

# The Role of the Environmental Service in Community Economic Empowerment through the Waste Bank Program in Mandailing Natal District (Case Study of the Mandailing Natal District Environmental Service)

Suci Fadhilah R. Lubis<sup>1</sup>, Maryam Batubara<sup>2</sup>, Muhammad Arif<sup>3</sup>

<sup>1,2,3</sup> Universitas Islam Negeri Sumatera Utara, Indonesia

Sucilubis08@gmail.com, Maryambatubara.uinsu.acid@gmail.com, mhdarif1895@gmail.com

## Abstract

*This study aims to reveal the role of Mutiara Garbage Bank in Community Economic Empowerment. This research was conducted in Binjai Village, Medan Denai District. The method used in this research is a qualitative research method with a descriptive approach. The instruments used in this research are interviews (interviews) conducted by the author, observation and documentation. This research is field research located at the Waste Bank in Mandailing Natal Regency using purposive sampling method. Data collection techniques using observation methods, interview methods and documentation methods. Using data analysis techniques qualitative descriptive method and using data validity test with triangulation. The results showed that the role of the Waste Bank in Mandailing Natal Regency in an effort to improve the welfare of the community was to conduct economic empowerment activities. Economic empowerment activities carried out by the Waste Bank in Mandailing Natal Regency include waste savings, inorganic waste crafts, and many more. With the Garbage Bank in Mandailing Natal Regency, it can empower the community's economy by involving the potential of the community in handling the waste they have through proper and proper waste sorting and management. With the Garbage Bank in Mandailing Natal Regency, it has an economic impact on the community and makes a clean environment free from waste and improves the quality of public health from air, soil and water pollution caused by garbage.*

## Keywords

role; waste bank; community economic empowerment.



## I. Introduction

Developing countries in Asia are generally faced with waste problems. Garbage is one of the main causes of environmental pollution. Waste problems are common in several developing countries, including Indonesia. As a waste-producing country, Indonesia has serious challenges to face. The generation of waste that will never decrease or run out will even increase along with the increasing human population growth and the complexity of human activities. Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area. (Shah, M. et al. 2020)

The waste problem that arises is caused by the amount of waste that increases along with the increase in population every year. In addition to the increase in the amount of

waste, other factors that cause waste problems in developing countries such as limited budgets for waste management, lack of understanding of the impacts without proper waste management, and handling of waste management in all aspects. Therefore, prediction of the amount of waste generated due to population growth needs to be done in an effort to manage long-term waste. The increasing population is accompanied by a waste management system that still relies on the old paradigm, resulting in the accumulation of waste.



**Figure 1.** Indonesia is the Second Contributor of Plastic Waste in the World

According to the Ministry of Environment, Indonesia is the second largest producer of plastic waste dumped into the sea after China, reaching 187.2 million tons of plastic waste per year.

Law Number 18 of 2008 concerning Waste Management mandates to abandon the old paradigm of waste management which views waste as useless waste and relies on an end-of-pipe approach, to be replaced with a new paradigm of waste management. The new paradigm views waste as a resource that has economic value and can be utilized in a comprehensive approach from upstream to downstream. Based on the mandate of the Law, waste management activities through waste reduction and handling can be realized through waste bank activities. Garbage bank activities use the working principle of a bank, which accommodates sorted waste from the community that can be recycled. People can enjoy the results of savings in the form of cash. In this activity, the community directly participates in waste management efforts and can also increase income. Waste management through waste bank activities is able to reduce the amount of waste that is disposed of in the TPA. Therefore, the waste bank is one of the best solutions in waste management, namely by involving the community directly and at the same time increasing the economic value of the community.

Waste management implemented through the concept of a waste bank can build public awareness in managing their waste properly and can generate economic benefits from the waste. Thus, indirectly, a cleaner and more comfortable environment will be obtained. Waste management directly from the source will help local governments to reduce and control the amount of waste that goes to landfills so that in the end it helps create a clean, cool and healthy environment.

Humans are indeed created by God to be the most perfect among other creatures, but humans are not free from mistakes, and one of the mistakes made by humans is destroying the earth with the waste they produce. The waste bank program is inseparable from community empowerment. Empowerment is an effort to improve people's lives by providing understanding, controlling social, economic and political forces. In addition to community empowerment, the Waste Bank also helps sell local handicrafts. The handicrafts are made from plastic waste that can be made into items of economic value such as bags, brooches, etc. Savings from saving garbage and selling handicrafts can increase people's income in meeting their daily needs.

