

Community-Based Waste Management Model Through The Waste Alms Movement Among Women Fishers At Teluk Penyus Beach Cilacap

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Abstract

The volume of waste at Teluk Penyus Beach, Cilacap continues to increase. Waste contributes to environmental pollution; however, if managed through the empowerment of the waste alms movement, it may generate economic, environmental, and social benefits. The objectives of this study are: (1) to examine women's understanding, awareness, and participation in the waste alms movement; (2) to analyze women's empowerment within the waste alms movement; and (3) to develop a model for the waste alms movement. This descriptive qualitative research employed purposive sampling to select women fishers as informants and used interactive analysis. The results show that (1) women's understanding of the waste alms movement remains generally low, though they are aware that waste causes environmental pollution; (2) empowerment of women fishers in building a model for the waste alms movement has never been conducted, yet dissemination activities indicate their enthusiasm to participate; and (3) the waste management model based on the waste alms movement should consider stakeholder priorities and governance: first, low-income communities; second, the elderly; third, environmental care communities; fourth, mosque management boards; fifth, fisher and coastal vendor groups; sixth, scrap collectors; and seventh, waste recyclers. The strategy for establishing the waste alms movement involves coordination with stakeholders by forming a working group composed of the Environmental Agency (DLH), mosque administrators, environmental communities, and community leaders. The actors involved include (1) the Teluk Penyus Coastal Women's Group, and (2) supporting institutions for this program.

Keywords: *Women; Waste Alms Movement*

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I. Introduction

The waste alms movement is an alternative community-based waste management model that provides social, environmental, and economic benefits for the community. The waste alms movement represents a synergy between religious approaches and environmental awareness, and constitutes an implementation of the Indonesian Ulema Council (MUI) Fatwa No. 47/2014. This initiative becomes a part of religious practice that

strengthens the faith and piety of Muslims and reflects Islam as *rahmatan lilalamin* (Suyanto Edy dkk, 2024)¹. Teluk Penyu Beach in Cilacap is one of the main coastal tourism destinations in the region. Currently, its condition is highly concerning, with scattered organic and inorganic waste, including tree branches, food wrappers, plastic bottles, used cooking oil plastic packaging, plastic bags, and polystyrene food containers. Such waste disrupts visitor comfort and the overall enjoyment of this iconic tourist area, even though properly managed waste can generate social and economic value. According to the Environmental Agency (DLH, August, 2024)², waste accumulation at Teluk Penyu Beach during holiday seasons reaches 2.0–2.5 tons per day. A beach cleanup activity organized by PT Solusi Bangun Indonesia Tbk collected and sorted 1.4 tons of waste, consisting of 98 kg of plastic, 774 kg of cardboard, 36 kg of glass bottles, 13 kg of metal, 9 liters of used cooking oil, and the remainder organic waste. All collected waste was donated to three waste banks in Cilacap. However, the impact of this activity was not sustained, as waste soon reappeared at the beach. This indicates a lack of community awareness (Sri Murniati, Dinas Lingkungan Hidup, 2024)³. Therefore, Teluk Penyu Beach requires improved waste management involving community participation through the waste alms movement to reduce environmental pollution and enhance community welfare.

The objectives of this study are: (1) to examine and analyze community understanding, awareness, and participation in community-based waste management through the waste alms movement; (2) to analyze women's empowerment in the waste alms movement as an effort to improve community welfare; and (3) to develop a community-based waste management model through the waste alms movement to enhance societal well-being.

The problem-solving approach and methodological steps are as follows. **First**, to examine understanding, awareness, and participation in the waste alms movement, a social approach was used by providing information on the objectives and benefits of waste management and the importance of the waste alms movement for community welfare. This examination applied a qualitative descriptive method with interactive data analysis. **Second**, issues of community empowerment in waste management and the waste alms movement were approached using qualitative descriptive methods, observation, and focus group discussions, analyzed interactively. Subsequently, a waste-care community group was established to instill social values within the waste alms movement. The **third** problem-solving step was to develop a model and strategy for the waste alms movement to address waste problems and optimize its benefits for coastal communities (Suyanto Edy, 2023)⁴.

