



Institutional Strengthening of a Waste Bank through Assistance in Drafting Organizational Bylaws in Muliawan Hamlet, Tegal Kertha Village

I Ketut Kasta Arya Wijaya^{1*}, Luh Putu Suryani², I Made Gianyar³

¹²³ Faculty of Law, Warmadewa University, Indonesia

*Correspondence: kastaaryawijaya@gmail.com

Article Info

Article history:

Received Aug 24th, 2026

Revised Sept 26th, 2026

Accepted Oct 4th, 2026

Keyword:

Community empowerment;
Community institution; Organizational
bylaws; Waste bank; Waste
management.

ABSTRACT

Community-based waste management requires strong institutional support to ensure that activities are conducted systematically, transparently, and sustainably. The Waste Bank Group in Muliawan Hamlet, Tegal Kertha Village, faced several problems, including the absence of organizational bylaws, unclear division of responsibilities, limited administrative systems, and low community participation in household waste separation. This community service program aimed to strengthen the institutional capacity of the waste bank through assistance in drafting organizational bylaws, restructuring the management team, preparing administrative instruments, providing waste separation education, and developing a sustainability plan. The program applied participatory, educational, and direct mentoring approaches. It was implemented in five stages: coordination and needs identification, program socialization and initial education, assistance in drafting organizational bylaws, administrative and operational training, and monitoring and evaluation. The results indicated that the community partners began to understand the importance of organizational regulations, role distribution, transaction recording, and community involvement. The program produced a draft of organizational bylaws, an organizational structure, simple administrative formats, educational materials, and an operational procedure for the waste bank. The assistance provided an initial foundation for more structured waste bank governance. However, program sustainability requires document finalization, consistent administrative implementation, regular evaluation, and increased community participation.



© 2026 The Authors. Published by Punggawa Legacy Center. This is an open access article under the CC BY license (<https://creativecommons.org/licenses/by/4.0/>)

INTRODUCTION

Population growth and consumer activity in urban areas contribute to an increase in the volume of household waste. (Karak et al., 2012) Waste that is not sorted and not managed at source can increase the burden on transport, expand the need for landfill sites, and heighten the risk of environmental pollution. These issues become even more complex when the public continues to view waste as something to be disposed of, rather than as a resource that can be reused or has economic value. Tegal Kertha Village is one of the areas in West Denpasar Sub-district, Denpasar City. This area has developed into an urban residential area characterised by high population mobility and economic activity. According to the data used in this study, the population of Tegal Kertha Village in 2025 is projected to reach 29,663 people, comprising 16,363 men and 13,300 women. The high level of community activity in the area has led to an increase in the generation of household waste, including inorganic waste.

Inorganic waste is one of the environmental problems because it takes a long time to decompose naturally (Samputri et al., 2025). Types of waste such as plastics, bottles, packaging, certain papers,

cans, and metals can survive in the environment for tens to hundreds of years. If not sorted and utilized, the waste can pollute the soil, disrupt waterways, reduce the cleanliness of settlements, and affect public health. On the other hand, some types of inorganic waste have a selling value when collected and grouped by type. One approach that can be applied to reduce waste generation is the development of community-based waste banks (Raharjo et al., 2017). Waste banks combine the activities of sorting, collecting, recording, and selling waste with a mechanism that resembles a savings system. Through this system, the community can hand over inorganic waste that has been sorted to the manager. The value of waste is then recorded as savings or economic benefits for members. The waste bank also functions as a medium for environmental education because it encourages the community to apply the reduce, reuse, and recycle, or 3R principles.

(Bilgies, 2024) explained that waste banks can be an alternative to community-based waste management because they combine environmental interests and economic benefits. This management not only reduces waste discarded, but also encourages the involvement of residents in the process of sorting and reuse. However, the success of a waste bank does not depend only on the amount of waste collected. Success is also determined by institutionalization, division of duties, record-keeping, leadership, and member participation.

