CHAPTER I

INTRODUCTION

1.1 Background

Waste management has became a critical environmental issue at the global level due to increasing population growth, rapid urbanization, and changes in consumption patterns, all of which contribute to a significant rise in the volume and complexity of solid waste. Ineffective waste management practices lead to serious environmental consequences, including land degradation, water pollution, and marine debris, as well as adverse impacts on public health and sustainable development (Kaza et al., 2018). These challenges are particularly evident in developing countries, where limitations in infrastructure, institutional capacity, and public awareness often hinder effective waste management systems.

In Indonesia, waste management continues to be a pressing issue despite the establishment of regulatory frameworks such as Law Number 18 of 2008 concerning Waste Management, which emphasizes the importance of waste reduction and environmentally sound waste handling. Furthermore, Presidential Regulation Number 97 of 2017 sets national targets for reducing and handling waste, highlighting the need for integrated waste management systems involving multiple stakeholders, which also sets ambitious national targets of reducing waste by 30% and managing 70% waste by 2025. However, in practice, waste management in many regions remains dominated by conventional approaches such as collection, transportation, and disposal, with limited emphasis on waste reduction and recycling at the source (Ministry Environment & Forestry, 2020).

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One of the primary issues in Indonesia's waste management system is the continued reliance on conventional end-of-pipe approaches, such as collection, transportation, and disposal, rather than upstream waste reduction strategies. Many local governments still prioritize waste transportation to final disposal sites (Tempat Pemrosesan Akhir/TPA), where waste is frequently managed using open dumping methods. This practice not only contributes to environmental degradation but also increases greenhouse gas emissions, particularly methane, which has a significant impact on climate change. In addition, Indonesia faces structural challenges related to rapid urbanization and population growth, which significantly increase waste generation rates.

The (Ministry Environment & Forestry, 2025) reports that Indonesia generates tons of millions of waste annually, with a substantial proportion consisting of organic waste and plastic waste. Plastic waste, in particular, has become a critical issue, as Indonesia is recognized as one of the largest contributors to marine plastic debris globally. This condition is exacerbated by inadequate waste segregation at the household level and limited recycling infrastructure. Another critical issue is the low level of community participation in waste management practices, especially in waste sorting and recycling activities. Although policies emphasize the importance of community involvement, public awareness and behavioral change remain limited. Waste is often mixed at the source, making it difficult to process and recycle effectively.

Informal waste management actors, such as scavengers or waste pickers, play a significant role in recycling activities, yet their contributions are often not formally integrated into the waste management system. Institutionally, waste management in Indonesia is also characterized by fragmentation and limited coordination among stakeholders. Responsibilities are often distributed across different levels of government and agencies, leading to overlapping roles and

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inefficiencies. In many cases, collaboration between government, private sector, and community actors has not been fully optimized, resulting in suboptimal implementation of waste management programs. These challenges indicate that technical solutions alone are insufficient to address waste management issues in Indonesia. Instead, there is a need for governance approaches that emphasize collaboration, participation, and shared responsibility among stakeholders. In this context, community-based initiatives such as the waste bank (bank sampah) program have emerged as an alternative strategy to promote waste reduction and recycling while fostering community engagement.

Since 2023, Raja Ampat has been recognized as a global geopark under United Nations Educational, Scientific and Cultural Organizations (UNESCO). The geopark conditions cover nearly the entire region compromising over 1500 islands surrounding with four major islands (Batanta, Waigeo, Salawati, and Misool) have shaped it into ocean karst landscape (UNESCO, 2023). As a result, Raja Ampat is vulnerable to climate change and abrasion. However, the locations of the final solid waste disposal facilities are only available in Waisai City as its capital city. Therefore, waste handling and transportation often result in suboptimal waste management practises, where waste handling is not fully integrated and environmentally sustainable methods are not consistently implemented.

According to the Public Works Office Agency in 2016 transported 1 m^3/day of waste to the garbage dump / *Tempat Pembuangan Sampah (TPS)*, which accounted for 30% of the total waste creation of 5 m^3/day. Meanwhile, the population keeps growing from 47,885 in 2018 to 64,141 in 2020 and further to 65,403 in 2021 (BPS, 2022). The primary sources of waste in Raja Ampat include households, residences, offices, traditional markets, commercial, public facilities, and marine debris (Helakombo et al., 2024; Priscilia et al.,

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2023). Besides that, Raja Ampat Island has become a very popular destination for both national and international tourists because of the centre of the richest tropical marine biodiversity and the heart of the world's coral triangle. The contribution of the tourism industry is essential to improve the economy of local livelihood; however it also has a negative impact towards the environment including waste generated from tourism activities.