Therefore, the researchers found the following phenomena that occurred in Mandailing Natal Regency:

Lack of public awareness in Mandailing Natal Regency regarding waste, especially household and office waste, which every day amounts to 118 tons/day. Through the Mandailing Natal Regency Government, efforts to raise the level of public awareness of waste from 27 villages spread throughout Mandailing Natal Regency, only 2 Kelurahan are able to carry out public awareness about waste, so the Mandailing Natal Regency government conducts socialization in the form of providing Garbage Banks in both Villages. .

The lack of waste transportation equipment makes it difficult for field officers to transport waste, in addition to the lack of Waste Bank groups and collection tools making it difficult to carry out a movement. Garbage cans are important for the community not to litter and this is still not managed properly, this is the Mandailing Natal Regency Government is able to provide trash cans in every kelurahan and determine a schedule for transporting waste and this information must be notified to residents so that garbage does not accumulate in every village.

**Table 1.** List of Waste Banks in Mandailing Natal 2017-2020

Village Names	Number of Customers by Mandailing Natal District			
	2017	2018	2019	2020
Like Forward	137	194	363	35
Mine	219	337	479	188
New village	151	272	341	237
development	282	319	294	169
New Ancient	129	141	101	92
Amount	918 People	1,263 People	1,578 People	721 People

Source: <http://DepartmentMandailingNatal.go.id/>

According to data owned by the Waste Bank, the number of empowered people or called customers by the waste bank from 2017-2020 has decreased. Here it can be seen that there is a decrease in the level of people who save in the Mandailing Natal district, which greatly affects the enactment of the role of the Environmental Service in this waste bank program, and has an effect on the decline in empowerment of the community in Mandailing Natal district with this waste bank program.

Interview with Mr. Kasmir, S.Pd., MM as the Chairperson of the Waste Bank Management, Waste Bank Activities in Mandailing Natal Regency have been initiated since 2011 and until now 5 Waste Banks have been recorded consisting of individuals and groups. Through this waste bank activity, the volume of waste that can be reduced (goes to the TPA and is managed by the Waste Bank unit) is 227,632.80 tons/year with a population of 1,247,303 people with a waste income of around 623, 6 tons per person. 0.5 kg.

However, the results produced from this waste bank are less attractive to the public, of course, things like this prevent waste bank customers from selling recycled waste products. Marketing of waste bank recycling is only carried out at certain events such as bazaars and madina's birthday, so there is very little possibility of capital obtained from recycling waste to be able to get economic value and get an appropriate salary from recycling this waste ".

Everyone should have the ability to meet the needs of society. However, this ability cannot be said to be fully owned by the community. Various groups of people are still unable to meet their daily needs, so this is what is often referred to as poverty. Then the lack of public interest in conducting transactions at the waste bank, the lack of waste transportation equipment, making it difficult for field officers to transport waste, in addition to the lack of waste bank groups and collection tools making it difficult to carry out a movement.

## **II. Research Method**

This research uses qualitative research by using SWOT and QSPM analysis to examine certain populations and samples. The type of research used is field research. The researcher will conduct research on the tourism area of Mandailing Natal Regency, North Sumatra with participants in this study in view of the researchers' considerations relating to the need to obtain complete and sufficient information, in accordance with the objectives or problems studied in the area.

## **III. Result and Discussion**

### **3.1 The Role of the Environmental Service in Community Economic Empowerment Through the Waste Bank Program in Mandailing Natal District.**

In managing waste, the Mandailing Natal Regency Government, especially the Environmental Service, needs to carry out outreach activities to the community. This is intended to maximize community participation in waste management.

Based on Law No. 18 of 2008 concerning Waste Management, there are two ways to manage waste, namely: a. Waste minimization aims to limit the amount of waste produced. b. Waste handling consists of sorting or separating waste according to its type, collecting or taking waste from temporary shelters to integrated waste processing sites, transporting it by bringing waste from the source or from an integrated processing site to the final processing place, then processing and processing. end of trash.

Each region has its own ways and policies in managing its waste, with the given management rights, the local government, especially the relevant agencies, in this case the DLH, Mandailing Natal Regency, can provide the best policies, especially in waste management because waste management is an important thing in preserving the environment.

With this socialization, public understanding and participation in waste management can increase and be able to synergize in programs held by the Environmental Service. The Mandailing Natal District Government through the Environmental Service has made efforts to disseminate waste related to the community, one of which is the Guidance of Waste Banks. This Waste Bank is one of the innovations or methods in waste management that has been applied in most areas in Indonesia and one of them is in Mandailing Natal Regency. Based on the results of the interview with Mr. Edi as the Head of Waste Management, he revealed that:

“Socialization and development of this waste bank has not run optimally, this is because there is still little public awareness in their understanding of sorting and managing waste. Now, this is our homework and our focus (the government) in the future is to further increase public awareness in managing waste because in managing waste it is not only us who work but community participation also participates in this waste management.”

