

**STRATEGIC DA'WAH APPROACHES BY LPBI NU IN
ENVIRONMENTAL EMPOWERMENT:
A Case Study on Waste Management**

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Abstract

This article explores the strategic da'wah approaches implemented by the Disaster and Climate Change Management Agency of Nahdlatul Ulama (LPBI NU) in empowering communities through waste management. This case study highlights how LPBI NU integrates da'wah principles with environmental programs to address social and ecological issues in Indonesia. Through a holistic approach, LPBI NU not only educates the public on the importance of proper waste management but also promotes behavioral change by reinforcing religious values. The research employs a qualitative method with an ethnographic approach to explore field dynamics, including the interaction between da'wah agents and communities, as well as the impact of these empowerment programs on social change at the community level. The findings indicate that the da'wah strategies employed by LPBI NU successfully raise environmental awareness and foster active participation in waste management among the community. This article contributes to da'wah studies by offering a new perspective on how da'wah strategies can be integrated with environmental empowerment programs. It also demonstrates how religious organizations can play a vital role in promoting environmental sustainability through da'wah-based approaches.

Keywords: Positive behavior, Agent Of change, Waste Plastic.



A. Introduction

The Da'wah Strategic Approach by LPBI NU in environmental empowerment, especially in waste management, shows a strong synergy between Islamic values and environmental sustainability practices. In this context, waste management is not only seen as a technical issue, but also as an important moral and spiritual issue in Islam. This study reveals several key results that are relevant to the purpose and context of the research. Increasing Public Awareness The results of the study show that the da'wah program implemented by LPBI NU has succeeded in increasing public awareness about the importance of sustainable waste management.

Through various activities such as training and awareness campaigns, the community is taught that "Cleanliness is part of faith," which is a basic principle in Islamic teachings.¹ This is in line with research that shows that environmental moral education can influence pro-environmental behavior.² Active Participation in Waste Management Waste management programs implemented, such as the establishment of waste banks, encourage active community participation. Interviews with participants showed that they felt more responsible for their environment. The research emphasizes the importance of a humanist approach in da'wah that can increase community involvement.³ In addition, the results of the study show that communities are not only involved in waste management, but also get economic benefits from recycling activities, which creates a positive impact on their well-being.⁴

Social and Economic Impact From a social perspective, this program creates a sense of togetherness and solidarity among community members. Waste

¹ Farida S. Achmad, 'Waste Management an Islamic Perspective', *Journal of Advanced Research in Social Sciences and Humanities* 7, no. 4 (2022), <https://doi.org/10.26500/jarssh-07-2022-0402>.

² Suhaila M. Omar, Ahmed J. K. Chowdhury, and Abdurezak A. Hashi, 'Islamic Ethics of Waste Management Towards Sustainable Environmental Health', *Iium Medical Journal Malaysia* 17, no. 1 (2018), <https://doi.org/10.31436/imjm.v17i1.1024>.

³ Qomariah Moehson, 'Dakwah Humanis Melalui Gerakan Tarekat', *Jurnal Ilmu Dakwah* 39, no. 2 (2019): 183, <https://doi.org/10.21580/jid.v39.2.4674>.

⁴ Omar, Chowdhury, and Hashi, 'Islamic Ethics of Waste Management Towards Sustainable Environmental Health'.

management activities carried out collectively increase social interaction and strengthen community networks. Research shows that community involvement in community-based programs can improve the quality of life and environmental sustainability.⁵ In addition, the economic benefits of waste management provide additional incentives for the community to actively participate in these program.⁶

Challenges in Implementation Although the results were positive, the study also identified several challenges faced in the implementation of the program. One of the main challenges is the lack of support from the government and related institutions in terms of policies and facilities for waste management. Research by shows that obstacles in da'wah are often related to a lack of structural support and supportive policies.⁷ In addition, there are still people who do not understand the importance of good waste management, which requires a more intensive educational approach.⁸ Discussion Overall, the results of this study show that the Strategic Da'wah approach by LPBI NU in environmental empowerment through waste management has great potential to increase public awareness and participation. The integration of Islamic values in environmental programs can be an effective tool to encourage more sustainable behavior change. However, to achieve optimal results, greater support from the government and related institutions is needed, as well as more intensive efforts in environmental education. This research makes an important contribution to the understanding of how faith-based approaches can play a role in environmental sustainability and community empowerment.

