



AG212X – Degree Project in Urban and Regional Planning
Second cycle 30 credits

Collaborative Governance in the Municipal Solid Waste Sector

Understanding the Collaboration Process in the Jakarta
Collaboration Forum

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Abstract

Municipal solid waste (MSW) management is a global concern due to urban population growth, particularly in developing countries. Collaboration among stakeholders in the MSW sector is vital for addressing the challenges associated with MSW management. However, initiating and operating collaborations in this domain are complex and have received limited attention in existing research. This study aims to understand collaboration in the MSW sector, specifically focusing on the factors influencing collaboration initiation and the collaboration process. The study utilizes the collaborative governance framework developed by Emerson et al. (2012) and conducts a case study on Jakarta's MSW sector, examining the Large-Scale Social Collaboration (LSSC) forum for waste management.

The analysis highlights the significant influence of the political and policy landscape in creating an enabling environment for collaboration in Jakarta's MSW sector. Non-governmental organizations (NGOs) play a crucial role in initiating and nurturing the collaboration forum. The presence of discussion spaces for the discovery of shared interests among stakeholders contributes to building trust. However, challenges arise from the diverse range of participants in the forum, hindering the identification of joint action. Government endorsement and the institutionalization of collaboration through a government decree are essential for fostering collaboration. This study suggests further research on applying collaborative governance in various MSW collaboration settings and investigating the interconnections among the elements.

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List of Abbreviations

Abbreviation	Meaning
CSR	corporate social responsibility
DCA	Divers Clean Action
FMCG	fast-moving consumer goods
ICLEI	International Council for Local Environmental Initiatives
JEA	Jakarta Environmental Agency
<i>KSBB</i>	<i>Kolaborasi Sosial Berskala Besar</i>
LSSC	Large-Scale Social Collaboration – English translation of KSSB
MSW	municipal solid waste
MSWM	municipal solid waste management
NGO	non-governmental organization
PHINLA	a community-based waste management program run by DCA and WVI
WVI	World Vision International

1 Introduction

As urban populations, particularly in developing countries, continue to grow, the management of municipal solid waste (MSW) has become a global concern (Marshall and Farahbakhsh, 2013). It is then essential to adequately handle solid waste to safeguard public health and environmental sustainability since inadequate disposal could lead to illnesses like diarrhoea or contribute significantly to marine debris (Serge Kubanza and Simatele, 2020; Batista et al., 2021). However, studies have observed that municipal authorities often lack the technical knowledge and skills to manage the MSW sector (Henry et al., 2006; Serge Kubanza and Simatele, 2020). In addition, external factors such as political landscape or sociocultural problems have added challenges beyond municipal governments' authority in developing countries (Marshall and Farahbakhsh, 2013), which further pose more difficulties for the municipal authority in handling this complicated task adequately. As a result, stakeholder involvement in the MSW sector is implied as crucial for addressing those challenges and also delivering proper MSW management (Pariatamby and Tanaka, 2014; Serge Kubanza and Simatele, 2020; Godfrey, 2021; Marshall and Farahbakhsh, 2013).

Although it is important to involve stakeholders in municipal waste management, a unified concept of such involvement is lacking. For instance, the common terminology used in literature to discuss stakeholder involvement in the MSW domain varies, with terms – for example, the terms 'partnership', 'collaboration,' or 'participation' are used, but without clear distinctions among them. This lack of clarification led to the oversight of stakeholder involvement implications, as though the involvement of stakeholders in the MSW issue was a straightforward solution and the solution would be failure-proof. Nonetheless, initiating and sustaining partnerships or collaborations in the MSW domain is a complex process that involves considering factors like trust, interest, and transparency (Ahmed and Ali, 2004; Kumari and Raghubanshi, 2023). Neglecting due diligence in the stakeholder engagement process in MSW collaboration can create new challenges (Ahmed and Ali, 2004). Poor due diligence in designing processes can further worsen the situation which can generate new problems of inefficiency and corruption (ibid).

Although studies have examined the involvement of stakeholders in the MSW sector, their primary focus is on evaluating the effectiveness of their involvement (e.g., Pasang et al., 2007; Ibáñez-Forés et al., 2019). However, these studies provide limited analysis of the initiation process and the development of collaboration in the MSW sector. For example, Pasang et al. (2007) studied the effectiveness of neighbourhood association involvement in delivering waste services but only briefly discussed how such collaboration is formed and progresses. As Kumari and Raghubanshi (2023) point out that stakeholder involvement is important in the MSW sector, but there are gaps in the stakeholder engagement processes that are often overlooked. For example, the engagement process during the deliberation of a shared vision among stakeholders, which can hinder the implementation of shared outcomes, should be addressed (ibid).