Based on the results of these interviews, information can be found that the Mandailing Natal District Environmental Service is aware that the socialization and development of waste banks has not been optimal. This is because there is still a lack of understanding and community participation in waste management activities carried out by the Environmental Service. Thus, the lack of community participation in waste management is the main focus of the Mandailing Natal District Government, especially the Environmental Service as an effort to develop the waste management performance program.

The Department of the Environment in Creating Strategies in an effort to empower the community's economy in this waste bank program is very necessary. This is to answer the global challenge in waste management, because almost all countries and cities cannot escape the problems of solid waste. Likewise with the waste in Mandailing Natal Regency, the increasing volume of waste in Mandailing Natal Regency every year and the decreasing environmental carrying capacity is a chore for the Government and for every individual. Therefore, a strategy for the Department of the Environment is needed in optimizing waste management.

Based on the results of an interview with Mr. Kasmir, S.Pd, MM, as the Head of the Waste Management Division, he revealed that:

"In creating" The strategy for optimizing waste management is what I explained earlier that increasing awareness and understanding as well as community participation in waste management is our main focus (the Government). Yes, you understand because people are not unemployed, right? many are busy, many are (work) in trading, there are employees like that."

In order to create a strategy for optimizing waste management, the Department of the Environment has made increasing public understanding and participation in waste management a priority focus in its activities. Many factors affect the low level of community understanding and participation, one of which is the daily activities of the people who are busy with their respective affairs so that they pay less attention to waste management. In fact, waste management requires the support and participation of the community who are unconsciously involved in waste activities. In addition to increasing community participation in waste management, the Environment Agency also seeks to



minimize waste production and reduce waste that is disposed of to TPS and TPA.

Based on the results of an interview with Mr. Muhammad Nur Lubis, SE as the Head of the Waste Reduction Section, said that:

"In addition to transporting waste to the Segawe Final Disposal Site (TPA) in Mandailing Natal Regency, DLH also utilizes the Reuse, Reduce and Recycle Waste Management Site (TPS3R) and Waste Banks, which will be encouraged in the future by socializing and increasing maggot cultivation. to society. This is because of the hundreds of tons of waste that people produce on a daily basis, it is dominated by organic waste that can be decomposed by maggot. Where 70 percent of the waste generated by the people of Mandailing Natal City comes from households.

Meanwhile, the remaining 30 are waste from business places, such as traders, service providers, commercial, and offices. Where this maggot has a fairly high economic potential compared to compost in addition to reducing household waste quickly and is also easy to apply in the community. Where will the cultivation development be "Maggot in each group of waste banks/TPS3R is expected to be able to apply and develop it to the surrounding community. So that the problem of household waste, especially food waste, can be reduced enough at home and not to be disposed of in the TPA."

Suroso further explained as follows:

"What is clear is that we are trying our best to reduce the waste that is thrown into the TPA and make the most of the waste from the source, because the less waste that is thrown away, the better. Inside there is a waste bank and others related to waste reduction. Next, plan facilities and infrastructure such as 3R TPS and then segregated garbage carts."

In accordance with the results of an interview with Mr. Muhammad Nur Lubis, SE as the Head of the Waste Reduction Section, it was found that the Environmental Service will also make every effort to reduce the production of waste that is disposed of in the TPA and utilize waste from the source. Then plan facilities and infrastructure such as Integrated TPS and segregated waste carts to improve waste management.

Waste Banks have an important role as the spearhead of waste reduction. Based on the results of the interview with Mr. Edi as the Head of Waste and B3 Waste Management, he revealed that:

"The role of waste banks in efforts to reduce waste generation must be optimized. In line with this optimization, accurate and valid data are needed from each waste bank in Mandailing Natal Regency, including the management structure to its activities. Waste Bank data will be inputted into the SIMBA application making it easier for evaluation, monitoring, and periodic guidance to all Waste Banks."

The results of an interview with Mrs. Nur Azizah Lubis as a staff employee for the management of waste and B3 waste at the Mandailing Natal District Environmental Service, said that:

"For the newly established waste bank, the meeting for evaluation is carried out by the management and customers after the waste bank system has been running for one month since the technical training and sales have been made. All administrators must be present. This meeting was held to assess the implementation of the waste bank that has been carried out with benchmarks in the form of the number of customers, waste reduction and turnover.

