

## CARING FOR THE ENVIRONMENT WITH A SOCIAL SPIRIT THROUGH THE WASTE BANK UNIT PROGRAM

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### Abstract

Waste management is a serious challenge that occurs in several countries. Poor waste management will lead to several problems. One movement that can overcome waste management is the establishment of waste banks. As one of the innovative steps that can overcome waste management problems in a sustainable manner. Waste banks are institutions that provide economic incentives for communities to recycle and utilize waste effectively. Community service activities in Nagrak village saw this phenomenon and made this a mainstay program. It is expected to provide in-depth insight into the contribution of waste banks in managing waste and achieving sustainable development goals. The results of this community service are expected to provide a basis for policy makers, industry players and the general public to improve the implementation and effectiveness of waste banks as an innovative solution in waste management and environmental sustainability.

**Keywords:** Waste Management, Waste Bank, Economy, Environment

### INTRODUCTION

Population growth and urbanization have significantly increased waste production, resulting in negative impacts on the environment. Waste is material discarded from natural processes or human activities that has no economic value. Waste has poor value if it is not dealt with in the first place. Health problems and environmental degradation due to pollution are some of the negative effects of waste caused. The government sees an increase in waste problems, and households are one of the main factors contributing to the increase in waste volume in landfills (Permatasari, Sugiartana, & Putra, 2022). Waste is a serious environmental problem, especially in urban areas.

Waste management is a serious challenge in many countries. Especially in the modern era where consumption levels are increasing rapidly. Poor waste management will lead to several other problems in society such as flooding, disease, environmental pollution, and several other problems. Living free from waste is impossible, but living by managing waste is very possible. Waste that is not managed properly will have a very bad impact on people's lives, both health, beauty, and comfort (Fanani, et al., 2021).

One movement that can address waste management is the establishment of waste banks. As one of the innovative steps that can overcome waste management problems in a sustainable manner. Waste banks are institutions that provide economic incentives for communities to recycle and utilize waste effectively.

Waste banks play a role in reducing the volume of waste going to landfills by encouraging communities to sort waste at source. By providing financial or in-kind incentives to people who recycle, waste banks encourage active participation in recycling efforts. In addition, waste banks also serve as a link between the community and the recycling industry, creating a sustainable supply chain for recycled raw materials.

From an economic perspective, waste banks can create new job opportunities and increase the income of local communities. By adding value to waste collected, waste banks are able to create new livelihoods and improve the economic well-being of communities. It can also help reduce pressure on natural resources due to the reutilization of existing materials.

Community service activities in Nagrak village saw this phenomenon and made this a mainstay program. It is expected to provide in-depth insight into the contribution of waste banks in managing waste and achieving sustainable development goals. The results of this community service are expected to provide a basis for policy makers, industry players and the general public to improve the implementation and effectiveness of waste banks as an innovative solution in waste management and environmental sustainability.

## **IMPLEMENTATION METHOD**

The research was conducted at Bank Sampah Unit (BSU) 2340, Nagrak Village, Gunung Putri District, Bogor Regency. The research method used in this paper is descriptive research with a qualitative approach. Qualitative descriptive approach is a research approach by collecting data sourced from interviews, field notes, photographs, notes, personal documentation, or memos and other data. In this study, the informants used were 11 (eleven) supporting informants consisting of: (1) Village Head, (2) Village officials, (3) Hamlet heads, (4) RW, (5) RT, (6) LPM, (7) BPD, (8) Karang Taruna, (9) PKK mothers, (10) Posyandu mothers, (11) Community leaders. Instruments in this research can be in the form of stationery, cellphones or cameras. In collecting data, this research used several methods, namely as follows: (1) Field Observation Method (2) Interview Method. Data analysis techniques in this study with interview analysis techniques

## **RESULTS AND DISCUSSION**

Community Service activities were carried out for 1 month, namely from August 7, 2023 to August 31, 2023. It was carried out in Nagrak Village, Gunung Putri District, Bogor. With an area of 616,000,000 M<sup>2</sup>, Nagrak Village is directly bordered by 3 areas, namely Jakarta, Bekasi and Depok, precisely with Ciangsana village to the North, Cikeas Udik/Wanaherang Village to the South, Cileungsi District to the east and Cikeas River to the West. It is led by a Village Head and 23 Community Associations. Because the location is still in the Bogor Regency area, some village elders are also appointed as Head of Hamlet.