Therefore, this study aims to understand collaborative involvement in the MSW sector, specifically focusing on the key factors influencing the initiation of the collaboration and the factors operating in the collaboration process. Thus, the study seeks to answer the following research questions: (1) *How is collaboration in the MSW sector in urban context of Indonesia initiated, and what key factors drive the initiation?* (2) *How is the collaboration process in*

the MSW sector in urban context of Indonesia operated? To achieve the objective, the concept of collaborative governance is used.

Collaborative governance is defined by Ansel and Gash (2007) as the collective action of bringing together public and private stakeholders with public agencies. To address the study objective and research questions, the collaborative governance framework developed by Emerson et al. (2012) is used. This framework consists of three nested dimensions: the system context, collaborative dynamics, and actions, which are interconnected in causal relationships. Since collaboration is a dynamic rather than a linear process, this framework facilitates the observation of causal relationships among the elements involved in the initiation and collaboration process (Berends et al., 2016). Traditional frameworks often primarily focus on outcomes while lacking attention to the influencing elements that drive the collaboration to be initiated (Beran et al., 2016). The Emerson et al. (2012) framework provides the "system context" and "drivers" elements that are important to consider for collaboration. These elements can complement existing scholarship on MSW collaboration that lacks the discussion of factors driving collaboration in the MSW sector.

To address this objective, a single case study is employed, focusing on Jakarta's municipal solid waste sector, particularly examining the Large-Scale Social Collaboration (LSSC) forum in waste management. A descriptive research design (Dulock, 1993) is utilized, which systematically describes the selected elements from the Emerson et al. (2012) collaborative governance framework. Primary data is collected through interviews with stakeholders involved in the LSSC forum, complemented by a desktop analysis of forum meeting documents and relevant municipal solid waste (MSW) policies in Jakarta. Secondary data is derived from pertinent documents and websites related to Jakarta's MSW sector.

From the analysis, it is found that the political and policy landscape pressure plays a crucial role in creating an enabling environment where a climate of collaboration could take place in the MSW sector in Jakarta. This is further supported by the presence of NGOs that act as critical actors in initially initiating the collaboration forum, and later nurturing the collaboration. However, the presence of NGOs is followed by their willingness to facilitate the forums beyond their own program interests. Nevertheless, the collaboration itself is not without difficulties. The diverse range of participants within the forum poses a challenge in discovering shared interests to achieve joint action. Another challenge arises from the schedules or conditions of the coordinator's organization, which necessitates adjusting the forum according to the coordinator's availability. Moreover, the legitimacy of the collaboration forum through government endorsement and the institutionalization of collaboration through government decree play crucial roles in nurturing collaboration. Moreover, the presence of discussion space for discovering shared interests has contributed to the development of trust among stakeholders.

This thesis is organized into five parts. The first following part focuses on reviewing the literature, examining the municipal waste sector in developing countries, addressing research gaps in collaboration within the MSW sector. The second part presents the collaborative governance conceptual framework employed for this study analysis. The third section describes the methodology used in this study. Next, a brief overview of the MSW Jakarta sector case studies and the LSSC forum is presented. The fourth section includes the analysis results, which systematically describe selected elements of the collaborative governance framework. Finally, the last section consists of discussion, conclusions, and suggestions for further research.

2 Literature review

Collaboration in MSW domain

Solid waste is any waste material that is not in liquid form, resulting from human or animal activities, and is thrown away because it is no longer useful or needed (Ramachandra et al., 2018). Solid waste can include household trash, construction debris, industrial waste, and hazardous waste. Meanwhile, municipal solid waste (MSW) refers to solid waste generated in the municipality, including all domestic refuse and non-hazardous wastes, such as commercial and institutional wastes and street sweepings. However, MSW excludes waste generated by industrial or agricultural activities and other non-municipal sources (Khatib, 2011). Municipal solid waste can include organic and inorganic substances, such as food scraps, packaging materials, clothing, glass and plastic containers, paper, and other items commonly discarded by a community (Ramachandra et al., 2018). Managing municipal solid waste involves different handling processes (i.e., separating/recycling, storing, collecting, transporting, processing, recovering, and disposal), and the waste characterization is heterogeneous. Thus, handling it is complex and requires multidisciplinary skills (Batista et al., 2021).

