

**ISTANBUL SABAHATTIN ZAIM UNIVERSITY**  
**GRADUATE EDUCATION INSTITUTE**  
**DEPARTMENT OF ISLAMIC ECONOMICS AND FINANCE**

**THE IMPACT OF ZERO-WASTE REGULATION AND  
WASTE BANK ON SOCIO-ECONOMIC  
EMPOWERMENT IN INDONESIA: ANALYSIS FROM  
THE PERSPECTIVE OF MAQASID AL-SHARI'AH**

**MA THESIS**

**Miftahorrozi Miftahorrozi**

**Istanbul**

**March-2022**

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## **DECLARATION OF SCIENTIFIC ETHICS AND ORIGINALITY**

This is to certify that this MA thesis titled “**THE IMPACT OF ZERO-WASTE REGULATION AND WASTE BANK ON SOCIO-ECONOMIC EMPOWERMENT IN INDONESIA: ANALYSIS FROM THE PERSPECTIVE OF MAQASID AL-SHARI‘AH**” is my own work, and I have acted according to scientific ethics and academic rules while producing it. I have collected and used all information and data according to scientific ethics and guidelines on thesis writing of Sabahattin Zaim University. In both the text and bibliography, I have fully referenced all direct and indirect quotations and all sources I have used in this work.

**Miftahorrozi Miftahorrozi**

Istanbul, March 2022

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**Miftahorrozi Miftahorrozi**

Istanbul, March 2022

**ABSTRACT**

**THE IMPACT OF ZERO-WASTE REGULATION AND WASTE  
BANK ON SOCIO-ECONOMIC EMPOWERMENT IN INDONESIA:  
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SHARI‘AH**

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With the rapid increase of waste in the country, the government of Indonesia has enacted regulations targeting waste reduction. Malang, one of the cities in Indonesia, has introduced zero-waste (ZW) initiatives to build a healthy environment. To start with the ZW program, Malang chose to establish a bank known as “*Waste Bank of Malang*” (WBM) or “*Bank Sampah Malang*” (in Indonesian). This study aims to analyze the impact of ZW regulations on socio-economic empowerment and assess the efficacy of waste banks in accomplishing this noble objective from the *maqasid al-Shari‘ah* viewpoint. The research adopts a descriptive-qualitative approach and uses both primary and secondary data. The primary data are obtained through the administration of in-depth interviews, while the secondary data are sourced from websites, journals, books, reports, and other publications. ZW regulations and operating WBM contribute considerably to the community’s economic and social well-being. Likewise, the WBM has successfully managed the waste by reducing, reusing, and recycling the waste collected from the customers. The customers earn from the waste bank once the bank sells the recycled waste to a specialized firm under the profit-sharing contract. The concepts of implementing ZW projects and running the waste bank align with the *maqasid al-Shari‘ah*.

**Keywords:** Zero Waste Regulation, Waste Bank of Malang, Socio-Economic Empowerment, *Maqasid al-Shari‘ah*

**ÖZET**  
**SIFIR ATIK YÖNETMELİĞİ VE ATIK BANKASI'NIN**  
**ENDONEZYA'DA SOSYO-EKONOMİK GÜÇLENDİRME**  
**ÜZERİNDEKİ ETKİSİ: MAKASID AŞ-ŞARI'AH AÇISINDAN**  
**ANALİZ**

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Endonezya hükümeti, ülkedeki atık miktarının hızla artmasıyla atık miktarını azaltmayı hedefleyen yönetmelikler çıkardı. Endonezya'nın şehirlerinden Malang, sağlıklı bir çevre için sıfır atık (ZW) girişimleri başlatmıştır. ZW programıyla başlamak üzere Malang, "Malang'ın Atık Bankası" (WBM) veya "Bank Sampah Malang" (Endonezya) olarak bilinen bir banka kurmayı tercih etmiştir. Bu çalışmada, ZW düzenlemelerinin sosyal-ekonomik kalkınma üzerindeki etkisinin analiz edilmesi ve bu asil amaca ulaşmada atık bankalarının etkinliğinin, *maqasid al-Shari'ah* gözüyle değerlendirilmesi amaçlanıyor. Araştırmada betimleyici-nitel bir yaklaşım benimsenmiş ve hem birincil hem de ikincil veriler kullanılmıştır. Birincil veriler derinlemesine görüşmeler yoluyla elde edilirken, ikincil veriler web sitelerinden, bültenlerden, kitaplardan, raporlardan ve diğer yayınlardan elde edilir. ZW düzenlemeleri ve işletim WBM, topluluğun ekonomik ve sosyal refahına önemli ölçüde katkıda bulunur. Aynı şekilde WBM, müşterilerinden topladığı atıkları azaltarak, yeniden kullanarak ve geri dönüştürerek atıkları başarılı bir şekilde yönetti. Kâr paylaşım sözleşmesi ile bankamız, geri dönüşümü sağlanan atıkları, uzmanlaşmış bir firmaya sattığında müşterileri, atık bankasından kazanç elde ediyor. ZW projelerinin hayata geçirilmesi, atık bankasının *maqasid al-Shari'ah* ile uyumlu hale getirilmesi gibi kavramlar.

**Anahtar kelimeler:** Sıfır Atık Yönetmeliği, Malang Atık Bankası, Sosyal Ekonomik Yetkilendirme, *Maqasid al-Shari'ah*

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## LIST OF ABBREVIATIONS

- 3Re** : Reduce, Reuse, Recycle
- CBSM** : Central Bureau of Statistics of Malang or “*Badan Pusat Statistik Kota Malang (BPS Kota Malang)*” in Indonesia.
- CEPA** : Country Environmental Performance Analysis
- CSR** : Corporate Social Responsibility (CSR)
- DCL** : Department of Cleaning and Landscaping (DCL) or “*Departemen Kebersihan dan Pertamanan Kota Malang*” (in Indonesian)
- DFLS** : Department of Forestry and Landscaping Service (DFLS) or “*Dinas Kehutanan dan Pertamanan Kota Malang /DKP Kota Malang* (in Indonesian)
- EHM** : Earth Hour Malang
- MCES** : Malang City Environment Service (MCE) or “*Dinas Lingkungan Hidup Kota Malang/DLH Kota Malang*” (in Indonesian)
- MEFI** : Ministry of Environment and Forestry of Indonesia
- WBM** : Waste Bank of Malang
- ZW** : Zero-Waste

# CHAPTER I

## INTRODUCTION

### 1.1. Research Background

Waste is a huge worldwide problem. It has a detrimental impact on our lives by causing ecological damage, climate change, loss of animal and marine life, spreading of illness, producing floods, air pollution, and disturbing an area's aesthetics. Numerous factors contribute to waste generation, such as population density, economic growth, public consumption, among others (Wahjoedi *et al.*, 2020). They contribute to an increase in volume and change qualities of waste. The issue of waste occurs in many countries, including Indonesia.

Indonesia is ranked as the fourth most populated country globally (Countries, 2022) and as the second plastic waste production, trailing only China (Satria, 2018). Indonesia currently produces 6.8 million tons of plastic waste per year, with only 10 percent of it ending up in recycling centers. The amount of waste dumped into the oceans is estimated to reach 625,000 tons annually (Hallee, 2021). Malang, one of the provinces in Indonesia, produces 1,004.86 tons of waste daily (Fadhilah *et al.*, 2019:957). As a result, the current waste in Malang has become a significant concern, especially in terms of its environmental impact.

The vast amounts of waste necessitate the availability of spare landfills for storage. Otherwise, the ecosystem will suffer if the existing landfills cannot accommodate the current level of wastes. Furthermore, poor infrastructure and lack of technology contribute to the complexity of waste concerns. To address the waste problem, the government, as the primary stakeholder, must introduce efficient waste management programs. Public awareness and community collaboration are expected to contribute to waste management positively.

Several countries have launched waste management projects to deal with the waste issue. In recent years, an entity known as the waste bank has been in control of waste management in Indonesia. The bank's motto is 3Re, which stands for reduce, reuse, and recycle (Muljaningsih, 2021:1). Almost all developing countries use the 3Re waste management processes including sorting, composting, and collecting wastes (Widiarti, 2012:101). Recycling, reducing, and reusing waste are essential steps to managing waste and mitigating its adverse impact on the environment (Maharani *et al.*, 2007:6).

Indonesia is one of the Southeast Asian countries committed to addressing the environmental issue. The country's commitment is demonstrated by having introduced such regulations as Indonesian No.8 of 2008 on Municipal Solid Waste Management, Government Regulation No.81 of 2012, and regulation of the Minister of Public Works No.3 of 2013 concerning Provision of Facilities and Infrastructure for Handling Domestic Waste and Domestic Waste Equivalent. These laws also highlight and govern waste management by using the concepts of reducing, reusing, and recycling to minimize the amount of waste in landfills and support the development of a circular economy (Destriana *et al.*, 2021:1-2).

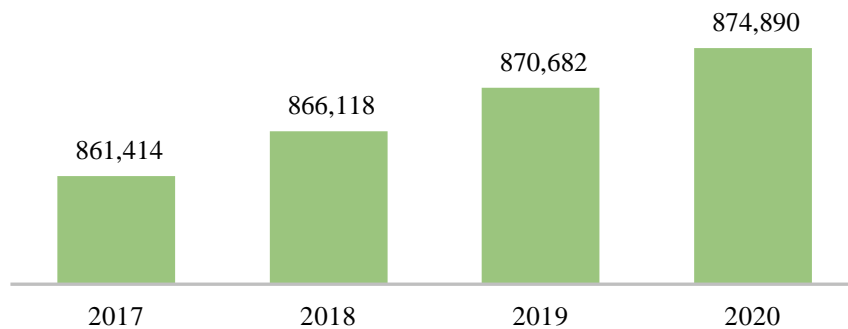
Zero-waste (ZW) management adopts the 3Re principles; therefore, this concept can help decrease waste volume as much as possible. Composting technology, recycling plastic and paper waste, organic and inorganic waste management technology, metropolitan city waste systems, and active community participation in waste handling are a few examples of the ZW concept. ZW management implementation includes an integrated waste management concept that involves the community (Hermawati *et al.*, 2015:40-41).

Many people perceive that waste is something worthless. As a result of this understanding, individuals are less concerned about the issue of waste. They are less willing to manage waste on their own to prevent environmental problems. This unaware view related to waste needs to be changed. Some people are aware of managing the waste independently to decrease environmental problems. The operation of a waste bank also focuses on changing the behavior and perspective of the community. The management of a waste bank prioritizes the participation of the community or the bottom-up approach (Ridha *et al.*, 2021:3).

The waste bank can contribute to the neighborhood's social and economic well-being. An empowered society would reduce waste disposed of in landfills by applying the 3R principles. Likewise, the community may earn additional income by selling recycled products (Suryani, 2014:73-74). Therefore, increasing awareness of the need for waste management is crucial for a better environment.

Many people ignore waste management. They do not consider the long-term impact of waste on the environment. A waste bank, an institution dedicated to waste management, is a revolutionary concept for improving community awareness on the importance of separating household waste, reusing, and recycling it. This concept intends to educate the public about the importance of waste sorting at the source and help society economically (Suwerda, 2012:46).

Malang is one of the cities in Indonesia that established a waste bank institution named Waste Bank of Malang (WBM) or "*Bank Sampah Malang*" (in Indonesian) on August 26, 2011. The rapid growth of the population of Malang causes an increasing number of wastes. Based on data from the Malang City Central Statistics Agency (2020), the population growth of Malang increases year by year, as shown in the following figure:



**Figure 1.1: The population of Malang (period 2017-2020)**

**Source:** CBSM/BPS (2020)

The figure above shows the increase in population in Malang over the 2017-2020 period. It does not count the number of migrants who work and study in Malang. The increasing population causes a higher volume of waste in the area. Therefore, the goal of WBM is to deal with its issue. According to the Malang City Environment Service (2019), the

estimated daily amount of waste left by Malang city is 670 tons in 2019, while the amount of waste transported to final disposal sites is 503 tons. The landfill in Malang is overloaded every day. The area is approximately 32 hectares. The waste is sourced from households, factories, and municipalities and looks like a mountain. Every day about 150 trucks transport waste to this place, as illustrated in the Figure 1.2. below (Aminudin, 2018):

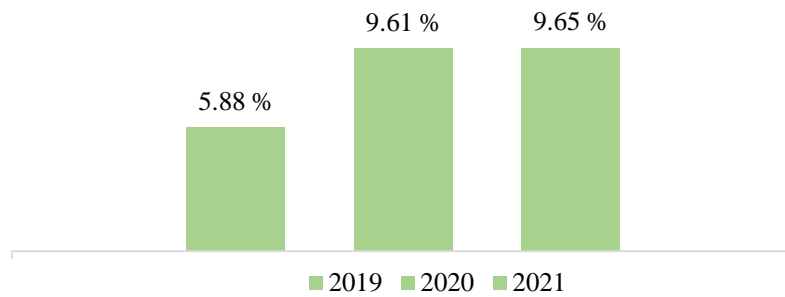


**Figure 1.2: The Supit Urang Landfill in Malang**

**Source:** Tanjung (2018:1)

The photo above shows the location of the landfill in Malang. It appears like a mountain. If the wastes are transported and disposed of to the final disposal site, the landfill will explode over time. In the end, the existence of WBM is to solve this issue by addressing the 3Re principle, which can reduce the waste in Malang by 20-30 percent of total wastes per day disposed of in the landfills (Sari *et al.*, 2020).

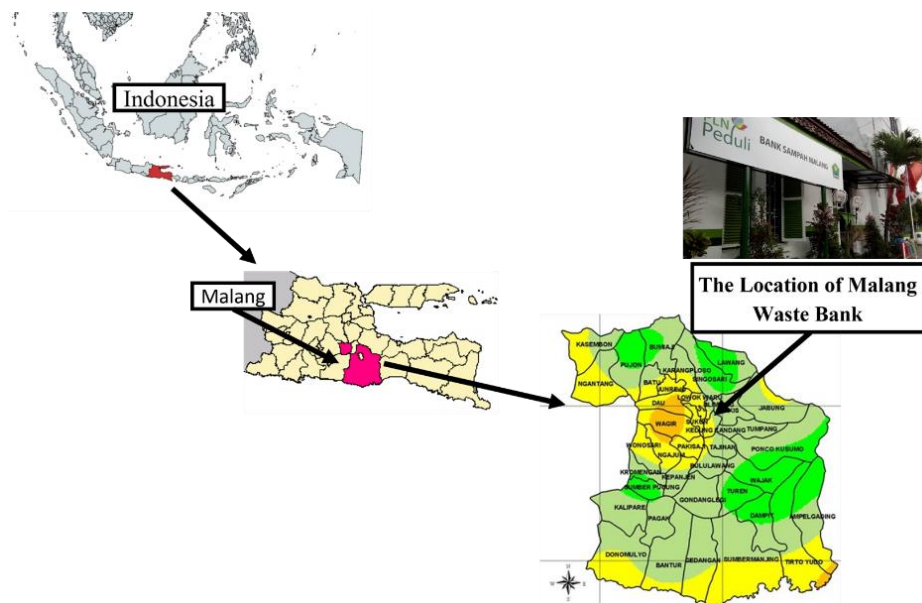
Further, the growing population in Malang causes the total unemployment increase, based on the data from CBSM (2021). The following is the unemployment movement in Malang:



**Figure 1.3: The Unemployment Rate in Malang (period 2019-2021)**

**Source:** CBSM (2021).

The Figure 1.3 above shows that the unemployment rate in Malang has increased over the 2019-2021 period. The government strives to decrease unemployment and foster socio-economic empowerment. The lack of jobs in Malang accounts for many people living in poverty. As reported by the CBSM (2020), Malang has a poverty rate of 4.44 percent of the total population and 38.77 thousand Malang citizens fall into the poverty category. The emergence of the waste bank in Malang impacts society socially, environmentally, and economically. The following is the office of the WBM in Malang:



**Figure 1.4: The location of area study**

**Source:** Maryono (2015)

The figure above shows the area study location in Malang, Indonesia. The concept of the waste bank is the bank that purchases usable waste from customers according to the agreed cost. After that, the bank will alter the waste using the 3Re principle together with other related institutions. Then, the bank sells the recycled waste to some factories, companies, and suppliers assisted by WBM. However, this waste bank does not provide as many services as Islamic banks. As mentioned by the Central Government and the Minister of the Environment, the waste bank in Malang is the best waste bank throughout Indonesia (Sari *et al.*, 2020).

There is still a lack of literature assessing ZW regulations and waste bank management from Islamic principles. The ultimate objective of *al-Shari'ah* is to improve the well-being of humans by focusing on five factors as stated by Imam al-Ghazali: preservation of religion (*hifz al-Deen*), preservation of soul (*hifz al-Nafs*), preservation of intellect (*hifz al-'Aql*), preservation of progeny (*hifz al-Nasl*), and preservation of wealth (*hifz al-Maal*) (Dusuki & Abdullah, 2017:31). Hence, the current study attempts to fill the gap by reviewing Indonesian ZW regulations and waste bank management from the *maqasid al-Shari'ah* perspective.

## **1.2. Problem Statement**

A global understanding and acceptance have emerged about the outcomes of excessive consumption on climate change, including biodiversity loss, deforestation, increased air, water, and soil pollutions, and reduced quantity of resources and materials. A waste minimization strategy seeks to address the issue and eliminate waste from production to consumer usage (Nizar *et al.*, 2018:1-2). Communities and even industries increasingly perceive waste as worthless. This is a false assumption, and people should understand and recognize that waste has an economic value on the one hand, and, on the other hand, it can adversely impact the ecosystem. The ZW concept is becoming popular worldwide as it encourages sustainable production and consumption, optimal recycling and resource recovery, and limits mass incineration and landfilling (Zaman, 2015:12-13).

Moreover, the number of unemployed people in Malang in 2021 increased slightly compared to the previous year (CBSM, 2021). Thus, the waste bank operation can provide an alternative job for people as a source of extra income. Lastly, the limited research on ZW and waste bank from the perspective of Islam is still rare. Therefore, this study will analyze the impact of waste bank management in Malang socially and economically on society from *maqasid al-Shari'ah*. This research is expected to have beneficial results and finding on waste management to preserve the environment and maintain a livable standard of living.