An integral part of this endeavour is to embed responsibility within the administrative framework. By implementing collaboration between the community, government, private sector and the non-governmental organization in waste management is a good first step to creating a healthy and clean environment. Given this condition, the concept of the waste bank programmes have been implemented as a pragmatic solution on reducing the environmental impact of waste as a typical community-based waste management effort. Hence, the Central Government introduced a new law on waste management in 2008, which was followed by several framework regulations including Government Regulation No. 81 in 2012 regarding household waste management and Ministry of Environment No. 13 in 2012 concerning the implementation of the reduce reuse and recycle (3R) concept through waste banks. Research studies have focused on waste banks as distinctive community-based waste management enterprises (Rahmawati & Pertiwi, 2025; Yandri et al., 2023). According to the regulation published by the Ministry of Environment and Forestry No. 14 in 2021, the waste bank (*bank sampah in Bahasa Indonesia*) is a facility that is established and managed by the community, business and/or local government with the purpose of managing waste based on the 3R principles (reduce, reuse, and recycle) as well as educating people in changing their behaviour towards waste management, and implementing a circular economy.

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The government of Raja Ampat initiated a local regulation of Peraturan Daerah (PERDA) No. 13 in 2014 concerning waste management and Peraturan Bupati No. 22 in 2024 regulates the procedures for the collection of waste management and sanitation services. The implementation of these laws are needed to strengthen the constitutionality of environmental aspects in Raja Ampat. However, there are several issues embedded within this regulation that also impact a broader systematic control of waste generation, collection, processing, and disposal constitutes waste management. Generally, there is a growing recognition of the inadequate provision of infrastructure for waste collection and disposal compared to high-income countries (Wang et al., 2023). For instance, a National Waste Policy published by the (Australian Government, 2018) focusing on the provision and delivery of waste management through environmental standards and occupational health and safety requirements, how waste services will be provided. Compared to Developing Nations like Indonesia faces a critical challenges of infrastructure and facility of 41% waste unmanaged, highlighting significant gaps in collection, treatment, and disposal systems (Romianingsih, 2023).

Furthermore, the local government's roles and responsibilities are often involved in waste management in regard to jurisdictional policies and frameworks, one of which is the waste bank program. Regulated under the Minister of Environment Regulation Number 13 of 2012, this program aims to encourage community participation in waste sorting and recycling by providing economic incentives. Waste banks are superior alternatives to conventional waste management and contribute to society and economic advantages (Faradina et al., 2020). Through this mechanism, waste is not only reduced but also transformed into resources with economic value, thereby promoting both environmental sustainability and community empowerment. Nevertheless, the effectiveness of waste bank programs depends not only on

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community participation but also on the active involvement and coordination of multiple stakeholders, including government agencies, local communities, private sector actors, and supporting institutions. This condition underscores the importance of collaborative governance as an approach to managing public programs.

Collaborative governance defined as a process in which public and non-public actors engage collectively in a formal, consensus-oriented decision-making process. According to the (Ansell & Gash, 2008) the success of such collaboration is influenced by several key elements, including face-to-face dialogue, trust building, commitment to the process, shared understanding, and facilitative leadership. A collaborative approach to waste management can raise public awareness and create shared responsibility for the waste problem in the Waisai City. This is in addition to the waste bank management program launched in 2013 by the Environmental Office of Raja Ampat Regency (DLH) as a foundations tep to reduce the amount of waste stored at disposal sites. Nevertheless, local governments still grapple with waste collection, often resulting in open dumping and burning. The environmental and health consequences of these practices are immense, particularly in Waisai City, Raja Ampat Regency. These dynamic performances may provide evidence on how collaborative governance could be a game changer.

The implementation of collaborative governance in waste bank management programs often encounters various challenges. These include limited stakeholder engagement, lack of effective coordination, unequal distribution of roles and responsibilities, and insufficient public awareness. Such conditions indicate that collaboration among stakeholders has not yet been fully optimized, thereby affecting the overall performance and sustainability of the program.

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Based on these conditions, it is important to examine how collaborative governance is implemented in the waste bank management program in Waisai City, Raja Ampat Regency. This research seeks to analyze the dynamics of collaboration among stakeholders and to assess the extent to which the principles of collaborative governance are applied in practice. The findings of this research are expected to provide insights into the strengths and limitations of the current system and contribute to the development of more effective and sustainable waste management strategies.