The novelty of this study, compared with previous research, includes: (1) its focus on the waste alms movement as an effort to improve community welfare; (2) examination of understanding, awareness, and participation of communities in the Teluk Penyu coastal area in the waste alms movement; (3) implementation of community empowerment related to the waste alms movement; (4) development of a community-based waste management model and strategy in the Teluk Penyu Beach area; (5) analysis using environmental sociology and community empowerment theories; and (6) the use of a descriptive qualitative method with interactive analysis based on Miles and Huberman (2014)⁵. In addition, this research constructs a waste alms movement model (Marimin, 2014)⁶. Several prior studies on waste-related activities include: (1) Diah Rayka Setianingrum, “Gerakan Bersih Sampah di Pantai Teluk Penyu” (Diah Rayka, 2024)⁷, which focuses only on inorganic waste cleanup and does not discuss a waste alms model; (2) Nandang Bakti, entitled “Partisipasi Masyarakat dalam Pengelolaan Sampah Teluk Penyu Cilacap”, (2021)⁸, which uses descriptive quantitative methods and only describes participation in waste management; (3) Lady Ayu Sri Wijayanti, et al. (2025)⁹ “Mengurangi Jejak Sampah Laut Melalui Aksi Bersih Pantai: Inisiatif Lokal di Teluk Penyu Kabupaten Cilacap”. (4) Teguh Hidayat Akbar (2023)¹⁰, entitled “Aksi peduli lingkungan dalam gerakan bersih-bersih sampah di Kawasan Teluk Penyu Cilacap”, using qualitative descriptive methods but not discussing community awareness, participation, or management strategies without discussing the people's participation; and (5) the review by the Head of DLH of Cilacap, Sri Murniati, entitled “Teluk Penyu Pantai Kotor dan Terbengkalai perlu gerakan bersih sampah dibudayakan” (Radar Banyumas, June 2024).¹¹, which does not discuss the waste alms movement or community-based waste management strategies. Thus, the state of the art of this study lies in its methodological and theoretical contributions in environmental sociology, as well as its focus on the Teluk Penyu Beach area in Cilacap.

II. Research Methodology

This study employed both qualitative and quantitative methods. The research location was the Teluk Penyu coastal tourism area in Cilacap, specifically in Cilacap Subdistrict (Teluk Penyu Beach; Kampung Kebon Jati; Kampung Sentolo Kawat; Kampung Tanggap Bencana; Kampung Nelayan Maju) located in South Cilacap District, Cilacap Regency. The selection of these areas was based on the consideration that the communities living there interact most frequently with tourists and generate the highest amount of waste compared to other urban and rural areas. Informants consisted of Dasa Wisma women, members of the Family Welfare Movement (PKK), mosque administrators (takmir), environmental care communities, community leaders, Neighborhood

Association (RW) administrators, and officers of the Environmental Agency (Dinas Lingkungan Hidup/DLH). Informants were selected using purposive sampling. Data collection techniques included in-depth interviews, observation, and secondary data analysis. Data validation used source triangulation, and the data were analyzed using interactive analysis.

III. Research Findings And Analysis

The approach to community-based waste management through the waste alms movement at Teluk Penyu Beach, as an effort to enhance community welfare and support sustainable environmental development, was examined through the lens of environmental ethics, particularly the concept of ecocentrism (deep ecology). This perspective constitutes one of the major environmental movements discussed in environmental sociology. The waste alms movement, as a component of environmental sociology, is based on the principle that the physical environment directly and indirectly influences social values and vice versa. This paradigm is referred to as the New Environmental Paradigm (NEP), later developed into the New Ecological Paradigm (NEP). One of the key assumptions of NEP is that human beings are not only shaped by social and cultural forces, but also by causal relationships and reciprocal interactions within the natural ecosystem, acknowledging the existence of nature's inherent rights. Environmental sociology also examines human ecology and social movements developed by neo-Durkheimian scholars with their ecocentric orientation (Buttel, 1987; Harper, 2004)¹².

Ecocentrism (**Deep Ecology**) represents an improvement over the earlier anthropocentric worldview in environmental management. Anthropocentrism views humans as the center of the environment or universe, attributing intrinsic value only to humans, while nature and its contents are considered mere instruments to satisfy human needs and interests. Humans are perceived as standing outside, above, and separate from nature, giving them authority to exploit it freely. This perspective leads to exploitative attitudes and behaviors lacking any concern for the environment. Anthropocentric ethics are considered one of the causes of environmental degradation and the overexploitation of natural resources and ecosystems.