The Muliawan Hamlet Waste Bank Group has social potential in the form of community willingness to be involved in waste management (Wijaya et al., 2025). However, the results of the initial identification show that the group still faces a number of limitations. The group does not yet have Articles of Association and Bylaws or AD/ART that can be used as organizational guidelines. The management structure and division of tasks have also not been arranged in detail. The management of activities still tends to depend on several individuals.

Another limitation can be seen in the administrative aspect. Member registration, waste transactions, savings, group cash, and activity documentation have not been carried out through a uniform system. This condition has the potential to affect the transparency and trust of members. Disorderly administration also makes it difficult for administrators to assess the development of activities, calculate transaction values, and compile reports.

In the social aspect, not all residents are used to sorting waste from home. Waste submitted to managers can still be mixed between organic and inorganic waste. This condition increases the workload of the management and reduces the quality of the waste to be sold. (Khairunisa & Sufiyanto, 2023) emphasized that community participation is an important element in the development of waste banks. Activities are difficult to develop if the community is not involved in sorting and depositing waste regularly.

The problems faced by partners show that strengthening waste banks needs to be done through an institutional approach. One of the steps that can be taken is to compile AD/ART as the foundation of the organization. AD/ART can regulate group identity, goals, membership, rights and obligations, management structure, meetings, financial management, and problem-solving mechanisms. The document can also be the basis for maintaining the sustainability of the organization when there is a change of management.

Based on these conditions, this community service activity is directed at the institutional strengthening of the Muliawan Hamlet Waste Bank Group. The program is carried out through assistance in the preparation of AD/ART, structuring organizational structures, preparing administrative formats, waste sorting education, and sustainability planning. This activity aims to increase partners' understanding of organizational governance and provide basic tools that can be used in waste bank activities.

RESEARCH METHODS

Location and Activity Partners

The service activity was carried out in Muliawan Hamlet, Tegal Kertha Village, West Denpasar District, Denpasar City, Bali Province. The partners of the activity are the management and members of the Muliawan Hamlet Waste Bank Group, as well as residents who have the potential to be involved in waste sorting and deposit activities. The activity was carried out in July 2026, involving as many as 7 administrators, 10 waste bank members, 10 residents, 2 students, and 3 lecturers or service teams.

Implementation Approach

The program uses three main approaches, namely participatory, educational, and direct mentoring approaches.

A participatory approach is carried out by involving partners in problem identification, program preparation, AD/ART formulation, organizational structure structuring, and evaluation of activities. Partners not only receive materials, but also participate in determining the content and form of the institutional tools needed.

An educational approach is used to increase public understanding of inorganic waste management, sorting at the source, the 3R principle, and the function of waste banks. Education is carried out through the delivery of materials, discussions, print media, and recording practices.

Direct assistance is carried out to help partners implement the tools that have been prepared. Assistance includes the preparation of documents, the use of administrative books, transaction recording, and the arrangement of waste bank operational flows.

Stages of Implementation

The activity was carried out through five stages.

Stage 1. Coordination, Observation, and Identification of Needs

The team coordinates with group administrators, community leaders, and related parties. Activities include observation of waste bank conditions, interviews or discussions with partners, as well as identification of institutional, administrative, participation, and operational problems.

The output of this stage is in the form of a problem map and a list of priority needs of partners.

Stage 2. Program Socialization and Early Education

The team socializes the goals, benefits, stages, and roles of partners in the program. The initial education discussed the definition of waste banks, types of inorganic waste, sorting from home, the 3R principle, and environmental and economic benefits.

The output of this stage is in the form of increasing the initial understanding and commitment of partners to participate in mentoring.

Stage 3. Assistance in the Preparation of AD/ART and Organizational Structure

The team facilitated discussions to prepare the draft AD/ART. Document materials included the name and position of the organization, principles, objectives, membership, rights and obligations, management structure, tenure, meetings, administration, finance, and provisions for changes and closing.

The team also helps to structure an organizational structure that includes a chairman, secretary, treasurer, recorder, weighing officer, custodian and public relations officer. The division of tasks is adjusted to the number of administrators and the condition of the group.