Nagrak Village was established in 1965 and its community typology is Industry/Service. The village category is Madya.

**Table 1: Profile of Nagrak Village, Gunung Putri Sub-district, Bogor**  
**Profil Desa**

Tahun	2014
Kode Desa (PUM)	3201022009
Desa/Kelurahan	NAGRAK
Kecamatan	GUNUNG PUTRI
Kabupaten/Kota	KABUPATEN BOGOR
Provinsi	JAWA BARAT
Tahun Pembentukan	1965
Luas Desa/Kelurahan (Ha)	616,000,000
Penetapan Batas	Ada
Dasar Hukum Perdes No.	.
Dasar Hukum Perda No.	.
Peta Wilayah	Ada
Koordinat	106.944714 BT / -63.846283 LS
T i p o l o g i	PERINDUSTRIAN/JASA
K l a s i f i k a s i	SWADAYA
K a t e g o r i	MADYA
Batas Wilayah :	
a. Desa/Kelurahan Sebelah Utara	Ciangsana
b. Desa/Kelurahan Sebelah Selatan	Cikeas Udik / Wanaherang
c. Desa/Kelurahan Sebelah Timur	Kecamatan Citeungsi
d. Desa/Kelurahan Sebelah Barat	Kali Cikeas

Source: <https://kecamatan gunungputri.bogorkab.go.id/desa/379>

**Table 2: Population of Nagrak Village**

a. Jumlah Penduduk					
Jumlah Laki-Laki (orang)	8.03				
Jumlah Perempuan (orang)	7.65				
Jumlah Total (orang)	15.68				
Jumlah Kepala Keluarga (KK)	4.165				
Kepadatan Penduduk (jiwa/KM2)	0				
b. Komposisi Usia Penduduk					
Laki-Laki		Perempuan			
Usia 0 - 6 Tahun	535	Usia 0 - 6 Tahun	447		
Usia 7 - 12 Tahun	964	Usia 7 - 12 Tahun	932		
Usia 13 - 18 Tahun	859	Usia 13 - 18 Tahun	802		
Usia 19 - 25 Tahun	875	Usia 19 - 25 Tahun	832		
Usia 26 - 40 Tahun	2.276	Usia 26 - 40 Tahun	2.529		
Usia 41 - 55 Tahun	1.77	Usia 41 - 55 Tahun	1.533		
Usia 56 - 65 Tahun	476	Usia 56 - 65 Tahun	355		
Usia 65 - 75 Tahun	192	Usia 65 - 75 Tahun	160		
Usia > 75 Tahun	83	Usia > 75 Tahun	60		
Jumlah Laki-Laki (Orang)	7.947	Jumlah Perempuan	7.59		

Source : <https://kecamatan gunungputri.bogorkab.go.id/desa/379>

**Table 3: Community Education Level.**

6. Tingkat Pendidikan Masyarakat			
Tingkatan Pendidikan	Laki-Laki (orang)	Perempuan (orang)	Jumlah (Orang)
Tamat SD/ sederajat	2.169	2.403	4.572
Tamat SMP/ sederajat	1.338	1.222	2.56
Tamat SMA/ sederajat	1.669	1.422	3.091
Tamat D-1/ sederajat	30	44	74
Tamat D-2/ sederajat	32	61	93
Tamat D-3/ sederajat	36	38	74
Tamat S-1/ sederajat	969	834	1.803
Tamat S-2/ sederajat	144	45	189
Tamat S-3/ sederajat	9	3	12
Jumlah Total (Orang)	6.396	6.072	12.468

Source : <https://kecamatan gunungputri.bogorkab.go.id/desa/379>

Based on interviews conducted with the Head of Nagrak Village, Mr. H. Agus Sahrudin S.PdI, as well as with the Village Secretary Mr. Samsudin, information was obtained that waste management in Nagrak village is still very lacking. Waste is only collected and disposed of in the landfill, whereas in accordance with the government's *green economy* program, which focuses on economic activities based on the environment, waste management is important. In addition, the Head of Nagrak Village

also wants to arouse the enthusiasm of the community to grow crops and green the environment. However, due to limited land, hydroponic activities were chosen as an alternative.

