

***Empowering Muslim Women for Environmental
Sustainability through the Mustika Darling Program
Memberdayakan Perempuan Muslim untuk Kelestarian
Lingkungan melalui Program Mustika Darling***

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Abstract

Environmental sustainability has become a pressing global challenge that requires the involvement of various social actors, including religious organizations. While previous studies have primarily focused on eco-pesantren as models of Islamic environmental education, the role of Muslim women's organizations in environmental movements remains underexplored. This study examines the role of Muslimat Nahdlatul Ulama (NU) in promoting environmental sustainability through the Mustika Darling (Muslimat Cantik Sadar Lingkungan) program. Employing a qualitative case study approach, the research was conducted in Nganjuk Regency, East Java, the pioneering region of the program. Data were collected through interviews, observations, and documentation and analyzed using an interactive qualitative model. The findings indicate that Mustika Darling functions not only as a waste management initiative but also as a faith-based environmental movement that integrates Islamic ecological values, women's empowerment, and community participation. The program enhances ecological awareness, encourages waste reduction practices, and generates social benefits through recycling-based activities. Furthermore, the study demonstrates that the effectiveness of the program is supported by the organizational capacity, religious legitimacy, and grassroots networks of Muslimat NU. Theoretically, this study contributes to Islamic ecotheology by extending its application from educational institutions to community-based environmental governance led by Muslim women.

Keywords : Muslimat NU, women's empowerment, environmental sustainability, Mustika Darling, Islamic ecotheology

Abstrak

Keberlanjutan lingkungan merupakan tantangan global yang semakin mendesak dan memerlukan keterlibatan berbagai aktor sosial, termasuk organisasi keagamaan. Selama ini, kajian tentang lingkungan dalam konteks Islam lebih banyak berfokus pada eco-pesantren sebagai model pendidikan lingkungan berbasis institusi formal, sementara peran organisasi perempuan Muslim dalam gerakan lingkungan masih relatif terbatas dikaji. Penelitian ini bertujuan menganalisis peran Muslimat Nahdlatul Ulama (NU) dalam mendorong keberlanjutan lingkungan melalui program Mustika Darling (Muslimat Cantik Sadar Lingkungan). Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus di Kabupaten

Nganjuk, Jawa Timur, sebagai daerah pelopor program. Data dikumpulkan melalui wawancara, observasi, dan dokumentasi, kemudian dianalisis menggunakan model analisis interaktif. Hasil penelitian menunjukkan bahwa Mustika Darling tidak hanya berfungsi sebagai program pengelolaan sampah, tetapi juga sebagai gerakan lingkungan berbasis agama yang mengintegrasikan nilai-nilai ekoteologi Islam, pemberdayaan perempuan, dan partisipasi masyarakat. Program ini meningkatkan kesadaran ekologis, mendorong praktik pengurangan sampah, serta menghasilkan manfaat sosial melalui kegiatan daur ulang. Penelitian ini berkontribusi pada pengembangan kajian ekoteologi Islam dengan memperluas penerapannya dari institusi pendidikan ke tata kelola lingkungan berbasis komunitas yang dipimpin oleh organisasi perempuan Muslim.

Kata kunci: Muslimat NU, pemberdayaan Muslimah, keberlanjutan lingkungan, Mustika Darling, ekoteologi Isla

Introduction

Global environmental issues are increasingly pressing to resolve because they directly impact the sustainability of human life and ecosystems. A United Nations Environment Programme (UNEP) report confirms that more than 400 million tons of plastic are produced annually, with approximately 14 million tons ending up in the oceans, threatening marine biodiversity and human health. (UNEP, 2025) Efforts to reduce this impact are outlined in the Sustainable Development Goals (SDGs), specifically SDG 12 on sustainable consumption and production and SDG 14 on marine ecosystems. Achieving the SDGs requires not only state policies but also the participation of civil society, including religious communities, which have significant potential as agents of change in promoting environmentally friendly lifestyles.¹

Indonesia faces significant environmental challenges, particularly plastic waste. The Ministry of Environment and Forestry (KLHK) recorded that national waste production reached 68.5 million tons in 2022, with approximately 17% of this being plastic waste. (KLH, 2022) This situation places Indonesia as one of the largest contributors of plastic waste to the world's oceans. (Bappenas, 2025) The government has set a significant target of reducing marine plastic waste by 70% by 2025. However, achieving this target requires strong synergy between technological innovation policies and community movements. In this context, the Islamic community in Indonesia can

¹ United Nations Department of Economic and Social Affairs, *The Sustainable Development Goals Report 2023: Special Edition*, The Sustainable Development Goals Report (United Nations, 2023), <https://doi.org/10.18356/9789210024914>.

play a strategic role through ecotheology-based education, environmental campaigns, and the empowerment of Muslim women who have significant influence in social life.²

