible character through curriculum integration, daily practice, and community empowerment. The implementation observed at Pondok Pesantren Baitul Hikmah clearly reflects these principles by embedding environmental education into both formal learning activities and productive institutional programs. The integration of Islamic values with ecological responsibility strengthens students' environmental ethics while reinforcing the religious obligation to preserve nature as part of human stewardship (*khalifah fil-ardh*).

Furthermore, the study strongly supports the principles of the Green Economy introduced by the United Nations Environment Programme (Adamowicz, 2022; Borel-Saladin & Turok, 2013), which emphasizes economic development that simultaneously enhances human well-being, social equity, and environmental sustainability. The pesantren demonstrates that environmental conservation and economic development are complementary rather than conflicting objectives. Organic farming, compost production, recycling activities, and environmentally friendly agricultural products illustrate the practical implementation of circular economy principles, whereby waste materials are transformed into valuable economic resources. These activities generate additional income for the institution while reducing environmental impacts, illustrating how green entrepreneurship can become an effective strategy for sustainable economic development within Islamic educational institutions.

The findings also align with the concept of Sustainable Development proposed in the Brundtland Report (1987), which emphasizes meeting present needs without compromising the ability of future generations to meet their own needs (Bermejo, 2014). The Eco-Pesantren program contributes directly to several Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 12

(Responsible Consumption and Production), and SDG 13 (Climate Action). By integrating environmental education into religious instruction and entrepreneurial activities, the pesantren cultivates students who possess ecological awareness, entrepreneurial competence, and social responsibility. This holistic educational approach ensures that environmental sustainability becomes embedded within students' values and behaviors, extending its impact beyond the educational setting into wider society.

The empirical findings are further supported by previous research. Herdiansyah, Sukmana, and Lestarini (2018) argued that Eco-Pesantren functions as an effective medium for cultivating environmental morality while simultaneously empowering surrounding communities through Islamic values (Herdiansyah et al., 2018). Similarly, the present study demonstrates that environmental education has become inseparable from students' religious learning and community engagement. However, this study extends previous findings by showing that the Eco-Pesantren program not only develops environmental awareness but also creates measurable economic value through the commercialization of environmentally friendly products and sustainable agricultural practices.

Likewise, the results are consistent with Rozinah et al. (2025), who reported that the Go Green program gradually transformed students' ecological behavior through continuous environmental habituation (Rozinah et al., 2025). Similar behavioral changes were observed at Pondok Pesantren Baitul Hikmah, where students actively participate in organic farming, waste management, environmental maintenance, and green entrepreneurship. Continuous involvement in these activities strengthens environmental responsibility while simultaneously developing practical vocational competencies. Moreover, the findings support Widodo (2026), who emphasized that the success of Eco-Pesantren depends on the integration of curriculum, institutional governance, environmental practices, and daily educational activities (Widodo, 2026). The present study confirms this proposition, as environmental sustainability has been incorporated into academic programs, institutional management, student activities, and productive business units.

A noteworthy contribution of this research is the identification of three interrelated dimensions that determine the effectiveness of the Eco-Pesantren program. First, the internalization of Islamic values provides the ethical and spiritual foundation for environmental responsibility by framing environmental conservation as a religious obligation. Second, environmentally responsible behavioral habituation ensures that ecological awareness is consistently practiced through daily routines,

environmental management, and experiential learning. Third, environmentally based productive economic activities transform environmental conservation into a sustainable source of economic value through green entrepreneurship and eco-friendly product development. These three dimensions reinforce one another, creating a holistic educational ecosystem where religious values, environmental stewardship, and economic empowerment operate simultaneously.

Overall, the findings demonstrate that the effectiveness of the Eco-Pesantren program should not be evaluated solely by its environmental achievements but also by its capacity to generate sustainable economic value while fostering ecological consciousness and entrepreneurial competence among students. The integration of Islamic education, green economy principles, and community-based entrepreneurship establishes a comprehensive model of sustainable development that can serve as a valuable reference for other Islamic boarding schools seeking to strengthen both environmental sustainability and institutional economic resilience. Consequently, the Eco-Pesantren model at Pondok Pesantren Baitul Hikmah represents an innovative approach to faith-based sustainability education that successfully integrates religious teachings, environmental ethics, and green economic development into a unified educational framework.