### **1.3. The Rationale of the Study**

As one of the cities in Indonesia, Malang supplies a considerable amount of waste, reaching 670 tons per day. This enormous waste is considered to negatively impact the environment in Malang (Malang City Environment Service (MCES) /DLH Kota Malang, 2019:71). Thus, the authorities in Malang attempt to set effective strategies to address this issue. Considered the emergence of WBM is to help overcome the environment-related issue. WBM that can accommodate and utilize waste to become goods with a selling value can reduce the potential for waste in Malang and its surroundings. The institution consists of local people who work and resell the results of the recycled products; hence people's income can increase by depositing waste to the waste bank, and it also can develop a cleaner environment. Therefore, it can support the community towards better socio-economic empowerment. On the other hand, the WBM applies religious teachings in supporting the prosperity of the surrounding community as members by applying *maqasid al-Shari'ah*, namely the concept of knowing the wisdom of enacting a law for humans, and the goal is *maslahah* or goodness and welfare of humankind both in this world and in the hereafter. This concept is through a profit-sharing contract implemented by WBM.

### **1.4. The Significance of the Study**

Environmental issues are becoming overwhelming nowadays. It becomes increasingly important to find solutions for the creation of decent living conditions. The more favorable the environment, the higher the standard of living. Waste, as we all know, is an

unavoidable element as long as the life cycle endures. However, there are certain strategies for mitigation of the negative effects of waste. Establishing a waste bank is one of the methods for the protection of the environment. This bank is widely regarded as having played a significant role in developing a safe and healthy ecosystem. Also, WBM is recognized to have contributed to economic empowerment.

As a comprehensive religion, Islam places on human beings the responsibility for preserving the earth and protecting of it from harmful activities. The concept of *maqasid al-Shari'ah* is expected to guide human actions. Thus, waste bank operations shall be more beneficially analyzed through the lenses of *maqasid al-Shari'ah*. The outcome should benefit society, especially the Muslim community.

Thus, the purpose of this study is to assess and evaluate the waste bank's operations in Malang from the *maqasid al-Shari'ah* perspective. This study is important because the findings will encourage people, particularly the Muslim communities, to participate in the ZW programs. If the Muslim community were aware that the *Shari'ah* encourages such WBM-like activities, they would almost certainly be eager to support and get involved in such undertakings.

### **1.5. The Research Questions and Objectives**

The research questions being addressed by the current study are:

- a) What is the view of the *Maqasid al-Shari'ah* on ZW initiatives?
- b) How does WBM contribute to socio-economic empowerment in Indonesia?

Hence, the following are the research objectives:

- a) To assess the significance of ZW initiatives from the *Maqasid al-Shari'ah* perspective; and
- b) To evaluate the contribution of WBM to socio-economic empowerment in Indonesia.

## **1.6. The Scope of the Study**

The scope of this study is to analyze the ZW regulation and waste bank management to empower the people's economy from the perspective of *maqasid al-Shari'ah* in Malang. Some interviews have done with the stakeholders of WBM (the director, employees, members, or customers) and with the head of the waste department of MCES. After having the interview, all information is evaluated and interpreted by developing related to the theoretical framework to be turned into a recurring report.



## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1. Zero Waste Regulation**

##### **2.1.1. The Definition of Zero-Waste**

Zero Waste (ZW) is a paradigm that aims to minimize waste and is even completely free of waste. Its concept is expected to encourage waste recycling, from the linear system to the closed cycle. Therefore, all types of waste can be reused. The best process is to imitate how resources are recycled naturally (Song *et al.*, 2015:209). The concept of ZW is the approach and the implementation of systems and technology integrated urban waste management on a regional scale with the target to carry out urban waste management on a regional scale, therefore, can reduce the volume of waste as little as possible and establish the industry recycling managed by the community or local government (Latianingsih *et al.*, 2019:147).

The ZW includes more than waste recycling; it also encompasses waste prevention and reduction (Kustiasih, 2017:111). Further, ZW entails integrating waste streams, recycling, reusing, composting, incineration, and ultimate disposal. As a result, waste sorting becomes a vital necessity that must be applied throughout all community activities, making waste management more straightforward in the following process (Yuliani *et al.*, 2017:95-96). The zero-waste management system is one method for managing waste and resources in a region holistically and sustainably (Nugroho, 2017:110). ZW implementation requires effort and dedication because not all communities can practice self-control and refrain from using items that result in waste, such as plastic bags.

Meidiana *et al.* (2011:2) discovered that most landfills functioned as managed open dumping facilities, including waste dumps. It intended to serve as a sanitary landfill. The level of service provided by waste management is one of the indications of excellent

municipal government. As stated by Mahjoub *et al.* (2020:58), waste management is one of government's environmental safety priorities and is one of the primary pillars of sustainable development.

### **2.1.2. The Zero-Waste Practices in Some Countries**

ZW was used by Plamer (2004) to address resources from chemical waste in 1973. Like Canberra, the first country to achieve this target followed by several countries implemented the ZW concept, the New Zealand government also endorsed and implemented the ZW concept in 1997. This concept is heavily advocated as (a circular material economy system or closed-loop material economy). Where a product is made to be reused and recycled, an economic system that minimizes and ultimately closes the material economy circle; one in which products are made to be reused and recycled, the economy of which minimizes and ultimately eliminates waste (Tennant, 2013: 46).

The United States state of California implemented the ZW concept comprehensively in 2000, and in the following year, it was used as strategic waste management. United Kingdom states ZW as *"A simple way that summarizes the target as far as possible in reducing the impact of waste on the environment. It is a visionary goal that prevents waste generation, conserves resources, and restores material value"* (Phillips *et al.*, 2011). The San Francisco Department of the Environment defines ZW as *"Throwing nothing to landfill or incinerators and establishing policies that reduce waste and increase access to recycling and composting"* (San, 2011).

Morocco is pursuing a "ZW society" strategy that adheres to the 3Re concept through implementing a countrywide hazardous waste plan (2008–2022) to maximize waste avoidance and see wastes as resources within a green economic vision. Several acts need to enhance solid waste management, including the professionalization of solid waste collection through private sector involvement, increasing disposal in controlled landfills, and developing new or rehabilitating existing landfills, all of which incorporate a social component. On the other side, the private sector and non-governmental organizations may involve community or collaborative efforts. Environmental education is another pillar that

helps solid waste management by developing specialized courses in schools or universities (Dahchour *et al.*, 2020:16-17).

Indonesian government enacted Legislation No.18 of 2008 on Waste Management as national law. Local governments demand the closure of all open-dumping landfills for a maximum of five years (2008 to 2013). When a new landfill is constructed, it needs to adhere to appropriate norms and regulations of the Sanitary Landfill system. The Presidential Regulation regarding Household Waste and Waste Similar to Household Waste No.97 of 2017. The minister of Indonesia adopted the waste bank concept into the settlers as outlined in the Minister Regulation of Environment of Indonesia, No.13 of 2012 regarding enforcement of the 3Re Guidelines for Waste Management – Reuse, Reduce, Recycle.

With regards to the development of Malang, it is vital to incorporate the concept of ZW into all stages of present waste management because ZW ensures that the exploitation of unlimited resources can be reduced, and the existing waste management can be sustainable.

## **2.2. The Waste Bank**

### **2.2.1. Waste Bank Definition**

The waste bank uses a bank-like system to manage waste where people get savings or money by depositing waste that can be sorted and recycled (Suryani, 2014:73-74). Thus, the waste bank's system is almost similar to a commercial bank. In the commercial bank, the customer deposits money to the bank, however in the waste bank customer saves the waste to the bank (Wulandari *et al.*, 2017:37). The waste bank is a social bank engineering that teaches people to sort waste and increase public awareness to manage waste well and, in the end, will reduce the waste that is transported to the landfill (Selomo *et al.*, 2016:233).

The minister of Indonesia adopted the waste bank concept into the settlers as outlined in the Minister Regulation of Environment of Indonesia, No.13 of 2012 regarding enforcement of the 3Re Guidelines for Waste Management – Reuse, Reduce, Recycle.

Another, in the second paragraph of Article 1, it is stipulated that the waste bank is an institution where the community sorts and collects waste from household and bring it to the waste bank for deposit to recycle and reuse into a new product to get economic value. Besides carrying out waste management awareness of a clean and healthy environment for the surrounding community, waste could be processed into things beneficial to the community, such as handicrafts or fertilizers, that have economic value under government regulations.

### **2.2.2. The History of Waste Bank**

The initial idea of establishing a waste bank was in Badegan village, Bantul district, Yogyakarta, Indonesia, under the name Gemah Ripah Waste Bank by a lecturer Bambang Suwerda at Yogyakarta Health Polytechnic on 23 February 2008. Gemah Ripah Waste Bank was founded by managing used cooking oil or waste in a system like a bank, which is accommodated and saved in "*Bank Tigor / Gemah Ripah*" (Indonesian language), Gemah Ripah Waste Bank is the first waste bank in Indonesia even in the world which designed with an account book, director, and teller.

Gemah Ripah Waste Bank aims to solve the waste problem, returning the benefits of waste to the community. Therefore, they do not consider waste as an unusable material (Suwerda, 2012:48). This new strategy was adopted by the government as outlined in the Regulation of Republic of Indonesia through Environment Minister No/13 of 2012 regarding the guidelines of waste banks in improving the concept 3Re.

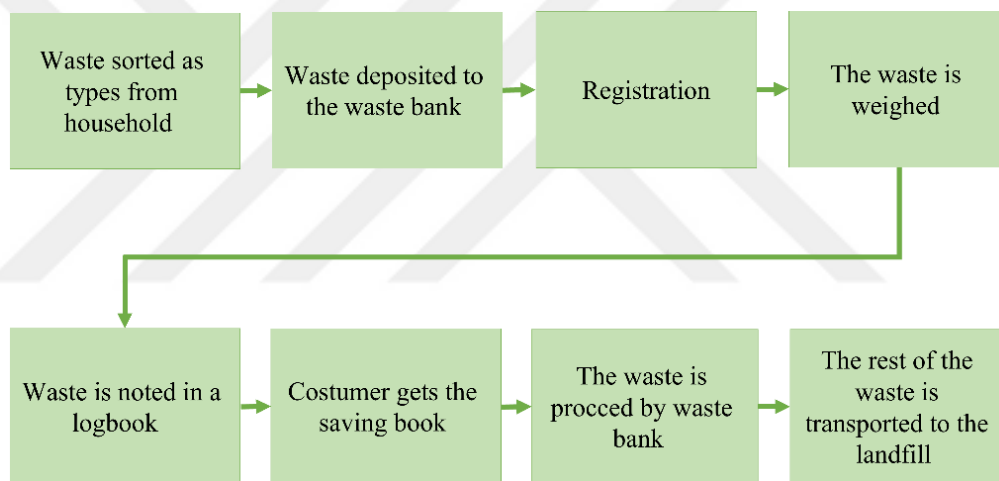
The waste bank has positively impacted the environment, social and economic aspects by creating new employment and increased income for the community. Creating, mobilizing, and managing a waste bank is not trivial. It requires a strong vision and dedication to management, particularly initiators or founders, government and community.

Waste bank emerges as a local community initiative in participation efforts addressing the problem. Through a waste strategy, 3Re can change the mindset of most people that waste has economic value. Developing the waste bank in Indonesia is the first step in building public awareness, which initially considered waste useless. Besides that, it may change the mindset to start sorting from the household and save in the waste bank to be produced

as recycled products, compost and resell it; therefore, it can get an economic value that improves the community's economy.

### 2.2.3. The Mechanisms and Operations of Waste Bank

The work of the waste bank is to collect and receive as much organic and inorganic waste from the household. The waste is sorted according to its type, weighed, and exchanged for a certain amount of money that can be taken in cash or deposited for at least three months. Waste bank opens the saving book account for the customer; therefore, the financial administration is more transparent and organized. A good waste bank has criteria such as having a legal entity and administrative system (Suwerda, 2012:50).



**Figure 2.1: The Process of Waste Bank Diagram**

**Source:** Adapted from Suwerda (2012:51)

The figure above illustrates that the customer sorted the waste from households, such as organic and inorganic waste. The waste is brought to the waste bank to be registered, weighed, and noted in the logbook. The customer gets a saving book which contains the list of names, debit, credit, and weighing the waste. The waste deposited is processed by the waste bank as valuable goods such as recycled products. The rest of the waste is disposed to the landfill.

There are two mechanisms for saving waste: saving waste individually and communally. Individuals deposit the waste by regularly sorting waste such as paper, plastic, and

cans/bottles from their households and depositing it in a waste bank. However, the procedure for communal waste collection is as follows: residents sort waste such as paper, plastic, cans/bottles and regularly deposit it in temporary shelters in each community group. Waste bank personnel then pick up waste at each temporary disposal site. The communal group consists of schools, markets, houses, hotels, apartments, etc. (Suwerda, 2012:54).

#### 2.2.4. The Requirement of Waste Bank Management in Indonesia

The MEFI provides guidelines to implementers of 3Re activities through waste banks. 3Re activities through the waste bank implemented for household waste and types of household waste. In the Environment Minister Regulation No.13, the year 2012, p. 154, waste bank requirements at least include the following requirements as follows (IND-PUU, 2012):

**Table 2.1: The Construction Requirement**

Components	Specification
<b>Floors</b>	a) Strong/ whole, clean, shaped floor and wall meet conical/curved, waterproof, flat, not slippery, not skewed, waste bank floor area is the same with 40 m2
<b>Walls</b>	b) Strong, rates, clean, brightly colored, dry
<b>Ventilation</b>	a) When the waste bank is combined with ventilation (natural and mechanical): Natural ventilation holes at least 15% x floor area Mechanical ventilation (fan, air conditioner, exhaust) b) When the waste bank is only natural ventilation: Ventilation holes at least 15% (fifteen percent) x floor area
<b>Roof</b>	Free of insects and mice, not leaking, strong
<b>Waste Bank Door</b>	Can prevent the entry of insects and mice, strong, open outwards.
<b>Bank Environment</b>	Fence, yard, garden, parking: Safe from accident risk, not dusty/muddy, separate from the treatment room, clean, and a shade tree.
<b>Surrounding drainage waste bank</b>	There is an infiltration well/bio pure, smooth-running water.
<b>Service room saver</b>	There are a waste sorting room, tables, chairs, scales, cupboards, tools light fire extinguishers. There is a waste bank instrument, free of insects and mice, No. smell, lighting 100-200 lux.

**Source:** IND-PUU (2012:1)

**Table 2.2: Waste Bank Management Standard System**

Components	Sub-Description
<b>1. Waste Bank Name</b>	(.....)
<b>2. Waste Bank Address</b>	(.....)
<b>The customers</b>	<ul style="list-style-type: none"> <li>a) Carried out counseling on the waste bank at least once in three months.</li> <li>b) Each customer is given three segregated trash bins</li> <li>c) Customers get a book account and number trash savings account.</li> <li>d) Done waste sorting.</li> <li>e) Made efforts to reduce waste.</li> </ul>
<b>Waste bank implementation</b>	<ul style="list-style-type: none"> <li>a) Use personal protective equipment while serving customers.</li> <li>b) Wash hands with soap before and after serving customers.</li> <li>c) Have attended waste bank training.</li> <li>d) Carry out monitoring and evaluation at least once a month by conducting a meeting of waste bank management.</li> <li>e) Workers or employees get a salary/incentive every month.</li> </ul>
<b>Collectors/buyers waste/industrial recycling</b>	<ul style="list-style-type: none"> <li>a) Not burning waste.</li> <li>b) Having a cooperation script/MOU with the waste bank as a partner in waste management.</li> <li>c) Able to keep a clean environment.</li> <li>d) Having a business license.</li> </ul>
<b>Management of waste in the waste bank</b>	<ul style="list-style-type: none"> <li>a) Waste worthy of a tube is taken by collectors at most once a month.</li> <li>b) Craftsmen produce recycled waste in the waste bank.</li> <li>c) Compostable waste is managed on a group and communal scale.</li> <li>d) Waste suitable for disposal (residue) is taken by officers twice a week.</li> <li>e) Waste transported to landfills is reduced by 30-40% every month.</li> <li>f) The number of customers increases by an average of 5-10 customers every month.</li> </ul>
<b>The role implementation of waste bank</b>	<ul style="list-style-type: none"> <li>a) As a facilitator of the development and implementation of the waste bank.</li> <li>b) Providing data on “waste collectors/buyers.”</li> <li>c) Providing “recycling industry.”</li> <li>d) Development and implementation of waste bank needs.</li> <li>e) Assist in facilitating fundraising.</li> <li>f) Providing the corporate social responsibility fund.</li> <li>g) Provision of infrastructure, facilities, and infrastructure to establish a waste bank.</li> <li>h) Management of waste bank business licenses.</li> </ul>

	<ul style="list-style-type: none"> <li>i) Assist in marketing recycled products.</li> <li>j) Recycle waste (compost, craft).</li> </ul>
<p>The working mechanism of the waste bank is regulated in Article 5 of Law No.13 of 2012, including:</p> <ul style="list-style-type: none"> <li>. Waste sorting</li> <li>. Delivery of waste to the waste bank</li> <li>. Waste weighing</li> <li>. Recording</li> <li>. Proceeds from the waste sale are handed over to the book in the waste bank office</li> <li>. Savings</li> <li>. Profit-sharing from the waste sale is shared with the waste bank and the customers</li> </ul>	
<p><b>The implementation of the waste bank includes:</b></p> <ul style="list-style-type: none"> <li>a) Determination of working hours</li> <li>b) Withdrawal of savings</li> <li>c) Borrowing money</li> <li>d) Saving book</li> <li>e) Waste pick-up services</li> <li>f) Type of saving</li> <li>g) Type of waste</li> <li>h) Price</li> <li>i) Waste conditions</li> <li>j) Minimum weight</li> <li>k) Waste containers</li> <li>l) Profit-sharing system</li> <li>m) Employee wages</li> </ul>	

**Source:** IND-PUU (2012:2-4)

**Table 2.3: Procedures for Implementing the Waste Bank**

Component	Description
Working Hours	Waste bank working hours depend entirely on the agreement of the waste bank employees and the community as customers. The number of working days of the waste bank in a week also depends; it can be two days, three days, five days, or seven days depending on the availability of time for the waste bank worker.