For old waste banks Monitoring and Evaluation every 3 months by looking at reports in the form of number of customers, waste reduction. Where the Environment Agency here only provides guidance because the waste bank itself was built in order to invite the public to reduce, reuse and recycle waste."

Monitoring and evaluation are factors that support the community's economic

empowerment through the waste bank program. From the results of the interviews above, it can be concluded that community economic empowerment activities through waste savings in the waste bank program can run well because of the supporting factors, namely the positive response from the community to welcome the waste bank program. There is support from the customer and external parties which greatly influence the activities in the waste bank program. As well as the spirit and sense of awareness to save waste and manage waste.

### **3.2 ConstraintEnvironmental Service in Community Economic Empowerment Through the Waste Bank Program in Mandailing Natal District**

Community economic empowerment through the waste bank program cannot be separated from obstacles. In the implementation of community empowerment through the waste bank program, there are also several obstacles that result in less than optimal implementation of the activities carried out. Based on the results of an interview with Mr. Edi as the Head of Waste and B3 Waste Management, he revealed that:

“Low public awareness, low community mindset, and people's habit of littering, such as throwing garbage on the streets and rivers. Public awareness to be involved in waste management is still very low, this is due to the mindset of the people who think that they have no role in waste management and most people think that waste is not their responsibility to manage. Because in society, especially in our cities, it is embedded that I have paid the waste fee so it is not their responsibility.”

Edi further explained as follows:

“Sarana dan prasarana persampahan masih minim Dalam pengelolaan sampah memerlukan dana yang besar, namun pada kenyataannya masih minimnya dana pemerintah daerah dalam hal pengelolaan sampah serta apresiasi untuk para relawan dan pengurus bank sampah pun masih relatif dikatakan kurang. Banyak relawan yang tidak sekedar tenaga dan waktu, tapi juga yang sifatnya materi untuk membeli peralatan dan perlengkapan operasional masih harus mandiri.”

In order to create a strategy for optimizing waste management, the Department of the Environment has made increasing public understanding and participation in waste management a priority focus in its activities. Many factors affect the low level of community understanding and participation, one of which is the daily activities of the people who are busy with their respective affairs so that they pay less attention to waste management. In fact, waste management requires the support and participation of the community who are unconsciously involved in waste activities. In addition to increasing community participation in waste management, the Environment Agency also seeks to minimize waste production and reduce waste that is disposed of to TPS and TPA.

The results of the interview with Mrs. Nur Azizah Lubis as a staff employee for the waste management sector at the Mandailing Natal District Environmental Service, said that:

“The price of waste is never stable and continues to decline, resulting in a decrease in the enthusiasm of waste bank customers to save. Where waste banks inevitably have to follow the flow of market prices because the volume of their waste is still inferior to pelapak or garbage collectors with large turnover.”

Furthermore, Mrs. Nur Azizah Lubis explained as follows:

“Not all villages in Mandailing Natal Regency have large amounts of inorganic waste. Where the majority of Mandailing Natal Regency is almost 70% organic household waste, so it can be said that the distribution of inorganic waste is not the same between one village and another.”

An interview with Mr. Muhammad Nur Nasution as a customer of the waste bank program said that: "If I want to save waste to the waste bank, there is a time constraint, I'm working. After work, it's late in the afternoon, the garbage bank is closed in the afternoon."

The following are the results of an interview with Mrs. Lastri as a customer of the waste bank program:

"I rarely participate in training activities and save trash because the distance from my mother's house to the waste bank is quite far, no one takes me, my mother's husband comes home from work in the afternoon. The children are busy with their own activities."

Following are the results of an interview with Mr. Janjang as the administrator and customer of the Waste Bank, in his interview he stated that:

"Inadequate waste storage capacity, unavailability of sufficient land to set up Garbage Bank warehouses, and lack of regular monitoring and evaluation. We still find it difficult to use the SIMBA application system. Especially if it requires updating the data periodically, for me it is a bit of a hassle coupled with the busyness of each administrator."

From the results of the interviews above, it can be concluded that the factors that hinder the economic empowerment of the community through the waste bank program are the lack of socialization to the wider community, constraints by the busyness of each customer, the absence of facilities and infrastructure assistance from the government for activities in the waste bank program and the distance from the waste bank to the community's house is quite far.