The classical approach to MSW management is viewed as an urban planning problem and has been widely adopted in developing countries, where municipal authorities are primarily responsible for MSW (Ahmed and Ali, 2004; Marshall and Farahbakhsh, 2013). However, it has been found that municipal authorities often face inherent limitations, such as a lack of human resources and financial resources (Henry et al., 2006; Serge Kubanza and Simatele, 2020). Other hindrances include institutional constraints, such as rigid laws that impede operational changes, low staff productivity, and inadequate supervision (Ahmed and Ali, 2004). Furthermore, Marshall and Farahbakhsh (2013) discovered that the political landscape, including the relationship between central and local governments, as well as the role of party politics in prioritizing municipal issues, adds further challenges to the ability of municipal authorities to manage municipal solid waste on their own. Thus, in the municipal solid waste discourse, stakeholder involvement in various forms is proposed essential (Pariatamby and Tanaka, 2014; Serge Kubanza and Simatele, 2020; Godfrey, 2021). For example, in the case of India and Philippines, Pariatamby and Tanaka (2014) found the involvement of informal waste pickers contributed to the recycling activities in the cities. Meanwhile, Serge Kubanza and Simatele (2020) proposed an overarching involvement of public, NGOs, and business sectors is needed to promote public awareness on solid waste issues.

Due to the complexity of the MSW issue in developing countries, stakeholder involvement takes different forms. Although MSW management may appear to be a technical process involving separation, recycling, and disposal, there are also non-technical aspects that complicate the issue. For example, low and middle-income countries often lack knowledge of household waste sorting, resulting in mixed waste that is difficult to recycle, and there are still many cases of improper waste disposal (Kumari and Raghubanshi, 2023). Due to the complexity of waste management in developing countries, involving stakeholders in MSW efforts goes beyond just technical issues in the handling process, and also involves non-technical efforts such as raising awareness and education. This has resulted in a diverse range

of concepts for stakeholder involvement in waste management, without a unified umbrella term. The common terminology used in literature to discuss stakeholder involvement varies, with terms – for example the terms ‘partnership’, ‘collaboration’, or ‘participation’ are used. However, few studies have examined the differences among these terminologies. For instance, the term "partnership" found in Olukanni and Nwafor's (2019) study explored partnership by emphasizing more on the cooperation that involves a transactional binding of private actors to deliver a waste service. Meanwhile, Ahmed and Ali (2004) defined partnership as beyond the profitability of waste service but rather as "shared commitments to pursue common goals." However, the lack of a cohesive concept for stakeholder involvement in MSW management leads to using "stakeholder involvement" narration to tackle MSW issues as a straightforward effort, but not carefully reflecting that involving stakeholders involves dynamics. For example, in their study, Serge Kubanza and Simatele (2020) proposed that community participation is essential in formulating MSW policies. Nevertheless, engaging the community is more complex and demands an iterative process.

According to Joseph (2006) stakeholders in MSW domain are individuals and organizations interested in solid waste management and participate in activities related to MSW domain. These stakeholders can include waste generators, waste processors, formal and informal agencies, non-governmental organizations, and financing institutions. Joseph (2006) also seen these can be communities, micro and small enterprises (MSEs), private entrepreneurs, and industries where local authorities try to explore ways to involve them to collaborate and utilize their human and financial resources towards developing a sustainable solid waste management system. The roles and categorization of important stakeholders in the MSW sector in developing countries are shown in Table 1 (summarized from Ahmed and Ali (2004) and Joseph (2006)).

Table 1. The roles of key stakeholders in the MSW sector

Key stakeholders	Roles and participation in MSW
Recycling industry actors	This includes waste pickers, itinerant waste buyers, small-scale recycling industries, and large-scale recycling industries. These actors are mainly important in recycling waste materials. They purchase items such as glass, metal cans, and plastics from waste pickers and can sell them to larger industries or even process them themselves to become new materials.
Community-based organization (CBOs)	The community-based organizations (CBOs) are informal groups formed by local people to address community needs, such as solid waste management (SWM) operations, primarily collection, and street cleaning. The sustainability of such initiatives often relies on the assistance and empowerment provided by NGOs, as well as the ability of local leader to attract financing and remain accountable.
Non-governmental organization (NGOs)	NGOs assist in forming and leading ward committees, encouraging community participation, and networking with other organizations to coordinate efforts. NGOs also utilize their relationships with municipalities and other influential bodies to obtain support for waste management initiatives. Moreover, they can involve unemployed individuals in waste management activities (i.e., through CBOs) and organize awareness campaigns to promote sustainable waste management practices.