Islamic teachings themselves provide a clear normative foundation regarding human responsibility towards nature. The concept of khalifah fil-ardh (vicegerent) (Quran, Al-Baqarah, 30) emphasizes that humans are God's representatives on earth, entrusted with preserving nature. The Prophet's hadith also emphasizes the importance of environmental cleanliness and preservation, one example being the recommendation to plant trees even though the apocalypse is near. These principles form the basis for the development of Islamic ecotheology studies, which attempt to connect sacred texts with environmental conservation practices. (Ibadulloh & Mutaqin, 2023) Ecotheological studies have shown that Islamic values can strengthen ecological awareness and shape societal behavior in maintaining the environment sustainably.³

In the context of Indonesian Muslim society, women play a crucial role in internalizing ecological values in both the domestic and social spheres. Studies show that women are often the primary actors in Sustainable household management, from consumption patterns to household waste management. (Cahyaningtyas et al., 2022) Muslim women are increasingly involved in faith-based initiatives that incorporate environmental concerns into everyday religious and social practices. Their participation highlights the growing significance of women's religious networks in promoting ecological awareness at the community level.⁴

Nahdlatul Ulama (NU), as the largest Islamic organization in Indonesia, has contributed significantly to strengthening the socio-religious role, including through its autonomous body, Muslimat NU. At its XVIII Congress in 2025 in Surabaya, Muslimat NU launched the Mustika Darling (Beautiful, Environmentally Aware Muslimat)

² Fachruddin Majeri Mangunjaya and Gugah Praharawati, "Fatwas on Boosting Environmental Conservation in Indonesia," *Religions* 10, no. 10 (2019): 570, <https://doi.org/10.3390/rel10100570>.

³ Salim Rosyadi et al., "Islamic Eco-Theology: Recycling Used Cooking Oil into Soap for Maṣlaḥah Oriented Families," *TAJ DID: Jurnal Ilmu Ushuluddin* 24, no. 1 (2025): 26–49, <https://doi.org/10.30631/tjd.v24i1.539>.

⁴ Frans Wijssen, "Environmental Challenges in Indonesia: An Emerging Issue in the Social Study of Religion," *Journal of Asian Social Science Research* 3, no. 1 (2021): 1–14, <https://doi.org/10.15575/jassr.v3i1.30>.

program, which is aimed at increasing ecological awareness among female congregants. (These are the 2 Muslimat NU Nganjuk Programs that Will Be Launched Nationally at the Congress, n.d.) This program was created in response to the reality that religious study and gathering activities often leave behind traces of single-use plastic waste. Thus, Mustika Darling not only instills religious values but also internalizes environmentally friendly practices in religious activities. (Launched, Three Mustika ala Muslimat NU, n.d.)

The Mustika Darling program includes environmental education, the establishment of a waste bank, a campaign to reduce single-use plastic, and recycling training. This initiative was born from one of the administrators of Muslimat NU Nganjuk, Mrs. Nadzifah from Nganjuk, East Java, who succeeded in building cross-sector participation by involving the local government and local communities, namely the chair of Muslimat NU Nganjuk, Mrs. Muthi'ah Huda. (Gunawan & Alfarisi, 2023) Previous studies on eco-pesantren have proven that Islamic educational institutions are capable of becoming centers of social transformation towards a sustainable lifestyle. (Pujianto et al., 2021) With a network of Muslimat NU spread throughout Indonesia, Mustika Darling has the potential to become an inclusive, gender-based and sustainable socio-religious movement.

Several studies have examined eco-pesantren as a model of Islamic environmental education that promotes ecological awareness and sustainable behaviour within educational institutions. Eco-pesantren has been recognized as an effective approach for integrating environmental values into pesantren activities, curriculum, and institutional culture (Pujianto et al., 2021; Hermawansyah, 2025). Similarly, Gunawan & Alfarisi (2023) demonstrate that environmental management practices in pesantren contribute to the development of ecological responsibility through religious education and institutional regulations. Although these studies have successfully highlighted the role of Islamic educational institutions in environmental conservation, their analyses remain largely concentrated on formal educational settings, particularly pesantren communities.

Consequently, the role of community-based religious organizations outside formal educational institutions remains insufficiently explored. This limitation is important because

environmental sustainability is not only shaped through educational systems but also through social and religious networks that interact directly with broader communities. In this regard, Muslim women occupy a strategic position in shaping household consumption patterns, waste management practices, and environmental awareness within society. Cahyaningtyas et al. (2022) argue that Muslim women actively contribute to everyday environmentalism through religious and social practices embedded in daily life. However, studies specifically examining organized environmental movements led by Islamic women's organizations are still relatively limited.

Muslimat Nahdlatul Ulama (NU) constitutes an important case for investigation because it is one of the largest Muslim women's organizations in Indonesia with an extensive grassroots network reaching villages, neighbourhood associations, and religious study groups. Through these networks, Muslimat NU possesses significant capacity to disseminate environmental values and mobilize collective environmental action. The emergence of the Mustika Darling program therefore offers an opportunity to examine how ecological awareness is institutionalized and translated into practical environmental initiatives through women's religious organizations.