Contribution of Green Products to the Economic Value of the Islamic Boarding School

The findings of this study indicate that the development of green products through the Eco-Pesantren program at Pondok Pesantren Baitul Hikmah Tempurejo Jember has made a substantial contribution to strengthening the institution's economic value. The economic contribution extends beyond direct financial returns generated through product sales, encompassing operational cost savings, enhanced resource efficiency, and the development of entrepreneurial competencies among students (*santri*). Green products produced by the pesantren include organic agricultural commodities, compost fertilizer derived from organic waste, and horticultural products cultivated through environmentally sustainable farming practices. Students actively participate in every stage of production, from cultivation and processing to packaging and marketing, enabling them to acquire practical entrepreneurial experience while supporting the pesantren's economic sustainability. The harvested products are primarily utilized to meet the institution's internal consumption needs, while surplus production is marketed to local communities through direct sales and community bazaars. This integrated approach demonstrates that green product development functions simultaneously as an environmental

conservation strategy and an instrument for achieving institutional economic independence.

An important finding of this study is that the economic value generated by green products is multidimensional, encompassing direct, indirect, and long-term developmental benefits. First, green products generate direct economic value by reducing operational expenditures, particularly kitchen and food procurement costs, through the utilization of self-produced agricultural commodities. This internal substitution decreases dependence on external suppliers while improving the efficiency of institutional resource allocation. Second, the sale of surplus agricultural products creates additional financial income, which supports the continuation and expansion of eco-pesantren activities. Third, green product development contributes to human capital investment by equipping students with competencies in sustainable agriculture, product processing, packaging, marketing, and business management. Consequently, the Eco-Pesantren program creates economic value that extends beyond monetary gains, encompassing institutional efficiency, financial resilience, and capacity building for future entrepreneurs.

These findings strongly support the Green Economy framework proposed by the United Nations Environment Programme (Trushkina, 2022), which emphasizes that economic activities should simultaneously promote environmental sustainability, resource efficiency, and social welfare. The green products developed at Pondok Pesantren Baitul Hikmah exemplify community-based green economic practices in which productive activities utilize local resources responsibly while minimizing environmental degradation. Organic farming, compost production, and environmentally friendly cultivation methods reflect the principles of the **circular economy**, where waste materials are transformed into valuable production inputs instead of becoming environmental pollutants. Such practices demonstrate that environmental conservation can coexist with economic productivity, illustrating how Islamic educational institutions can become important actors in advancing sustainable local economies.

From the perspective of the Sustainable Livelihoods Framework developed by Chambers and Conway (1992) (Chambers & Conway, 1992), the Eco-Pesantren program contributes to strengthening the pesantren's livelihood assets across five interrelated dimensions. Natural capital is enhanced through sustainable land utilization and environmentally responsible agricultural practices that preserve soil fertility and ecosystem quality. Human capital is strengthened by providing students with practical knowledge and entrepreneurial skills related to organic farming, green

production, and business management. Social capital develops through collaboration among teachers, administrators, students, community members, and local partners involved in production and marketing activities. Physical capital is reinforced through investments in agricultural infrastructure, composting facilities, and production equipment that support environmentally friendly enterprises. Finally, financial capital increases through product sales and operational cost savings, enabling the pesantren to diversify its revenue sources while reducing dependence on external financial assistance. The simultaneous strengthening of these livelihood assets contributes significantly to the long-term economic resilience of the institution.

The findings also reflect the principles of Sustainable Development articulated in the Brundtland Report (1987) (Ian, 1991), particularly the integration of economic, environmental, and social objectives into a single development framework. The Eco-Pesantren program demonstrates that environmentally friendly economic activities can generate immediate financial benefits while simultaneously preserving natural resources for future generations. This balance between economic productivity, environmental protection, and social empowerment aligns closely with the three pillars of sustainable development. Furthermore, the program contributes to several Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) by providing experiential entrepreneurship education, SDG 8 (Decent Work and Economic Growth) through the development of productive economic activities, SDG 12 (Responsible Consumption and Production) through sustainable resource utilization, and SDG 13 (Climate Action) by promoting environmentally friendly agricultural practices. The integration of these objectives demonstrates that Islamic educational institutions can serve as effective platforms for implementing sustainable development at the community level.

The present findings are consistent with previous empirical studies. Hidayati et al. (2021) reported that agricultural business units established within Islamic boarding schools significantly contributed to institutional economic independence while simultaneously empowering students through direct involvement in production and marketing processes (Hidayati et al., 2021). Similar results were observed in this study, where green products functioned both as a source of institutional revenue and as an educational medium for developing entrepreneurial competencies. However, the present research extends previous findings by revealing that the economic benefits generated by green products form an internal economic cycle, in which agricultural outputs simultaneously reduce institutional

expenditures, generate market income, and finance the sustainability of subsequent Eco-Pesantren programs.