This is in line with the idea that Islam has a strong perspective on environmental sustainability, which can be seen in its teachings that emphasize the

⁵ None Ibdalsyah, Amir T. Ramly, and Rahmat Rosyadi, 'Manajemen Strategi Dakwah Walisongo Di Wilayah Pulau Jawa', *Jurnal Manajemen* 14, no. 2 (2023): 290–304, <https://doi.org/10.32832/jm-uika.v14i2.715>.

⁶ Achmad, 'Waste Management an Islamic Perspective'.

⁷ Wahilul Wahdi, 'Hambatan Dakwah Di Masjid Taqwa Sikilang Kecamatan Sungai Aur Kabupaten Pasaman Barat', *Tabsyir* 5, no. 1 (2023): 70–80, <https://doi.org/10.59059/tabsyir.v5i1.804>.

⁸ Muslimin Ritonga and Dewi Sartina, 'Komunikasi Dakwah Gus Miftah Di Lokalisasi Pasar Kembang Yogyakarta', *Al-Munzir* 13, no. 2 (2020): 273, <https://doi.org/10.31332/am.v13i2.2051>.

importance of maintaining cleanliness and preserving nature.⁹ A literature review shows that a religion-based approach, especially in the context of Islam, can make a significant contribution to pro-environmental awareness and behavior. For example, research by shows that environmental moral education combined with Islamic religiosity can increase pro-environmental behavior among individuals.¹⁰

In addition, it highlights how Muslim environmental activists develop a unique environmental cosmology, which integrates religious knowledge with sustainability practices.¹¹ Another study by Rahman and Jalil confirms that Islamic-based environmental management is increasingly receiving attention both at the national and international levels, showing the relevance of Islamic teachings in the context of environmental conservation.¹² The theoretical framework used in this study can refer to the theory of planned behavior, which links Islamic knowledge and environmental education with pro-environmental behavior.¹³

This theory helps explain how Islamic values and teachings can influence an individual's attitudes and actions towards the environment. As such, this approach focuses not only on the technical aspects of waste management, but also on the broader social and spiritual dimensions. The state of art of this research lies in the integration of Islamic values in environmental management practices, especially in the context of waste management. LPBI NU's initiative in community empowerment through environment-focused da'wah programs shows that a faith-

⁹ Anita Agustina, 'Perspektif Hadis Nabi Saw Mengenai Kebersihan Lingkungan', *Jurnal Penelitian Ilmu Ushuluddin* 1, no. 2 (2021): 96–104, <https://doi.org/10.15575/jpiu.12206>.

¹⁰ Abida Begum et al., 'Impact of Environmental Moral Education on Pro-Environmental Behaviour: Do Psychological Empowerment and Islamic Religiosity Matter?', *International Journal of Environmental Research and Public Health* 18, no. 4 (2021): 1604, <https://doi.org/10.3390/ijerph18041604>.

¹¹ Rosemary Hancock, 'Environmental Conversions and Muslim Activists: Constructing Knowledge at the Intersection of Religion and Politics', *Social Movement Studies* 19, no. 3 (2019): 287–302, <https://doi.org/10.1080/14742837.2019.1665505>.

¹² Aulia Rahman, 'Peran Taruna Siaga Bencana Dalam Mitigasi Bencana Di Kabupaten Serang Dan Sukabumi', *Sosio Konsepsia* 6, no. 1 (2016), <https://doi.org/10.33007/ska.v6i1.311>.

¹³ Essia R. Ahmed et al., 'Theory of Planned Behavior Environmental Management Towards Environmental Behavior: A Mediating Effect of Islamic Knowledge and a Moderating Effect of Islamic Upbringing', *Kresna Social Science and Humanities Research* 1 (2021): 202, <https://doi.org/10.30874/ksshr.36>.

based approach can be an effective tool to increase public awareness and participation in environmental issues.¹⁴

This creates a synergy between spiritual values and practical actions that can lead to more sustainable behavior change. The statement of objectives of this study includes: (1) Analyzing the effectiveness of LPBI NU's da'wah approach in increasing public awareness about waste management; (2) Identify factors that affect community participation in environmental empowerment programs; and (3) Developing a community empowerment model based on Islamic values for sustainable waste management. Thus, the Strategic Da'wah approach by LPBI NU in environmental empowerment, especially in waste management, is not only theoretically relevant but also practical, contributing to broader environmental sustainability efforts.