Social enterprise	Social enterprises are run by entrepreneurs who focus on creativity, innovation, and the constant search for new process or product ideas. Within the MSW sphere, social enterprises are mainly found in filling the gap in service delivery. Social enterprises identify gaps in service delivery and respond to demand by providing services for a fee. For instance, they may offer house-to-house garbage collection in areas where the municipal government does not provide this service.
Sectoral agency	This can also refer to municipal authorities. However, sometimes waste management issues are focused on a specific division within the municipality or are handled by one main agency that is responsible for setting environmental regulations and standards, as well as monitoring and enforcing them. They may also have a planning role.
Municipal authority	This role mainly focuses on administrative functions, such as managing population and land ownership. Their role in waste management involves keeping it in mind while developing city plans and designating space for waste management facilities with adequate buffer zones. In this regard, they work in collaboration with sectoral agencies.
Private sector	Private sectors/corporations provide funding for waste management as part of their corporate social responsibility. They may collaborate with NGOs or civil society organizations directly if they have dedicated funds, or if approached by such groups.
Public / households	This involves households playing a role in carrying out source reduction and segregation, identifying suitable waste management facilities, and paying for waste services.

While collaboration is crucial, in reality, initiating collaboration between different actors is not easy. Nurturing that collaboration also requires considering other factors (e.g., trust, interest, transparency) to be considered as well (Ahmed and Ali, 2004; Kumari and Raghubanshi, 2023). Therefore, it is crucial to explore the relevant factors of stakeholder involvement in the MSW sector. Attempting stakeholder involvement in MSW without due diligence can lead to inefficiencies (Ahmed and Ali, 2004). This due diligence refers to a thorough analysis and careful consideration of factors that are important in the partnership process. Ahmed and Ali (2012) argue that the absence of careful examination of the collaboration process can worsen the situation, resulting in ineffectiveness and corruption. Ahmed and Ali (2012) discuss the importance of considering factors such as incentives, transparency, accountability, and others in the collaboration process within the MSW sector.

However, limited studies have provided a comprehensive framework for analysing collaboration process in the MSW sector. Although Ahmed and Ali (2004) discussed partnership process in the MSW sector in developing nations, their discussion is brief. It does not include an overarching analysis of elements required to form and nurture partnerships. On the other hand, drawing from public administration research, Ansel and Gash (2007) introduced the concept of collaborative governance. Collaborative governance is defined as the setting of collaboration that emphasizes bringing together public and private stakeholders in collective action to govern public matters (Ansel & Gash, 2007). The prevailing

implications of involving stakeholders in the MSW sector as a public matter can be regarded as a collaborative governance effort. Thus, the concept of collaborative governance is utilized as the main framework for this study.

In conclusion, the existing literature on MSW implies the significance of collaboration in the MSW sector that is complex. However, it is also studied that initiating and nurturing collaboration is a challenging task, and poorly approached collaboration can lead to inefficiency. On the other hand, studies on collaboration in the MSW sector primarily concentrate on performance and outcomes, leaving the overarching views of the essential elements required for initiating and nurturing collaboration unexplored. Therefore, this study fills the gap in the existing literature on MSW collaboration by examining the necessary elements for initiating and developing collaboration.

3 Theoretical framework

3.1 Collaborative governance

Stakeholder involvement is found to be crucial in the MSW sector, as discussed in the Literature Review section. However, there is a lack of a unified concept for stakeholder involvement in MSW management that has led to the implication of stakeholder involvement in the MSW sector being carried out without adequate consideration. Thus, in this study, the concept utilized to comprehend stakeholder involvement in waste management is the concept of collaborative governance. Collaborative governance represents an overarching form of stakeholder involvement in public matters.

Ansel and Gash (2007, p. 544) defined *collaborative governance* as a collaborative approach that emphasizes bringing together public and private stakeholders in collective action with public agencies. Marshall and Farahbakhsh (2013) observed a shift in the perception of MSW management from a focus solely on "government" to a broader concept of "governance," which recognizes the involvement of all relevant parties in managing MSW. Therefore, the concept of collaborative governance is highly relevant to investigating how stakeholders engage in governing public matters of the MSW sector.

In providing collaborative governance framework, Emerson et al.'s (2012) framework provides a more comprehensive approach compared to Ansel and Gash's (2007) limited definition of collaborative governance. The Emerson et al. (2012) framework covers a broader range of cross-boundary governance¹ form, going beyond formal settings initiated by the government, as approached by Ansel and Gash (2007). Moreover, unlike Ansel and Gash's (2007) sequential model, Emerson et al.'s (2012) framework is structured as a multilevel system with three nested dimensions: the system context dimension, collaborative dynamics and actions (see Figure 1), in which the elements work in causal relationships with each other. As collaboration is not a linear process but a dynamic one, this framework allows for the detection of causal relationships among the different elements in a collaboration (Berends et al., 2016). Furthermore, Ahmed and Ali (2004) stated, initiating partnership or collaboration between different actors in the MSW sector is not easy, and developing that collaboration requires relational factors (e.g., trust, interest, transparency) to be considered as well, in which this relational elements covered in the Emerson et al. (2012) framework.