<b>Withdrawal Savings</b>	Everyone can save waste in the waste bank. Each waste is weighed and accounted for based on the market price. The money can be directly withdrawn by customers or recorded in an account book prepared by the bank. It is better if the deposited waste is not immediately cashed in; however, it is saved and recorded in an account book and can only be collected within three months.
<b>Money Loan</b>	The waste bank can also lend money to customers with a profit-sharing system and return it within a particular time.
<b>Saving Book</b>	Every waste saved is weighed and valued according to the market price of waste then recorded in an account book (passbook) as written evidence of the amount of waste and the amount of money each customer has. Each account book contains: No, debit, and balance columns that record every transaction made.
<b>Waste Pick up Service</b>	The waste bank provides transportation to pick up waste from an area to other areas in all services. Customers call the waste bank and place the waste in front of the house; the waste bank officer will weigh, record, and transport the waste.
<b>Types of Savings</b>	The types of waste stored in the waste bank are grouped into 1. The paper includes newspapers, magazines, cardboard, and duplexes; 2. Plastics include transparent plastics, plastic bottles, plastic paper, and other types of plastic. 3. Metal, which includes iron, aluminum, and tin. Waste banks can accept other types of waste from customers as long as the waste has economic value.
<b>Price</b>	The price for each type of waste is an agreement waste bank administrator. The price of each type of waste fluctuates depending on the market price. Pricing includes 1. For individuals who sell waste directly and expect cash, the price determined fluctuates according to the market price; 2. For customers who sell collectively and deliberately to save, the price given is a stable price independent of the market, usually above the market price. This method motivates people to sort, collect and save waste. This method is also a cross-subsidy strategy for waste bank operational costs.
<b>Waste Condition</b>	Customers are encouraged to deposit waste in clean and intact conditions. Because the price of waste in a clean and good condition has a higher economic value, the sale of plastic in plastic pellets has a higher economic value. It can be worth three times higher than in the original form.
<b>Minimum Weight</b>	To make waste weighing more efficient and recording in the account book. It is necessary to apply a minimum weight requirement for saving waste, such as 1 kg for each type of waste. Therefore, the customers are encouraged to store their waste savings at the house before reaching the minimum weight requirement.
<b>Waste Cans/Container</b>	Customers recommended carrying three large groups of waste into three different bags, including: The first waste bag is plastic, the second bag is paper, and the third is metal.
<b>Profit-Sharing System</b>	The amount of the waste bank profit-sharing system depends on the waste bank meeting results. The decision results in the amount of profit-sharing disseminated to all customers. The profit-sharing commonly used today is 85:15, which is 85% for customers and 15%

	for waste bank operators. The 15% allotment for the waste bank is used for waste bank operational activities such as making account books, photocopying, purchasing stationery, and purchasing equipment to implement waste bank operations.
<b>3Re activities through waste banks carried out by the Minister, governors, regents/mayors, and society. Implementation of 3Re activities through waste banks by the Minister includes:</b>	
<ul style="list-style-type: none"> <li>a) Technical coaching</li> <li>b) Construction of a pilot waste bank</li> <li>c) Monitoring and evaluation of the implementation of waste banks in the regions</li> <li>d) Development of international cooperation in the implementation of the waste bank</li> </ul>	
<b>The implementation of 3Re activities through waste banks by the governor or regent/mayor includes:</b>	
<ul style="list-style-type: none"> <li>a) Increase the number of waste banks</li> <li>b) Technical assistance and assistance</li> <li>c) Training</li> <li>d) Monitoring and evaluation of waste banks; and</li> <li>e) Assist in marketing the results of 3Re activities</li> </ul>	
<b>Implementation of 3Re activities through waste banks by the community include:</b>	
<ul style="list-style-type: none"> <li>a) Waste sorting</li> <li>b) Waste collection</li> <li>c) Handover to the waste bank</li> <li>d) Increase the number of waste banks</li> </ul>	
Meanwhile, the institutions for implementing 3Re activities through waste banks as regulated in the Minister of Environment Regulation No. 13 of 2012 can be in the form of cooperatives or foundations.	

**Source:** IND-PUU (2012:1-3)

### 2.2.5. Socio-Economic Empowerment

There are several definitions of empowerment. According to Suharto (2005, p. 89), empowerment is a process through which individuals gain the ability to participate in, share control over, and influence events and institutions that impact their lives. Individuals are able as they gain the necessary skills, knowledge, and power to impact their own lives and the lives of others.

Similarly, Kindervater (2005) defines empowerment as the process of improving one's capacities in terms of knowledge, skills, and attitudes to comprehend and control power in social, economic, and political situations to better one's place in society.

These processes or efforts aim to empower specific groups of people. Empowerment can be described as an educational activity that raises awareness and desire for knowledge,

skills, and talents that will eventually develop and increase the community's welfare (Subekti, 2018:149).

Empowerment is the process of assisting weak individuals in becoming empowered, strengthening their power, and having the knowledge and skills to meet their physical, economic, and social needs. Such as having self-confidence, communicating ambitions, having a source of income, participating in social activities, and being self-sufficient in carrying out daily responsibilities (Suharto, 2005:109).

Hence, socio-economic empowerment enables the community and provides them with the knowledge and skills to raise their income, solve problems, and build systems to access the required resources.

#### **2.2.6. The Concept of Socio-Economic Empowerment**

Empowerment defines as a deliberate ongoing process in the local community involving mutual respect, critical reflection, caring, and community participation. People can control their lives, democratic participation, and a critical awareness of their environment (Perkins & Zimmerman, 1995:570).

Huraerah (2011:87) stated that community empowerment strengthens increased Income what is commonly known as community self-reliance or independence. In this process, the community analyzes the problems encountered finds alternative solutions to problems and strategies to utilize their various capabilities. The concept of empowerment has a close relationship with two main concepts: power and the concept of disadvantaged "inequality." The empowerment can be divided into four perspectives (Ife, 2002):

- a) The structuralist perspective in community empowerment is an approach to eliminate inequality in society or the process of fundamental structural liberation such as eliminating or lowering poverty levels, income inequality, and the supply of work in the context of a growing economy.
- b) The post-structural perspective in empowerment changes people's thoughts to develop and analyze. This approach tends to be intellectual rather than action or activity.

Therefore, empowerment in the educational factor does not mean action; nevertheless, rather intellectual, and analytical.

- c) Pluralist effectiveness is the process of helping people who need help; therefore, society can compete more effectively with others who are more competent in terms of economics, social structures, and politics.
- d) The ethical perspective in empowerment is an effort to influence and collaborate with people with higher positions such as officials, community leaders, and rich people to reduce social inequality.

### **2.2.7. Efforts to Empower Society**

Efforts to empower society may be accomplished by cultivating an environment conducive to developing the community's potential. Empowering is a term that refers to the process of encouraging, motivating, and developing (Huraerah, 2011:95). In economics, empowerment is an endeavor to strengthen a community's power by motivating, encouraging, and increasing awareness of its ability to improve its economic potential and seek to grow it (Priyono, 1996:28). Community empowerment is a necessary condition for developing self-capability and potential, which enables a community to survive and advance in everyday living activities. As mentioned by Hikmat (2001:28), five connected components contribute to the community's economic empowerment in Indonesia:

- a) Integration of all associated elements: governments, banks, academics, and business practitioners who appreciate information and experience sharing.
- b) Increasing the productivity of current systems through mobilization. The community's economy requires a partner capable of operating on a national and international scale and training local-class entrepreneurs. Modern industrial machinery, training, labeling, and marketing are all empowerment initiatives that must be implemented.
- c) Procurement, replacement, and enhancement of an organization's current systems.

- d) Enhancement of the community's economic empowerment in a more productive manner. Economic empowerment must be genuine or transparent, whether through enhancing the quality of goods, services, or marketing to get access to finance.
- e) The expansion of economically productive activity. The economic market of the community must be conducted and consumed by the community.

As claimed by Sunartingsih (2004:131), the community empowerment process is supposed to be able to:

- a) Analyze the environmental situation.
- b) Improving members' quality of life.
- c) Increase community income and enhance livelihoods.
- d) Develop a strategy for obtaining the necessary resources.

#### **2.2.8. The Purpose of Empowerment**

The objective of empowerment, specifically community empowerment, is to improve the dignity of the strata of society in poverty and backwardness. In other words, empowerment is the capacity to enable and build a community around it, which has a process that includes a variety of development activities, including the following (Mardikanto & Soebiato 2012:18):

- a) Enhancement of education. Education improvement entails recasting empowerment as a component of improved education. Education advancement via empowerment is not limited to material advancement, method advancement, location and time advancement, and the facilitator-beneficiary connection, but also to education advancement that fosters a love for lifetime learning.
- b) Increased Income. Enhancing the firm's operations will increase revenue, including family and community income.
- c) Enhancement Business. Business education enhancements, accessibility enhancements, activities, and institutional enhancements all contribute to the betterment of contemporary business.

- d) Enhance Accessibility. Accessibility will increase due to the growth and development of a lifetime spirit, regarding access to sources of knowledge and innovation, sources of funding, product and equipment suppliers, and marketing agencies.
- e) Enhance Quality of Life. Increased Income and better environmental circumstances will enable each family and the general public to enhance their living situations.
- f) Enhance the environment. Increased Income will benefit the environment due to the environmental degradation caused by poverty or a low income.
- g) Corrective actions. Through increasing accessibility to broader materials, better practical activities will occur.
- h) Improvement of Institution. Enhancing the institution's activities will strengthen institutions, especially the development business partnership network.
- i) Improvement of community. Enhancing living circumstances, aided by the environment, will materialize a more prosperous community.

It is intended that through the community empowerment process above, the community would be able to identify alternate solutions to their challenges. Also, the role of leaders is critical in fostering social change. If community empowerment at the local level is effective, it will positively affect national development and life in general.

Based on the description above, empowerment primarily strives to develop self-sufficient people and communities. In this context, independence might refer to the ability to think, act, and control one's actions.

## 2.4. Maqasid al-Shari‘ah

### 2.4.1 Definition of Maqasid al-Shari‘ah

*Maqasid al-Shari‘ah* derives from the words *maqasid* and *Shari‘ah*. *Maqasid* means intention or purpose. *Maqasid* is the plural form of the word *maqsad* derived from *qasada* which means purpose or objective; *Maqasid* means desired and intended things. The *Shari‘ah* means Allah's laws for humans to achieve goodness in this world and the hereafter. Therefore, *maqasid al-Shari‘ah* means the content of the value that is the goal of law enforcement. Hence, *maqasid al-Shari‘ah* is the objective from a legal determination (al-Raisuni, 1999:13).

Imam al-Ghazali stated that *Maqasid al-Shari‘ah* is an Islamic legal philosophy. Another closely connected ancient theory, *maslahah* (welfare or public interest), has risen to prominence recently (Duderija, 2014:5). Imam al-Ghazali also established the concept of *maqasid al-Shari‘ah* for the first time, arguing that *maslahah* was Allah’s overarching purpose in disclosing the divine rule to preserve five pillars of human well-being: faith, soul, intellect, lineage, and wealth (Opwis, 2005).

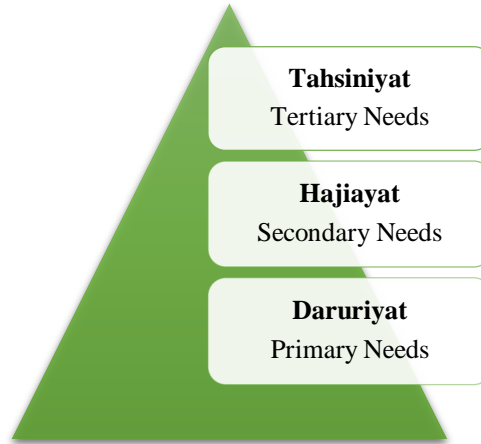
The term *maqasid al-Shari‘ah* have both broad and specialized connotations. The term “general understanding” refers to what is intended by legal verses or hadith legislation, regardless of their linguistic content or aim. The broad concept is equivalent to the meaning of the word *maqasid al-Shariah* (Allah’s intention to reveal the legal verse or the Prophet’s intention to issue legal hadith). By contrast, the specific meaning refers to the content or objectives of a legal formulation (Shiddiqi, 2009:119).

Imam al-Shatibi believes that it is vital to learn the *maqasid al-Shari‘ah* doctrine in Islamic law. The following factors contribute to the urgency. Islamic law is a code of conduct derived from Allah’s revelation and presented for people. As a result, it is constantly concerned with social transformation. In this situation, the question arises as to whether Islamic law, whose primary sources (Al-Qur’an and Sunnah) were revealed during the last few centuries, can adapt to social developments. The solution to that question may provide after a thorough examination of several facets of Islamic law, the most significant of which is the doctrine of *maqasid al-Shari‘ah* (Mas‘ud, 1996:91).

Furthermore, historical evidence indicates that the Prophet Muhammad, his companions, and subsequent generations of mujtahids paid heed to this notion. Understanding *maqasid al-Shari'ah* is critical to a mujtahid's success in his *ijtihad* since any difficulty in human life may resolve by legal reasoning. As specified by Khallaf (1968:98), a specialist in *usul fiqh* (Islamic jurisprudence), the *Shari'ah* texts cannot be comprehended unless one is familiar with the *maqasid al-shari'ah* (the purpose of law). This perspective is consistent with other fiqh scholars, such as al-Zuhaili (1986:117), who classified that the study of *maqasid al-Shari'ah* is a *dharuri* (urgent) matter for *mujtahid* to comprehend the texts and make lawful *istinbath*, as well as for the public to recognize *Shari'ah* law.

Allah's instructions and prohibitions in the Qur'an, as well as the Prophet's orders and prohibitions in the Sunnah as codified in fiqh, have a purpose and nothing wasted. As several Qur'anic verses demonstrate, everything is imbued with wisdom, particularly human goodness. Allah stated the purpose of the Prophet Muhammad being sent as follows. "*And We have not sent you but as a mercy for all the worlds.*" (Holy Qur'an, 2019, 21:107). Mercy for the whole world is defined as the public good. Meanwhile, the advantages may view as positive and accepted by common sense. Accepted sense means that reason can recognize and comprehend the motivation for the establishment of law, as long as it benefits humanity, regardless of whether the motivations are categorized by Allah or through rationalization.

Al-Shatibi (2014:221-223) categorizes *maqasid* into three sections: *daruriyyat*, *hajjiyat*, and *tahsiniyat*. The three components are divided into priority levels, beginning with *daruriyah* and progressing to *tahsiniyyah*. In addition to these three aspects, there is a *mukmilah* (complementary) element whose purpose is to fulfill the requirements for achieving *daruriyyah*, *hajiyah*, and *tahsiniyyah*. Then he classified *dharuriyyah* in more depth, focusing on five objectives: religious preservation, soul protection, intellect preservation, descendant preservation, and property preservation.



**Figure 2.2: Maslahah Pyramid**

**Source:** Dusuki and Abdullah (2007:35)

*Daruriyat* is a necessary stage for promoting the welfare of people, including the religious and the worldly affairs. When its perspective is gone, the world's and even the Hereafter's benefits, are lost. *Daruriyat* is critical and must be implemented immediately; otherwise, it will annihilate human life. If this component does not meet, it will result in faults and harm the other two aspects, *hajiyyat* and *tahsiniyat*.

On the other hand, if the *hajiyyat* and *tahsiniyat* are not observed, the *daruriyat* is unaffected. *Daruriyat* consisted of five pillars: religion, soul, intellect, lineage, and wealth, together referred to as *al-kulliyah al-Khamsah* (Mawardi, 2010:80).

## 2.5 Summary of Previous Studies

**Table 2.4: The Literature Remarks**

Reference	Title of Research	Findings
(Zaman & Lehmann, 2011)	Urban growth and waste management optimization towards the zero-waste city	This paper aims to analyze traditional waste management practices towards ZW and its challenges, threats, and opportunities. It indicates that tools, systems, and technologies can help cities become "ZW cities." However, they should be inexpensive, practical, and thriving within their local regulatory framework.
(Fatma Sabariah Alias, Latifah Abdul Manaf, Mariani Ariffin,	Enhancing the potential of recyclables waste collection through waste bank	The research's objective is to raise students' awareness to reduce, reuse, and recycle the waste into a new product that has economic value and makes the green campus of UPM. The waste bank program in Malaysian Higher Education Institutions

& Sabrina Ho Abdullah 2019)	program: experience from HEI Malaysia	(HEI) allows for an effective solid waste mitigations strategy in developing a sustainable and green campus.
(Schwarz <i>et al.</i> , 2014)	Cities in the transition towards ZW: A case study of Aalborg municipality.	It aims to analyze how Aalborg is moving towards ZW and how to make a transition. The result shows that Aalborg takes a primarily methodological approach and concentrates on altering the design of the drainage systems rather than focusing on the societal challenge that ZW entails. Even so, promising developments in Aalborg are in a manner that will enhance the transformation to ZW.
(Song <i>et al.</i> , 2015)	Minimizing the increasing solid waste through zero-waste strategy	It analyses the challenge and opportunity toward a zero-waste vision by transforming traditional waste management. "ZW" is an excellent way to reduce the rising amount of solid waste. Nevertheless, to reduce solid waste, additional efforts will need to be made in the future.
(Bakhri & Syariah, 2018)	<i>Shari'ah</i> Economic Perspective on the Role of Waste Banks on the Welfare of Local Communities	It examines the waste bank from an economic perspective. Simple linear regression analysis was used. The role of the waste bank in the local community's welfare has a significant influence. The local community already possesses prosperity, morality, spiritual well-being, and social welfare from a <i>Shari'ah</i> economic perspective. In comparison, the standards for welfare goods have not been met.
(Ismawati, 2016)	Description of Community Participation in Waste Management at 16 Independent SME waste Bank in RW 002, Tamamaung Village, Panakkukang District, Makassar city	They researched waste bank management to know the level of knowledge, attitudes, actions, mobilization (forms of activities and benefits of waste banks), and community participation in waste management. The results showed that the level of community knowledge as good (90.8%), level (75.3%), the level of the community as suitable (100%), and not a customer of the Waste Bank was also categorized as good. With the level of community mobilization (50%) and the level of community participation (51.5%).
(Suryani, 2014)	The Role of the Waste Bank in the Effectiveness of Waste Management (Case Study of Malang Waste Bank)	This study analyses the effectiveness of the role of waste banks in waste management in terms of five aspects of waste management. The result showed that there are still numerous challenges to overcome in terms of funding, while regulatory assistance is required to improve the functioning of BSM. Public collaboration has played an essential role to date. However, it has not always been at its best due to a disparity in waste bank expertise and grasp. Although the active technique part was carried out satisfactorily, location remains a big issue.