As for every obstacle, there must be a solution, based on the results of an interview with Mr. Edi as the Head of the Waste Management Division, he revealed that:

"The Environment Service is also expected to increase community participation through mobilization, socialization, mutual cooperation activities, and providing incentives and to make people aware that they must be more aware that the waste problem is not only the responsibility of the local government but also the responsibility of the community. The community should be able to take advantage of the existence of the community-level program in the form of a waste bank as a way of managing waste, besides being able to create a clean and healthy environment, it can also empower the community. Especially in conducting socialization, because there are still many people who do not know about the waste bank program."

### **3.3 Research Findings at the Mandailing Natal District Environmental Service**

The researcher tries to explain and describe in detail the role of the Environmental Service in empowering the community's economy through the waste bank program in Mandailing Natal Regency. The explanation of the research findings is as follows:

- a. Environmental Service Waste Bank Program in Community Economic Empowerment in Mandailing Natal Regency.
  1. The existence of a waste bank program can help empower the community's economy through waste management, where they collect waste and then deposit it into a waste bank and then they get the results from the waste in the form of cash and goods (sembako).
  2. The waste bank in Mandailing Natal can be a potential for community economic empowerment where the community is invited to process organic and inorganic waste. Because of the hundreds of tons of waste that people produce every day, it is dominated by organic waste that can be decomposed by maggots.
  3. The Environment Agency supports the community who participates in waste management. In addition, by forming a cooperative or main waste bank, the results of collecting inorganic waste (plastic, paper, metal) can be concentrated in one location



where the role of the cooperative or main waste bank is as a recycling center for the unit waste bank.

- a) In maximizing human resources in waste management, waste banks sort, deposit, weigh, record and transport.
  - b) The waste bank in Mandailing Natal Regency reduces the amount of waste in the community, increases income for the community, creates a clean and healthy environment and fosters public awareness of the importance of protecting and respecting the environment.
  - c) The Environment Agency supports the community who participates in waste management. In addition, by forming a cooperative or main waste bank, the results of collecting inorganic waste (plastic, paper, metal) can be concentrated in one location where the role of the cooperative or main waste bank is as a recycling center for the unit waste bank.
  - d) In maximizing human resources in waste management, waste banks sort, deposit, weigh, record and transport.
  - e) The waste bank in Mandailing Natal Regency reduces the amount of waste in the community, increases income for the community, creates a clean and healthy environment and fosters public awareness of the importance of protecting and respecting the environment.
  - f) The Role of the Environmental Service in Community Economic Empowerment Through the Waste Bank Program in Mandailing Natal District.
1. Based on Law No. 18 of 2008 concerning Waste Management, there are two ways to manage waste, namely: Waste Reduction and waste management. The Department of Environment is trying as much as possible to reduce the waste that is thrown into the TPA and make the most of the waste from the source. Because less waste is disposed of, it will reduce the accumulation of waste in the landfill.
  2. Waste bank management involves the community, therefore supervision is needed by optimizing the role of the waste bank.
  3. As a place to manage organic and non-organic waste

### **3.4 Environmental Service Constraints in Community Economic Empowerment Through the Waste Bank Program in Mandailing Natal Regency.**

- a) Lack of public awareness to use waste banks. The solution is that the government is aggressively promoting the benefits of the waste bank program.
- b) Constrained by the busyness of each customer. The solution is that the waste bank management picks up the ball in garbage collection to make it easier for customers.
- c) The government's support for facilities and infrastructure has not been maximized for activities in the waste bank program. The solution is mentoring and coaching for the Waste Bank group, and training for administrators and members. Guidance on Waste Banks.

#### **1. Waste Bank Legal Basis**

On October 15, 2012, the Government of the Republic of Indonesia, promulgated Government Regulation No. 81 of 2012 concerning Management of Household Waste and Types of Household Waste, which is also the implementing regulation of Law No. 18 of 2008 concerning Waste Management as well as strengthening the legal basis for implementation of waste management in Indonesia. As mandated in Law No. 18 of 2008 concerning Waste Management, a waste management policy was initiated.

## IV. Conclusion

1. Environmental Service Waste Bank Program in Community Economic Empowerment in Mandailing Natal Regency.

The existence of a waste bank program can be a potential for community economic empowerment where the community is invited to process organic and inorganic waste. By forming a cooperative or main waste bank, it can be concentrated in one location where the role of the cooperative or main waste bank is as a recycling center for unit waste banks. In maximizing human resources in waste management, waste banks sort, deposit, weigh, record and transport. The waste bank in Mandailing Natal Regency reduces the amount of waste in the community, increases income for the community, creates a clean and healthy environment and fosters public awareness of the importance of protecting and respecting the environment.