B. Method

The method applied is a qualitative approach with a case study design, which allows researchers to delve deeply into the practices and impacts of the programs implemented by LPBI NU. Research Design This research uses a case study design that focuses on community empowerment programs in waste management carried out by LPBI NU. This approach was chosen because it allows researchers to understand the social and cultural context in which the program is implemented, as well as to explore the experiences and perspectives of the communities involved.¹⁵ The researcher also collects and analyzes related documents, such as activity reports, training materials, and LPBI NU publications. This helps in understanding the framework and strategies implemented in the program.¹⁶ Data Analysis Data obtained from observations, interviews, and documentation studies were analyzed using a thematic analysis approach. This

¹⁴ Sarah Anabarja and A. S. Mubah, 'The Islamic Environmentalism in Eco-Pesantren Initiatives: Integrating the Sustainable Development Values in Islamic Boarding School', *Journal of International Studies on Energy Affairs* 2, no. 1 (2021): 75–90, <https://doi.org/10.51413/jisea.vol2.iss1.2021.75-90>.

¹⁵ Syafrian Tommy, 'Grand Design Policy for Economic Empowerment Through Waste Management: A Case Study of Pekanbaru City's Environmental and Energy Strategies', *E3s Web of Conferences* 506 (2024): 02003, <https://doi.org/10.1051/e3sconf/202450602003>.

¹⁶ Tommy.

process involves coding the data to identify the main themes that emerge, which are then linked to the research objectives. This analysis aims to uncover patterns in the data related to the effectiveness of the da'wah approach in community empowerment and waste management.¹⁷

The results of the initial analysis were shared with several informants to get feedback and ensure that the researchers' interpretations were in line with their experience.¹⁸ By using this comprehensive and systematic research method, it is hoped that a deep understanding of the effectiveness of the Strategic Da'wah approach by LPBI NU in environmental empowerment and waste management can be obtained. The findings of this study are expected to contribute to the development of more effective community empowerment programs in the future

C. Result and Discuss

a. Islamic Concept of Waste Empowerment

Islam teaches that the earth and all its contents, including mountains, oceans, and valleys, were created by Allah as a mandate for humans to be managed and preserved, not to be destroyed. This concept is very clear in the Qur'an, especially in Surah Al-Ahzab (33:72), which states that Allah offers trust to the heavens, earth, and mountains, but only humans are willing to bear it. This verse emphasizes that humans are often negligent in maintaining this mandate, which can be seen from the stories of the previous ummah who were punished by Allah for not maintaining the environment.¹⁹

Preserving nature is an obligation for every Muslim, which is not only considered a moral responsibility, but also a form of worship. In this context, Imam

¹⁷ Begum et al., 'Impact of Environmental Moral Education on Pro-Environmental Behaviour: Do Psychological Empowerment and Islamic Religiosity Matter?'

¹⁸ Begum et al.

¹⁹ Bahagia Bahagia, 'Developing Environmental Awareness and Conservation Through Islamic Teaching', *Journal of Islamic Studies* 22, no. 1 (2010): 36–49, <https://doi.org/10.1093/jis/etq067>.

Al-Ghazali emphasized that a person who causes an accident due to negligence in maintaining cleanliness is responsible for the consequences.²⁰ In addition, the Fatwa of the Indonesia Ulema Council (MUI) No. 47 of 2014 emphasizes that maintaining environmental cleanliness, managing waste, and recycling are the obligations of every Muslim for the common good.²¹

At the 2019 Nahdlatul Ulama (NU) National Conference, it was decided that littering plastic waste is haram, reflecting the importance of maintaining human relations with nature (*hablun minal alam*) in an Islamic perspective.²² This decision was taken based on data that shows that waste, especially plastic waste, is a serious problem in Indonesia. With this decision, NU strives to realize public benefits and welfare through good waste management and environmental conservation.²³ Islam also teaches ecological values that can be actualized in environmental conservation. These values include respect for nature and the understanding that every living thing has values that must be respected.²⁴

In this context, an approach that integrates Islamic values in environmental education can increase awareness and pro-environmental behavior among Muslims.²⁵ Overall, Islamic teachings on environmental management emphasize the importance of individual and collective responsibility in preserving nature as a mandate from Allah. Therefore, every Muslim is expected to play an active role in protecting and preserving the environment for the common good.

b. LPBI NU Movement in Plastic Waste Empowerment

LPBI NU (Nahdlatul Ulama Disaster Management and Climate Change Institute) is an organization that focuses on disaster management, climate change,

²⁰ Ilham Tohari and Umar Faruq, 'Aktualisasi Nilai-Nilai Ekologis Ajran Tasawwuf Dalam Pelestarian Lingkungan', *PJRS* 1, no. 1 (2022): 42–54, <https://doi.org/10.59001/pjrs.v1i1.30>.