Stage 4. Administrative and Operational Training

The team introduced the format of the member list, attendance book, waste transaction book, member passbook, cash records, and activity documentation. Partners also get an explanation of the operational flow consisting of receipt, weighing, recording, storage, and sale of waste.

The output of this stage is in the form of an administrative format and a draft operational SOP.

Stage 5. Monitoring, Evaluation, and Sustainability Planning

Monitoring is carried out to see the involvement of partners, participant understanding, use of administrative formats, and readiness of the group to implement AD/ART. Evaluation is carried out through observation, discussion, and documentation. The team and partners then developed a follow-up plan in the form of a schedule of activities, evaluation mechanisms, strengthening partnerships with collectors, and strategies to increase citizen involvement.

Data Collection and Analysis Techniques

Activity data were obtained through observation, interviews or group discussions, attendance lists, documentation, activity notes, and evaluation of participants' understanding. Data were analyzed descriptively by comparing conditions before mentoring and achievements after program implementation.

Indicators of activity success include: The preparation of the AD/ART draft; The composition of the organizational structure and division of duties; The availability of administrative formats;

Increasing partners' understanding of waste bank management; Preparation of a follow-up plan for activities.

If pretest and posttest data are available, the evaluation results can be analyzed using a percentage increase in scores or a simple statistical test according to the amount and characteristics of the data.

RESULTS AND DISCUSSION

Initial Condition of the Partner

The identification results show that the Muliawan Hamlet Waste Bank Group has social capital in the form of the willingness of the management and the community to develop waste management activities. However, this social capital has not been supported by adequate institutional and administrative tools.

The group does not yet have AD/ART as a formal organizational guideline. Rules regarding membership, management, meetings, finance, and decision-making mechanisms have not been documented. The absence of these documents causes the management of activities to run more based on habits or verbal agreements.

The division of duties of the management has also not been formulated in detail. Some activities still rely on certain individuals. Reliance on key drivers can be a risk to the sustainability of the program. When the individual is inactive, activities may decrease or stop.

From the administrative aspect, the group has not used a uniform recording format. Member lists, junk transactions, savings, and cash have not been managed through an integrated device. In fact, recording is an important component because waste banks manage materials that have economic value.

Community participation in waste sorting is also uneven. Some residents have understood the importance of sorting, while others are still mixing household waste. This condition shows that waste banks need education that is carried out repeatedly and close to community activities.

Table 1 Initial Condition of Partners

Aspects	Initial conditions	Impact
Institutional	Don't have an AD/ART yet	The rules and organizational mechanisms are not yet clear
Organizational structure	The division of tasks is not yet detailed	Activities depend on specific individuals
Administration	The recording format is not yet uniform	Transparency and evaluation are not optimal
Community participation	Sorting from home has not been consistent	The amount and quality of sorted waste is not stable
Sustainability	There is no evaluation and routine plan	Programs at risk of stagnation

The results of the identification reinforce the view that waste banks need to be managed as community organizations, not just as waste collection activities. Institutional strengthening is needed so that the objectives, authority, and work mechanisms can be understood by all members.

Program Coordination and Socialization

Initial coordination resulted in an understanding of the problems and priorities of the activities. The partners stated that the group's main needs are organizational guidelines, division of tasks, recording formats, and increasing citizen awareness. The team then developed a program based on these needs.

The socialization explained the relationship between waste sorting, environmental cleanliness, economic value, and the sustainability of the waste bank. Participants were introduced to the 3R principle as well as the role of the household as the main source of sorting.

The participants' responses showed that the economic aspect is still an important attraction in waste bank activities. However, the team emphasizes that the economic benefits are not always immediately of great value. Waste banks also generate benefits in the form of reducing waste, improving cleanliness, environmental education, and strengthening citizen cooperation.