Furthermore, the use of this framework has helped studies uncover missing elements (i.e., process elements) that are commonly used in traditional frameworks used to analyse partnerships (Beran et al., 2016; Berends et al., 2016). For example, the "drivers" element, which focuses on uncovering the process of partnership, was found to be missing from the traditional framework that focused more on outcomes (Beran et al., 2016). In addition, as discussed earlier, the MSW sector in developing nations is a complex sphere that is influenced not only by technical issues but also non-technical issues such as the political domain. The *system context* dimension in Emerson et al. (2012)'s framework can help

¹ Emerson et al. (2012) approach cross-boundary governance as a form of governing that extends beyond the conventional focus solely on the formal setting initiated by the public sector. Instead, it involves collaboration across organizations that are not only formally initiated by the public sector (e.g., community-based collaborations).

uncover multi-layered contexts that affect the formation of collaboration. The attributes that are included in Emerson et al.'s (2012) framework are described in the following section.

3.2 The framework

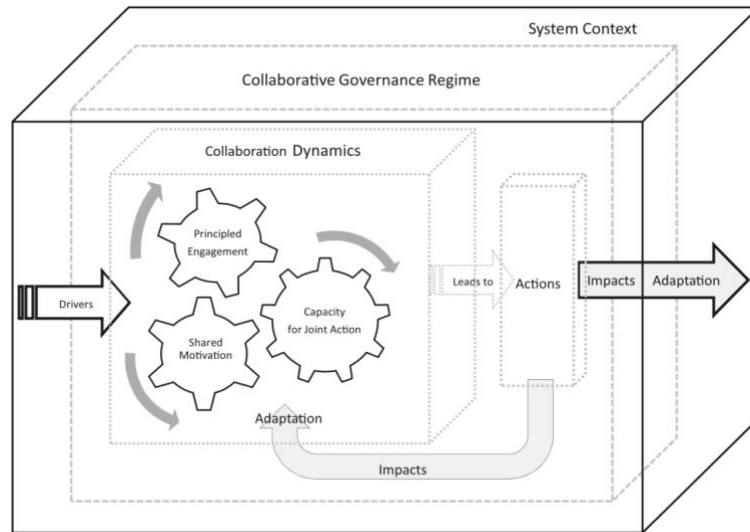


Figure 1. The integrative framework for collaborative governance (developed by Emerson et al., 2012)

The framework is developed from a wealth of literature and research on collaborative governance, spanning a range of disciplines including public administration, conflict resolution, and environmental management (Emerson et al., 2012). The Emerson et al. (2012) review found that different settings of collaborative governance share common crucial characteristics, which are modelled as three nested dimensions (Figure 1). These three nested dimensions are *system context*, *collaborative dynamics*, and *collaborative actions*. These comprehensive elements provide a detailed analysis of how collaboration is established, executed, and produces actions in an iterative process rather than a linear one.

As the objective of the study is to learn how stakeholders in MSW sector collaboratively involve with a focus on collaboration processes, certain selected components of this framework have been chosen (Table 2). The selected dimensions include the *system context*, *drivers*, and *collaborative dynamics*, which comprise *principled engagement*, *shared motivation*, and *capacity for joint action*. The approach chosen is built upon the fact that the selected elements serve as process components that examine the necessary elements for initiating and nurturing collaboration (Emerson et al., 2012), which is the main interest of this study.

In addition, it is important to note that different framework elements can have varying levels of relevance to a particular case study as also noted by Emerson et al. (2012). Also, for example, in their research, Berends et al. (2016) employed this framework; however, not all framework elements are highlighted into their analysis. For instance, they highlighted the "drivers" element while giving less prominence to elements related to "principled engagement." Therefore, the framework is tweaked for the study analysis, considering that certain elements may be more apparent or highlighted than others.

Table 2. Selected elements from Emerson et al.'s model of collaborative governance

System context	Drivers of the collaboration	Collaborative dynamics		
		Principled engagement	Shared motivation	Capacity for joint collaboration
- Resource conditions	- Leadership	- Discovery	- Trust	- Procedural and
- Policy and legal frameworks	- Consequential incentives	- Definition	- Mutual understanding	- institutional arrangements
- Prior failure to address the issues	- Interdependence	- Deliberation	- Legitimacy	- Leadership
- Political dynamics and power relations	- Uncertainty	- Determination	- Shared commitment	- Knowledge
- Degree of connectedness within networks				- Resources
- Historic levels of conflict				
- Socioeconomic and cultural				