Source: Author's compilation

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1. The Research Design**

This study is the qualitative descriptive method to describe a phenomenon in the field and its characteristics. Various qualitative approaches are designed to have a deep and broad grasp of the issues by developing and evaluating, and the most frequent ones are interviewing and observing (Creswell, 2007).

*The research setting:* Data collection is through theory and based on field observations. The data obtained is connected to the perspective of the *maqasid al-Shari'ah* on ZW initiatives. Besides that, to analyze the role of WBM to socio-economic empowerment from *maqasid al-Shari'ah perspective*.

#### **3.2. The Sample of the Research**

The data collection technique was done by triangulation which is a method that allows data to be validated and may be utilized in both quantitative and qualitative research or a research project. Triangulation can guarantee that basic biases stemming from using a single technique or observer are addressed by mixing theories, methodologies, or observers (Noble and Heale, 2019).

The sample uses purposive sampling, a non-probability sampling strategy, which arises when components picked for such sample are based on the investigator's judgment. Researchers usually assume how to acquire a representative sample by employing a good judgment (Black, 2019). Also, this research uses snowball methods that employ a limited pool of original informants to recommend throughout existing social. "Snowball sampling" represents an analogy to a snowball expanding in size as it travels downward (David, 2008:816-817).

The research used descriptive qualitative data with the in-depth interview that includes conducting intense individual interviews with a limited number of respondents to investigate various views on a specific topic, project, or issue (Boyce and Neale, 2006:3). The in-depth interview in this research is like questioning participant, employee, director, and stakeholder connected with a waste bank program regarding their perceptions and knowledge relating to the program. Also, it asks the ideas individuals possess regarding waste bank operational processes, techniques, or outcomes in any adjustments individuals experience with themselves as a result of participating in the waste bank.

Therefore, this research uses ten samples of participants who have deep knowledge about ZW regulation and WBM. The survey respondents are as follows: the head of the waste department of MCES, the director of WBM who has information regarding the management and operational processes of the waste bank, employees who know the information regarding the operations procedures, and process the waste bank, customers and the community members who are participants in the waste bank program. The list of respondents is presented in table 3.1 below:

**Table 3.1: The List of Respondents**

No	Position	Age
1	Head of the Waste Department of MCES (DLH Malang)	49
2	Director of WBM	44
3	Teller	42
4	Production Division	34
5	Household Division	27
6	Operational Division	40
7	Customer	45
8	Customer	39
9	Customer	34
10	Customer	48

**Source:** Author's compilation

### 3.3. The Data collection

The primary data in this study is through interviews. The secondary data uses the historical documents, statistical data from WBM, data of MCES, data of MEFI, and literature reviews such as journals from google scholar, direct scientific journals, national and international standards journals.

## **CHAPTER IV**

### **DISCUSSION OF RESULTS**

#### **4.1. Zero-Waste Regulation**

In this research, the term of “ZW regulations” refers to Indonesian laws, government rules, ministerial decrees/policies, and other local regulations affecting waste management in Malang, as detailed below (JDIH, 2017):

##### ***i. Laws Governing Waste Management***

- a) Law No.18 of 2008 concerning waste management. State sheet of the Republic of Indonesia No.69 of 2008.
- b) Government regulation on environment management No. 32 of 2009.
- c) Regulations of Indonesian Regarding on Municipal Solid Waste Management. No. 8 of 2008.

##### ***ii. Government Regulations Related to Waste Management***

- a) Government regulation of the Republic of Indonesia No.81 of 2012 concerning household and similar waste management.
- b) Regulation of presidential regarding national policy and strategy of household waste management No. 97/2017.

##### ***iii. Ministerial Decree/Regulation on Waste Management***

- a) Regulation of the minister of house affairs regarding guidelines for waste management. No. 33 of 2010.
- b) Environment minister regulation No.13 of 2012.
- a) Regulation of the minister of public works on implementing waste infrastructure and facilities for handling household and similar waste No. 03/PRT/M/2013.
- b) Minister of public works regarding provision of facilities and infrastructure for handling domestic waste and domestic waste equivalent. No. 03 of 2013.

##### ***iv. Regional Regulations in Malang for the Waste Management***

- a) Malang city regional regulation. No. 10 of 2010 concerning waste management.
- b) Mayor Regulation City of Batu/Malang No. 66 the Year 2020 regarding waste management guidelines.

#### **4.1.1. Implementation of Zero-Waste Regulation in Malang**

Waste management is the vision and mission of the mayor of Malang; therefore, the mayor's figure has an influential role in policymaking. Its waste management policy is a continuing policy, not radical or revolutionary. The city of Malang was made a pilot project and program in waste management by the central government. The following is the breakdown of the waste management program conducted in Malang (MCES/DLH Kota Malang, 2019:150-153).

- a) **Accuracy of program targets.** The target of the waste management policy is to realize Malang as a zero-waste city that can reach 50% of the set objective, as shown by various areas implementing the ZW regulation principle using the 3Re technique.
- b) **Program socialization.** Socialization is given community in many educational institutions, business institutions, public institutions, etc. Having direct contact with program implementers facilitates the process of conveying information. The socialization carried out by the Department of Cleaning and Landscaping (DCL) has run effectively. Nevertheless, socialization needs to be improved, especially in border areas and densely populated areas.
- c) **The aim of the ZW regulation program in Malang.** The goal is to realize Malang as a clean, comfortable, and beautiful city. The number of newcomers in Malang proves that Malang is a livable city that attracts tourists to come to Malang. The mission of the DCL is to improve the quality of cleaning services, implement waste management from households and through 3Re based on community empowerment to raise awareness and increase income, and manage landfills by utilizing appropriate and environmentally friendly technology. The mission is carried out through waste management strategies from upstream to downstream. The current situation illustrates the compatibility between the planned objectives of the waste management policy and the results obtained after implementing the policy.

- d) **Monitoring.** It has a purpose to evaluate the waste management program implemented. The DCL efforts are taken to find out to what extent the program has been implemented. In addition to monitoring carried out by the DCL itself, monitoring environmental quality is also carried out by the Department of Environment and the Inspectorate. The synergy between these institutions effectively recognizes implementing of a ZW policy in Malang.
- e) **Community participation.** Community participation in waste management is the spearhead of waste management mandated by the central government regulation from the Malang area and cooperation with the local community waste bank of Malang. Table 4.1 details the management of ZW regulation in Malang.

#### 4.1.2. Management of Zero-Waste Based on Regulation in Malang

The program of ZW regulation in Malang is addressed by the society, private sector, and Malang city as shown below (MCES/DLH Kota Malang, 2019:105-111):

**Table 4.1: Management of Zero-Waste Process in Malang**

The Scheme	Managed by Society	Managed by Private Sector	Managed by Malang City
Sweeping			v
Sorting	v	v	
Transferring	v	v	v
Transportation			v
Final Disposal			v
Sanitary Landfill			v

**Source:** MCES/DLH Kota Malang (2019)

- a) **Sweeping.** Waste sweeping is the earliest waste management activity focusing on waste collection from the sources such as houses, businesses, workplaces, and highways. The initial activities of waste management are carried out every day. The cleaning service staff of Malang organizes the working hours into four categories: 06.00 AM–10.00 AM; 10.00 AM–02.00 PM; 02.00 PM–06.00 PM; and 06.00 PM–10.00 PM.
- b) **Sorting.** Sorting is carried out manually by the community from the household through separated and placed in a waste bag before being deposited to the waste bank. The street waste collected by scavengers who are residents in Malang. The scavengers are

divided into groups that collect all Waste deemed to have economic worth and deposit it in the waste bin it carries. The waste collected by scavengers is transported to the landfills in Supit Urang as the last disposal place in Malang. The bulk of waste gathered by scavenger is inorganic waste, such as plastic, iron, and paper. This waste is difficult to break down and degrade when accumulated. Scavengers may leave the results of their waste collection to a waste bank in Malang, which may store and manage waste to become an asset that can exchange for money.

- c) **Transferring.** Individual homes may deliver Waste to the waste bank, or waste officers can transfer Waste from cans to containers or dump trucks. Waste officers may transfer waste collection for delivery to the waste bank. Sorted Waste is weighed and documented in a logbook based on its qualities. The remainder of non-recyclable Waste is disposed to the landfill.
- d) **Transportation / freighting.** Waste transportation refers to the movement of waste gathered in temporary shelters or straight from the source to the ultimate disposal location. Malang City Environment Service transports waste from temporary disposal locations, including waste banks and the private sector, to the final disposal site, employing three modes of conveyance, including loaders, dump trucks, and arm rolls.
- e) **Final disposal.** Disposal site refers to destroying solid waste between waste collection and ultimate disposal. The Supit Urang ultimate disposal site's waste management strategy is based on a controlled landfill system. The managed landfill system is preferable to open dumping. The Malang government is responsible for the ultimate disposal.
- f) **Sanitary landfill.** The waste is coated with soil every three days to reduce environmental hazards. To enhance land usage efficiency and ensure the eventual disposal site's surface remains stable during the procedure. Additionally, heavy gear is used to outfit and compress waste. However, the government acknowledges that the controlled landfill infrastructure is unable to handle the volume of Waste at the ultimate disposal place. A sanitary landfill system, a type of waste management, is required to address this issue in a systematic manner, such as distributing and compacting waste

in the landfill area and closing the waste each day to minimize the possibility of interference.

#### **4.1.3. The Challenges in the Implementation of Zero-Waste in Malang**

The implementation of ZW in Malang has challenges as following below:

- a) **The limited budget.** The limited budget of the local government continues to be the principal limitation on implementing any program, the funds dedicated to waste management incur enormous expenses. Due to the inadequacy of the city's budget to meet these objectives, the Municipal Government of Malang may partner with the federal, provincial, and municipal governments to get additional funding.
- b) **Lack of facilities and infrastructure.** The Malang municipal environmental service is responsible for waste management facilities and infrastructure; nevertheless, the number of facilities and infrastructure is still insufficient. The sanitation and gardening service's equipment and infrastructure have not been effectively separated, such as waste carts, trash bins, and vehicles.
- c) **Lack of skills and abilities in capturing opportunities.** Improving waste management requires much research, effort, and financial resources. Due to the bureaucratic apparatus's insufficient knowledge, skills, and capacity for gathering chances for innovation, it cannot grasp the opportunities and challenges inherent in the community context, and therefore innovation is frequently unsuccessful. Again, the limited capacity for resource organization is owned; hence, bureaucracy cannot allocate available resources.

## **4.2. Waste Bank of Malang**

### **4.2.1. Waste Bank of Malang: An Overview**

WBM is a legal entity through cooperatives established on August 12, 2011, with the approval of the Mayor of Malang city No.518/18/35,73,112/2011. This waste bank is located at street S. Supriyadi No.38 Malang. Also, this is a joint legal entity established in collaboration with the government of Malang city through the DCL of Malang city and collaborated with the State Electricity Company / PT. PLN with an initial capital of IDR

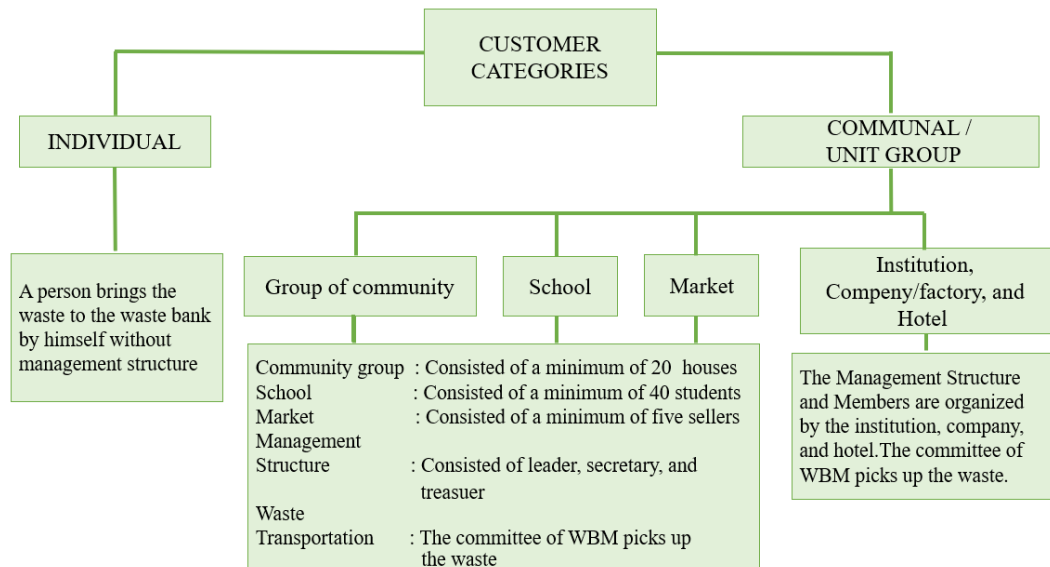
710.000.000.00 was inaugurated on November 15, 2011 The waste bank has been working since November 2011, which has members of the cooperative totaling 25 employees. Currently, WBM has 32.000 customers who manage the waste in 57 sub-districts perform a waste collection system every two weeks starting Monday-Saturday (WBM, 2012). The image below depicts the waste bank's office and a teller servicing a client at the office of WBM on Monday, 12 April 2019.



**Figure 4.1: The Office of Waste Bank of Malang**

Source: Sucipto (2018:1)

The categories of WBM customers consists of individual and communal seen in Figure 4.2 below:



**Figure 4.2: The Customer Categories**

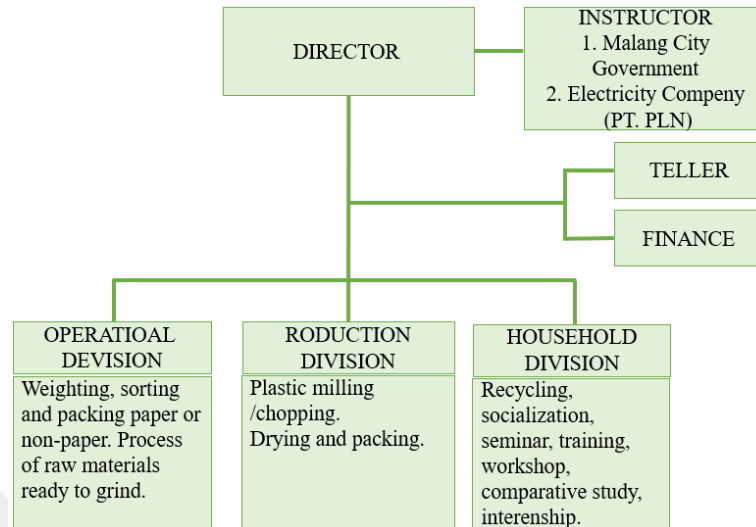
Source: WBM (2018)

The figure above illustrates that WBM has two types of customers: individual and communal. The individual customer consisted of a single individual who registers and provides waste to the waste bank without any management structure. Communal customers or unit groups are formed by a chairperson, treasurer, and secretary. The WBM committee visits the community group to weigh the complete waste for transporting it to the WBM and further weighing at the office to account for the possibility of an explosion during shipment. Customers in Malang do not pay a waste collection fee; however, a price based on kilometers is applied if the customer lives outside of Malang.

Customers can deposit any amount of Waste where if the weight of the Waste has reached 50 kg or is worth IDR 100-200 thousand, they can take it as money by cash or exchange it through goods they need because WBM also provided the sale of daily necessities. Likewise, users may pay for electricity quickly through a waste bank since the waste bank has partnered with the State electricity company (PLN Malang). Thus, if someone wishes to pay for electricity, they may swap it for waste if the amount exchanged equals the amount paid. Apart from paying daily expenses, the income from the waste deposit might be invested or utilized for installment loans or other reasons; after sorting the debris, WBM processes it through a waste crusher machine, mainly plastic bottles for selling to industries or companies (WBM 2018:30-31).

#### **4.2.2. Structure of Organization of Waste Bank of Malang**

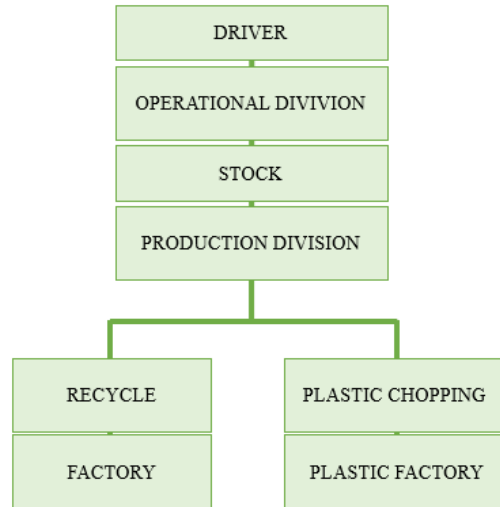
The waste bank has a core organizational structure tasked with carrying out daily operational activities shown below (WBM, 2018) in Figure 4.3. It depicts the organizational structure of WBM, which includes the director, instructor, teller, finance, operational division, production division, and household division. The researcher covers the waste process handled by the operational, production, and household divisions.



**Figure 4.3: The Organizational Structure of WBM**

Source: WBM (2018)

**Operational division.** The operational division has responsible for weighing, sorting, and packing waste. The waste sorting activity aims to facilitate collecting waste processing for beneficial work and more effectively. Waste segregation is accomplished by WBM in multiple steps, beginning with the Waste brought in by the waste collection officer and ending with the processed waste bought by the manufacturer for reprocessing. Waste is classified into 70 different forms of waste in the WBM. Each kind of waste has a distinct market value; each employee sorts ten different forms of waste for one individual. Thus, it requires a minimum of seven people to comprehend and issue a price tag. Therefore, WBM is required to update the waste price list every month. The waste price list is used as a reference when scavengers, waste bank agents, and waste bank units distributed across Malang purchase waste. The following illustration depicts the waste sorting system used by WBM.