²¹ Fachruddin M. Mangunjaya and Gugah Praharawati, 'Fatwas on Boosting Environmental Conservation in Indonesia', *Religions* 10, no. 10 (2019): 570, <https://doi.org/10.3390/rel10100570>.

²² Mangunjaya and Praharawati.

²³ Mangunjaya and Praharawati.

²⁴ Tohari and Faruq, 'Aktualisasi Nilai-Nilai Ekologis Ajran Tasawwuf Dalam Pelestarian Lingkungan'.

²⁵ Begum et al., 'Impact of Environmental Moral Education on Pro-Environmental Behaviour: Do Psychological Empowerment and Islamic Religiosity Matter?'

and environmental conservation. The vision of LPBI NU is to create a resilient and adaptive society to disasters and reduce environmental impacts due to natural changes. In this context, LPBI NU plays an important role in educating the public about the importance of environmental and disaster management. One of the significant steps taken by Nahdlatul Ulama (NU) regarding environmental issues is the decision resulting from the National Conference (Munas) of Alim Ulama NU in 2019.

In the forum, it was agreed that littering plastic waste is haram, especially if the action harms the environment both in the short and long term.²⁶ This decision confirms that the government has the right to take action against perpetrators who litter and producers who do not manage their product waste properly. The community is also authorized to boycott companies that are not responsible in their waste management. This decision was born out of concern for the public good and is very relevant to be implemented in Indonesia, although it looks irrelevant in developed countries such as Japan which already have a good waste management system.

According to the Fatwa of the Indonesia Ulema Council (MUI), waste is defined as the remnants of daily human activities or natural processes that require special management. Waste management must be carried out systematically, comprehensively, and sustainably, including the reduction, utilization, and handling of waste.²⁷ Waste can be differentiated into organic and inorganic, with plastic waste being the main concern due to its hard-to-decompose nature. Indonesia is currently facing major challenges in plastic waste management, where data from the Ministry of Environment and Forestry (MoEF) shows that Indonesia is the second largest producer of plastic waste in the world after China.²⁸ Plastic waste

²⁶ Fitri Wahyuni and Binti Maunah, 'Kepemimpinan Transformasional Dalam Pendidikan Islam', *Southeast Asian Journal of Islamic Education Management* 2, no. 2 (2021): 141–62, <https://doi.org/10.21154/sajiem.v2i2.51>.

²⁷ Wahyuni and Maunah.

²⁸ Bagus D. Cahyono et al., 'Aplikasi Bank Sampah Berbasis Android Untuk Mengoptimalkan Pengelolaan Sampah Di Desa Sumberuko Kecamatan Purwosari Kabupaten Pasuruan', *Jurnal Kreativitas Pengabdian Kepada Masyarakat (Pkm)* 6, no. 4 (2023): 1544–53, <https://doi.org/10.33024/jkpm.v6i4.8367>.

management is not only related to technical aspects, but also closely related to the cultural and social dimensions of the community. Consumptive culture and lack of awareness of the importance of waste management are the main obstacles in efforts to reduce plastic waste. Therefore, community involvement is the key to effective waste management. Since 2011, LPBI NU has been active in community empowerment through various programs, including waste processing with a compost system. One of the important initiatives is the establishment of the Nusantara Waste Bank (BSN), which aims to reduce the pile of plastic waste by collecting and processing waste into valuable products.²⁹

BSN has grown to have more than 120 branches on the islands of Java and Kalimantan, and has become a waste management model that involves the wider community. The LPBI NU movement in plastic waste management does not only focus on technical aspects but also on efforts to build awareness and change community behavior. Through its programs, LPBI NU strives to create a community that cares more about the environment and is more active in waste management, especially plastic waste which is the main problem in Indonesia.³⁰

c. LPBI NU Movement in Plastic Waste Empowerment

LPBI NU (Nahdlatul Ulama Disaster Management and Climate Change Institute) is an organization that plays an active role in disaster management, climate change, and environmental conservation. LPBI NU's vision is to create a resilient and adaptive society to environmental changes. One of the significant steps taken by Nahdlatul Ulama in environmental issues is the decision of the National Conference (Munas) of Alim Ulama NU in 2019, which stated that it is haram to throw plastic waste carelessly, especially if the action has a negative impact on the

²⁹ Sigit Gunawan, 'Penyuluhan Peningkatan Kualitas Lingkungan Hidup Dengan Pengelolaan Sampah Anorganik Di Padukuhan Cageran Kalurahan Tamanmartani Kapanewon Kalasan Kabupaten Sleman', *Jurnal Abdi Masyarakat Indonesia* 3, no. 3 (2023): 1031–36, <https://doi.org/10.54082/jamsi.798>.