The findings also corroborate those of Haekal et al. (2025), who argued that integrating environmental education with entrepreneurship fosters green entrepreneurship among students. Students participating in environmentally oriented business activities develop a stronger understanding of the relationship between economic profitability and ecological sustainability (Sari et al., 2025). Similar patterns emerged at Pondok Pesantren Baitul Hikmah, where students recognized that maintaining environmental quality is fundamental to ensuring the long-term viability of green businesses. Furthermore, the study supports Tasur et al. (2025), who emphasized that the sustainability of environmentally based enterprises depends largely on product quality and community support. The present research confirms this proposition, as local communities and institutional partners actively support the pesantren by purchasing green products, promoting them through community networks, and providing continuous market trust. Such partnerships strengthen the commercial sustainability of the Eco-Pesantren program while expanding its socioeconomic impact beyond the institution itself.

A significant theoretical contribution of this study is the identification of three interconnected mechanisms through which green products generate economic value within the pesantren. The first mechanism is economic efficiency, achieved through the utilization of internally produced agricultural commodities to reduce operational costs. The second mechanism is income generation, whereby surplus production is marketed to surrounding communities, creating additional financial resources for institutional development. The third mechanism is capacity investment, in which students acquire entrepreneurial competencies that increase their future employability and capacity for independent business development. These mechanisms interact to create a self-reinforcing cycle of sustainability, whereby financial returns generated from green products are reinvested into program expansion, infrastructure improvement, and student empowerment.

The Role of Local Partnerships in Supporting the Sustainability of Green Business at Baitul Hikmah Islamic Boarding School, Tempurejo, Jember

The findings of this study demonstrate that local partnerships play a pivotal role in sustaining the green business initiatives developed through the Eco-Pesantren program at Pondok Pesantren Baitul Hikmah Tempurejo Jember. Rather than functioning merely as external supporters, local stakeholders—including village authorities, farmer associations, agricultural extension officers, local entrepreneurs,

and surrounding communities—have become integral collaborators in the development of environmentally friendly economic activities. These partnerships provide technical guidance, strengthen institutional capacity, facilitate market access, and create a supportive social environment that enables the pesantren to expand its green business while maintaining environmental responsibility. The collaborative model observed in this study illustrates that sustainable community-based enterprises require continuous interaction between educational institutions and local actors to generate long-term social, environmental, and economic benefits.

The empirical evidence further indicates that the contribution of local partnerships can be categorized into three interconnected dimensions. First, partnerships provide technical assistance by improving agricultural cultivation techniques, organic fertilizer production, post-harvest management, and environmentally friendly product packaging. Such knowledge transfer enhances the quality and competitiveness of green products while increasing the practical competencies of students involved in production activities. Second, local partners expand marketing opportunities through community networks, village events, agricultural exhibitions, and direct recommendations to consumers. These activities reduce marketing barriers frequently encountered by community-based enterprises and improve product visibility beyond the pesantren environment. Third, partnerships foster trust and social legitimacy. Continuous collaboration establishes mutual confidence among stakeholders, encouraging local communities to support and purchase pesantren products because they perceive them as environmentally responsible and socially beneficial. Consequently, the sustainability of green business is strengthened not only through financial gains but also through social acceptance and collective commitment.

These findings are consistent with Putnam's Social Capital Theory (1993), which emphasizes that networks, trust, and norms of reciprocity constitute valuable resources for collective action and community development (Tzanakis, 2013). The Eco-Pesantren program reflects these principles through strong interpersonal relationships between the pesantren and surrounding communities. Regular communication with agricultural advisors, collaboration with farmer groups, and active participation in village development programs demonstrate the existence of dense social networks that facilitate knowledge exchange and resource mobilization. Reciprocity is evident in the mutually beneficial relationship where the pesantren receives technical and marketing support while simultaneously contributing to local economic development through environmentally sustainable production. Trust,

meanwhile, is reflected in consumers' willingness to recommend and consistently purchase green products produced by the pesantren. These findings suggest that religious values embedded within the pesantren culture reinforce social capital by encouraging cooperation, responsibility, and shared environmental stewardship.

From the perspective of the Asset-Based Community Development (ABCD) framework proposed by Kretzmann and McKnight (1993), the study reveals that local partnerships effectively mobilize existing community assets rather than relying solely on external assistance (Kretzmann & McKnight, 1996). Agricultural extension officers contribute professional expertise, village governments facilitate institutional support, local farmer groups provide production experience, and community members become active participants in product marketing and promotion. By connecting these diverse assets, the Eco-Pesantren program transforms local capacities into sustainable economic opportunities. Instead of perceiving environmental challenges as limitations, the pesantren utilizes locally available resources—including organic waste, agricultural land, community knowledge, and social networks—as strategic assets for green entrepreneurship. This asset-oriented approach strengthens local ownership of the program and enhances its long-term resilience.