These findings are in line with (Meidiana et al., 2022) who explain that community-based waste management requires community involvement in the waste reduction process. Participation is not enough to build through instruction. Participation needs to be supported by understanding, facilities, rules, and benefits that can be felt by the community

Preparation of AD/ART as an Institutional Policy

Assistance in the preparation of AD/ART is the main activity in the program. The team and partners discuss the substance of the document gradually. The discussion starts from the identity of the group, position, principles, and goals of the organization. The next stage discusses membership, rights and obligations, management structure, meetings, administration, and financial management.

A participatory process is used so that documents are not only compiled by the service team. Partners are given space to convey the group's conditions, habits, and needs. This approach is important because overly complex documents can be difficult for administrators to implement. On the other hand, a document that is too simple can fail to address important issues.

The resulting AD/ART plan contains at least some of the following components: The name, position, and term of the organization; Basis, purpose, and objectives; Membership conditions; The rights and obligations of members; The structure and tenure of the manager; Meeting and decision-making mechanisms; Financial resources and management; Administration and reporting; AD/ART changes; Dissolution and closing provisions.

AD/ART provides clarity on the relationship between management and members. The document can also reduce an organization's reliance on informal agreements. (Nuraini et al., 2023) show that waste bank management requires a community role and a clear division of labor so that activities can take place consistently.

Although the initial draft is available, the document still needs to be finalized and ratified through a group forum. Finalization is important to ensure that all provisions are acceptable and implemented by members.

Organizational Structure Arrangement

The structuring of the waste bank is carried out to divide the management function of the waste bank. The structure that was prepared included the chairman, secretary, treasurer, recorder, weighing officer, storage officer, and citizen coordination officer.

The chairman is in charge of coordinating the program and representing the organization. The secretary manages correspondence, member lists, minutes, and documentation. The treasurer records cash flows and prepares financial statements. The record-keeping officer is responsible for transactions and savings balances. Weighing officers ensure that the weight of the waste is recorded correctly. Storage officers group the garbage before it is sold. Resident coordination officers convey schedule information and invite the community to participate.

The division of tasks aims to prevent the accumulation of work on one individual. The structure also facilitates the evaluation process because each function has a person in charge. In community-based organizations, the division of roles needs to be adjusted to the capacity of members. The structure doesn't need to be too big, but it should include the main functions of the organization.

Preparation of Administration and Operational SOPs

The next product is a simple administration format. The compiled format includes: List of members; Attendance list; Waste transaction books; Member savings book; Cash Books; Garbage sales list; Documentation of activities; Routine evaluation format.

The format is made simple to be used manually. Simplicity is an important consideration because not all administrators have experience using digital systems. The use of manual recording books can still support transparency if data is recorded consistently and checked regularly.

In addition to the administrative format, the team prepared a draft operational SOP. The SOP contains the stages of depositing, checking the type of waste, weighing, recording, storage, sale, and distribution of results. The SOP also regulates the responsibilities of officers at each stage.

The operational flow is formulated as follows:



Figure 1 Operational Waste Management Flow

SOPs help the management maintain consistency of service. Each member receives the same treatment in the weighing and recording process. This system can also reduce transaction errors and potential discrepancies in information between administrators and members.

Waste Sorting Education

The educational material contains the types of inorganic waste, how to clean and classify waste, the 3R principle, and the mechanism of depositing it to the waste bank. Educational media is arranged in the form of posters, leaflets, and direct explanations.

Education emphasizes that the sorting process must start from home. Waste that has been sorted has better quality and is easier to process. Dirty garbage or mixed with food scraps can reduce the selling value and increase the work of the management.

Strengthening sorting behavior requires an ongoing process. One socialization does not necessarily result in a change in habits. The management needs to convey information regularly, provide examples, and provide a clear deposit schedule.

(Hidayat, 2025) explained that household waste management education can strengthen the implementation of community-based waste banks. Education becomes more effective when people get practical explanations and have channels to apply that knowledge.

Programme Reach

The implementation of the activity produced several initial outputs. These outputs include institutional documents, administrative tools, educational materials, and follow-up plans.