2. The Role of the Environmental Service in Community Economic Empowerment Through the Waste Bank Program in Mandailing Natal District

Based on Law No. 18 of 2008 concerning Waste Management, there are two ways to manage waste, namely: Waste Reduction and waste management. The Department of the Environment is trying as much as possible to reduce the waste that is thrown into the TPA and make maximum use of waste from the source. Because less waste is disposed of, it will reduce the accumulation of waste in the landfill. Waste bank management involves the community; therefore, supervision is needed by optimizing the role of the waste bank. As a container for managing organic and non-organic waste.

3. Environmental Service Constraints in Community Economic Empowerment Through the Waste Bank Program in Mandailing Natal Regency.

The Environmental Service of Mandailing Natal Regency realizes that the socialization and development of the waste bank has not been optimal. This is because there is still a lack of understanding and community participation in waste management activities carried out by the Environmental Service.

## References

- Alfarisyi, Ahmad Thoriq. (2019). Peran Pemberdayaan Bank Sampah Dalam Islam (Studi Kasus Pada Bank Sampah Induk Surabaya), Alfarisyi Jurnal Ekonomi Syariah Teori dan Terapan Vol. 6 No. 3, Surabaya: Universitas Airlangga
- Almaidah, Ektiv Intan dkk. (2018). Tinjauan Terhadap Peran Bank Sampah Asri Dalam Pemberdayaan Ekonomi Masyarakat Desa Puhsarang Kabupaten Kediri, Jurnal Qawanin, Vol. 2, No. 2
- Al-Quran dan Terjemah, Kementrian Agama Republik Indonesia, maret 2022
- Andini, Uly Hikmah Mochamad Saleh Soeaidy, Ainul Hayat. (2018). Jurnal Pemberdayaan Ekonomi Masyarakat Dari Desa Tertinggal Menuju Desa Tidak Tertinggal (Studi di Desa Muktiharjo Kecamatan Margorejo Kabupaten Pati) Vol. 2 No. 12
- Aziz, Moh. (2005). Ali Dakwah Pemberdayaan Masyarakat: Paradigma Aksi Metodologi. Yogyakarta: Pustaka Pesantren
- Danusaputro, Munadjat. (2001). Hukum Lingkungan, Buku Umum. Bandung: Binacipta
- Dinas Lingkungan Hidup,(Program Bank Sampah),Kabupaten Mandailing Natal di akses 20 Maret 2022
- Emzir. (2014). Metode Penelitian Kualitatif: Analisis Data. Jakarta: Rajawali Pers