Accordingly, this study seeks to address the existing gap by examining the role of Muslimat NU in promoting environmental sustainability through the Mustika Darling program. Theoretically, this study contributes to the development of Islamic ecotheology by extending its application beyond pesantren-based environmental education toward community-based environmental activism led by Muslim women. Furthermore, this study offers a conceptual linkage between Islamic ecotheology, women's empowerment, and community-based environmental governance, an area that has received limited scholarly attention in previous studies.

Thus, this study aims to (1) describe the concept and implementation of the Mustika Darling program; (2) analyze the role of Muslimat NU in promoting ecological awareness and (3) assess the program's contribution to environmental sustainability and the achievement of the SDGs. This article is expected to provide scientific contributions to the study of Islamic ecotheology and gender-based environmental movements while also offering a model of community empowerment that can be replicated in various regions of Indonesia.

Research Methods

This study employed a qualitative approach with a case study design to explore the empowerment of Muslim women through the Mustika Darling program and its contribution to environmental sustainability. A qualitative case study was chosen because it enables an in-depth understanding of social processes, meanings, experiences, and interactions within a specific context (John W. Creswell & Cheryl N. Poth, 2018). The approach is particularly suitable for examining how environmental values are interpreted and practiced through religious and community-based activities.

The research was conducted in Nganjuk Regency, East Java. The selection of Nganjuk as the research site was based on purposive considerations. Nganjuk represents the origin and primary development center of the Mustika Darling program before it was adopted as a national initiative by Muslimat Nahdlatul Ulama. As the pioneering region, Nganjuk provides a strategic context for understanding the emergence, implementation, and institutionalization of the program at the grassroots level. Moreover, the district demonstrates active collaboration between Muslimat NU, local government institutions, and community members in implementing environmental initiatives, making it an information-rich case for investigating the relationship between Islamic ecotheology, women's empowerment, and community-based environmental sustainability (Yin, 2018).⁵

Research participants were selected purposively based on their direct involvement in the Mustika Darling program. They consisted of Muslimat NU administrators responsible for program implementation, members participating in environmental activities, and external stakeholders such as local government representatives and community partners. This participant selection was intended to capture diverse perspectives regarding the implementation process, challenges, and impacts of the program.

Data were collected through semi-structured interviews, participant observation, and documentation studies. Interviews were conducted with key informants to obtain information regarding the history, implementation, and outcomes of the program. Observation

⁵ Robert K. Yin, *Case Study Research and Applications: Design and Methods*, Sixth edition (SAGE, 2018).

was employed to understand environmental practices carried out during Muslimat NU activities, particularly waste management and awareness campaigns. Documentation included organizational reports, activity records, photographs, policy documents, and media publications related to the Mustika Darling program.

Data analysis followed the interactive model proposed by Miles, Huberman, and Saldaña (2014),⁶ consisting of data condensation, data display, and conclusion drawing. The analysis process was conducted continuously throughout the research in order to identify patterns, themes, and relationships among findings. To enhance the credibility of the study, data triangulation was applied by comparing information obtained from interviews, observations, and documentary sources.

Results and Discussion

Mustika Darling Program Description

The Mustika Darling (Beautiful, Environmentally Conscious Muslimat) program was born from concerns about waste after the monthly Muslimat NU routine activities that brought together thousands of congregants. At these events, piles of plastic waste often pollute the activity location. From this concern emerged an initiative from one of the Muslimat NU Nganjuk administrators named Mrs. Nadzifah as the first initiator of the program and also served as the direct executor at the Nganjuk district level. Mrs. Nadzifah is the branch coordinator for the Mustika Darling program, to make waste management part of the Muslimat NU social da'wah agenda. This program was then adopted nationally at the 18th Muslimat NU Congress in 2025 in Surabaya making it a collective movement involving the entire Muslimat NU network in Indonesia.

The emergence of the Mustika Darling program illustrates how environmental concerns can be transformed into collective religious action. Rather than treating waste merely as a technical problem, Muslimat NU frames environmental responsibility as part of religious and social obligations. This finding suggests that ecological awareness within Muslim communities can develop through everyday religious activities and organizational networks. In this context, environmental stewardship becomes embedded in religious practice, enabling

⁶ Matthew B. Miles et al., *Qualitative Data Analysis: A Methods Sourcebook*, Third edition (SAGE Publications, Inc, 2014).

ecological values to be internalized through routine communal engagement rather than through formal environmental education alone.