³⁰ Sigit H. Murti, Arundati Shinta, and Galuh S. Winahyu, 'Strategi Promosi Pengelolaan Sampah Di Kalangan Mahasiswa', *Prosiding Seminar Nasional Teknik Lingkungan Kebumihan Satu Bumi* 3, no. 1 (2021), <https://doi.org/10.31315/psb.v3i1.6282>.

environment. Indonesia faces a major challenge as the world's second-largest producer of plastic waste, which pollutes the ocean and the environment (Fahlevi, Jannah, and Sari 2020, 68-74).³¹

In overcoming this problem, LPBI NU has been active since 2011 in waste empowerment, one of which is through the establishment of the Nusantara Waste Bank (BSN). BSN aims to reduce the accumulation of plastic waste by processing it into valuable products, and has grown with more than 120 branches throughout Indonesia (Rachmandhani 2022, 459-486). This movement not only focuses on the technical aspects of waste management, but also on changing people's behavior. Through various programs, LPBI NU seeks to increase environmental awareness and encourage community participation in plastic waste management in Indonesia.³² One of the innovative initiatives from LPBI NU is the development of the Green Islamic Boarding School concept, which aims to answer environmental challenges through the development of environmentally friendly Islamic boarding schools. This movement involves the application of various new methods and innovative approaches in environmental management in Islamic boarding schools.

The green pesantren implementation module is designed to help pesantren become more sustainable, covering waste management, clean water management, and the use of renewable energy.³³ Fitria Aryani, Director of the Nusantara Waste Bank (BSN) LPBI NU, emphasized the importance of this module in designing the transformation of Islamic boarding schools into green Islamic boarding schools (Kasanah 2023, 267-278). This initiative is in line with the government's efforts to

³¹ Reja Fahlevi, Fathul Jannah, and Raihanah Sari, 'Implementasi Karakter Peduli Lingkungan Sungai Berbasis Kewarganegaraan Ekologis Melalui Program Adiwiyata Di Sekolah Dasar', *Jurnal Moral Kemasyarakatan* 5, no. 2 (2020): 68-74, <https://doi.org/10.21067/jmk.v5i2.5069>.

³² Ricka Handayani and Ambang Daulay, 'Youtube Sebagai Media Komunikasi Dalam Berdakwah Di Tengah Pandemi', *Hikmah* 15, no. 1 (2021): 123-38, <https://doi.org/10.24952/hik.v15i1.3569>.

³³ Rani D. Yulyani, 'Pengaruh Potensi Diri, Motivasi Belajar, Lingkungan Sosial, Dan Prospek Kerja Terhadap Keputusan Mahasiswa Memilih Kuliah Di Prodi Bahasa Arab Uin Sultan Maulana Hasanuddin Banten', *Jkip Jurnal Kajian Ilmu Pendidikan* 2, no. 1 (2021): 18-29, <https://doi.org/10.55583/jkip.v2i1.179>.

implement the Adiwiyata program, which aims to create schools that care about the environment.³⁴

This program encourages the active participation of students and the community in protecting the environment, as well as building the character of caring for the environment among the younger generation.³⁵ Thus, LPBI NU not only focuses on waste management, but also on sustainable and participatory environmental education, which is expected to change people's behavior towards higher environmental awareness.³⁶ Overall, LPBI NU is committed to creating a society that cares more about the environment through various programs and initiatives that involve all levels of society, especially among the younger generation. With a holistic and participatory approach, LPBI NU seeks to overcome the environmental challenges facing Indonesia today.

The Nahdlatul Ulama Disaster Management and Climate Change Institute (LPBI NU) is one of the organizations that plays an important role in disaster management and climate change in Indonesia. In carrying out this movement, LPBI NU collaborates with various related agencies and organizations, such as Rabithah Ma'ahid Islamiyah (RMI) NU, Maarif NU Education Institute, Lakpesdam NU, Bahtsul Masail Institute (LBM) NU, P3K Unusia, Ministry of Religious Affairs, and Greenpeace. This collaboration aims to study the definition of green pesantren, determine the stages of its implementation (from silver, gold, to platinum levels), and set change targets both for the pesantren as a whole and for the kiai and their students Dzvimbo, Mashizha, Zhanda, and Mawonde.³⁷

³⁴ Mukson Mukson, Ubaedillah Ubaedillah, and Farhan S. Wahid, 'Penanaman Pohon Sebagai Upaya Meningkatkan Kesadaran Masyarakat Tentang Penghijauan Lingkungan', *Jamu Jurnal Abdi Masyarakat Umum* 1, no. 02 (2021), <https://doi.org/10.46772/jamu.v1i02.350>.