- Erwin, Muhammad Hukum. (2008). Lingkungan dalam Sistem Perlindungan dan Pengelolaan Lingkungan Hidup Di Indonesia. Bandung: PT. Refika Aditama
- Fathoni, Abdurrahmat. (2020). Manajemen Sumber Daya Manusia. Jakarta: PT. Rineka Cipta
- Hadi, Siswanto. (2003). Kamus Pelopor Kesehatan Lingkungan. Jakarta: EGC
- Harahap, Erni Febrina. (2012). Jurnal Pemberdayaan Masyarakat Dalam Bidang Ekonomi Untuk Mewujudkan Ekonomi Nasional Yang Tangguh Dan Mandiri. Vol. 3 No. 2 ISSN 2086 – 5031
- Hasil Wawancara dengan ibu Ratna Nasution di jln parbangunan, pada tanggal 08 Februari 2022
- Hendropuspito. (1989). Sosiologi Sistematis. Yogyakarta: Kanisius
- Horoepoetri, Arimbi, Achmad Santosa. (2003). Peran Serta Masyarakat Dalam Mengelola Lingkungan. Jakarta: Walhi
- <http://ariftetsuya.blogspot.co.id/2014/04/pengertian-peran.html> diakses tanggal 25 November 2021
- <http://e-learning.unej.ac.id/mod/resource/view.php?id=30650>. Diakses tgl 23-11-2021
- <http://www.sridianti.com/pengertianlingkungan-hidup-menurut-para-ahli.html>, diakses pada tanggal 3 April 2021
- <https://dlh.mandailingnatal.go.id/> diakses Mei 2021
- [https://id.wikipedia.org/wiki/Bank\\_sampah](https://id.wikipedia.org/wiki/Bank_sampah) diakses 24/01/2021
- Huraerah, Abu. (2008). Pengorganisasian & Pengembangan Masyarakat. Bandung: Humaniora
- Isma'il, Nur Mahmudi. (2001). "Strategi Pemberdayaan Umat dan Pencetakan SDM Unggul", dalam Hotmatu Daulay dan Mulyanto (ed), Membangun SDM dan Kapabilitas Teknologi Umat. Bandung: ISTECS
- KementrianLingkungan,diakses,<https://KementrianLingkungan/katadata.co.id/timpublikasi> katadata/berita-kesadaran-warga-memilah-sampah-masih-rendah diakses 12 Maret 2021
- Khoriddin. (2001). Pembangunan Masyarakat. Yogyakarta: Liberty
- Komposisi Sampah Berdasarkan Jenis Sampah Di Kabupaten Mandailing, di akses Natal. indonesia-jadi-tantangan-bagi-masyarakat, pada tanggal 5 februari 2022
- Komposisi Sampah Berdasarkan Sumber Sampah Di Indonesia di akses <http://KementrianLingkungan/Menlhk.Go.Id/>, pada tanggal 5 februari 2022
- Kurnia, Ayumila dan Sa'diyaturrachma Insani. (2020). Pemberdayaan Masyarakat, Perspektif Ekonomi Syariah Melalui Program Kotaku (Kota Tanpa Kumuh), e-journal vol 3 no 1 ISSN: 26210622, Universitas Muhammadiyah Lampung, PPs IAIN Raden Intan Lampung, 2020 dikses [journal.uml.ac.id](http://journal.uml.ac.id) pada 23/11/2021
- Latuconsina, Muh.Mansyur Syah. (2017). Potensi Ekonomi Melalui Pengolahan Sampah dalam Perspektif Islam dalam Jurnal Iqtisaduna Vol 3 No 2
- Machendrawati, Nanih dkk. (2001). Pengembangan Masyarakat Islam. Bandung: Rosdakarya
- Mahsun, M. (2000). Pengukuran Kinerja Sektor Publik. Yogyakarta: BPFE
- Marliani, Novi. Pemanfaatan Limbah Rumah Tangga (Sampah Anorganik) Sebagai Bentuk Implementasi dari Pendidikan Lingkungan Hidup dalam Jurnal Formatif Vol.4 No.2
- Moleong, Lexy. J. (2005). Metode Penelitian Kualitatif. Bandung: Remaja Rosda Karya
- Mufid, Sofyan Anwar. (2018). Ekologi Manusia. Bandung: PT Remaja Rosdakarya
- Muhtadi, Asep Saiful dan Agus Ahmad Safe'i. (2003). Metodologi Penelitian Dakwah. Bandung, Pustaka Setia
- Mustofa\_Kamil, Pengertian\_Pemberdayaan, diakses April 2021Nasution. Metode