Implementation of the Mustika Darling Program in the field

Based on an interview with the Chairperson of Muslimat NU Nganjuk, each Ahad Wage event with approximately 1,000 congregants produces approximately 20 kg of waste. The waste is sorted on-site, consisting of plastic bags, plastic bottles, and other dry waste. The collected waste is managed in a variety of ways. Some is sold to scrap dealers, some is used to provide assistance to orphans, and some is allocated for community service activities. Thus, this program not only functions ecologically but also has social and economic value. (Muti'ah Huda, personal communication, September 18, 2025) This finding is consistent with research on community participation in community-based waste management, which emphasizes the importance of local actors in breaking the household waste chain down to the collective level. (Meylanisa et al., nd)

Table 1. Average Amount of Waste Sorted during the NU Muslimat's Ahad Wage Routine

Types of Waste	Average Per Activity	Advanced Management	Social Benefits
Plastic bags	± 8 kg	Sold to a scrap dealer	Branch activity cash fund
Plastic Bottles	± 7 kg	Sold/distributed	Orphanage assistance
Other Dry Waste	± 5 kg	Waste bank/collector	Social service activities
Total	± 20 kg	Varies per coordinator	Cleaner environment

The waste management practices implemented through Mustika Darling demonstrate that environmental action is not limited to waste reduction but also generates social and economic value for the community. The conversion of waste into financial resources for social assistance and community programs reflects a circular approach in which ecological responsibility is integrated with social welfare objectives. This finding indicates that environmental sustainability initiatives are more likely to gain community support when they provide tangible social benefits. Therefore, the success of Mustika Darling lies not only in reducing waste generation but also in

transforming environmental activities into a mechanism for strengthening social solidarity among community members.

A closer examination of Table 1 reveals that plastic bags constitute the largest proportion of waste generated during routine religious gatherings, followed by plastic bottles and other dry waste. This pattern suggests that single-use plastic consumption remains deeply embedded in everyday community practices despite increasing environmental awareness. Consequently, the challenge faced by Mustika Darling is not merely managing waste after consumption but also transforming consumption behaviour before waste is produced. The findings indicate that environmental problems within local communities are closely linked to daily consumption habits, particularly the widespread use of disposable plastic products during communal activities.

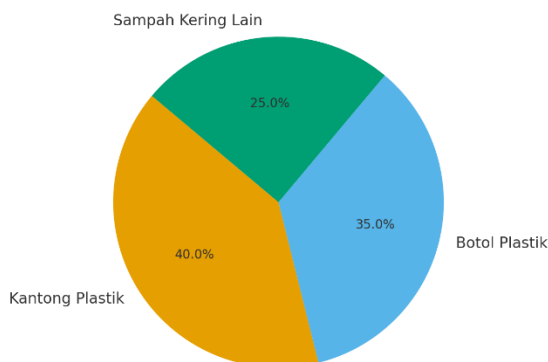
From the perspective of Islamic ecotheology, this finding reflects an important shift from reactive environmental management toward preventive environmental responsibility. Environmental stewardship is not limited to cleaning waste after activities but also includes encouraging participants to reduce unnecessary consumption and adopt more sustainable lifestyles. In this regard, the significance of Mustika Darling extends beyond waste collection activities, as it contributes to the internalization of ecological ethics within everyday religious life. Such practices reflect the Islamic principle of *khalifah fil-ardh*, which emphasizes human responsibility for maintaining environmental balance and preventing ecological degradation.⁷

District scale: Waste Product Estimation

If one sub-district produces approximately 20 kg of waste per routine, then across the 20 sub-districts in Nganjuk Regency, the total could reach approximately 400 kg per month. Adding in one district-level activity (approximately 30 kg), the total waste managed per month is approximately 430 kg, equivalent to 5,160 kg per year.

⁷ Mangunjaya and Praharawati, "Fatwas on Boosting Environmental Conservation in Indonesia."

Komposisi Rata-rata Sampah per Kegiatan Rutinan (± 20 kg)

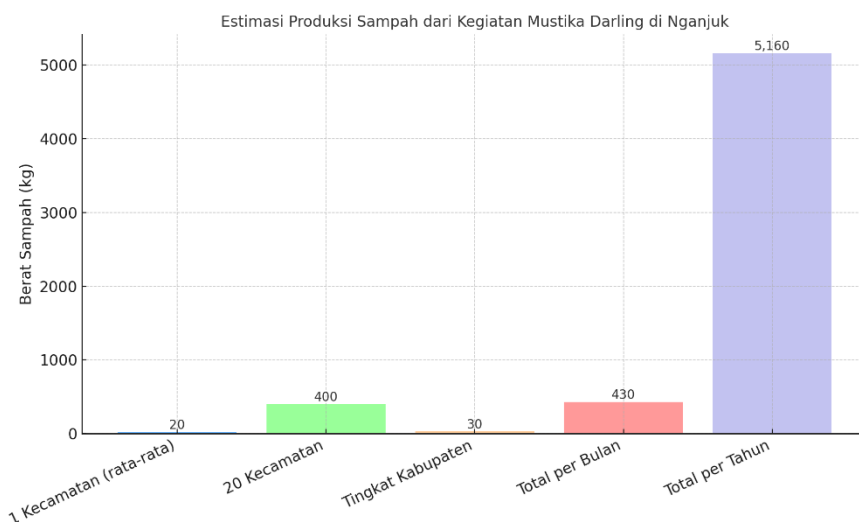


The image is a pie chart of the average composition of waste in one routine Ahad Wage Muslimat NU activity (total around 20 kg per event):

1. 40% plastic bags
2. 35% plastic bottles
3. 25% other dry waste

Because in Nganjuk Regency there are approximately 20 sub-districts, each of which has its own routine plus the district-level routine, the amount of waste produced can actually be hundreds of kilograms per month.