**Figure 4.4: Sorting Mechanism**

**Source:** WBM (2018)

The structure of the sorting system is depicted in Figure 4.4. First, the waste collection committee’s driver weighs and totals the waste collected from individuals, institutions, schools, and community members. After that, the waste is sorted and cleaned according to its kind. The operating division oversees the sorting department. The operational section is responsible for and supervises the waste collection and non-production waste sales (paper, plastic, metal, glass, bottles). The operational division is responsible for sorting and packaging commodities, but only for specific types of paper waste. Meanwhile, non-paper waste is classified according to its kind, and non-paper packaging is categorized into two types: those ready for direct sale and those made from raw materials used in manufacturing.

**Production division.** The Waste generated during the manufacturing process is placed in a waste stock, ready to grind for chopping and reselling. The Waste collected is categorized according to the waste chamber or warehouse allocated a barrier. The rooms’ Waste was neatly heaped up and placed in bags. There is a significant amount of plastic-type Waste due to the presence of a plastic crushing factory until the clean Waste is ready to be ground and placed in the waste stock held by WBM for further processing. The operating division then transmits ready-to-mill Waste to the production division. The following illustration depicts the waste cleaning process as performed by WBM.



**Figure 4.5: Cleaning from Labels and Chopping**

**Source:** WBM (2018)

Figure 4.5 above results from the recycled goods produced by the production division, responsible for milling, drying, and packaging milled goods. The production division converts waste into shreds fed through a machine and rinsed. After the enumeration is carried out, followed by drying using a centric/blower machine. The drying results using a centered machine/blower which is not dry or still a little damp; therefore, it is essential to dry on a stretch or aerated for one day. After being spread out, the chopped plastic is placed into a bag. The dryer and packaging department weigh and record the packed goods and submit them to the production manager for sale to the plastic factories or buyers that requested them.

Figure 4.6 below illustrates the process of plastic chopping and packing in WBM. 30 types of plastic waste are sorted based on their classification, then separated or collected by the room, which is neatly stacked and put in sacks. The collected waste is purchased from customers at different prices for each type of waste. Buyers, or factories can order the waste they like based on the type of waste.

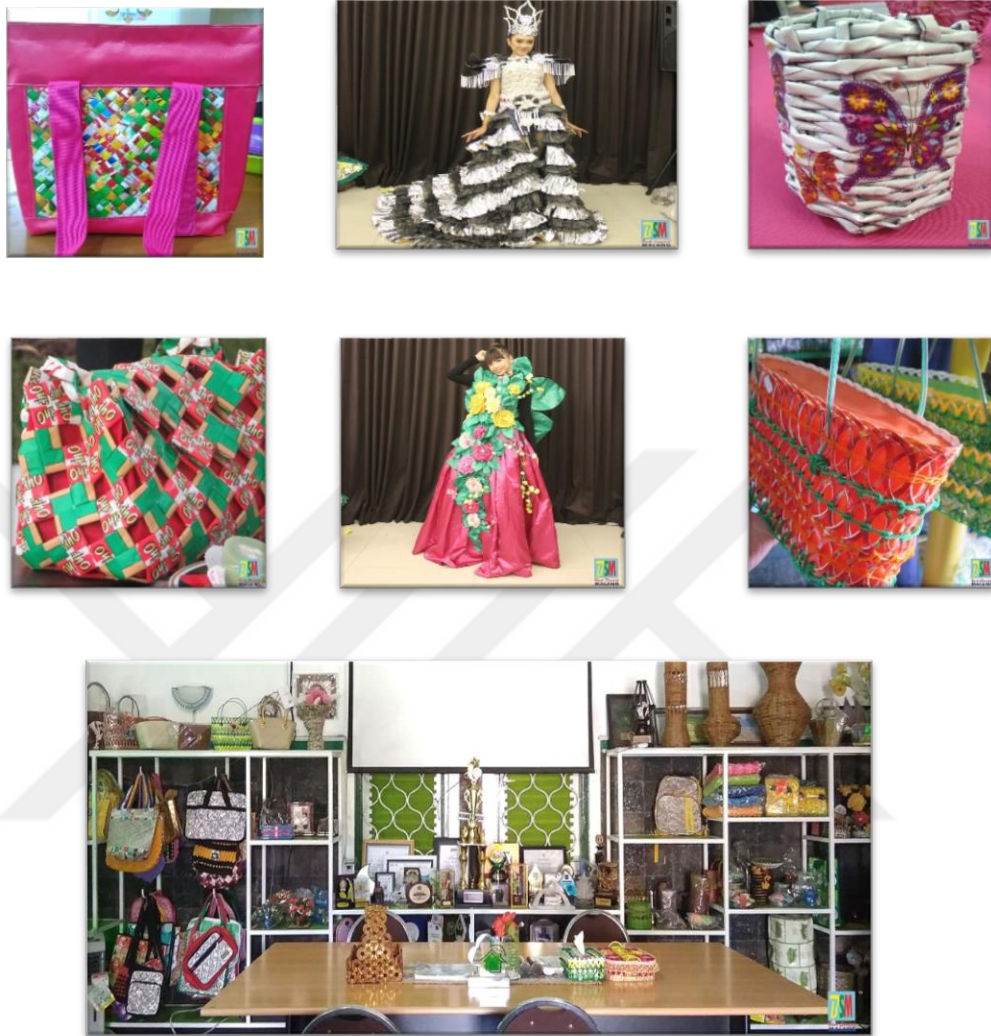


**Figure 4.6: Plastic Chopping and Packing Process**

**Source:** WBM (2018)

The WBM sells its waste products into three categories: raw materials, recycled crafts, and plastic manufacturing/chopping. Plastic goods that do not shred are used as raw materials, including plastic, metal, paper, and glass bottles. After being sorted by WBM, these raw materials are sold directly to palm shops/collectors/factories. The waste that can be processed as crafts is like newspaper can be recycled into flower vases, cloth into wallets, styrofoam as the primary material for painting, plastic into various bags, etc. In this recycled craft, the manufacture of handicrafts is not carried out by WBM; however, it is managed by the customers themselves who work at WBM. The handicrafts sold at WBM are controlled by clients who wish to sell their handicraft goods directly to the public; buyers like plastic factories often order them.

WBM sells three categories of waste: raw material products, plastic manufacturing, and chopped plastic. Meanwhile, the sale price of recycled handicraft products is fluctuating. Because it depends on the number of visitors to WBM; also, recycled handicrafts are purchased by the Malang city government, particularly the Department of Forestry and Landscaping Service (DFLS or DKP Kota Malang), to supplement the 3Re training activities conducted by the Malang City Environment Service. Figure 4.7 below presents WBM's crafts:



**Figure 4.7: The Recycled Products in WBM**

Source: WBM (2018)

***Household division***

- a) **Socialization and accompaniment.** One of the roles of WBM is to educate and help the public regarding waste management and the social, economic, and environmental advantages associated with waste management. WBM's socialization and community aid activities have extended beyond the Malang region. Similar programs have also been carried out nationally through trips to numerous towns and villages around Indonesia.

- b) **Comparative study activities.** An activity that attempts to develop understanding and knowledge for anyone interested in learning WBM's operations. Participants in comparative studies hail from some provinces, districts, cities, and villages in Indonesia.
- c) **Workshop.** The WBM supports workshop activities conducted in other locations or collaboration with community-based activities. This program combines theory and hands-on experience with waste specialists at the WBM. This program would educate the public sufficiently about the necessity of waste management to build a community perspective about the value of a clean environment for future generations.
- d) **Internship.** The WBM also provides internship activities for the public, including job training for all activities consisting of managerial and operational training held in an integrated manner under the guidance of WBM instructors experienced in their fields. The internship of WBM works for five days with various activities including class material, field practice, recycling craft training, and visits to several places like unit waste banks, WBM assisted villages, like integrated waste management in Bersatu Dau, Malang regency, integrated waste management site in Bandung Rejosari, Malang city, and integrated waste management in Supit Urang Malang city. The interns gain knowledge holistically and comprehensively concerning the implemented management system and can be applied to WBM in each participant's area.
- e) **Recycling.** The recycled craft products made from inorganic waste such as plastic waste from metalized waste, wrap coffee, or snacks, plastic cup waste, and paper waste. The recycled handicrafts from the waste are made into recycled products such as bags, wallets, tissue holders, stationery holders, jars, and various other types of crafts. The various recycled handicrafts result from collaboration between WBM and its customers. The handicrafts can be marketed directly through WBM itself, industries, companies, etc.
- f) **Training.** Training activities include waste sorting and waste recycling craft activities. Through waste sorting training, community members may learn that waste has economic value and can develop a more sustainable environment.

Meanwhile, waste recycling education initiatives focus on reusing waste that retains its value and function and turning waste into valuable commodities.

- g) **Deposits.** The WBM offers interest-free deposits maintained by the teller and finance departments and recorded at each weighing. Regular savings may be initiated at any moment or following an agreement.

#### 4.2.3. Types of Savings at WBM

There are different types of savings in WBM as follows (WBM, 2019):

- a) **Regular savings.** The savings can be withdrawn at any time based on the mutual agreement.
- b) **Education savings.** The savings can be taken at the time of the new school year or when there is a need for education or school payments.
- c) **Groceries savings.** The savings are not monetary; instead, they are in the form of essential food products according to the customer's intention at a particular time based on the agreement and the value of the savings.
- d) **Environmental savings.** The purpose of these savings is to fund environmental management activities for helped groups or community members, such as acquiring plants and fabricating waste cans, carts, composters, and recycling machines in response to client demands and savings values.
- e) **Health insurance savings.** The saving provides to cover the cost of health insurance by paying for a specified quantity of waste, and the customer will get health facilities for free.

#### 4.2.4. The Mechanisms of Processing of WBM

##### *Member*

- a) Member collects and sorts of the Waste from the household. Each consumer classifies their Waste into organic and inorganic categories, inorganic Waste like glass, aluminum cans, etc. Organic waste like vegetables, food, etc.
- b) Waste is categorized based on the criteria established by WBM.

### ***WBM unit manager***

- a) The waste is delivered to the waste bank for weighing and appraising according to market price.
- b) The separated waste is stored to handle the WBM unit at a period determined by management system of WBM.
- c) Then the logbook is used to document the quantity of waste and the amount of money each client has. The account book has a credit, debit, and balance column that records each transaction.

### ***WBM waste collection officer***

- a) The officer weighs the waste based on the type of waste picked from the WBM unit, and if it has not been sorted, it is either priced lower or not taken for sorting due to the high cost.
- b) The waste deposited are classified into three categories: a) paper, such as newspapers, periodicals, cardboard, and duplexes; b) Plastics such as transparent plastics, bottles plastic, and other rigid plastics; c) Metal is composed of aluminum, iron, and tin elements. The Waste is classified according to its category using a waste bank management system.
- c) The waste is procced by waste bank into handicraft, compost and sold to the waste buyers that has a partnership with the waste bank.

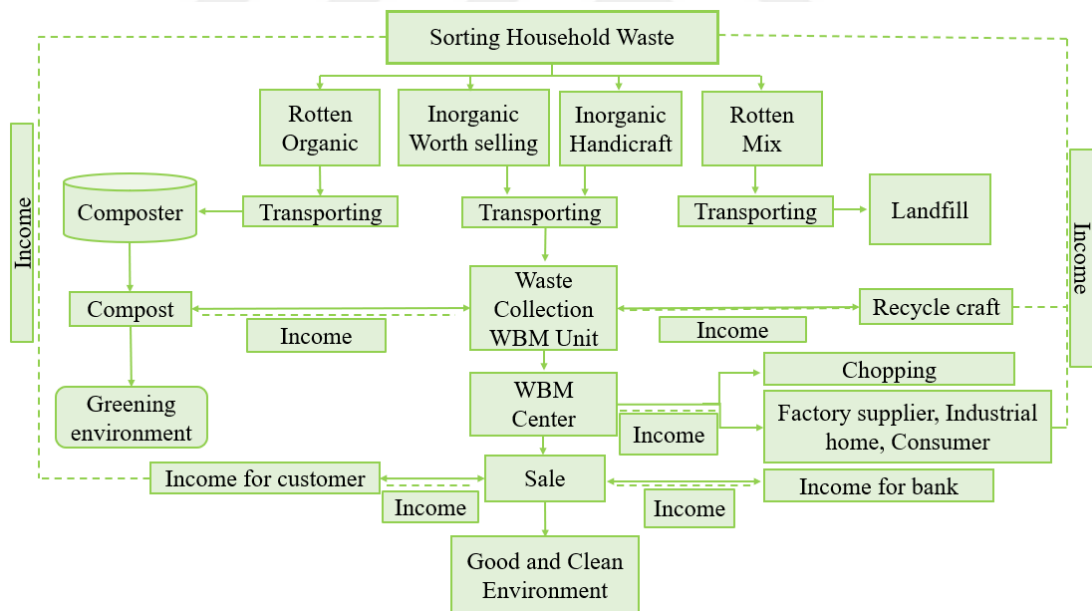
### ***The waste processing at the WBM center***

- a) The waste in the WBM center is chopped by machine and sold to the factory.
- b) Some of the waste is recycled into a craft.
- c) The waste taken by the committee is re-weighed in the WBM center, and a brief note is brought to the teller.
- d) The committee presented the WBM unit's passbook and the original memorandum.

### *The price and the profit*

The standard price for each type of waste is determined by waste bank management. Prices change based on the market conditions for persons who sell waste directly and expect payment. On the other hand, if the client sells collectively and purposefully to save, the price is regular and does not rely on the market price.

Profit-sharing is determined at the waste bank administrators' meeting. The current standard is 15% for waste banks only the amount taken from the profit because the bank's capital consists of government support, CSR of the State Electricity Company (PT. PLN), and other organizations. The profit for consumers consists of 85% of the profit to encourage people to participate and motivate others join waste bank program. A client gets money generated from the waste they dump at any period agreed upon or at least three months afterward (WBM, 2019).



**Figure 4.8: Waste Mechanism Diagram of WBM**

**Source:** Adapted from WBM (2016)

The diagram above shows that the process of waste bank starts from the household, bank unit, and bank center. Firstly, the waste is sorted from the household into four categories, rotten organic waste which can be compost goods, organic waste which has worth selling can be delivered to WBM unit, inorganic waste which can be recycled transported to

WBM unit, however, the rotten mixed waste will be thrown to the final disposal. The waste collected in WBM unit is recorded and produced into handicraft and is also delivered to the WBM center. In the WBM center, the waste is recorded and processed like chopping which is sold to the factory, industrial home, and consumer. The profit of sale waste is shared based on the management of the waste bank system.

#### **4.3. The Analysis of ZW Regulation from *Maqasid al-Shari'ah* Perspective**

To analyze the ZW regulation in the light of *maqasid al-Shari'ah*. This study expands on the interview findings and the theory or concept of *maqasid al-Shari'ah* proposed by Imam al-Ghazali, the founder of *maqasid al-Shari'ah*, and other Islamic scholars. He classifies *maslahah* into three categories: necessity (*daruriyyat*), complement (*hajiyat*), and embellishment (*tahsiniyat*). Necessities are classified into five critical aspects (*kulliyat al-khamsah*): protection of religion, soul, intellect, offspring, and wealth. If the five aspects are realized, the world and the hereafter will become more noble and prosperous.

Fulfilling community needs has an effect, which is *maslahah*, because the five necessities are fundamental needs that every member of society should meet. The five factors are listed in ascending order. *Maqasid* of al-Ghazali has widely accepted by many scholars, including al-Shatibi (1373), al-Mu'in (1991), Nayezee (1994), Zahrah (1997), Chapra (2008), Dusuki and Abdullah (2007), and Larbani (2011). Applying Imam Ghazali's theory to a waste bank is tricky because the concept of al-Ghazali's *maqasid* places a premium on humanity. Meanwhile, this research focuses on the ZW regulation in Indonesia, encompassing environmental, ecological, regulatory, economic, and social aspects. As a result, this study also adopts the theory of Chapra (2008), which divides the five elements of *kulliyat al-Khamsah* into numerous branches' elements, dimensions, and indicators, including social, economic, educational, and ecological. Its concept is relevant to the research's objective of evaluating ZW regulation from *maqasid al-Shari'ah* perspective. The ZW regulation program's concept, implementation, and implications are examined through the five *maqasid al-Shari'ah*: preservation of religion, soul, intellect, offspring, and wealth.

Additionally, this thesis examines the ZW regulation in light of teachings of Qardawi (2002), who emphasizes the importance of environment protection. As Baroudi (2016) stated, Yusuf Qardawi as a theologian concerned with ecology commits a substantial portion of his views to the subject in a book named *Riayah al-Biah fi al-Shariah al-Islamiyah*. Following that, al-Qardawi (2002) emphasizes in his book that *maqasid al-Shari'ah*, which has focused on five fundamental human concerns, also has a solid relationship with environmental issues.

#### **4.3.1. The Analysis of ZW Regulation from the Perspective of Maslahah**

In this section, the ZW regulation is analyzed through the *maslahah* viewpoint regarding public interest and harm. Also, it studies and classifies *maslahah* pyramid. Based on findings from MCES/DLH Kota Malang and interviews, ZW regulation based on *maqasid al-Shari'ah* viewpoint is as the following ways:

The ZW regulation through waste bank efforts has a positive environmental effect by cleaning up the environment and, most crucially, eliminating waste piles in the surrounding region, which have been an eyesore throughout Malang. The ZW regulation through the waste bank impacts empowering education; therefore, individuals may get knowledge, insight, and skills like sorting, reducing, and recycling waste. Also, the waste bank provides training, workshops, internships, and seminars on recycling waste into a creative economy, especially to the students from elementary to high school levels and the public. As a result, the waste bank impacts education and empowerment. The ZW regulation through the waste bank concepts such as interest-free savings, interest-free credit, and profit-sharing affects the community's application of religious teachings that discourages the use of *riba* or interest.