3.2.1 System context

Emerson et al. (2012) explained *system context* as an enabling environment that encompasses "the host of multi-layered contexts of political, legal, socioeconomic, environmental, and other influences that can initiate and shape the collaborative governance regime²" (Emerson et al., 2012, p. 8). This system context is not set as a starting condition but rather as a surrounding dimensional space because external conditions may influence the formation, dynamics, and performance of collaboration not only at the outset but at any time during the collaborative governance regime (Emerson et al., 2012). The collaborative governance regime broadly consists of *collaboration dynamics and collaboration actions*, where the *collaboration actions* can also shape and influence the system context. As mentioned earlier, the MSW sector is influenced by non-technical factors such as the political landscape. Therefore, exploring this *system context* element can help identify the features that create an enabling space for collaboration within the MSW sector, as these elements also drive the initiation process of collaboration

The elements of the *system context* include the need to improve, increase or limit resources; the failure to address issues through conventional channels and authorities; the political dynamics and power relations within communities and among/across levels of government; the degree of connectedness within and across existing networks; the historical levels of conflict among recognized interests; and the resulting levels of trust and their impact on working relationships; as well as the socio-economic and cultural contexts (Table 2) (Emerson et al., 2012). The *system context* dimension is also capable of creating both opportunities and constraints and can influence the overall *collaboration dynamics and collaboration actions*.

3.2.2 Drivers of the collaboration

This study selected *driver* elements as it serves as instruments to identify essential elements for initiating collaboration. Emerson et al. (2012) distinguish between *system context* and *driver* elements. The *system context* is a broader enabling environment that provides conditions for collaborative governance mechanisms to take place, while *driver* elements are fundamental components without which the forces for collaboration would not successfully unfold (Emerson et al., 2012). Nevertheless, the *system context* and *driver* elements essentially affect and influence each other. The *driver* elements include *leadership*, *consequential incentives*, *interdependence*, and *uncertainty*.

Leadership characterizes the presence of a committed leader who demonstrates impartiality and a willingness to absorb the transaction costs of initiating the collaborative effort. The leader also should possess a commitment to collaborative problem solving. This role of leader may arise from their position within one of a partner organization, their expertise, or the role they play in the development of the collaboration. The next driver is termed *consequential incentives*, which refers to the internal or external factors that drive the collaboration. This includes problems, interests, resource needs, and opportunities. This *consequential incentives* helps to present the collaboration in a way that others perceive it as significant, which enables different parties to engage with others. *Interdependence* is a desired factor in forming collaborations, where each participant recognizes that they are unable to undertake certain activities without the involvement of others. The final driver is *uncertainty*, which is related to *interdependence*. It refers to situations where each partner lacks a solution individually, creating a need for collaboration to identify ways of addressing the issue.

3.2.3 Collaboration dynamics

Emerson et al. (2012) propose that a collaborative governance regime involves *collaboration dynamics* and *collaboration actions*. This study focuses on the elements of collaboration dynamics, which are considered crucial features that shape and operate throughout the collaboration process, starting from problem definition to direction setting for joint action to determine future collaborative efforts (ibid). The elements include *principled engagement*, *shared motivation*, and *capacity for joint action*. Emerson et al. (2012) see these three components as iterative and influencing each other rather than linear. These interactions shape the dynamics of the collaboration process and play a determining role in subsequent collaborative actions (e.g., action, output, impact) (Emerson et al., 2012).

Principled engagement consists of essential elements in terms of uncovering shared interests and concerns among participants, which Emerson et al. (2012) argued as the first crucial factor in nurturing and shaping collaboration. It explores how values, problem understanding, and a shared sense of action are developed within the collaboration process. *Shared motivation* is more focused on interpersonal and relational aspects between stakeholders during the collaboration process. *Capacity for joint action* involves procedural setting and creating the potential for effective action.

3.2.3.1 Principled engagement

The *principled engagement* includes process elements of *discovery*, *definition*, *deliberation*, and *determination*. *Discovery* is introduced as a process of revealing individual and shared interests and concerns. The next process, *definition*, involves continuous efforts to build shared meaning, clarify expectations of one another, and agree on concepts participants will

use. Communication in the collaboration is a part of the process of *deliberation*, which allows the participants to exchange their opinions, and how they discuss and agree on different interests. The final element is *determination*, which involves creating joint decisions through various types of determinations. These determinations include procedural decisions, such as setting agendas and planning working groups, as well as substantive decisions that are important for achieving key collaboration milestones, such as reaching agreements on primary objectives and final outputs.