Figure 1. Estimation of Waste Production from Mustika Darling Activities in Nganjuk



From the estimated waste production from Muslimat NU (Mustika Darling) activities in Nganjuk:

1. 1 sub-district (average) ± 20 kg
2. 20 sub-districts (once a routine Sunday Wage simultaneously) ± 400 kg
3. District level routine ± 30 kg
4. Total per month (20 sub-districts + districts) ± 430 kg
5. Total per year (12 times routine) $\pm 5,160$ kg

These data demonstrate that the scale of the Mustika Darling program's impact is actually quite substantial, reaching more than 5 tons of plastic and dry waste annually from just one district (Nganjuk) alone. This estimate demonstrates that Mustika Darling contributes significantly to waste reduction at the district level. This finding aligns with studies of community-based waste management, which demonstrate the effectiveness of collective approaches in reducing waste generation at the local level.⁸

It is important to note that the estimated annual waste volume of approximately 5,160 kg represents a projection derived from routine activity records rather than direct longitudinal measurement. Therefore, the figure should be interpreted as an indication of the program's potential environmental contribution rather than a precise measurement of annual waste reduction. Nevertheless, the estimate remains useful for illustrating the scale of environmental action generated through routine community participation. Future studies employing systematic waste audits and longitudinal monitoring would be valuable for validating these estimates and assessing the long-term environmental impact of the program.

The analytical significance of Figure 1 lies not merely in illustrating waste quantities but in demonstrating the cumulative environmental impact of routine religious activities. Individually, the amount of waste generated by each gathering appears relatively small.

⁸ Zurbrugg, C., et al., *Decentralized Community-Based Waste Management: Global Review. Waste Management*, 95 (July 2019), <https://doi.org/https://doi.org/10.1016/j.wasman.2019.06.030>.

However, when aggregated across organizational networks and repeated consistently over time, the environmental contribution becomes substantial. This finding supports community-based environmental governance perspectives which emphasize that meaningful environmental outcomes often emerge from sustained collective action rather than isolated interventions.

Moreover, the figure illustrates the organizational potential of Muslimat NU as a grassroots environmental actor. The accumulation of waste management activities across multiple branches demonstrates how local religious networks can generate measurable environmental contributions. Therefore, the importance of Mustika Darling should not be assessed solely through the volume of waste collected but through its ability to institutionalize environmentally responsible practices within community life.

Beyond its operational mechanism, the implementation of Mustika Darling reflects a broader process of social transformation. Waste management activities are not merely technical efforts aimed at reducing environmental pollution; they also function as instruments for cultivating collective responsibility within the community. Through regular participation in waste sorting, recycling, and environmental campaigns, members are encouraged to develop environmentally responsible habits that gradually become embedded in their daily practices.

This finding suggests that environmental sustainability is more likely to be achieved when ecological action is integrated into existing social and cultural structures. Rather than introducing entirely new behavioural systems, Mustika Darling incorporates environmental practices into established religious gatherings, community meetings, and organizational activities. Consequently, environmental responsibility is experienced as a natural extension of religious and communal life rather than as an external obligation imposed through environmental campaigns or governmental regulations.

From a sociological perspective, this process demonstrates how environmental behaviour is socially constructed through repeated interaction, shared norms, and collective participation. The routine nature of Muslimat NU activities creates opportunities for the continuous reinforcement of ecological values. Environmental awareness is therefore not produced solely through information

transfer but through social processes that shape collective habits and behavioural expectations.

Social and Environmental Impact of the Mustika Darling Program

The impacts of the Mustika Darling program extend beyond environmental cleanliness. The program contributes to the development of collective ecological awareness among participants by encouraging them to take responsibility for the waste generated during religious gatherings. Furthermore, the allocation of waste-derived income for social assistance programs demonstrates the integration of environmental and social objectives within a single community initiative. This combination of ecological responsibility and social solidarity strengthens the sustainability of the program because participants perceive environmental action not only as an environmental obligation but also as a form of religiously inspired social engagement. Such findings support previous studies suggesting that faith-based environmental movements tend to be more sustainable when ecological values are linked to community welfare and collective religious identity.⁹

The social impact of the program extends beyond improvements in environmental cleanliness and waste reduction. Participation in environmental activities strengthens social cohesion among members by creating shared goals and collective responsibilities. Environmental action becomes a medium through which community members cooperate, exchange knowledge, and reinforce social solidarity. In this regard, ecological initiatives contribute not only to environmental improvement but also to the strengthening of community resilience and social capital.