³⁵ Fadzil Ahmad and Eka Maryam, 'Review Analisis Pendidikan Fisika Berbasis Etnosains, Budaya, Dan Kearifan Lokal Di Indonesia', *Jurnal Riset Rumpun Matematika Dan Ilmu Pengetahuan Alam* 1, no. 1 (2022): 12–24, <https://doi.org/10.55606/jurrimipa.v1i1.126>.

³⁶ Aji R. Nugroho, 'Sistem Pembinaan Psikologi Pada Strategi Bermasalah', *Jurnal Impresi Indonesia* 2, no. 4 (2023): 384–92, <https://doi.org/10.58344/jii.v2i4.2345>.

³⁷ S. K. Samaddar et al., 'Evaluating Effective Public Participation in Disaster Management and Climate Change Adaptation: Insights From Northern Ghana Through a User-Based Approach', *Risk Hazards & Crisis in Public Policy* 6, no. 1 (2015): 117–43, <https://doi.org/10.1002/rhc3.12075>.

Green Islamic boarding schools are a concept that integrates environmental education with Islamic values, so that it is expected to give birth to a generation that is not only knowledgeable, but also cares about the environment. In this context, the approach used involves affective, cognitive, and the application of best practices as inspiration and motivation for other Islamic boarding schools. This is in line with global efforts to achieve the sustainable development goals, where environmental education and awareness are key in facing the challenge of climate change.³⁸ One of the first steps in the development of green pesantren is the creation of an implementation module designed to help pesantren become more sustainable. This module covers various aspects, such as waste management, clean water management, and the use of renewable energy. With this module, it is hoped that pesantren can transform into an institution that not only teaches religious science, but also plays an active role in maintaining and preserving the environment.³⁹

LPBI NU also strives to increase public awareness and participation in environmental management through programs involving students and the surrounding community. For example, a waste management program that involves students in the process of sorting and processing waste into valuable products. This not only provides economic benefits, but also builds awareness of the importance of maintaining cleanliness and environmental sustainability.⁴⁰ In the context of disaster management, LPBI NU is committed to increasing the capacity of Islamic boarding schools in dealing with natural disasters. By involving pesantren in disaster management programs, it is hoped that pesantren can become a center of information and education for the surrounding community. This approach is in line with the principles of disaster risk reduction that emphasize the importance of

³⁸ Ilan Kelman, 'Climate Change and the Sendai Framework for Disaster Risk Reduction', *International Journal of Disaster Risk Science* 6, no. 2 (2015): 117–27, <https://doi.org/10.1007/s13753-015-0046-5>.

³⁹ Hamid Jafari et al., 'The Use of Uncertain Scenarios in Disaster Risk Reduction: A Systematic Review', *Foresight* 21, no. 3 (2019): 409–18, <https://doi.org/10.1108/fs-11-2018-0099>.

⁴⁰ Paul Hudson, Philip Bubeck, and Annegret H. Thieken, 'A Comparison of Flood-Protective Decision-Making Between German Households and Businesses', *Mitigation and Adaptation Strategies for Global Change* 27, no. 1 (2021), <https://doi.org/10.1007/s11027-021-09982-1>.

community involvement in mitigation and adaptation efforts to climate change.⁴¹ The collaboration between LPBI NU and various related organizations also reflects the importance of synergy in facing environmental challenges. By combining resources and knowledge from various parties, it is hoped that the programs carried out can be more effective and sustainable. This is in line with research that shows that community participation in disaster management and climate change can increase the effectiveness of these programs.⁴² In order to achieve this goal, LPBI NU also conducts training and workshops for kiai and students to improve their understanding of environmental issues and climate change.