The first research finding shows that (1) community understanding—especially among women fishers around Teluk Penyu Beach, regarding the concept, benefits, and objectives of the waste alms movement remains very limited. Evidence shows that 50% reported no understanding, 27% reported low understanding, and only 22.2% indicated that they understood the waste alms movement. Most women fishers stated that they did not know the meaning, objectives, or benefits of the waste alms movement for society and the environment (61.1%), while 22.3% reported minimal knowledge, and only a small portion (16.6%) had some awareness of the waste alms movement. Nevertheless, awareness and participation in household waste management were relatively good, as indicated by the fact that 66.3% disposed of waste in designated places, while 33.7% still disposed of waste indiscriminately. Awareness of the importance of establishing a waste alms movement in their area was generally high (78.1%), with only 21.9% showing low enthusiasm for forming such a movement. This awareness emerged after the community received socialization about the concept, objectives, and benefits of the waste alms movement. According to one informant, referred to as Mrs. HAR, aged 61, a retired teacher who currently works as a scrap collector:

“... Regarding community-based waste management, in our area, a waste bank was once established, but it was not successful because the commitment of both the community and the managers needed to be strengthened due to various activities and time constraints. However, after being informed about the waste alms movement as an effort to reduce environmental pollution and enhance social solidarity, I am now very enthusiastic and fully supportive of establishing such a movement. The waste alms movement is crucial for fostering and strengthening social solidarity among residents, and for promoting mutual support based on social values, so that community welfare can be improved...”

The statement above regarding the benefits of the waste alms movement is in line with Emile Durkheim's Theory of Social Solidarity, which asserts that solidarity plays a significant role in social and community life. Essentially, individuals require solidarity both within and between groups. Social groups serve as spaces for collective survival; communities remain cohesive through unity and mutual dependence fostered by solidarity among members.⁴ Durkheim formulated his argument by distinguishing between mechanical and organic solidarity, emphasizing functional interdependence within the division of labor.

Second, the empowerment of women within the waste alms movement among women fishers is highly relevant to be implemented in the Teluk Penyu coastal area (88.9%). This is due to the following considerations (1) Local context: Teluk Penyu Beach frequently serves as a site for beach-cleaning activities. These activities are collaborative initiatives involving local government, environmental communities, volunteers, and a resident base that can be integrated into the waste alms movement. (2) Socio-religious values: The Cilacap coastal area displays strong religious activities and community traditions. Institutionalizing alms in the form of waste contributions allows the movement to draw on local norms and cultural wisdom to enhance participation. (3) Local economic aspects: Waste materials such as plastic, paper, and cans possess economic value and can be converted through waste banks or recycling partnerships, thereby providing economic incentives for the

community—either as additional income or to support social activities through the waste alms movement. An informant, Mrs. ISW, aged 54, the wife of a fisher, expressed the following:

“... I learned from the internet that in Malang and Yogyakarta, the waste alms program has been running successfully, and the communities there have truly benefited from it. In fact, this kind of initiative is highly suitable for development in the Teluk Penyu coastal area. The main challenge for local residents is their busy daily routines on the beach, which leaves them with limited free time. Even so, if proper outreach is carried out—such as during *dasa wisma* gatherings, religious study groups (*pengajian*), or PKK meetings—people, especially women, will begin to understand the importance of waste alms, considering that waste is plentiful around homes and along the beach, and is produced every day. Instead of throwing away waste carelessly—such as plastic, paper, or bottles—it would be much better to collect and donate it. The proceeds can later be used to support social activities. For example, in Yogyakarta, the funds are used to help economically disadvantaged residents, support community programs, religious activities, and more. This is why empowerment efforts are needed among coastal communities, especially in the Teluk Penyu area, so that the waste alms movement can be developed using models and strategies that fit local conditions. That is my view, based on the limited information I have gathered from my mobile phone on the internet...”