- Penelitian Naturalistik Kualitatif. (Bandung: Tarsito, 2018)Observasi oleh peneliti di Bank Sampah Berkah Kamardikan pada Juni 2022Penelitian KPJU Unggulan Profil Madina Provinsi Sumatera Utara Tahun 2022P3M STAIN Jurai Siwo Metro. 2015. Pedoman Penelitian. Lampung: Pustaka At-Tirmidzi
- Perkasa, Didin Hikmah. (2021). Pemberdayaan Masyarakat Melalui Pendirian Bank Sampah Di Kelurahan Tanjung Duren,(Growth: Jurnal Pengabdian Masyarakat,Vol. Nomor 2
- Poerwadarminto. (1999). Kamus Umum Bahasa Indonesia. Jakarta: PN Balai Pustaka
- Presiden (Peraturan Perundang- undangan Nomor 13 Tahun 2012) diakses 11 Maret 2022
- Rahardjo, M. Dewam. (1999). Islam Dan Transformasi Sosial Ekonomi. Yogyakarta: Pustaka Pelajar
- Riswan, dan kawan-kawan. (2021). Pengelolaan Sampah Rumah Tangga, Jurnal Ilmu Lingkungan, Vol.9, No 1.
- Rozak, Abdul. (2014). Peran Bank Sampah Warga Peduli Lingkungan (WPL) dalam Pemberdayaan Perekonomian Nasabah. Jakarta: Fakultas Syaria'ah dan Hukum
- Rozalinda. (2019). Ekonomi Islam. Jakarta : PT Raja Grafindo Persada
- Sari. (2016). Analisis Pengelolaan Sampah Padat Di Kecamatan Panyabungan Kabupaten Mandailing Natal. Jurnal Kesehatan Masyarakat Andalas Vol.5 No.22.
- Sayyid, Sabiq. (2019). Fikih Sunnah jilid 12. Bandung: Al-Ma'arif
- Sejati, Kuncoro. (2019). Pengolahan Sampah Terpadu. Yogyakarta: Kanisius
- Selomo Makmur. (2019). Agus Bintara Birawida, Anwar Mallongi, Muammar, Bank Sampah,Sebagai Salah Satu Solusi Penanganan Sampah dalam Jurnal MKMI, Vol. 12 No. 4.
- Septiani, Pratiwi Mega. (2017). Pemberdayaan Ekonomi Masyarakat Berbasis Potensi Lokal Terhadap Peningkatan Ekonomi Rumah Tangga di Dusun Satu Kecubung Desa Terbanggi Lampu Tengah dalam skripsi Universitas Islam Negeri Raden Intan
- Shah, M. et al. (2020). The Development Impact of PT. Medco E & P Malaka on Economic Aspects in East Aceh Regency. Budapest International Research and Critics Institute-Journal (BIRCI-Journal). P. 276-286.
- Simbolon, dkk. (2014). Analisis EVA (Economic Value Added) Untuk Menilai Kinerja Keuangan Perusahaan dalam Jurnal Administrasi Bisnis (JAB), Vol. 8, No. 1
- Soekanto, Soerjono. (2002). Sosiologi Suatu Pengantar. Jakarta: Raja Grafindo Persada
- Soekanto, Soerjono. (2013). Sosiologi Suatu Pengantar, Jakarta: PT. RajaGrafindo Persada
- Soemarwoto, Otto. (2001). Ekologi, Lingkungan Hidup. Jakarta: Djembatan
- Soerdjono, Soekanto. (2009). Beberapa Teori Sosiologi Tentang Struktur Masyarakat. Jakarta : PT Raja Grafindo Persada
- Sridianti. (2021). "Pengertian Lingkungan Hidup Menurut Para Ahli", dikutip dari laman webside: [www.sridianti.com/pengertian-lingkungan-hidup-menurut-para-ahli.html](http://www.sridianti.com/pengertian-lingkungan-hidup-menurut-para-ahli.html), diakses pada mei
- Sugiyono. (2007). Metode Penelitian Bisnis. Bandung: Alfabeta.
- Sugiyono. (2015). Metode Penelitian Kombinasi (Mixed Methods). Bandung: Alfabeta
- Suhendra. (2006). Peranan Birokrasi dalam Pemberdayaan Masyarakat. Bandung: Alfabeta
- Sumaryadi, Nyoman. (2018). Perencanaan Pembangunan dan Pemberdayaan Masyarakat. Jakarta: Citra Utama
- Suryani, Anih Sri. (2014). Peran Bank Sampah dalam Efektivitas Pengelolaan Sampah (Studi Kasus Bank Sampah Malang) dalam Jurnal Aspirasi, Vol. 5 No.1
- Undang-Undang Republik Indonesia Presiden, Tentang Pengelolaan Sampah Nomor 18 Tahun 2008, diakses 11 maret 2022
- Walgito, Bimo. (2003). Psikologi Sosial, Edisi Revisi. Yogyakarta: Andi Offset

Wawancara dengan bapak Kasmir selaku Ketua Kepengrusan Bank Sampah Kabupaten Mandailing Natal 08 Maret 2022

Wawancara dengan Bapak Kasmir, S.Pd.M.M selaku Kepala Bidang Pengelolaan

Wawancara dengan Bapak Muhammad Aripuddin Nasution, S.E selaku Kepala Seksi Pengurangan sampah

Wawancara dengan Bu Siti Hawa Lubis, nasabah bank sampah pada Juni 2022

Wawancara dengan Bapak Muhammad Aripuddin Nasution, S.Sos selaku Kepala Seksi Pengurangan sampah Dinas Lingkungan Hidup Kabupaten Mandailing Natal, Juni 2022

Wawancara dengan Ibu Nur Azizah Lubis selaku pegawai staff Bidang Pengelolaan Sampah dan Limbah B3 Dinas Lingkungan Hidup Kabupaten Mandailing Natal, Juli 2022

Sampah Dinas Lingkungan Hidup Kabupaten Mandailing Natal, Juni 2022

Widiarti, Ika Wahyuning. (2017). Pengelolaan Sampah Berbasis "Zero Waste" Skala Rumah Tangga Secara Mandiri dalam Jurnal Sains dan Teknologi Lingkungan, Vol. 4 No. 2 Juni

Wrihatnolo, Randy R. (2007). Manajemen Pemberdayaan: Sebuah Pengantar dan Panduan untuk Pemberdayaan Masyarakat. Jakarta: PT Elex Komputindo

Zain, Badadu. (1997). Kamus Umum Bahasa Indonesia. Jakarta: Sinar Harapan.