In this Community Service activity, waste management activities were chosen by establishing a Waste Bank Unit. Because this activity is able to make people more *aware of* environmental cleanliness, besides that it can also generate income or economic opportunities for the community.

Waste bank is a waste management system that involves community participation in the collection, sorting and sale of waste. In an effort to increase effectiveness and efficiency, the concept of establishing a Waste Bank Unit can be implemented. Bank Sampah Unit is a branch or sub-unit of a Waste Bank that is managed independently at a more local level.

A waste bank is basically the idea of collecting dry and segregated waste and has a management similar to banking, but what is saved is not money, but waste. The people who save, or drop off waste, are also called customers. They have a passbook and can borrow money to be returned with garbage worth the money borrowed. The waste is weighed and valued at a certain amount of money, then sold at a factory that cooperates with the waste bank (Asteria & Heruman, 2016).

#### **Benefits of Establishing a Waste Bank Unit:**

##### **1. Increased Community Participation**

The establishment of a Bank Sampah Unit allows for more direct community participation. With units located in the neighborhood, it is easier for the community to contribute to the collection and sorting of waste.

##### **2. Improved Waste Management Efficiency**

With Bank Sampah Units, the waste collection and sorting process can be done more efficiently. Local communities can more easily bring their waste to the nearest unit, reducing transportation costs and time.

##### **3. Local Economic Empowerment**

The Bank Sampah Unit not only serves as a place for waste management, but also as a source of economic income. The collected waste can be sold, and the revenue earned can be used for development activities or financing social programs at the local level.

##### **4. Environmental Impact Reduction**

With the establishment of Bank Sampah Units, the amount of waste going to landfills can be reduced. Proper segregation of waste at the local level helps reduce environmental pollution and optimize resource utilization.

##### **5. Environmental Education**

The Bank Sampah Unit not only acts as a waste management center but also as an environmental education center. Through socialization activities, the community can be given a better understanding of the importance of good waste management and its positive impact on the environment.

## Steps to Establish a Waste Bank Unit in Nagrak Village

### 1. Business Plan Preparation:

The first step is to develop a business plan that includes goals, strategies, resources needed, and estimated revenue. A good business plan will be the foundation for the success of the Bank Sampah Unit. The management of the Bank Sampah Unit was organized and will be responsible for the activities. The BSU board received an official letter of assignment from the Nagrak Village Head.

### 2. Strategic Location Selection:

Choose a location for the Bank Sampah Unit that is strategic, easily accessible to the community, and has great potential for sufficient waste collection. The location of the Bank Sampah Unit is in RW 03. Adjacent to the location of an existing waste collector.

### 3. Community Training and Education:

Conduct training and education activities for the local community so that they understand how to collect, sort, and the benefits of their participation.

Waste Bank Unit. The training was given by a team of lecturers from the Faculty of Economics and Business, namely Mrs. Asti Marlina SE, MMSI as Head of the Digital Business Study Program, Mr. Hanis Zaidan Sinaga SE, MMSI, as Secretary of the Digital Business Study Program and Mr. Setio Pramono SE, MSi.

### 4. Procurement of Facilities and Infrastructure:

Ensure that the Bank Sampah Unit is equipped with adequate facilities and infrastructure for the waste collection and sorting process, such as storage bins, sorting tools, and payment systems. The Community Service Team in collaboration with KKN students provide initial facilities and infrastructure such as scales, plastics, bins, etc.

### 5. Cooperation with Related Parties:

Collaborate with the government, educational institutions, and the private sector to support the sustainability of the Bank Sampah Unit. This cooperation can involve funding, mentoring, and promotion. Cooperation in Nagrak village is carried out with collectors who are already operating to help collect waste, a team from the Ibn Khaldun University campus and full support from village officials from the village head to the RT / RW.

## Photos of Community Service Activities



Waste Weighing Activity



Waste Bank Unit Training Activity





Joint Photo with Nagrak Village Head and UIKA KKN participants. Source: Collection of KKN activities

## CONCLUSION

Not many people do waste segregation at the household level; most people prefer to dispose of waste directly to self-management. without being sorted. It is hoped that the establishment of the Bank Sampah Unit in Nagrak village is an effort to inform the community what a waste bank is, how to manage waste, and the benefits of waste. To make the village community more aware and participate in the waste bank program. For the sustainability of the Waste Bank Unit, the activities of each Banjar must be increased.

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