3.2.3.2 Shared motivation

Shared motivation is a self-reinforcing cycle of interpersonal and relational aspects in collaborative dynamics. It is often regarded as social capital, the value derived from positive connections between entities (Emerson et al., 2012). This element comprises *mutual trust*, *understanding*, *internal legitimacy*, and *commitment*. *Mutual trust* is introduced as an interpersonal factor that is developed as the collaboration moves forward and each participant shows to be trusted. The mutual trust then develops the *mutual understanding* that is introduced as where the participants understand and respect others' views. The following factor is *internal legitimacy*, where the participants are seen as credible and trustworthy. Those relational elements then lead to creating bonds of shared *commitment*.

3.2.3.3 Capacity for joint action

Capacity for joint action involves setting and creating the potential for effective action. *Capacity for joint action* can also be seen, but not necessarily, as an intermediate outcome of the interaction between *principled engagement* and *shared motivation*. This combines four necessary elements: *procedural and institutional arrangements*, *leadership*, *knowledge*, and *resources*. *Procedural and institutional arrangements* include a range of protocols and structure work management and can be informal and formal rules. The next feature, *leadership*, is that a leader is needed to direct and support the various collaboration operations. For a collaboration to be successful, *knowledge* must be shared among all participants, and this can be generated through the discussion or shared information. Finally, *resources* are essential in the collaboration that may include funding, time, technical and logistical support, and needed expertise, and these can be "leveraged and redistributed" from the collaboration members.

In summary, Emerson et al. (2012) framework provides a detailed analysis of the initiation and development of collaboration. These elements operate in an iterative process rather than a linear one. Considering the objective of this study, which focuses on collaboration initiation and processes in the MSW sector, specific elements that pertain to the initiation and the operation of the collaboration are selected. These elements include the *system context*, *drivers*, and *collaborative dynamics*, encompassing *principled engagement*, *shared motivation*, and *capacity for joint action*. The system context helps uncover a broader enabling environment that enables a climate of collaboration, while the driver elements are fundamental components necessary for collaboration to unfold (Emerson et al., 2012), and they mutually affect and influence each other. Lastly, collaborative dynamics play a vital role in shaping and nurturing the collaboration processes.

4 Methodology

The purpose of this study is to investigate how stakeholders in the MSW sector collaborate, with a specific focus on how collaboration is initiated and what factors are involved in its development and shaping. Case studies are often seen as being subjective and lacking generalizability. However, Flyvbjerg (2006) argues the importance of context and the ability of case studies to provide in-depth insights into specific phenomena. In addition, a case study method can provide explanations and insights into how and why certain phenomena occur within a specific context, which can assist in exploring the underlying factors, mechanisms, and causal relationships associated with it (Flyvbjerg, 2006). Therefore, this approach is useful for studying collaboration in the municipal solid waste sector, which is a complex problem by which utilizing case study could assist in in-depth insights and causal relationship in MSW collaboration. To address this aim, an information-oriented selection single case study is employed (Flyvbjerg, 2006) by utilizing Jakarta's municipal solid waste sector and will focus on the Large-Scale Social Collaboration (LSSC) forum in waste management. The Jakarta case yields rich and informative data relevant to learn about the initiation process of collaboration in the MSW sector.

Jakarta is a metropolitan area conducive to studying its municipal solid waste sector because of the complexity of the sector (i.e., densely populated urban conditions, overflowing landfills, and the prevalence of informal settlements with inadequate waste infrastructure). Furthermore, regarding collaboration in the MSW sector, this city has a long history of diverse types of collaborations in waste management, which in 2022 led to the formation of the LSSC forum. The LSSC forum can provide ample insights to answer the research objectives. Firstly, the LSSC forum is unique because it is not solely initiated by the local government but is run under the government's endorsement, thus providing insight into how collaborative governance in the MSW sector is initiated. Moreover, the forum operates at a regional level and involves a diverse range of stakeholders from private and non-governmental entities to social enterprises, which is suitable for valuable analysis on how collaboration works and operates with diverse stakeholders within the MSW domain.

In addition to the study's aim and research inquiry, a descriptive research design will be employed. This approach is useful for gaining familiarity with the phenomenon, especially in cases where previous work is lacking (Dulock, 1993). The study will systematically describe the elements relevant to the area of interest (Dulock, 1993) using the collaborative governance conceptual framework by Emerson et al. (2012). The analysis focuses on the *system context*, *drivers*, and *collaborative dynamics* elements (i.e., *principled engagement*, *shared motivation*, and *capacity for joint action*) within the framework. This means that the selected component framework is used as the main analysis and is described accordingly.