Furthermore, the integration of environmental and social objectives enhances the sustainability of the program itself. The proceeds generated through waste recycling are utilized for social assistance, community services, and organizational activities. This mechanism demonstrates that environmental initiatives can generate

⁹ June Cahyaningtyas et al., "Muslim Women and Everyday Environmentalism in Post-Covid Indonesia: Shifting the Canon?," paper presented at Proceedings of the First International Conference on Democracy and Social Transformation, ICON-DEMOST 2021, September 15, 2021, Semarang, Indonesia, *Proceedings of the First International Conference on Democracy and Social Transformation, ICON-DEMOST 2021, September 15, 2021, Semarang, Indonesia, 2022*, <https://doi.org/10.4108/eai.15-9-2021.2315562>.

tangible benefits that directly affect community welfare. Participants are therefore more likely to remain engaged because environmental activities produce visible social outcomes rather than merely abstract ecological benefits.

These findings support arguments within community-based environmental governance literature that environmental programs are more sustainable when ecological objectives are linked to local social needs and collective interests. The success of Mustika Darling is therefore not solely attributable to environmental awareness campaigns but also to its ability to connect ecological responsibility with social solidarity and community welfare.

Challenges and Limitations of Program Implementation

Despite its positive environmental and social impacts, the implementation of the Mustika Darling program faces several challenges. First, the sustainability of the program relies heavily on the voluntary participation of Muslimat NU members and local coordinators. Maintaining long-term commitment can be difficult because environmental activities must compete with other religious, social, and organizational agendas.

Second, environmental awareness among participants remains uneven. Although many members actively support waste sorting and plastic reduction initiatives, some participants continue to use single-use plastic products due to convenience, habit, and limited access to environmentally friendly alternatives. This indicates that behavioural change requires continuous education rather than one-time campaigns.

Third, the economic sustainability of the program remains relatively limited. While waste sales generate additional resources for social activities, the resulting funds are insufficient to support broader environmental programs independently. Consequently, cooperation with local governments, waste banks, and community partners remains necessary to ensure program continuity.

Furthermore, structural challenges also exist. Differences in organizational capacity among branches, variations in local leadership, and unequal access to waste management infrastructure may affect the consistency of program implementation across regions. These findings suggest that the long-term success of Mustika Darling depends not only on ecological awareness but also on institutional

support, organizational capacity, and sustainable collaboration among stakeholders.

Theoretical Analysis of the Mustika Darling Program

The findings of this study demonstrate that Islamic ecotheology functions not merely as a theological doctrine but as a practical framework for environmental action. Within Islamic thought, the concept of *khalifah fil-ardh* positions humans as God's trustees on earth who bear moral responsibility for maintaining ecological balance and preventing environmental destruction. Environmental conservation is therefore not only a technical or social obligation but also a religious responsibility rooted in the relationship between humans, nature, and God. (Mangunjaya & Praharawati, 2019; Nasr, 1996)

In the context of the Mustika Darling program, these theological principles are translated into concrete environmental practices, including waste sorting, recycling, reducing single-use plastics, and promoting environmentally friendly behaviour during religious gatherings. The findings indicate that ecological responsibility is not understood merely as an abstract religious teaching but is embedded within everyday religious activities. This demonstrates how religious values can move beyond normative discourse and become practical mechanisms for shaping environmental behaviour within communities.

The significance of these findings lies in the way religion functions as a mechanism of social mobilization. Rather than relying solely on environmental regulations or technical interventions, Mustika Darling mobilizes ecological awareness through religious norms, moral responsibility, and collective participation. Environmental messages are repeatedly communicated through routine religious gatherings, recitations, organizational meetings, and community activities organized by Muslimat NU. Through this process, environmental values become socially reinforced and gradually internalized as part of collective religious identity. This finding supports previous studies arguing that Islamic values can serve as important moral resources for environmental conservation and sustainable development. (Mangunjaya & Praharawati, 2019; Rosyadi et al., 2025)

Furthermore, the effectiveness of Mustika Darling cannot be separated from the organizational characteristics of Muslimat NU itself. As one of the largest Muslim women's organizations in Indonesia, Muslimat NU possesses extensive grassroots networks, strong social legitimacy, and routine organizational structures that facilitate the dissemination of environmental values. Environmental messages delivered through trusted religious networks tend to be more easily accepted than those introduced solely through external campaigns or governmental programs. In this regard, Muslimat NU functions not only as a religious organization but also as an intermediary institution capable of translating ecological values into collective social action.

The findings also demonstrate that environmental sustainability can be strengthened through women's religious organizations operating beyond formal educational institutions. Previous studies on eco-pesantren primarily emphasized environmental education within pesantren settings and focused on students, teachers, and institutional management. (Pujianto et al., 2021; Gunawan & Alfarisi, 2023) In contrast, Mustika Darling mobilizes environmental awareness through community religious gatherings, social networks, and collective action among Muslim women. Consequently, environmental stewardship is institutionalized not through formal educational structures but through community-based religious engagement.