All the components above are consistent with the principle of *maslahah*, which is a public good or simply exploiting and denying harm to advance the goal of *Shari'ah*. Table 4.2 below details the ZW regulation analysis in the light of *maslahah* and *mafsadah*.

*Maqasid al-Shari'ah* can be applicable in many parts of life, notably in law and social finance, including ZW policies and waste bank management. The three levels of *maslahah* are associated with each other. It is vital to analyze more on *maqasid al-Shari'ah* related

to the environment, waste management, and waste bank due to the paucity of research on it. The following is the ZW regulation and waste bank analysis based on five *maqasid al-Shari'ah*: the preservation of religion, soul, intellect, offspring, and wealth.

**Table 4.2: The Analysis of ZW Regulation Based on Maslahah and Mafsadah**

Public Good ( <i>Maslahah</i> )	Prevent the Harm ( <i>Mafsadah</i> )
<ul style="list-style-type: none"> <li>• Economic empowerment</li> <li>• Islamic contract</li> <li>• Interest-free savings</li> <li>• Interest-free capital</li> <li>• Profit-sharing</li> <li>• Clean and good environment</li> <li>• Protect the earth</li> <li>• Prevent illness</li> <li>• Social solidarity</li> <li>• Good governance</li> <li>• Knowledge and skill</li> <li>• Social welfare</li> <li>• Socio-economic</li> <li>• Avoid interest</li> <li>• Employment availability</li> <li>• Justice distribution</li> <li>• Fulfillment of need</li> </ul>	<ul style="list-style-type: none"> <li>• Poverty</li> <li>• Climate change</li> <li>• Close to disease</li> <li>• Bad governance</li> <li>• Disease Burden in the Environment</li> <li>• Unemployment</li> <li>• Pollution of Indoor Air</li> <li>• Particulates from cities</li> <li>• Ozone depletion in the region</li> <li>• Ozone at the local level</li> <li>• Emissions of sulfur dioxide</li> <li>• Index of conservation Risk</li> <li>• Efficient conservation</li> <li>• Index of water quality</li> <li>• Water tension</li> <li>• Conservation of critical habitat</li> <li>• Adequate sanitation</li> </ul>

Source: Author's compilation



**Figure 4.9: The Analysis of ZW Regulation and WBM in Socio-Economic Empowerment from Maslahah Pyramid**

Source: Author's compilation

Allah SWT generally created this nature by considering that nothing is either mussy or

pointless. Therefore, what is created by Allah SWT is maintained by humans as the caliphate on this earth. Thus, humans must protect earth, not destroy and disturb the imagery created by Allah SWT. According to al-Qardawi (2002), the sustaining environment uses the term *al-Bi'ah* while in the maintenance concept, it used *Ri'Dads*. Also, environmental maintenance is called *ari'Dad al-Bi'at*, terminologically meaning an effort to avoid its existence and absence from a positive or negative thing. However, it requires environmental maintenance such as management systems to develop or improve it. The connections between preservation of the five fundamental *maqasid al-Shari'ah* included protection of the environment such as ZW management. The relation between each point of *maqasid al-Shari'ah* is discussed in further detail below.

#### **4.3.2. The Analysis of ZW Regulation from the Preservation of Religion**

The purpose of ZW regulations in Indonesia is to conserve the environment, which is mentioned in the Indonesian laws, government rules, ministerial decrees/policies, and other local regulations. Taking care of the environment in Islam is a vital aspect. Harmony in this concept is the same thing as safeguarding the religion. Therefore, this underlying foundation is the most crucial element on its point.

Polluting the environment with waste on this planet would profoundly undermine the objective of human existence on earth, while also deviating from command in a horizontal religious framework. Often, religion and the environment are considered in isolation. The understanding has grown dramatically throughout time due to the tight interaction between religion and the environment, notably in the religious contribution to influencing human conduct with regard for the conservation of the natural environment. A detailed religion teaches people to recognize and respect the need for environmental protection since any natural disaster will long-lasting affect the community, as stated in the Qur'an:

*Corruption has appeared throughout the land and sea by [reason of] what the hands of people have earned so He [i.e., Allah] may let them taste part of [the consequence of] what they have done that perhaps they will return [to righteousness] (Holy Qur'an, 2019, 30:41).*

According to Chapra (2008), religion is the first part of life. It gives a worldview that

shapes conduct, lifestyle, human likes and preferences, and attitudes towards people, resources, and the environment. Religion (faith) is a set of values capable of guarding and maintaining morals. Furthermore, religion can also modify every deed of a person or group to carry out life and be responsible in this world and the afterlife. Likewise, to enhance, one's drive to constantly do good to others, prioritize shared interests and build a decent atmosphere. According to al-Shatibi preservation of religion is vital, religious protection is not only connected to worship. Nevertheless, it also involves preserving the rights of others, respecting the faiths, etc (Auda, 2008, p. 56).

Based on the research results, ZW regulation through the waste bank has a system that addresses maintaining the religion: interest-free savings and interest-free credit. This saving is like the *Shari'ah* bank system; however, what is deposited is not the quantity of money. However, its deposits use waste. When consumers sell their waste, the waste bank will record the sales in a savings book given by the waste bank. The deposit might be based on the contract or agreement between the consumer and waste banker. The categories of savings products at WBM include regular savings, education savings, grocery savings, environmental savings, and health insurance savings. The customer readily does this program to do credit without any interest as in a typical bank, plus the customer may enhance the need, particularly for conducting business.

In addition to that, the program of WBM typically helps members implement their religious teachings, which are transactions based on *al-Shari'ah*, which does not apply the interest. The Almighty Allah states "*Allah permitted commerce, and He prohibited usury.*" (Holy Qur'an, 2019, 2:276). The implementation of waste bank management program focuses on increasing the tendency/fondness for saving waste through the savings system, which applies the system of depositing the waste. WBM buys waste at a price agreed by both parties. The waste is deposited with the *wadiah* contract, where its sale contract does not require interest on savings and a discounted fee for administration. If it is associated with *maqashid al-Shari'ah*, it can be known as the *maslahah* principle. The waste becomes money and uses a benefit by being managed by *mudhorib* (waste bank) as a *qardhul hasan* for the member who needs it. Allah stated in the Qur'an: "*O you who have believed, do not consume one another's wealth unjustly but only [in lawful] business*

by mutual consent. And do not kill yourselves [or one another]. Indeed, Allah is to you ever Merciful.” (Holy Qur’an, 2019, 4:29).

Table 4.3 presents the diagram of ZW regulation in the light of preservation of religion which describes in the following:

**Table 4.3: Diagram of ZW Regulation from Perspective of Preservation of Religion**

Al-Ghazali’s Maqasid al-Shari’ah	Preservation of Religion		
Umer Chapra’s Maqasid al-Shari’ah	Enrichment of Faith		
<b>Elements Indicators Dimension</b>	Worldview unity of Allah, vicegerency of human beings and hereafter, the well-being of all (falah)	Benefit (regulation of human self), right motivation, education (moral and materials)	Self enrichment, intellect, posterity, good governance, and wealth
	Free poverty, fulfillment of need, employment availability, and self-employment	Justice distribution, the integrity of the family, social solidarity	Justice, freedom, security of life, fulfillment of a socio-economic and political obligation, trust, tolerance, patience, mutual care
<b>Disclosure Aspects / Indicators of Zero Waste Regulation and Waste Bank of Malang</b>	Fulfillment of need	Benefit (regulation of human self)	Socio-solidarity
	Employment availability	Education (moral and materials), training and seminar of waste craft	Justice
	Interest-free savings and Interest-free credit	Tolerance	Free poverty

**Source:** Author’s compilation

The table above is the diagram of ZW regulation in the light of preservation of religion. Therefore, in conclusion, the ZW regulation is under the first aspect of *maqasid al-Shari’ah* which, is the preservation of religion.

#### 4.3.3. The Analysis of ZW Regulation from the Preservation of the Soul

ZW regulation in Indonesia that focuses on the environmental protection in keeping the soul is also the factor that interacts or relates, in this case, the protection of the psychic of

human life and their safety. The waste causes environmental destruction pollution, reduces natural resources, endangers human life. The more exploited this factor, the greater the threat for the human soul on Earth. Because waste can cause natural disasters such as flooding, landslides, disease emerges, damaged ecosystems, etc. Furthermore, this makes a great case, like killing humanity itself which is a great sin against Allah's principles.

Regarding the importance of a human's self and soul, Allah SWT stated:

*Because of that, we decreed upon the Children of Israel that whoever kills a soul unless for a soul or corruption [done] in the land - it is as if he had slain mankind entirely. And whoever saves one - it is as if he had saved mankind entirely. And Our messengers had certainly come to them with clear proofs. Then indeed many of them, [even] after that, throughout the land, were transgressors (Holy Qur'an, 2019, 5:32).*

In addition, according to Chapra (2008, p. 45), to fulfill a person's welfare, one needs to have a healthy soul to carry out the good life. Hence, for the soul's protection, it may be accomplished by fulfilling its primary requirements through its role as a leader (caliph) and distributing the advantages and welfare of others. Dignity, respect, fraternity, social equality, and the need for a sense of justice, life security, property rights, and honor are all essential. Also, caring for the soul or life entails doing all necessary to preserve life's existence, such as providing enough accommodation, healthy food, sufficient cleanliness, access to health care, and being safe from human and animal disturbances.

Cleanliness is inextricably linked to the soul; when an individual cares about and is receptive to cleanliness, their soul will be maintained as well. Islam is exceptional in its emphasis on the soul concerns because the soul is a critical component of carrying out numerous tasks at work and performing acts of worship to Allah SWT.

Humans must be clean because Islam prioritizes the human soul which is one of the goals of *Shari'ah*. Thus, health is critical in achieving the aim of Islam's presence. It is not easy to carry out numerous endeavors to meet essential responsibilities without one's health. In other words, the soul is the primary factor in fulfilling the aim of religious presence.

According to al-Shatibi, maintaining *Shariah's* instructions must be carried out on

someone still physically and mentally healthy (Haq, 2007, pp. 97). As a result, a healthy soul is essential in life; therefore, the *maqasid al-Shari'ah* provides for the maintenance of the soul to ensure its health. The Prophet SAW stated that *“Narrated by Ibn ‘Abbas: “There are two blessings that many people are deceived into losing: health and free time”*. (Sahih al-Bukhari 6412).

The Prophet Muhammad SAW also stated:

*Narrated Salih bin Abi Hassan: “I heard Sa‘eed bin Musayyab saying: Indeed, Allah is Tayyib (good) and he loves cleanliness, He is Karim (kind) and He loves kindness, He is Jawad (generous) and He loves generosity. So clean- I think he said- your courtyards, and do not resemble the Jews. “He said: “I mentioned that to Muhajir bin Mismar, and he said: “Amir bin Sa‘d (bin Abi Waqqas) narrated it to me from his father the Prophet (SAW), similarly, except that he did not say. “Clean your courtyard”*. (Jami at-Tirmidhi 2799)

Regarding the purity Allah SWT revealed:

*Do not stand (for prayer) within it-ever. A mosque founded on righteousness from the first day is more worthy for you to stand in. Men who love to purify themselves are within it, and Allah loves those who purify themselves* (Holy Qur’an, 2019, 9:108).

Besides that, the concept of ZW regulation is aimed to offer basic services such as health savings through an interest-free savings scheme. Thus, the interest-free savings system is based on the *Shari'ah* objective of preserving the soul through how customers deposit waste, which benefits waste bank customers in the long term by allowing them to use their savings for treatment if they become ill at any time. Thus, the interest-free savings program conceptually adheres to the fundamental principle of *maqasid*, namely the preservation of the soul. Furthermore, the waste bank implementation program is being carried out in partnership with the Health Service and Medika Waste Insurance. If a member becomes ill, the cost of health care/medicine is met through the savings of the members who deposit the waste (Berobat, 2014).

**Table 4.4: ZW Regulation Diagram from the Perspective of Preservation of Soul**

Al-Ghazali's Maqasid al-Shari'ah	Preservation of Soul		
Umer Chapra's Maqasid al-Shari'ah	Invigoration of the Human Self		
<b>Elements Indicators Dimension</b>	Freedom, security of life, property, and honour	Spiritual and moral, mental peace and happiness	Good governance
	Family and social solidarity, marriage and proper upbringing of children	Equitable distribution of income and wealth, need fulfillment	Justice, minimization of crime and anomie
<b>Disclosure Aspects / Indicators of Zero Waste Regulation and Waste Bank of Malang</b>	Health savings	Social equality	Equitable distribution of income and wealth
	Employment and self-employment	Need fulfillment	Justice
	Education (training, seminar of recycling waste)	Family and social solidarity	Free poverty

**Source:** Author's compilation

The table above shows ZW regulation from the perspective of preservation of the soul. It can mean that ZW regulation has aided in soul or life preservation. This deed is consistent with the second component of *maqasid al-Shari'ah*, which is the preservation of the soul.

#### 4.3.4. The Analysis of ZW Regulation from the Preservation of Intellect

The blessing of reason by Allah to humans is highly superior, as it elevates humans to the highest level of living creature with such sensibility. And this was because humans were tactile. Executing *Shari'ah* and Allah's generosity is a hardship. However, if human brains are not functioning correctly and cannot distinguish between what is declared correct and what is said to be wrong, human beings are no different from animals, and attempts to sustain human existence would fail. As a result, the Qur'an frequently overstrikes human behavior with the analogy: "Don't you think?" Because most human desire is to damage the scrap-like environment, to satire the expected awareness and use its roots to think and manage the waste and its management under what Religion has done.

Furthermore, intellect is the trait that distinguishes humans from other creatures on earth; therefore, Islam absolves individuals who lack sense, such as children, insane people, sleeping people, and fainting people, of legal accountability. Numerous social problems can arise due to actions that are not rational. Therefore, Islam pays attention to guarding the mind by avoiding things that can cause loss of mind, like drinking alcohol. Alternatively, through maintaining the mind by increasing the ability of reason in thinking by gaining knowledge such as seminars, motivation, or discussion groups and the availability of educational institutions from elementary to the high level, free education costs, provision of fund allocation for the sector. Education provides adequate educational facilities like teaching staff, research facilities, libraries, provision of information, and cultural centers (Chapra, 2008:40-42). According to the interview result, ZW regulation through the waste bank system teaches the public how to increase their competence and understanding through household waste sorting, training, workshops, comparative studies, and seminars. Thus, it is consistent with the objective of *maqasid al-Shari'ah*, which is to preserve intellect by knowledge-seeking, as stated by Chapra above.

Also, the concept of the savings program and the supply of interest-free credit is implemented through counseling and scholarship help to deserving students whose schools collaborate with WBM and through monetary support to deserving students from low-income families. Through CSR funds, WBM collaborates with other companies. As a result, several schools in Indonesia have implemented a system of paying school tuition through waste savings (Rahayu, 2016, p. 1).

The Table 4.5 below describes ZW regulation from perspective of preserving intellect under the concept of al-Ghazali (1937), and Chapra (2008). According to the elaboration and the figure above, ZW is consistent with *maqasid al-Shari'ah* number three, which is the maintenance or enrichment of intellect.

#### **4.3.5. The Analysis of ZW Regulation from the Preservation of Offspring**

Maintaining the environment is also part of protecting the offspring, preserving human descendants in this world. Therefore, protecting the environment means protecting future generations. Unmanaged waste devastates the ecosystem and endangers future

generations. Waste management treatment will result in a clean and healthy environment, which will impact the next generation's quality of life. Thus, generations will have such good environmental impacts as a healthy environment.

**Table 4.5: ZW Regulation Diagram in the Light of Preservation of Intellect**

Al-Ghazali's Maqasid al-Shari'ah	Preservation of Intellect		
Umer Chapra's Maqasid al-Shari'ah	Enrichment of Intellect		
<b>Elements Indicators Dimension</b>	Giving a reward for creative work	Thought freedom and expression	Good library and high research facility
	Good finance	High quality of education and religious	Develop Maqasid in interpretation
	Knowledge expansion	Religion, soul, offspring, and wealth enrichment	Social-economic and political development
	Human well-being	Equitable distribution of income and wealth	Developed technology
<b>Disclosure Aspects / Indicators of Zero Waste Regulation and Waste Bank of Malang</b>	Interest-free capital for school fees	Interest-free savings for education	Expansion of knowledge and technological base in waste management
	Good finance	Equitable distribution of income and wealth	Education (seminar, internship, workshop, study comparative, and training)
	Social-economic and political development	Empowerment	Giving a reward for creative work

**Source:** Author's compilation

Meanwhile, uncontrolled waste would undoubtedly contribute to environmental issues such as industrial, pesticide, transportation, erosion, floods, and droughts. All of these problems result from human activities that will affect future generations.

Furthermore, the preservation of offspring or honor is the fourth principle that must be adhered to achieve *maslahah* or human welfare. According to Chapra (2008:44-45), in the context of *maqasid al-Shari'ah* development, offspring maintenance can be accomplished through marriage and family integrity, preserving natural resources for future generations, ensuring a clean environment in the context of sustainable development, ensuring security, and remaining conflict-free.

The ZW legislation strives to promote sustainable development and a circular economy to conserve natural resources and maintain a healthy and clean environment for future generations. The picture below illustrates the training program held by WBM to students, and youth organizations.



**Figure 4.10: The Waste Training to the Students in WBM**

Source: Yuk (2017)

The table below is the ZW regulation diagram from the perspective of the preservation of offspring. Based on the explanation and the figure above, as a result, it can be concluded that ZW regulation is in line with the concept of *maqasid al-Shari'ah*, which is preservation offspring, as the target is precise and sustainable.

**Table 4.6: ZW Regulation Diagram in the Light of Preservation of Offspring**

Al-Ghazali's Maqasid al-Shari'ah	Preservation of Offspring		
Umer Chapra's Maqasid al-Shari'ah	Enrichment of Posterity		
Elements Indicators Dimension	Marriage, and family integrity	Clean, and good environment	High quality of education and religious
	Good governance	Freedom from conflict, fear, and insecurity	Fulfillment of need
	Sustainable human development		
Disclosure Aspects / Indicators of Zero Waste Legislation and Waste Bank of Malang	Health savings, education savings	Clean and healthy environment by saving waste	Interest-free savings for future generation, marriage, and family integrity, sustainable human development

Source: Author's compilation

#### 4.3.6. The Analysis of ZW Regulation from the Preservation of Wealth

ZW regulation through the waste bank can preserve wealth because it has a savings program that can meet human beings' most basic needs, namely protecting treasure, as Allah stated: *“And do not give the weak-minded your property, which Allah has made a means of sustenance for you, but provide for them with it and clothe them and speak to them words of appropriate kindness.”* (Holy Qur'an, 2019, 4:5).