Table 2 Activity Achievements

Output	Status	Remarks
Map of existing conditions	Achieved	Contains institutional, administrative, and participation issues
Draft AD/ART	In the finalization process	The main substance has been compiled
Organizational structure	In the determination process	The division of functions has been formulated
Administrative formats	Compiled	Includes members, transactions, savings, and cash
Operational Standard Operating Procedures	Drawn up in draft form	Load the deposit flow to the sale
Educational materials	Compiled	In the form of sorting materials and 3R principles
Action plan	In the process	Include a schedule, evaluation, and participation strategy

The program's achievements show a shift from a completely informal condition to a more structured governance. These changes cannot be measured as a long-term impact because some products are still in the process of being implemented. However, the availability of basic tools provides opportunities for partners to manage activities in a more accountable manner.

Impact and Sustainability

The initial impact of the activity can be seen in increasing the understanding of partners regarding AD/ART functions, administration, and division of tasks. Before mentoring, the institution was understood as the existence of management. After the discussion, the partners began to understand that the institution also includes rules, working mechanisms, documentation, and evaluation. In the social aspect, the program opens a space for communication between administrators and residents (Luton, 1993). Education about sorting can be the basis for the formation of new habits. These behavior changes require consistency, support from community leaders, and operational schedules that residents can follow.

In the economic aspect, waste banks have the opportunity to generate benefits from the sale of inorganic waste (Al Zahra & Shohibuddin, 2025). However, these benefits depend on volume, sorting quality, collector prices, and operating costs. Therefore, the group needs to build cooperation with collectors who have a clear schedule and price.

The sustainability of the program requires several strategies. First, AD/ART needs to be ratified and socialized to members. Second, administrators need to use an administrative format for each transaction. Third, activities need to have a regular schedule. Fourth, evaluations need to be carried out periodically. Fifth, management regeneration needs to be prepared so that activities do not depend on certain figures. (Puspita Retno et al., 2025) stated that the cooperation of the government, the community, and universities can strengthen the management of waste banks. Universities can support through education, mentoring, evaluation, and innovation development. However, daily management still needs to be carried out by the community so that the organization has independence.

Activity Limitations

This activity has several limitations. First, mentoring is still at the stage of strengthening institutional foundations. Some of the outputs have not been implemented for a long period of time. Second, quantitative data on changes in behavior and waste volume are not yet fully available. Third, the success of the program is still influenced by the commitment of the management, citizen involvement, waste prices, and the sustainability of the relationship with collectors. These limitations indicate that further evaluation needs to be carried out after the AD/ART and administrative system are implemented. Evaluations can be carried out in the range of three to six months to see the development of members, the regularity of transactions, the amount of waste, and the economic and environmental benefits.

CONCLUSION

Community service activities in Muliawan Hamlet are directed to strengthen the waste bank institution through assistance in the preparation of AD/ART, organizational structure arrangement, administrative preparation, waste sorting education, and sustainability planning. The results of the activity show that the problems of partners are not only related to the technical waste collection, but also to organizational governance. The group does not yet have formal rules, a detailed division of tasks, a uniform recording system, or a scheduled evaluation mechanism. The program produces an AD/ART design, organizational structure, administrative format, operational SOP design, educational materials, and follow-up plans. These products provide the initial foundation for more orderly, transparent, and sustainable waste bank management. The sustainability of the program requires finalizing and ratifying the AD/ART, implementing the administration consistently, establishing operational schedules, improving public education, cooperating with collectors, and periodic monitoring. Follow-up evaluations need to use quantitative data so that changes in participation, waste volume, and economic benefits can be objectively measured.

ACKNOWLEDGMENTS

The service team expressed its gratitude to the Tegal Kertha Village Government, the Muliawan Hamlet apparatus, the management of the Muliawan Hamlet Waste Bank Group, students, and the entire community who have participated in the implementation of the activity.