From the perspective of women's empowerment, the program expands women's participation from household-based environmental practices to broader community initiatives. Muslim women are actively involved in organizing waste management activities, coordinating environmental campaigns, mobilizing community participation, and managing the social benefits generated through waste recycling. These findings support previous research suggesting that Muslim women contribute significantly to everyday environmentalism through religious and social practices embedded in community life. (Cahyaningtyas et al., 2022) Furthermore, the findings are consistent with ecofeminist perspectives that emphasize the relationship between care ethics, social responsibility, and environmental stewardship.

Unlike many environmental movements that rely primarily on environmental education, public campaigns, or regulatory approaches, Mustika Darling integrates ecological action with religious identity and communal worship practices. Environmental responsibility is framed not only as a civic obligation but also as a religious duty. As a result, ecological behaviour receives moral legitimacy and social reinforcement from religious communities. This combination of spiritual motivation, organizational networks, and collective participation represents one of the distinctive characteristics of faith-based environmental movements. Therefore, the contribution of Mustika Darling extends beyond waste reduction efforts; it demonstrates how Islamic ecotheology, women's empowerment, and community-based environmental governance can interact to create sustainable environmental action at the grassroots level.

The Effectiveness of Muslimat NU and Religious Mobilization in Environmental Action

One of the most important findings of this study is that the effectiveness of the Mustika Darling program cannot be explained solely by its waste management activities. Rather, its success is closely related to the organizational capacity, social legitimacy, and religious networks possessed by Muslimat NU as one of the largest Muslim women's organizations in Indonesia. This finding suggests that environmental sustainability is not only determined by technical interventions but also by the social mechanisms through which ecological values are disseminated, internalized, and practiced within communities.

The effectiveness of Muslimat NU is supported by several interrelated factors. First, the organization possesses extensive grassroots networks that reach villages, neighbourhood associations, religious study groups, and community organizations. These networks provide an existing social infrastructure through which environmental messages can be disseminated continuously. Unlike short-term environmental campaigns, Mustika Darling utilizes routine religious gatherings as regular spaces for environmental education and behavioural reinforcement. Consequently, ecological awareness is developed through sustained interaction rather than isolated interventions.

Second, Muslimat NU enjoys strong moral legitimacy among its members and surrounding communities. Environmental messages delivered through trusted religious leaders and organizational figures tend to be more easily accepted than messages originating solely from governmental institutions or external actors. In this context, environmental responsibility is framed not only as a social obligation but also as a religious duty. This finding supports Mangunjaya & Praharawati (2019) argument that Islamic values can function as moral resources for environmental conservation by providing ethical foundations that encourage environmental stewardship.

Third, the routine structure of Muslimat NU activities facilitates the continuous mobilization of ecological awareness. Environmental messages are repeatedly communicated during religious recitations, organizational meetings, and community activities. Through repeated exposure and collective participation, ecological values become embedded within everyday religious practices. This process illustrates that religion functions not merely as a source of environmental ethics but also as a mechanism for social mobilization capable of transforming values into collective action. Such findings are consistent with previous studies showing that religious communities possess significant capacity to promote environmental awareness because ecological messages are reinforced by shared beliefs, collective identity, and moral commitment. (Cahyaningtyas et al., 2022)

The findings also reveal important differences between faith-based environmental movements and conventional environmental campaigns. Many environmental programs rely primarily on environmental education, public awareness campaigns, or regulatory approaches to encourage behavioural change. While these approaches remain important, they often encounter difficulties in maintaining long-term community participation. In contrast, Mustika Darling integrates environmental action with religious identity, communal worship practices, and shared moral values. Environmental responsibility is framed not merely as a civic duty but as part of religious devotion and ethical responsibility toward God's creation.

As a result, ecological behaviour receives both moral legitimacy and social reinforcement from the religious community. Participants are motivated not only by environmental concerns but also by

religious values emphasizing stewardship, responsibility, moderation, and care for the environment. This combination of spiritual motivation, organizational networks, and collective participation distinguishes Mustika Darling from many conventional environmental initiatives. Therefore, the significance of the program extends beyond waste reduction efforts; it demonstrates how religious institutions can function as effective actors of community-based environmental governance and contribute to sustainable environmental transformation at the grassroots level.

From a broader theoretical perspective, these findings extend existing discussions on Islamic ecotheology. Previous studies have predominantly focused on environmental education within pesantren settings and formal educational institutions. (Pujianto et al., 2021; Gunawan & Alfarisi, 2023) In contrast, this study demonstrates that Islamic ecotheological values can also be operationalized through women's religious organizations operating at the community level. The Mustika Darling program therefore broadens the scope of Islamic environmentalism from educational institutions to grassroots religious movements and highlights the strategic role of Muslim women in promoting community-based environmental governance. In doing so, the study contributes to the growing literature on the intersection of religion, gender, and environmental sustainability in contemporary Indonesia.