**Table 4.7: ZW Regulation Diagram in the Light of Preservation of Wealth**

Al-Ghazali's Maqasid al-Shari'ah	Preservation of Wealth		
Umer Chapra's Maqasid al-Shari'ah	Development and Expansion of Wealth		
<b>Elements Indicators Dimension</b>	Fulfillment of need, zero poverty, equitable distribution	Mutual trust and social solidarity	Savings and investment
	Property and honor as well as security of life	Good governance	Free poverty, fulfillment of need, employment availability, and self-employment
	Self-employment opportunity	Justice distribution, the integrity of the family, social solidarity	Development optimum rate
	The well-being of all (falah)		
<b>Disclosure Aspects / Indicators of Zero Waste Regulation and Waste Bank of Malang</b>	Interest-free savings	Free poverty, need fulfillment, and equitable distribution	
	Self-employment opportunity	Social-economic	
	Justice distribution, the integrity of the family, social solidarity	Good governance	
	Socio-solidarity, and mutual trust	Employment opportunity	

**Source:** Author's compilation

This verse explains that assets are not limited to money, gold, and jewels, nevertheless, all earth and nature are part of the yield to obtain assets as needed. Thus, the deed of managing waste is the necessity for all human beings on the planet to be helpful and not cause this environment to be damaged, by which it is causing environmental degradation

and causing existence in protecting treasure to be disturbed. ZW regulation in five core points method of *maqasid al-Shari'ah* must be implemented correctly in preserving the living environment under *Maqasid al-Shari'ah* (legal purpose), to increase the effectiveness of the community in the conservation of the environment.

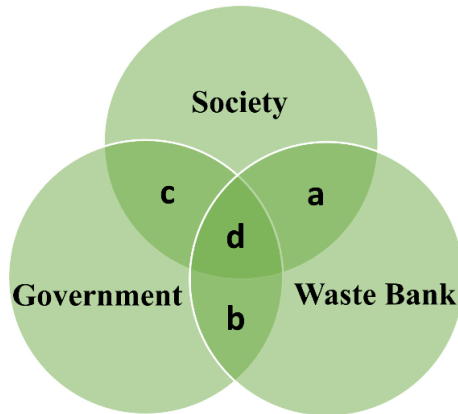
Additionally, ZW regulation through the waste bank can empower the community economically. Therefore, it can increase the community's income even of their wealth. According to Chapra (2008:46-47), wealth is a facility of Allah's grace given to humans to support the main responsibility as caliph on earth. Wealth is a trust which needs to be developed in a planned manner to eliminate poverty, meet the basic needs of everyone, make life comfortable, and encourage the creation of an even distribution of income and wealth. Furthermore, the safeguarding of assets includes the provision of jobs, government fairness, the existence of banking and investment, social solidarity, the security of life, the elimination of poverty, the fulfilment of community needs, and the optimal level of regional development.

Based on the collaboration and diagram of ZW regulation above can be concluded that ZW regulation is consistent with the *maqasid al-Shari'ah* viewpoint of preservation of wealth.

#### **4.4. The Contribution of WBM to Socio-Economic Empowerment in Malang**

##### **4.4.1. The Collaboration of Waste Bank in Empowering economy**

The role of WBM in empowering the economy is not inseparable from the collaboration of government and community; therefore, it can provide economic advantages, benefit society, and be environmentally friendly. The following is the collaboration between waste bank, government, and society for empowering socio-economic:



**Figure 4.11: The Synergy of Waste Bank, Society, and Government**

**Source:** Adapted from Wulandari *et al.* (2017:39).

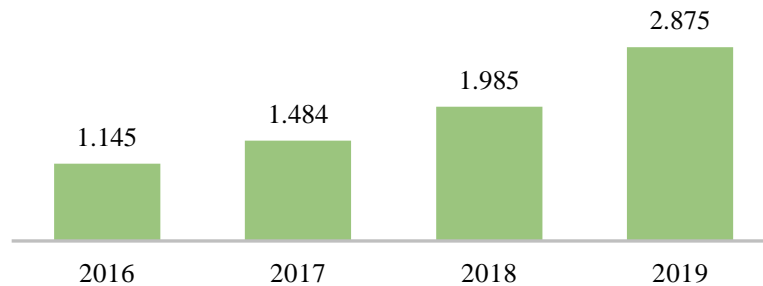
The intercepts mentioned above a, b, c, and d demonstrate a synergy between the waste bank, government, and society in economic empowerment.

- a) Establishing partnership between society’s components (individuals, communities, organizations, and schools) and waste banks entails taking an active role in waste management.
- b) The government’s synergy with waste banks develops a clean environment and boosts income.
- c) Collaborating with society, the government can improve human resources and raise public awareness about waste reduction.
- d) The cooperation between all stakeholders (community, waste bank, and government) is essential for economic empowerment.

#### **4.4.2. Economic Value of Waste Banks**

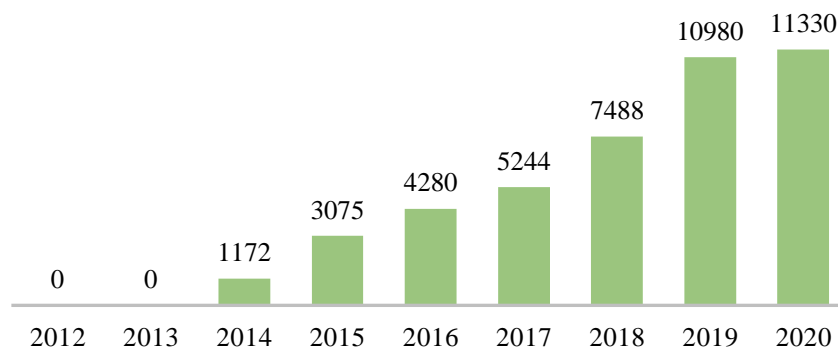
The economic value, number, and contribution of waste banks nationally are shown in Figures 4.12 – 4.14 below. The rise of the economic value of WBM seems slightly slow during the period because some Indonesians did not support the concept of waste bank management, and most of the people did not care about environmental pollution around them. Therefore, the government of Indonesia is striving hard to educate the community

about the value of waste bank through its different initiatives to reach more satisfying growth.



**Figure 4.12: The Economic Value of Waste Banks (2016-2019, in billions IDR)**

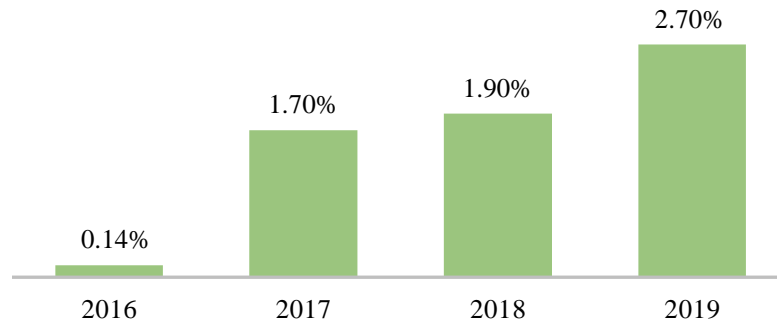
Source: MEFI (2019)



**Figure 4.133: The Total of Waste Bank in Indonesia 2014-2020**

Source: MEFI (2020)

The data above demonstrates the number of waste banks from 2014 to 2020. It seems to be rising throughout the time, starting from 2014 with 1.172 units of waste banks in 2015. 3.075 units, and up to July 2020, there are 11.330 waste banks, consisting of unit waste banks and a central waste bank (Usis, 2021). The number of waste banks in 2020 still grew during the pandemic COVID-19 because the people were more interested in depositing the waste sorted from their households and replaced their job by participating in the waste bank. MEFI develops the concept of the waste bank in several provinces, including Java, Sumatera, Kalimantan, Maluku, Bali, Sulawesi, etc.



**Figure 4.14: The Contribution of Waste Banks in Indonesia (2016-2019)**

**Source:** MEFI (2019)

The figure above displays the contribution of waste banks to Indonesia’s national economy from 2016 to 2019. Overall, the graph has stayed consistent or grown throughout the years from 2016 of 0,14 % and in the last period 2019 of 2,70 %.

WBM is the best waste bank in Indonesia making huge contribution to the society. According to the interview results and data from WBM, its waste bank has an impact on the empowerment of the community. This is in line with the research conducted by Usis (2021), which stated the best waste bank in Indonesia regarding socio-economic and environmental impacts is the waste bank in Malang. The development, innovation, and modification of WBM through a central system in the city and unit branches also contribute to WBM becoming the best waste management institution in the Asia Pacific (Suparjo, 2019).

The impact of ZW regulation on Malang’s community economy can be shown by the accomplishment of the autonomy award from The Jawa Pos Institute of Pro Otonomi (JPIP) (Lestari *et al.*, 2018). Through the silver medal in economic empowerment and the achievement of the Indonesian government’s Adipura Kencana award for environmental management in 2015, especially waste management. It indicates that the WBM has a positive economic impact on the Malang community.

Also, Malang was honored by the Ministry of Environment and Marine Affairs (Kementerian Lingkungan Hidup dan Kelautan/KLHK) as a waste reduction award in 2021 (Kota, 2021). The ranking is based on the city’s or district’s waste sorting and

reduction implementations. These accomplishments result from the Malang municipal environment agency's performance in collaboration with the community's actively engaging in the waste reduction program by selecting and sorting waste from households before the waste committee picks it up.

#### 4.4.3. The Financial Analysis of Waste Bank of Malang

The income that WBM earns results from sales of operational division, production division, household division, government grants, and CSR of Electric Company.

**Table 4.8: The Price of Waste 2019 (in IDR)**

No	Type of Plastic	Price	No	Type of Bottle/Glass	Price
1	Clear Plastic	2.000	1	Glass Bottle	1.000
2	Dirty Plastic	600	2	Drink Bottle	1.000
3	Screen Printing Plastic	400	3	Orson drink bottle	600
4	Thin plastic	350	4	Bottle of Soy Sauce/Big Sauce	650
5	Small Atum Bottle	3.000	5	Gasoline Bottle	550
6	Glass Bottle	3.500	6	Beer Bottle	500
7	Mixed Plastic	3.500	7	Coca-Cola Bottle	200
8	Cable Skin	2.000	No	<b>Type of Copper</b>	<b>Price</b>
9	Hose	900	1	Ordinary Copper	90.000
10	Carpet	500	2	Super Copper	95.000
11	Color Bottle Caps	2.500	No	<b>Type of Zinc / Iron</b>	<b>Price</b>
12	Clean Color Drink bottle	3.000	1	Good Zinc	300
13	Dirty Color Drink Bottle	2.000	2	Ordinary Zinc	3.000
No	<b>Type of Paper</b>	<b>Price</b>	3	Good Iron	4.000
1	Ordinary book	2.500	4	Ordinary Iron	3.000
2	HVS Paper	2.600	No	<b>Type of Aluminum</b>	<b>Price</b>
3	Newspaper	2.600	1	Slender Cop	11.000
4	Building Paper	3.000	2	Antenna/Pot/Frying Pan	8.000
5	Magazine	1.000	3	Plate	12.000
6	Duplex Printing	900	4	Aluminum Bottle Cap	5.000
7	Good Cardboard	2.000	5	Bronze	9.000
8	Bad Cardboard	1.900	6	Monel	16.000

*Note.* The price can fluctuate (WBM, 2019).

Meanwhile, the expenses of the WBM come from capital goods, and general operating expenses. The WBM gains money by selling waste items such as raw materials, recycled

crafts, and plastic production/chopping. The raw material is a non-shredded plastic product, such as metal, paper, or glass bottles. After being processed by WBM, this raw material is sold straight to palm shops/collectors/factories.

Table 4.8 above lists the prices of raw materials in WBM 2019. It shows that the most expensive form of waste is aluminum and copper, costing around IDR 16,000. The most affordable waste pricing is determined by plastic and bottle/glass type. The cost of waste in the waste bank is subject to change at any time. This is because market waste is not static. Pricing fluctuates in lockstep with collectors' prices in general. However, the consumer is alerted when the price changes.

**The Income Statement of WBM.** The WBM's revenue statement from 2016 to 2019 shows the following items: waste sale of operational division, waste sale of production division, household division, government grant, and CSR from the State Electric Company.

**Table 4.9: The Income Sources of WBM 2016-2019 (in millions of IDR)**

No	Description Revenue	2016	2017	2018	2019
1	Waste sales of Operational Division	1.218	1.486	1.793	1.901
2	Waste sales of the Production Division	1.100	1.256	950	1.174
3	Waste sales of Household Division	545	688	989	1.790
4	Government Grants and CSR of Electric Company	110	276	388	550
5	<b>Total</b>	<b>2.972</b>	<b>3.705</b>	<b>4.119</b>	<b>5.484</b>

**Source:** Data processed from WBM (2019)

Table 4.9 summarizes the inflow generated by WBM revenues between 2016 and 2019. It shows growth in total sales and operating income from 2016 to 2019. It reflects an annual rise in the operational division, starting from IDR 1.217 million in 2016 to IDR 1.900 million in 2019. The manufacturing sector is of IDR 1.255 million in 2017, owing to the sincerity and passion of the staff and hard workers. However, in 2018, IDR 949 million decreased due to a lack of absorption of production outcomes. In 2019, the production division increased by IDR 1.173 million due to increased staff passion and excitement from to government-sponsored awards. The household division continues to

grow year by year due to the division's efficiency and creativity. In aggregate, all categories rose over the period.

**WBM Operating Expenses.** Expenses are the expenditures made by WBM in the process, which consist of capital goods and general running expenditures (staff wages, maintenance, loan payments, and office equipment).

Table 4.10 below presents WBM expenditure growth from 2016 to 2019. The statistics on expenditures reveal a rise in capital goods from year to year owing to higher purchases of waste. General operational expenditures grew due to WBM personnel, artisans, maintenance costs, debt payment, and office equipment.

**Table 4.10: WBM Expenses 2016-2019 (in millions of IDR)**

No	Description Expenses	2016	2017	2018	2019
1	Capital goods	19	23	23	25
2	General operating expenses	2.766	2.996	3.312	4.543
3	Total Expenditure	2.785	3.019	3.335	4.569

**Source:** Data processed from WBM (2019)

**The Cashflow of Waste Bank of Malang 2016-2019.** The cashflow is generated from the ratio between income and expenditure. Therefore, the cashflow may be estimated as follows:

**Table 4.11: WBM Cashflow 2016-2019 (in millions of IDR)**

No	Year	Inflow	Outflow	Cashflow
1	2016	2.972	2.785	188
2	2017	3.705	3.019	686
3	2018	4.119	3.335	783
4	2019	5.484	4.569	915

**Source:** Data processed from WBM (2019)

Table 4.11 shows that the cashflow of WBM over the period of 2016-2019. Overall, the cashflow result seems increasing throughout the years. Therefore, the WBM is deemed a feasible institution.

#### **4.5. The Program of WBM in Empowering the Economy**

WBM is a community organization dedicated to empowering and enhancing the local economy through waste as a source of income. Apart from being a source of income, the WBM may help Malang's waste issue by sorting the waste that can be recycled or have economic value. If waste is separated from the house as the source of waste, the result is not waste but rather a recycled product with economic value.

The result of economic empowerment implemented by WBM to the community is how WBM can increase people's income. Each member has a varied economic impact based on their level of participation. The role of WBM in empowering the economy can increase the community's income. The customer's savings at most is only IDR 767.500. Meanwhile, the customer's savings are at least IDR 60.000. The impact of WBM on the community can be sufficient for customers' daily needs because of the community's average income in the first three months of IDR 12.975.000.

Nonetheless, the waste bank's impact on improving artisans' income is highly successful, as seen by the salaries or compensation supplied by the waste bank to artisans. The following illustrates the craftsman's earnings (WBM, 2019):

- a. Wash coffee packs and their types of IDR 7.000 per kg.
- b. Wash oil pack and its types of IDR 700 per kg.
- c. Chopping IDR 12.000 per kg.
- d. Daily sewing IDR 27.000 per day.
- e. Wholesale IDR 2.000 to IDR 12.000 depending on the production made.
- f. Weaving IDR 5.500/100 packs.
- g. Sewing webbing IDR 3.000/100 packs.

Artisans can earn IDR 700.000-1000.000 rupiah per month. However, artisans might make up to IDR 1.300.000 each month if consumers have many orders.

Besides economic empowerment, the waste bank also empowered society through segregating waste from households, training, workshop, internship, and seminar on recycling waste, interest-free savings, and interest-free credit. This result is consistent with the research conducted by Lestari (2018:313), which concluded that waste

management activities have a positive impact on the community because they can be used as income for education costs. The existence of a waste bank may result in creating a new job. This finding is congruent with Linawati *et al.* (2017:6), which assessed that the management of the waste bank is good enough to impact the socio-economic community, despite some technical issues in the field. Also, homemakers with lots of spare time in their everyday life might profit from a waste bank as a source of additional money.

Sekarningrum (2017:296) mentioned that the authorities, local governments, and social institutions/organizations must provide a continuous program. Therefore, the local community is aware of the importance of having good habits in managing waste effectively and wisely. The socialization and training on waste management impact changing the behavior and perspective of the participants to manage waste communally. WBM also aims to reduce poverty and unemployment through counseling waste recycling into a creative economy. These programs encourage members to be economically self-sufficient and provide knowledge to create new jobs and possibly reduce unemployment.

Regular savings, education, grocery, environmental, and health savings are programs of WBM. Those savings can be used as extra income like school fees, electric bills, and health care costs. However, profit sharing is not maximized since the price of waste avoided fluctuates. On the other hand, the bank's liquidity is insufficient. As a result, WBM collaborates with the MCES/DLH Kota Malang and the CSR of the State Electricity Company (PT. PLN) to meet liquidity requirements.