1.2 Problem Statement

Despite the implementation of the waste bank program in Waisai City as a community-based approach to waste management, its effectiveness remains questionable. The program is expected to reduce waste volume and promote recycling through active participation from various stakeholders. However, in practice, the outcomes have not fully reflected these expectations. This shows that the issue may not lie solely in the availability of programs or policies, but rather in how these programs are managed and implemented at the local level.

A key issue that emerges is the lack of effective collaboration among stakeholders involved in the waste bank management program. Although multiple actors such as government agencies, community groups, and private sector participants are formally present, yet their interaction does not necessarily translate into meaningful collaboration. Indications such as inconsistent coordination, limited stakeholder engagement, and unclear distribution of roles suggest that the collaborative process may not be functioning optimally. As a result, the potential of the waste bank program as a sustainable waste management solution has not been fully realized.

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This condition raises an important analytical question regarding the implementation of collaborative governance in the waste bank management program in Waisai City. Referring to the framework proposed by (Ansell & Gash, 2008), effective collaboration requires structured interaction, trust building, shared understanding, and commitment among stakeholders. However, the extent to which these elements are present and function effectively in Waisai City remains unclear. Therefore, it is necessary to conduct an in-depth analysis of collaborative governance in order to understand the underlying problems and identify factors that influence the effectiveness of stakeholder collaboration in the waste bank management program.

1.3 Research Questions

The research questions in this research are formulated as follows:

1) How is collaborative governance implemented in the waste bank management program in Waisai City, Raja Ampat Regency?
2) How do stakeholders collaborate in the implementation of the waste bank management program in Waisai City, Raja Ampat Regency?
3) What factors support and hinder collaborative governance in the implementation of the waste bank management program in Waisai City, Raja Ampat Regency?

1.4 Research Objectives

To achieve the aim of this research, the objectives are formulated as follows:

1) To examine the implementation of collaborative governance in the waste bank management program in Waisai City, Raja Ampat Regency
2) To analyze stakeholder collaboration in the implementation of the waste bank management program in Waisai City, Raja Ampat Regency

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3) To identify and analyse the factors that support and hinder collaborative governance in the implementation of the waste bank management program in Waisai City, Raja Ampat Regency.

1.5 Significance of the Research

Based on the problem statement and research questions above, it is hoped that this research will be useful for many parties, including:

1) Theoretical Significance

   This research is expected to contribute to the development of knowledge in the field of environmental governance, particularly in the study of collaborative governance in waste management. By applying the collaborative governance framework proposed by Ansell and Gash (2008), this study provides empirical insights into how collaborative processes are implemented at the local level. Furthermore, this research enriches existing literature by presenting findings from Waisai City, Raja Ampat Regency, which has unique geographical and environmental characteristics, thereby offering a contextual contribution to the study of collaborative governance.

2) Practical Significance

   Practically, this research is expected to provide useful insights for stakeholders involved in waste management in Waisai City, particularly the Department of Environment (DLH) of Raja Ampat Regency. The findings can serve as a reference for improving the implementation of waste bank management programs, especially in enhancing stakeholder coordination, participation, and collaborative practices. In addition, this research may assist private sector actors and environmental organizations in understanding their roles within a

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collaborative governance framework, thereby supporting more effective and sustainable waste management.

1.6 Scope and Limitation of the Research

This research focuses on analysing the the implementation of collaborative governance in the waste bank management program in Waisai City, Raja Ampat Regency. The study specifically examines the roles and interactions of stakeholders involved in the program, including the Department of Environment (DLH), local communities, and other relevant actors. The analysis is conducted using the collaborative governance framework proposed by Ansell and Gash (2008), with emphasis on key elements such as face-to-face dialogue, trust building, commitment to the process, shared understanding, and facilitative leadership. In addition, this research explores the supporting and inhibiting factors that influence the effectiveness of collaboration in waste management practices in Waisai City. The study adopts a qualitative descriptive approach, utilizing data collected through interviews, observations, and document analysis.

This research is limited in scope and subject to several limitations as described below. First, the study is geographically limited to Waisai City, Raja Ampat Regency; therefore, the findings may not be generalizable to other regions with different socio-economic and environmental conditions. Second, the research focuses specifically on the waste bank management program and does not cover all aspects of waste management in the region. Third, the study relies on qualitative data obtained from selected informants, which may be influenced by their perspectives and experiences. Although efforts are made to ensure data validity through triangulation, the findings remain dependent on the availability and reliability of the data collected. Lastly, the analysis is limited to the collaborative governance framework proposed by (Ansell &

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Gash, 2008), and does not incorporate other theoretical perspectives that may also be relevant.