The statement aligns with community empowerment theory, which asserts that effective empowerment requires understanding key strategies, including: (a) human resource development; (b) group institutional strengthening; (c) the cultivation of community (or private) capital; (d) the development of productive enterprises; and (e) the provision of appropriate and accessible information. Furthermore, the theory identifies three essential conditions for community empowerment: (a) creating a supportive and comfortable environment for the community, (b) strengthening the resources already possessed by the community, and (c) ensuring the availability of human resources capable of managing the natural resources within the local area. The stages of community empowerment consist of: (a) preparation (engagement), (b) assessment, (c) implementation, (d) evaluation, and (e) termination (disengagement).

Third, in developing a community-based waste management model through the waste alms movement, the analysis indicates that designing such a model and its supporting strategies for the Teluk Penyu coastal area requires careful attention to the varying levels of interest and collaboration among stakeholders. Several aspects must be considered in designing a waste management policy model based on the waste alms movement: (1) The stakeholder priorities and governance that must be considered include, first, economically disadvantaged communities; second, older adults (LANSIA); third, waste-conscious communities; fourth, managers of the waste alms movement; fifth, mosque administrators (*takmir*); sixth, fishers' groups and coastal vendors; seventh, scrap collectors; and eighth, communities engaged in recycling organic and inorganic waste. (2) The model and strategic methods for implementing the waste alms movement involve coordination with stakeholders by establishing a working group consisting of the Environmental Agency (Waste Management Division), mosque administrators, environmental communities, and community leaders. (3) The allocation of proceeds from the waste alms movement is as follows: 30% is used for coastal conservation in the form of vegetation, procurement of permanent waste bins along the coast, and beach cleaning activities. Fifty percent is allocated for social assistance to residents, such as economically disadvantaged households (distribution of rice, cooking oil, and other basic necessities), older adults (LANSIA) for health needs, support for communal work (*kerja bakti*) in the form of meals, support for Friday blessing programs (*Jumat Berkah*) in the form of boxed lunches, and assistance for residents experiencing hardship such as death or accidents. The remaining 20% is designated for incentives for volunteers and other operational needs. To ensure the sustainability of this waste alms movement, education and campaigns must be conducted through dissemination in religious gatherings (*pengajian*), neighborhood meetings, or *dasa wisma* gatherings, beach cleanup activities, and outreach through social media.

The prototype model and strategy for community-based waste management through the waste alms movement as an effort to enhance community welfare are as follows: In general

(A) The objectives of this model are built upon the integration of core values, including: (1) Religious values (waste alms as a form of social worship for community welfare). (2) Ecological or environmental values (waste as a trust that must be properly managed to maintain environmental cleanliness for humankind). (3) People-centered or community economic values (waste supporting community social activities and serving as a source of welfare). In this waste alms movement model, women are positioned as the **primary actors** and agents of social and environmental change along the Teluk Penyu coast in Cilacap.

(B) The main actors involved in detail, in developing the Community-Based Waste Management Model through the waste alms movement to enhance community welfare among women in Teluk Penyu Cilacap are as follows: (1) The Teluk Penyu Coastal Women's Group, which serves as the core driver of community empowerment. This includes women fishers, informal sector vendors along the coast, religious study group activists, *dasa wisma* groups, neighborhood-level PKK members, and women's religious groups. (2) The next actors are the institutions supporting this program (Village/Subdistrict Government; Zakat/Charity

Agency; mosque administrators; green communities; waste banks; and the District Environmental Agency (DLH)). (3) Downstream partners include waste collectors, recycling centers, and MSME entrepreneurs engaged in creative industries.

(C) The model structure consists of the following components (Input–Process–Output–Outcome–Impact): (a) Inputs include: Social components such as environmental awareness among coastal women; Spiritual components such as values of charity and good deeds; Resource components including household waste, coastal waste, and waste generated by tourists; Institutional components such as women’s groups (dasa wisma, religious study groups, PKK, women fishers, Yasinan groups); Supporting components such as neighborhood associations (RT/RW), village government, Baznas, DLH, and mosque administrators.