The training covered a wide range of topics, from natural resource management to disaster mitigation strategies. By increasing the capacity of human resources in Islamic boarding schools, it is hoped that a generation will be created that is better prepared to face environmental challenges.⁴³ In addition, LPBI NU also strives to establish partnerships with the government and the private sector in order to support green pesantren programs. With support from various parties, it is hoped that pesantren can access the resources and technology needed to implement these programs effectively. This partnership can also open up opportunities for pesantren to contribute to sustainable development programs at the local and national levels.⁴⁴

In facing the increasingly complex challenges of climate change, LPBI NU realizes the importance of a holistic and integrated approach. Therefore, the programs carried out not only focus on technical aspects, but also consider social, economic, and cultural dimensions. With a comprehensive approach, it is hoped that green pesantren can become a model for other educational institutions in an

⁴¹ Mark Keim, 'Preventing Disasters: Public Health Vulnerability Reduction as a Sustainable Adaptation to Climate Change', *Disaster Medicine and Public Health Preparedness* 5, no. 2 (2011): 140–48, <https://doi.org/10.1001/dmp.2011.30>.

⁴² Chuan Yan et al., 'Climate Change Affected the Spatio-Temporal Occurrence of Disasters in China Over the Past Five Centuries', *Royal Society Open Science* 8, no. 2 (2021), <https://doi.org/10.1098/rsos.200731>.

⁴³ Hudson, Bubeck, and Thielen, 'A Comparison of Flood-Protective Decision-Making Between German Households and Businesses'.

⁴⁴ Shylvana Adella, Agussabti Agussabti, and Mudatsir Mudatsir, 'Determinan Motivasi Berpartisipasi Mahasiswa Bidang Kesehatan Dalam Penanggulangan Bencana', *Jurnal Pendidikan Sains Indonesia* 9, no. 1 (2021): 22–35, <https://doi.org/10.24815/jpsi.v9i1.17592>.

effort to protect and preserve the environment.⁴⁵ Overall, LPBI NU's movement in developing green Islamic boarding schools is a strategic step in facing environmental challenges and climate change. By involving various parties and implementing innovative approaches, it is hoped that Islamic boarding schools can play an active role in preserving the environment and increasing public awareness of the importance of environmental issues. Through these efforts, LPBI NU not only contributes to environmental conservation, but also creates a generation that is more concerned and responsible for the environment.⁴⁶

In the face of increasingly urgent environmental challenges, the Green Islamic Boarding School program initiated by the Nahdlatul Ulama Disaster Management and Climate Change Institute (LPBI NU) is one of the strategic steps to reduce negative impacts on the environment.⁴⁷ This program is a long-term effort that aims to restore environmental conditions to normal, even though it takes a long time to achieve the desired results. With the increasing frequency of natural disasters and environmental unrest, this movement is expected to play an important role in containing the rate of environmental damage and minimizing its adverse impacts, at least by not adding to the damage already existing.⁴⁸

The Green Islamic Boarding School begins by changing the culture and behavior of NU students, so that they can become pioneers in preserving the environment, both in the pesantren environment and in daily life. This process involves education and training that focuses on environmental awareness, natural resource management, and environmentally friendly practices that can be applied in daily life.⁴⁹ Thus, students are expected not only to become recipients of religious

⁴⁵ Robin Leichenko et al., 'Economic Vulnerability to Climate Change in Coastal New Jersey: A Stakeholder-Based Assessment', *Journal of Extreme Events* 01, no. 01 (2014): 1450003, <https://doi.org/10.1142/s2345737614500031>.

⁴⁶ Kelman, 'Climate Change and the Sendai Framework for Disaster Risk Reduction'.

⁴⁷ Hesti Indriani et al., 'Vertical Garden Sebagai Solusi Degradasi Ruang Terbuka Hijau Dan Edukasi Santri Wahid Hasyim Yogyakarta', *Jurnal Pengabdian Masyarakat Mipa Dan Pendidikan Mipa* 4, no. 2 (2021): 2, <https://doi.org/10.21831/jpmmp.v4i2.37498>.

⁴⁸ Wignyo Adiyoso, 'Urgensi Pendekatan Multi Dan Inter-Disiplin Ilmu Dalam Penanggulangan Bencana', *Bappenas Working Papers* 4, no. 2 (2021): 167-77, <https://doi.org/10.47266/bwp.v4i2.104>.

⁴⁹ Ayu A. Sari, Alifa A. Sabilla, and Diana Hertati, *Syntax Idea* 2, no. 5 (2020): 21, <https://doi.org/10.36418/syntax-idea.v2i5.252>.

knowledge, but also to become agents of change who are active in protecting the environment. Environmental education in pesantren also includes the introduction of concepts such as waste management, the use of renewable energy, and water conservation. Through this approach, students are expected to understand the importance of protecting the environment and apply these principles in their daily lives.⁵⁰ In addition, this program also seeks to build collective awareness among students and the surrounding community, so that they can contribute to environmental conservation efforts more broadly.