1.7 Conceptual Framework

This research's not only analyzes the implementation of collaborative governance in waste bank management program but also evaluates its effectiveness in addressing waste management problems in Waisai City. The framework allows for the identification of whether the collaborative governance approach has functioned optimally or not. Based on this evaluation, the study examines supporting and inhibiting factors that influence the collaborative process. Furthermore, the findings are used to formulate recommendations and possible solutions, either by strengthening the existing collaborative governance approach or by addressing gaps that hinder its effectiveness. This ensures that the research does not only provide descriptive analysis but also contributes to practical improvements in waste management governance.

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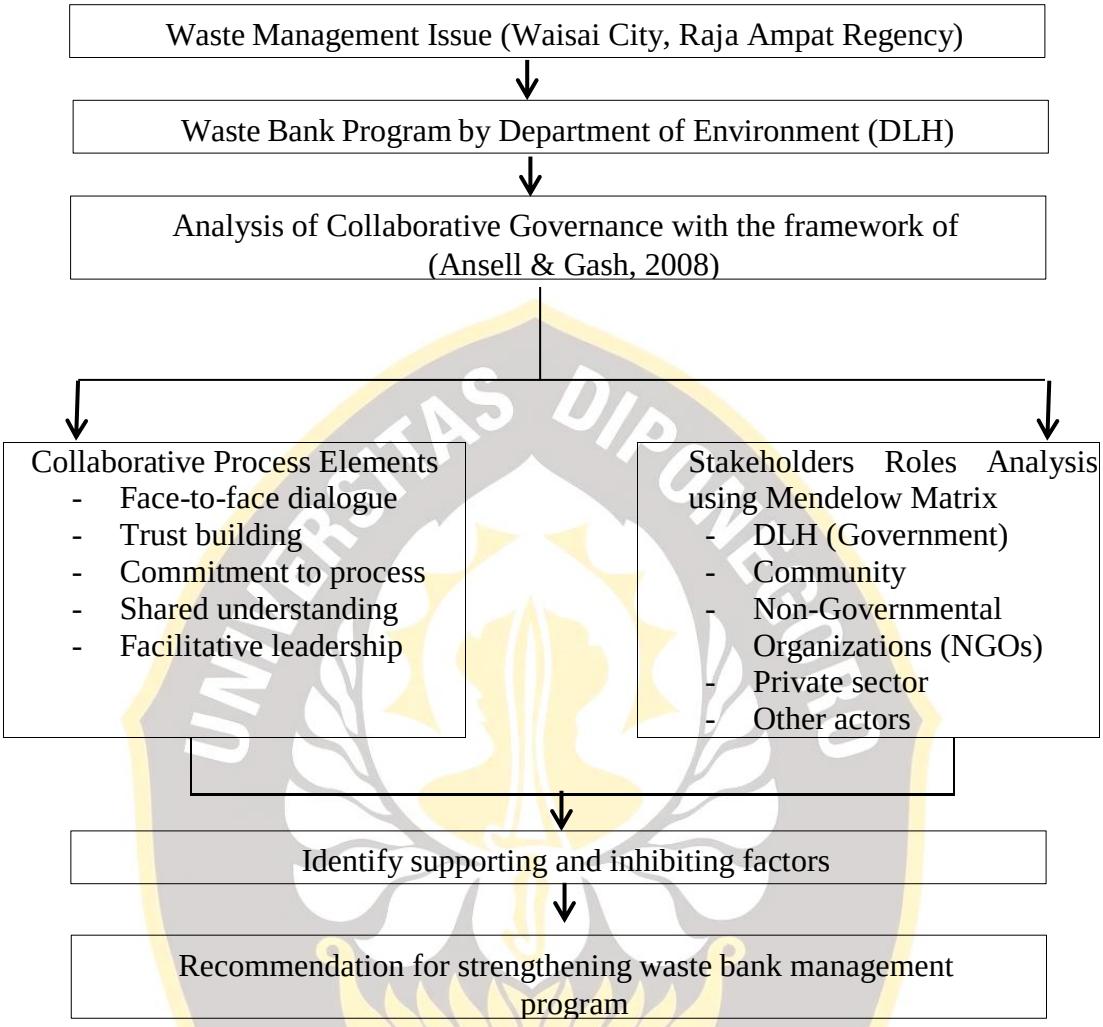


Figure 1 Conceptual Framework

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