(D) The Model’s Working Mechanism constitutes the Main Process in the modeling which is built through several stages: (1) The stage of education/outreach and religious-ecological literacy, including religious study sessions on the environment, sermons on waste alms, and training on sorting waste from waste alms activities. (2) The stage of collecting waste from the waste alms movement, including household waste, coastal waste, and tourist-generated waste, with weekly contributions made to the waste alms managers. (3) The stage of managing and processing the results of waste alms, including further sorting, weighing, recycling, and producing handicrafts from inorganic waste. (4) The stage of converting the results of waste alms into economic value. This stage includes savings generated from waste alms for community social funds and capital for women’s MSMEs managed by Dasa Wisma. (5) The stage of distributing the results for community welfare, including meals for communal work, educational support for orphaned children of fishers, distribution of basic necessities for economically disadvantaged older adults, support for Yasinan activities, Friday blessing programs, health assistance for disadvantaged older adults, and support for women’s entrepreneurship.

(E) The Outputs or Results of the Waste Alms Movement among Coastal Women can be directly observed, including: (a) a cleaner coastal environment; (b) an active community waste bank; (c) active green community engagement; (d) women producing goods from inorganic waste; (e) the availability of social funds from the waste alms movement; (f) women having their own income with economic value; (g) increased social solidarity; (h) increased community welfare; and (i) increased tourism.

(F) The Long-Term Impacts of the Waste Alms Movement Model are: (a) improved community welfare; (b) sustainable coastal areas; (c) women serving as leaders in ecological sustainability; (d) a productive, environmentally based waste alms system; and, more broadly, the development of a model that can be replicated nationally in waste alms movements in coastal areas among women.

(G) Model Diagram Conceptually the flowchart of the waste management model based on the waste alms movement among coastal women is as follows:

(A) *RELIGIOUS VALUES AND ENVIRONMENTAL VALUES*----- (B) *WOMEN’S EDUCATION*;----- (C) *WASTE ALMS* -----(D) *GREEN COMMUNITY CONCERNED WITH WASTE*----- (E) *COMMUNITY WASTE BANK*----- (F) *RECYCLING AND WASTE-BASED PRODUCTION*----- (G) *ECONOMIC VALUE AND SOCIAL VALUE*----- (H) *WELFARE OF COASTAL COMMUNITIES*.

(H). The indicators of success in the waste alms movement among coastal women include: (a) the number of women involved in the waste alms movement, (b) the volume of waste received by the Green Community from waste alms increases, (c) an increase in community income, (d) an increase in the number of residents receiving social assistance from waste alms, (e) a reduction in the volume of waste in coastal areas.

(I) The positive aspects or strengths of the Waste Management Model Based on the Waste Alms Movement in Supporting Community Welfare are that this model: (a) strengthens the role of women in coastal waste management and in community empowerment; (b) possesses religious worship value; (c) has social value; (d) is based on human and community awareness; (e) does not depend on government funding; (f) can be replicated in other coastal regions with relatively similar socio-cultural and religious characteristics.

IV. Conclusion

First, the waste alms movement at Teluk Penyu Beach represents a concrete step in addressing waste problems through religious, social, and ecological approaches. The support of local government, religious leaders, environmental communities, mosque administrators, neighborhood leaders (RW), community figures, and tourists is the key to the success of the waste alms movement.

Second, the empowerment of fisherwomen in developing a waste alms movement model has never been undertaken before. The results of the outreach show strong enthusiasm for implementing the waste alms movement. **Third**, in developing policy models and strategies for waste management based on the waste alms movement, it is necessary to consider the priority interests of various relevant stakeholders. The key stakeholder priorities that must be considered are: (1) Economically disadvantaged communities; older adults (LANSIA); (2) Environmental Care Communities; (3) Mosque administrators (takmir); (4) Local government—specifically the Environmental Agency; (5) Coastal fishers’ communities and vendors; (6) Scrap collectors of inorganic waste; (7) Recycling communities; (8) Waste banks; (9) The tourism sector (food stalls and boat rental

services); (10) Academics. The governance scheme of the waste alms movement involves forming a coordination group (task force) that integrates the roles of the government, religious leaders (for promoting the values of waste alms), academics, and representatives from the waste bank for monitoring and financial reporting generated from the waste alms movement. For the sustainability of the waste alms movement, dissemination must be conducted through religious study groups, *dasa wisma* gatherings, neighborhood PKK groups, and mass media outreach.

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