LPBI NU collaborates with various related agencies and organizations in the implementation of the Green Islamic Boarding School program. This collaboration includes Rabithah Ma'ahid Islamiyah (RMI) NU, the NU Maarif Education Institute, Lakpesdam NU, and the Ministry of Religious Affairs, as well as non-governmental organizations such as Greenpeace.⁵¹ This collaboration aims to review the definition of green pesantren, determine the stages of its implementation (from silver, gold, to platinum levels), and set change targets both for the pesantren as a whole and for the kiai and their students. Through this collaboration, it is hoped that the Green Islamic Boarding School program can be implemented more effectively and sustainably. A multi-disciplinary approach involving various parties will enrich perspectives and strategies in dealing with environmental challenges.⁵² In addition, this collaboration can also increase the capacity of Islamic boarding schools in managing natural resources and reducing negative impacts on the environment.

The Green Islamic Boarding School program not only focuses on environmental management, but also on building the character of students who care about the environment. By educating students about the importance of protecting

⁵⁰ Rahman, 'Peran Taruna Siaga Bencana Dalam Mitigasi Bencana Di Kabupaten Serang Dan Sukabumi'.

⁵¹ Aditya Dewanggajati, 'Pengaruh Lembaga Pendidikan Dan Penanggulangan Bencana Daerah Terhadap Partisipasi Pelatihan Bencana Rumah Tangga', *Jurnal Manajemen Dan Supervisi Pendidikan* 5, no. 1 (2021): 29, <https://doi.org/10.17977/um025v5i12020p303>.

⁵² Evinna C. Hendriana, Anita Wardani, and Mertika Mertika, 'Partisipasi Anak- Anak Dalam Pengurangan Resiko Bencana', *Journal of Educational Review and Research* 3, no. 2 (2020): 202, <https://doi.org/10.26737/jerr.v3i2.2170>.

the environment, it is hoped that they can become agents of change who are able to influence the surrounding community.⁵³ This is in line with the sustainable development goals which emphasize the importance of education and environmental awareness in achieving social and economic welfare. The long-term impact of this program is expected to be seen in the form of improving the quality of the environment around the pesantren, as well as changes in community behavior in managing natural resources. Thus, pesantren can serve as a model for other educational institutions in an effort to preserve the environment.⁵⁴ In addition, this program can also contribute to disaster mitigation and adaptation efforts to climate change, which is increasingly important amid the threat of natural disasters that are increasingly frequent.⁵⁵

The Green Islamic Boarding School is a strategic step in facing increasingly urgent environmental challenges. Through education and training that focuses on environmental awareness, this program is expected to change the culture and behavior of students, so that they can become pioneers in preserving the environment. Collaboration with various parties is also key to the success of this program, so that it can be implemented effectively and sustainably. Thus, Green Islamic Boarding Schools not only contribute to environmental conservation, but also create a generation that is more concerned and responsible for the environment.

D. Conclusion

As a caliph on earth, man's duty is to prosper the earth and take care of it. Humans are the main drivers of life on this earth and are responsible for the management of nature. LPBI NU's innovative movement towards waste and

⁵³ Zonghua Wang et al., 'Perceived Stress and Humanistic Care Ability Among Chinese Healthcare Workers: The Chain Mediating Role of Social Support and Life Satisfaction', *Frontiers in Psychology* 13 (2022), <https://doi.org/10.3389/fpsyg.2022.1029265>.

⁵⁴ Adella, Agussabti, and Mudatsir, 'Determinan Motivasi Berpartisipasi Mahasiswa Bidang Kesehatan Dalam Penanggulangan Bencana'.

⁵⁵ Farly Ihsan, Cecep E. Kosasih, and Etika Emaliyawati, 'Kesiapsiagaan Perawat Dalam Menghadapi Bencana: Literature Review', *Faletehan Health Journal* 9, no. 01 (2022): 66–79, <https://doi.org/10.33746/fhj.v9i01.319>.

environmental empowerment is a great contribution to efforts to protect and preserve the environment. LPBI NU's positive behavior as part of the Nahdlatul Ulama program has played a role in producing the 2019 National Congress decision on plastic waste. Other preventive efforts carried out by LPBI NU are by opening the Nusantara Waste Bank (BSN), socializing plastic literacy activities and cultivating green Islamic boarding schools among NU-auspices. This activity is in addition to supporting the government (KLKH) and the world's SDGs goals so that the world will be better in 2030. This LPBI NU movement still has to be carried out because it has a positive impact on fostering a new culture in waste empowerment and making the environment sustainable and comfortable.

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