Nevertheless, the findings also indicate that the relationship between religious values and environmental behaviour is not automatic. Although ecological messages are regularly disseminated through Muslimat NU activities, some participants continue to rely on single-use plastics because of convenience, affordability, and established consumption habits. This suggests that religious values alone may be insufficient to produce long-term behavioural transformation unless supported by institutional commitment, environmental infrastructure, and continuous social reinforcement. Therefore, the success of Mustika Darling should be understood not only as the result of Islamic ecological teachings but also as the outcome of organizational capacity and collective community participation.

Women's Empowerment and Ecofeminism

The gender dimension constitutes one of the central findings of this study. The involvement of Muslimat NU demonstrates that environmental sustainability is closely connected to women's everyday experiences and social responsibilities. Through organizing waste collection, sorting activities, environmental campaigns, and community participation, Muslim women play a crucial role in sustaining local environmental initiatives. These findings support previous studies showing that Muslim women contribute significantly to everyday environmentalism through religious and social practices embedded in community life.¹⁰ Furthermore, this pattern is consistent with ecofeminist perspectives that emphasize the relationship between women's social roles, care ethics, and environmental stewardship. (Duffield, 2014) In the context of Mustika Darling, environmental responsibility is not merely an ecological concern but also a form of community care rooted in religious values and collective solidarity.

Comparison with Eco-Pesantren and Previous Studies

Previous research has largely examined eco-pesantren as a model for Islamic-based environmental education. (Pujiyanto et al., 2021) The focus of their studies was on Islamic students (*santri*) and formal educational institutions. (Gunawan & Alfarisi, 2023) However, this study demonstrates that environmental sustainability can also be promoted through women's religious organizations operating beyond formal educational institutions. Unlike eco-pesantren initiatives that primarily focus on students and educational management, the Mustika Darling program mobilizes environmental awareness through community religious gatherings, social networks, and collective action among Muslim women. This finding broadens the scope of Islamic ecotheology by showing that ecological values can be institutionalized not only through educational systems but also through grassroots religious movements.

Furthermore, the findings suggest a conceptual relationship between Islamic ecotheology, women's empowerment, and community-based environmental governance. Muslim women are not merely beneficiaries of environmental programs; rather, they function

¹⁰ Cahyaningtyas et al., "Muslim Women and Everyday Environmentalism in Post-Covid Indonesia."

as active actors who organize, disseminate, and sustain ecological practices within society. This contribution offers a broader perspective on faith-based environmental movements and enriches existing discussions on religion, gender, and environmental sustainability in contemporary Indonesia.

Contribution to SDGs and National Policy

Mustika Darling contributes directly to the achievement of the Sustainable Development Goals (SDGs), especially SDG 12 (Sustainable Consumption and Production) and SDG 13 (Climate Action). In addition, this program supports the Indonesian government's policy in reducing single-use plastic waste. With the management of ± 5 tons of waste per year in one district, if replicated throughout the national Muslimat NU network, the impact could be very large in supporting the target of 30% waste reduction by 2030 as announced by the Ministry of Environment and Forestry (KLHK). (Preparation of Regional Strategy Policy in the Management of Household Waste and Household-Similar Waste, nd)

Conclusion

This research demonstrates that the Mustika Darling program, initiated by Muslimat NU in Nganjuk Regency, represents a concrete form of a faith-based environmental movement rooted in community participation. The findings indicate that routine religious activities can serve as effective platforms for environmental action. Through waste sorting, recycling practices, and environmental awareness campaigns, the program successfully integrates ecological responsibility into everyday religious activities. Field data show that each routine activity generates approximately 20 kg of waste, which, when accumulated across the district, reaches more than five tons annually. In addition to reducing waste, the program generates social and economic benefits through the allocation of waste-derived income for social assistance, community services, and organizational activities.

Theoretically, this study contributes to the development of Islamic ecotheology by extending its application beyond pesantren-based environmental education toward community-based environmental activism led by Muslim women. The findings demonstrate that women's religious organizations can function as actors of community-based environmental governance by integrating Islamic ecological values, collective participation, and social

solidarity. Unlike previous studies that primarily focused on eco-pesantren initiatives within formal educational institutions, this study highlights the strategic role of Muslimat NU in mobilizing environmental awareness and ecological action at the grassroots level.

Nevertheless, this study has several limitations. First, it focuses on a single case study in Nganjuk Regency, which limits the generalizability of the findings to other regions and organizational contexts. Second, the research relies primarily on qualitative data obtained through interviews, observations, and documentation, which may not fully capture the long-term environmental impact of the program. Third, the estimated annual waste management volume presented in this study is based on routine activity records and projections rather than direct longitudinal measurements. Therefore, the findings should be interpreted as an indication of potential environmental impact rather than as a definitive measurement of waste reduction outcomes.

Future research is encouraged to conduct comparative studies involving Muslim women's organizations in different regions and to employ mixed-method or quantitative approaches to measure environmental outcomes more systematically. Further studies may also explore the long-term relationship between faith-based environmental movements, women's empowerment, and public environmental policy in Indonesia. Such efforts would contribute to a broader understanding of how religious organizations can support sustainable development and environmental governance in contemporary society.

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