The goal of interest-free credit, regardless of the form of loan granted, is to help customers build their businesses, pay for healthcare bills, and aid with school tuition for students. Its concept is that community members may build their businesses independently through interest-free credit, and poverty students can also get loans to cover their school costs. They may make practical payments with waste rather than with money. Meanwhile, the challenge of interest-free credit is that since 2018, there has been an increase in high non-performing loans.

#### **4.6. Effectiveness of WBM Program in Empowering the Community**

WBM operates training programs, internships, comparative studies, seminars on recycling waste, offers interest-free savings and interest-free credit. The waste savings program tries to encourage people to care about the environment by reducing waste and encouraging participation by selling waste deposited to the WBM that can be withdrawn at any time or saved. The waste savings program is WBM's flagship program, and it has continued success. It can be observed in the growing number of members and increasing the volume of wastes received from the community. The WBM strives to educate the community about the significance of waste management and environmental conservation actions that could be done domestically.

The empowerment goals mentioned by Mardikanto and Soebiato (2012:18) are as follows:

- 1. Improvement of Education.** The participation of schools in WBM savings programs indicates a desire to manage waste. School is the most effective environment for learning and may help develop a better future generation through socialization on waste management in the school.
- 2. Environmental Improvement.** The WBM initiative will enhance the better environment to achieve sustainable development. The environment will be more orderly and cleaner by sorting waste from households and the concept of 3Re.
- 3. Improvement of Action.** Access to waste management services offered by the WBM may help reduce waste disposal in inappropriate places since some types of waste can be valued if delivered to the WBM.
- 4. Income Enhancement.** Environmental problem is often a result of poverty or low income. The WBM's expanded reach enables it to increase income for clients and workers; therefore, it can be utilized to address necessities.
- 5. Improvement of the Community.** Living circumstances, supported by an improved environment, will result in a more vibrant communal life. Societal advancements result from diligent work to maintain a clean environment with appropriate waste management. The surroundings will no longer seem scruffy however become clean and beautiful.

- 6. Institutional Development.** Improved waste management will establish a network of commercial relationships between the WBM and other entities, as has occurred, particularly the shipment of shredded plastic to companies.
- 7. Life Improvement.** Changes in community behavior and viewpoint on waste, increased revenue from the waste sale, a cleaner environment, and promoted community welfare.



## **CHAPTER V**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1. Conclusion**

The analysis of the ZW regulation and WBM on socio-economic empowerment from the perspective of *maqasid al-Shari'ah* can be concluded as follows:

- ZW regulation is a policy that aims to reduce waste as much as possible for the realization of maximum cleanliness, turning waste into economic value, and empowering the community to have good skills and potential to realize benefits and prevent harm. It is under the *maslahah* or goodness and welfare of humanity and five *maqasid al-Shari'ah*, preserving religion, soul, intellect, lineage, and wealth.
- The WBM is a bank that serves and empowers the community through training, internship, comparative study, seminars on recycling waste, interest-free savings, interest-free credit. Those programs can empower communities socially, economically, and environmentally.

#### **5.2. Recommendations**

- The government should develop a waste management policy and waste bank by integrating the concept of *maqasid al-Shari'ah* considering the specifics of the community.
- WBM should address more the implementation of *maqasid al-Shari'ah* especially the one concern with the preservation of the soul to make the process of waste collection safe.
- Government and WBM are recommended to come up with safety measure regulations for waste collection.
- The government's role should be more active in mobilizing grant funds for the

waste bank.

- The government should seek sponsors or corporate social responsibility funds to collaborate with WBM on waste treatment and management.
- To increase awareness among the young generation, especially millennials, in waste management, the WBM, and related parties may organize the competition for school-aged students regarding effective waste management.
- The outreach of the WBM should be expanded by collaborating with the various community and organizations supported by local governments.
- WBM should have strong ties with the government to develop innovations in community-based waste management.
- WBM should enhance and develop its recycling training operations to boost the product's pricing and engage with other parties such as colleges, craft institutions, and others.
- The government must be persistent in enforcing existing regulations and inventive in seeking a more organized and comprehensive approach to waste management.
- The need for more effective law enforcement and the implementation of consequences ranging from empathetic reprimands to social work, suspension of administrative arrangements, and incarceration, up to a maximum fine for waste control violators.

### **5.3. The Limitations of the Study and Suggestions for Future Research**

Due to time and cost constraints, this study primarily focuses on WBM located in Malang, Indonesia. Future research could focus on waste bank management more comprehensively by analyzing the effectiveness of waste banks in other countries and assessing the factors affecting the performance of waste banks, particularly focusing on processing, management, marketing of waste, generating enthusiasm and public awareness on how to manage waste.

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## APPENDIX

### **Interview Questions on the impact of ZW Regulation on Socio-Economic Empowerment from Maqasid al-Shari‘ah perspective:**

What is the view of the *Shari‘ah* on ZW initiatives?

1. What is your response to the existence of a ZW?
2. Is ZW regulation crucial?
3. What is the purpose of zero waste regulation?
4. What is the role of zero waste regulation?
5. What is the concept of zero waste regulation?
6. How far do you know zero waste regulation in Malang?
7. Where do you get the information on ZW regulation in Malang?
8. Do you agree that zero waste can empower society to sort, recycle, reduce waste?
9. How is zero waste in empowering the economy of the community?
10. What is the weakness of zero waste?
11. What is the purpose, role, concept, and impact to the economy in conducting waste regulation in Malang city?
12. What is your response to the existence of a ZW?
13. Is zero-waste regulation crucial?
14. What is the purpose of zero waste regulation?
15. What is the role of zero waste regulation?
16. What is the concept of zero waste regulation?
17. How far do you know zero waste regulation in Malang?
18. Where do you get the information on zero waste regulation in Malang?
19. Do you agree that zero waste can empower society to sort, recycle, reduce waste?

20. How is zero waste in empowering the economy of the community?
21. What is the weakness of zero waste?
22. What is the purpose, role, concept, and impact to the economy in conducting waste regulation in Malang city?

### **Interview Questions of the WBM on Socio-Economic Empowerment Economy**

How does WBM contribute to socio-economic empowerment in Indonesia?

1. What is the role of WBM in community empowerment?
2. What are the forms of programs run by WBM?
3. Who are the actors involved in implementing the WBM program?
4. Where does WBM's capital come from?
5. What facilities and infrastructure are WBM essential for the program implementation process?
6. Does the implementer of the program have sufficient information regarding running the program?
7. Have all parties supported the implementation of the program?
8. Do all program implementers know their duties and authorities?
9. How does communication take place between actors involved in the
10. implementation of the program?
11. What is your response to the existence of a waste bank?
12. What is the aim of the waste bank?
13. What is the role of the waste bank?
14. What is the concept of the waste bank?
15. How is the way to sort the waste from the household?
16. How is the weakness of sorting the waste from the household?

17. How is the empowerment of recycling craft, training, and seminar provided by waste bank?
18. What is the issue faced by recycling products?
19. What are the training program's objectives, issues, and implications for processing waste into a creative economy?
20. How is the empowerment program of WBM through savings the waste?
21. What is the concept of savings in WBM?
22. What is the impact of interest-free savings on the economy?
23. What is the weakness of interest-free savings?
24. What are the goal concept and products of WBM?
25. What are the advantages of savings, and what is the role of a waste bank for your family?
26. How is the empowerment of WBM through interest-free credit?
27. What is the concept of interest-free credit?
28. What is the issue or weakness faced in interest-free credit?
29. What are the objectives, issues, and implications for interest-free credit products?
30. What are the results of saving waste?
31. What are the aspects that wasted banks can help you?
32. What are the benefits of saving waste?
33. What are the programs of the waste bank provided?
34. What are the products of the waste bank provided?

To get favorable interview outcomes. The researchers recorded every answer obtained from the informant and were equipped with a voice recorder like a mobile phone. The

results of this interview are intended to find out the impact of zero waste regulation and waste bank on socio-economic empowerment from the *maqasid al-Shari'ah* perspective.

### **Interview results on the impact of ZW Regulation on Socio-Economic Empowerment**

**The existence of zero waste regulation with the question:**

*"What is your response to the existence of a zero-waste regulation?"*

- Most of the interviewees said that zero waste regulation is a crucial factor in addressing a better environment.
- Most respondents know about the ZW regulation policy from both the central and regional governments of Malang. However, when asked further about zero waste regulation from government policy, they did not recognize it.
- All respondents stated that the ZW regulation could improve society's awareness of handling waste.

**The aim of the ZW in Malang is through the question: *"What is the purpose of zero waste regulation for?"***

- Some respondents know the purpose of zero waste regulation in Malang is to make a clean environment and to anticipate the amount of waste in Supit Urang. However, some interviewees do not know the aim of its zero-waste regulation.

**The information of zero waste through the question: *"where did you get the information regarding the ZW regulation?"***

- Most of the respondents understand the ZW of Malang from the news such as television and social media.

**The effect of the ZW regulation for empowering the economy with the question *"How does zero-waste regulation affect socio-economic empowerment?"***

- The interviewer agrees that zero waste regulation can change the public's perspective on the waste that has economic value.
- Some interviewees said that zero waste regulation in Malang can provide jobs and reduce unemployment, such as through WBM.
- The interviewees see that the economic empowerment of zero waste regulation is only addressed with the waste bank because its institution provides savings through the waste and returns it with money.
- Some interviewees understand that the community feels that zero waste in Malang is addressed through the waste bank.
- The regulation of zero waste of Malang has impacted the WBM through the funds and assistance from MCES/DLH Kota Malang.

**The weakness of zero waste in Malang with the question: *"What is the weakness of zero waste in Malang?"***

- Waste bank programs and activities need more budget. Therefore, it needs funds fixed annually from the Government.

**The following is one of the respondents' responses regarding the zero-waste regulation in Malang with the question: *"What is the purpose, role, concept, and impact of the ZW regulation to the economy in Malang city?"***

*"The purpose of the ZW regulation program in Malang is to anticipate the mountains of waste in the Supit Urang landfill. On the other side, establishing this waste bank aims to build public awareness in managing waste properly while campaigning to reduce, reuse, recycle. Therefore, the Malang city government issued a policy in a paradigm in waste management through Regulation No.10 of 2010 in Malang city. Hence the Malang city government established the waste bank institution for economic empowerment and a good environment.*

*The Government's role of Malang through the Malang City Environment Service assisted the waste bank by assisting with equipment like waste trucks, carts, plastic chopping*

*machines, and the construction of warehouses. On the other side, Individuals and communities can establish a waste bank unit under the guidance of the WBM center, therefore, can provide a new job and economic value from waste management.*

*In ten years for development and assistance on waste management through waste banks, by the end of 2019, there were 270 waste bank units in Malang and provided part-time, full-time, and volunteer jobs for the income from about IDR 500,000 to IDR 3,000,000. The basic principle of WBM is to invite the community to reduce waste from the source, sort it from households and then sell/save it in a waste bank and have a shared slogan, change waste into rupiah, and turn problems into blessings."*

Based on the interview result above, the ZW regulation impacts the community through the empowerment from WBM.

### **Survey results on the impact of WBM on Socio-Economic Empowerment**

Below are systems of empowerment provided by a WBM for improving the economy.

#### **The sorting program from a household with the question:**

***"How is the sorting program from household?"***

The researcher found that the way customers sort the waste from households can be evaluated as follows:

- Separating the waste based on the types of waste
- They have different waste cans side by side in the household.
- They have a minimum of three waste cans. Like organic waste can, inorganic waste can, and mixed waste can.
- Most of the respondents' customers feel responsible for sorting the waste and bringing it to the waste bank. However, the young person pays to heed to waste sorting.

**The information on how to separate the waste types from households through the question. *"Where did you get the information regarding the way how to separate the waste?"***

- Most of the respondents know it from the seminar and training provided by the waste bank.
- Few of them know it from the pickup committee and the neighborhood that is active in the waste bank program.

**The weakness of sorting the waste from the household with the question. *"What is the weakness of sorting waste from households?"***

- Respondents agree that young people are still apathetic in sorting the waste.
- Respondents still do not know for sure what kind of waste should not be sorted.

Based on the interview results, it was found that the waste bank empowerment program through separation was well understood by the respondents and had an impact on the environment and the economy. The following is the result of one of the respondents' thoughts:

*"This empowerment concept is very beneficial for the environment and a learning method for future generations to build sustainable development."*

*"Waste sorting is very easy. Besides that, the waste can be deposited in a waste bank and get value in the form of money."*

**The empowerment of recycling craft, training, and seminar provided by the waste bank with the question:**

***"What is your response to the existence of empowerment through recycling craft training and seminar provided by the waste bank?"***

Most interviewees respond positively and feel good with empowerment provided by WBM because they get insight and knowledge. Besides, the training and seminar of WBM

is an essential aspect of increasing the community's lack of awareness and improving the community's skills.

***"What are the types of waste which can be recycled and cannot?"***

Respondents stated that the types of waste which can create a new product are inorganic recycling of used plastic, used bottles, waste paper, etc. Waste that cannot be recycled is organic. However, it can be composted.

***"What are the impacts or benefits of recycling in empowering the economy?"***

Most respondents said that recycling training could open new opportunities for the community to create new jobs. Further, some of them said that it could advance the nation economically and reduce the number of unemployed.

The interviewees' customers stated that the recycling craft can improve little family's income even though it is not much, for instance, for their children's school fees, electric payment, and the cost of sick.

***"What is the issue of recycling products provided by WBM?"***

The respondent believes the price of recycling products is higher than the original product. On the other hand, the recycled product is not as good as the original brand.

Therefore, some respondents agree with the need for advanced technology and increasing creativity to recycle better waste to compete with the original product.

The interview result above can be summarized that the empowerment provided by WBM through recycling craft training and seminar can improve the customer's creativity, skill, new job, and income. However, the recycled product has a price issue, and it is not good as the original product.

**Some of the interviewees' responded to the question:**

***"What is the role, objectives, issues, and the impact of the training program for processing waste into a recycle product?"***

*"The role of WBM is to motivate the community, where they do not just sort waste but also use it to recycle. Furthermore, their handicrafts can be sold later, and they get money*

*from selling them. In implication, the community becomes creative, economic needs are fulfilled, and earns extra income. The issue it faces is the marketing of handicraft products because recycling is higher than the original brand".*

*"We educate and conduct training to several schools from elementary to high school, and we teach how to sort waste, make sofas from bottles, bags from cardboard, etc."*

*"We foster and assist the community of the waste bank unit in educating the community in the environment, especially customers. We educate through socialization and coaching."*

*"This empowerment can improve my skill and ability in recycling waste into a new product, besides the most important thing is that I got more extra income."*

### **The empowerment program of WBM through savings the waste**

**Question:** *"How is your response regarding the empowerment of WBM through saving the waste?"*

The interviewee's response to saving the waste is positive because it benefits the cleaner environment and can be changed into money.

**Question:** *"What is the concept of savings in WBM?"*

The respondents classified that there are kinds of products in savings: regular savings, education savings, groceries savings, environment savings, and health insurance savings.

**Question:** *"What is the impact of interest-free savings on the economy?"*

The customers' response said that the savings could improve their income, such as school fees, electric payments, and the cost of sick.

**Question:** *"What is the weakness of interest-free savings?"*

The interviewee believes that the price of the waste saved fluctuates. Hence the profit-sharing is not maximum. On the other hand, the bank cannot fulfill its liquidity because it is low. Therefore, to meet the liquidity, the bank collaborates with the Malang City Environment Service (DLH), and the CSR of State Electricity Company / PT. PLN.

The following is an interview result of the WBM represented by the director of WBM.

**Question:** *"What are the goal concept and products of WBM?"*

*First, our primary goal in establishing WBM is to reduce waste in landfills because the landfill in Supit Urang has limited land. Besides, the community around Sukun district in Malang has a middle income. Therefore, it is also aimed to increase and empower society's economy. Processing waste can indeed have economic value, such that employees can prosper by increasing the development of waste banks.*

*The concept of savings in WBM is like the Shari'ah bank system; However, what is deposited is not the amount of money, but the waste and the savings without interest system, which is haram in Islam. When customers sell their waste, the waste bank will record the sales in a savings book provided by the waste bank. The deposit can depend on the contract or agreement between the customer and waste banker. The types of savings products at WBM are regular savings, education savings, groceries savings, environmental savings, and health insurance savings.*

*One of the customer ideas with the question. "What are the advantages of saving in a waste bank, and what are the roles of a waste bank?"*

*Saving in a waste bank has many benefits, for example, making a clean environment, improving the awareness of the community to care about cleanliness, and returning the waste into economic value. The waste can be exchanged and saved for money. We are also learning how to sort the waste according to its type, so the price will be higher if we sort it by type.*

*The existence of a waste bank can improve my family's economy, even though the money got is not much. I have extra income, such as paying for electricity, water, and school fees for my children.*

How the empowerment of WBM through interest-free credit.

**Question:** *"What is the response to the interest-free credit provided by WBM?"*

The respondents stated that the customer quickly does this program to do credit without interest like a conventional bank. The customer can also improve the need, especially for doing business.

**Question:** *"What is the concept of interest-free credit?"*

The respondents stated that venture capital credit, school fees credit. The sick costs credit. The concept of this program is that customers can install the credit without money but with the waste deposited regularly. The requirements are not complicated and wordy.

**Question:** *"What is the issue or weakness faced in interest-free credit?"*

A respondent stated that this interest-free credit had an issue in 2018 in high non-performing loans. Therefore, to overcome this, it is necessary to collaborate with the environmental department of the city of Malang to cover the high non-performing loan.

One of the interviewee's quotes from an employee of WBM with the question:

***"What are the objectives, issues, and implications for interest-free credit products?"***

*For the type of loan provided, the first is to develop the customer's business, afford healthcare costs, and assist with school fees for students. Its program implies that the community can independently develop their business with interest-free loans, and underprivileged students also can take a loan for their school fees. They might pay installments through the waste, not with money. Meanwhile, the issue faced by WBM from this scheme since 2018 there was an increase of non-performing loans.*

# CURRICULUM VITAE

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