The results also support the principles of Sustainable Development, particularly the integration of economic viability, environmental conservation, and social inclusion. Green businesses developed through collaborative partnerships contribute to environmental protection by promoting organic farming, compost production, and environmentally friendly cultivation methods while simultaneously generating income and empowering students with entrepreneurial competencies. These outcomes correspond closely with the objectives of the United Nations Sustainable Development Goals (SDGs), especially Goal 8 (Decent Work and Economic Growth), Goal 12 (Responsible Consumption and Production), Goal 13 (Climate Action), and Goal 17 (Partnerships for the Goals). The findings indicate that educational institutions can become important drivers of sustainable local development when they establish collaborative governance with surrounding communities.

The present findings corroborate previous studies emphasizing the significance of collaborative governance in community-based environmental programs. Wicaksono and Ismayanti (2023) reported that cooperation among educational institutions, local governments, and agricultural communities significantly improves both environmental sustainability and rural welfare (Ismayanti & Lahi, 2026). Similarly, this research demonstrates that active stakeholder participation

strengthens the implementation of Eco-Pesantren programs by expanding access to technical expertise and marketing channels. However, the current study extends previous research by illustrating that partnerships also contribute directly to entrepreneurial capacity building among students, thereby integrating environmental education with economic empowerment. Likewise, the findings support Trimulyo et al. (2026), who highlighted the necessity of continuous external mentoring and institutional networking for sustaining entrepreneurship-based pesantren programs (Susanto, 2024). The effectiveness of community recommendations in promoting pesantren products also aligns with Qosidah's (2025) findings regarding the importance of consumer trust and social networks in strengthening community-based enterprises.

Based on the synthesis of empirical findings, theoretical perspectives, and previous studies, this research proposes that the sustainability of green business within the Eco-Pesantren program is supported by three mutually reinforcing partnership functions: educative, facilitative, and legitimizing functions. The educative function is reflected in continuous technical mentoring and knowledge transfer that improve students' competencies and production quality. The facilitative function operates through expanded market access, institutional cooperation, and resource sharing that enhance business performance. Finally, the legitimizing function emerges through trust-building and social recognition, enabling pesantren products to gain wider community acceptance. These three functions interact dynamically to establish a sustainable ecosystem in which environmental conservation, economic development, and community participation reinforce one another. Therefore, the sustainability of green businesses in Islamic boarding schools depends not only on internal institutional capacity but also on the strength of collaborative partnerships and social capital developed with local communities. This integrated partnership model provides a valuable framework for other Islamic educational institutions seeking to implement environmentally responsible entrepreneurship while simultaneously promoting inclusive and sustainable local development.

CONCLUSION

This study concludes that the Eco-Pesantren program implemented at Pondok Pesantren Baitul Hikmah Tempurejo Jember has been effective in integrating green economy principles into Islamic education, environmental management, and productive economic activities. Environmental conservation is not treated as a separate initiative but has become an integral part of the pesantren's educational

culture through the internalization of Islamic values, environmentally responsible practices, and sustainable resource management. The program has successfully fostered environmental awareness among students while promoting behavioral changes that support long-term ecological sustainability.

The study also demonstrates that the development of green products contributes significantly to strengthening the economic value of the pesantren. Organic farming, compost production, and other environmentally friendly products generate multiple benefits, including operational cost savings, additional income from product sales, and the development of students' entrepreneurial competencies. Rather than focusing solely on financial returns, the Eco-Pesantren program creates a sustainable economic cycle in which environmental stewardship, economic self-reliance, and human resource development reinforce one another. This integrated approach enables the pesantren to enhance institutional independence while equipping students with practical skills relevant to green entrepreneurship.

Furthermore, the sustainability of the pesantren's green business is strongly supported by strategic partnerships with local stakeholders, including community members, farmer groups, village authorities, and agricultural extension officers. These partnerships provide technical assistance, expand marketing opportunities, strengthen institutional networks, and build social trust, all of which contribute to the long-term viability of the Eco-Pesantren program. Overall, the findings indicate that the successful implementation of Eco-Pesantren is built upon the synergy between Islamic environmental values, green economic practices, and collaborative community partnerships. This integrated model offers a practical framework for other Islamic boarding schools seeking to promote environmental sustainability, economic resilience, and community empowerment simultaneously.

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