REFERENCES

- Al Zahra, P., & Shohibuddin, M. (2025). A Community-Driven Approach to Urban Waste Management: Insights from the Kenanga Waste Bank, Bogor, Indonesia. *Society*, 13(1 SE-Research Articles), 306–327. <https://doi.org/10.33019/society.v13i1.786>
- Bilgies, A. F. (2024). Bank Sampah Sebagai Alternatif Strategi Pengelolaan Sampah Berbasis Masyarakat Di Songowarengi. *JSCS : Journal of Social Community Service*, 1(2), 119–124.
- Hidayat, V. (2025). Edukasi Pengelolaan Sampah Rumah Tangga dan Penerapan Bank Sampah Berbasis Masyarakat Desa.pdf. *Jurnal Pengabdian Kepada Masyarakat*, 1(1), 8–14.
- Karak, T., Bhagat, R. M., & Bhattacharyya, P. (2012). Municipal Solid Waste Generation, Composition, and Management: The World Scenario. *Critical Reviews in Environmental Science and Technology*, 42(15), 1509–1630. <https://doi.org/10.1080/10643389.2011.569871>
- Khairunisa, K., & Sufiyanto, M. I. (2023). Pengembangan Bank Sampah Guna Meningkatkan Nilai Ekonomi Masyarakat dan Bentuk Partisipasi Masyarakat Dalam Pengelolaan Sampah. *Jurnal Nasional Pengabdian Masyarakat*. <https://api.semanticscholar.org/CorpusID:260407541>
- Luton, Larry S. (1993). Citizen-Administrator Connections: Impacts on Public Facility-Siting Decision Making. *Administration & Society*, 25(1), 114–134. <https://doi.org/10.1177/009539979302500106>
- Meidiana, C., Kurniawan, T. A., Yudono, A., & Surjono, S. (2022). Community-Based Waste Management Model in Optimizing Waste Reduction. 98–113. <https://doi.org/10.4018/978-1-7998-9190-1.ch006>
- Nuraini, F., Widyati, S., Ramadani, W., & Ngazizah, N. (2023). Pengelolaan Sampah Botol Plastik Melalui Bank Sampah TPST 3R, Trirejo, Loano, Purworejo. *Mandub : Jurnal Politik, Sosial, Hukum Dan Humaniora*, 1, 87–92. <https://doi.org/10.59059/mandub.v1i4.569>
- Puspita Retno, D., Eka Putri, H., Nardia Putri, V., Rabbani, A., Marsita Angelica, A., & Nafi'ah, B. A. (2025). Partisipasi Mahasiswa dalam Sinergi Pemerintah dan Masyarakat untuk Pengelolaan Sampah melalui Bank Sampah di Kelurahan Kenjeran. *PEMA: Jurnal Pendidikan Dan Pengabdian Kepada Masyarakat*, 5(3 SE-Table of Content | Articles), 36–45. <https://doi.org/10.56832/pema.v5i3.1552>
- Raharjo, S., Matsumoto, T., Ihsan, T., Rachman, I., & Gustin, L. (2017). Community-based solid waste bank program for municipal solid waste management improvement in Indonesia: a case study of Padang city. *Journal of Material Cycles and Waste Management*, 19(1), 201–212. <https://doi.org/10.1007/s10163-015-0401-z>
- Samputri, S., Maru, R., Nasrul, N., & Aisyah, N. (2025). Innovation in Processing Inorganic Waste into Ecobricks : An Environmentally Friendly Solution in Panciro Village , Bajeng District , Gowa Regency. *Innovation*, 23(3), 189–198. https://www.researchgate.net/profile/Nasrul-Nasrul/publication/392721934_Innovation_in_Processing_Inorganic_Waste_into_Ecobricks_An_Environmentally_Friendly_Solution_in_Panciro_Village_Bajeng_District_Gowa_Regency/link/s/684fc16f11be4823fbde9f81/Innovation
- Wijaya, I. K. K. A., Gianyar, I. M., & Suryani, L. P. (2025). Community Empowerment in the Management of Inorganic Waste through a Waste Bank Program in Muliawan Hamlet, Tegal Kertha Village, West Denpasar District, Denpasar, Indonesia. *Journal of Scientific Research and Reports*, 31(12), 657–663. <https://doi.org/10.9734/jsrr/2025/v31i123805>