The primary data sources are obtained from interviews and document analysis. The interview could serve a more targeted approach towards the case study topics and provide valuable explanations (Yin, 2018). One limitation of research interviews is that participants may be reluctant to provide a comprehensive account of the case study, and it tends to be influenced by the participants' perspectives and interests regarding the topic under question (Czarniawska, 2014). This limitation is addressed by conducting interviews with different stakeholders in the MSW sector to synthesize any potential conflicting accounts. However, interviews still hold the potential to gather knowledge from interviewees who may be limited in expressing themselves openly in real case within MSW practices, but their perspectives can still be heard in the research discourse (Czarniawska, 2014). The interviews are

conducted with stakeholders involved in the LSSC forum. Additionally, to create a comprehensive understanding of collaboration in MSW, document analysis is also carried out. The document analysis provides a more transparent analysis of how participants are actually performing in the real case without being dependent on being asked by the researcher (Silverman, 2014). Secondary data is derived from relevant documents and websites related to Jakarta's municipal solid waste sector. Secondary data is derived from relevant documents and websites related to Jakarta's municipal solid waste sector.

4.1 Interviews

The interview method is used to attain the research objective and research answers. Interviews serve as a beneficial method to gain comprehensive insight into the interests of this thesis, specifically the collaboration process and dynamics in the MSW sector. This method enabled the study to be more targeted towards the case study topics and provided valuable explanations (i.e., the "hows") of key elements in the case being explored (Yin, 2018). As the interest is to learn about how collaboration in the MSW sector works, conducting interviews is very effective in providing more targeted explanations for the key elements that influence collaboration in MSW sector waste management.

The interviews were conducted in an in-depth one-on-one format that is semi-structured format. This approach allowed for follow-up questions and enabled interviewees to express themselves in their own words and context (Billups, 2021). The guiding questions were based on the elements of interest in Emerson et al. (2012)'s framework. The interviews were conducted in Bahasa Indonesia and virtually via Zoom, with interviewees' consent, and recorded. If any interview answers were unclear, clarification was obtained through personal communication via WhatsApp. Initially, a preliminary interview was conducted with the coordinator of the forum as they were found to be the key actors in the LSSC forum. Later, a snowball sampling method was used to select subsequent respondents. The snowball sampling approach involves generating a pool of participants by asking individuals who are connected to or aware of others with specific characteristics relevant to the research for referrals (Biernacki and Waldorf, 1981).

The interviews were conducted between March and May 2023, and a total of 6 interviews were conducted with 5 organization representatives involved in the LSSC forum. The representatives were from the government, NGO, private actors, and social enterprise (see Table 3). The selected organizations are the government and NGOs who act as coordinators in the LSSC forum. The chosen interviewees in those organizations (i.e., Interviewee 2, Interviewee 3, Interviewee 4) are individuals who are in charge and directly involved in the initiation and development of the LSSC forum

Table 3. List of interview respondents

No	Interviewee organization	Type of organization in MSW sector	Citation interviewee
1	Jakarta Environmental Agency	Environmental sectoral agency	Interviewee 1
2	Jakarta Environmental Agency	Environmental sectoral agency	Interviewee 2
3	Wahana Visi Indonesia	Non-governmental organization	Interviewee 3

4	Divers Clean Action	Non-governmental organization	Interviewee 4
5	Rekosistem	Social enterprise	Interviewee 5
6	Unilever Indonesia	Private actor	Interviewee 6

To systematically organize the interview results, the transcripts were coded and categorized based on the elements that the study identified as important to the collaboration approach outlined in Emerson et al. (2012)'s framework, as well as by identifying common and recurring themes mentioned by the respondents. The data extraction process was facilitated by using Atlas.ti, a qualitative data analysis software, to aid in labelling and sorting the thematic elements.

There may be limitations in synthesizing data for certain elements in the framework from the selected interviewees. For example, interviewee responses might lead to bias in understanding the system context element or discovering shared interest in principle engagement. However, document analysis through the minutes of meeting and policy documents can help reduce such biases, which were also further confirmed in follow-up communication with the interviewees.

4.2 Document analysis

Documentation analysis is another method utilized in this study, which is particularly suitable for a case study approach where full access to documentation is available (Yin, 2018). Document analysis allows the thesis to study naturally occurring texts that capture participants' real-world actions and behaviours without relying on direct questioning by the researcher (Silverman, 2015). This method provides a comprehensive view of how the real case of collaboration unfolds over a period of time. The document analysis intends to study how the dynamics of the collaboration case occur, such as the process of discussion and setting joint actions, which can be accessed through minutes of meetings, for example. Two document analyses were conducted. One focused on the LSSC document forum, which included invitations, meeting minutes, meeting agendas, presentation files from the event, meeting terms of reference. The minutes of the forum are the result of the forum's discussion, where the contents differ from one forum to another due to varying forum goals. The minutes includes the discussion points, such as the speaker key takeaway points or summary of smaller group discussion points.

The analysis of the forum documentation is necessary because it can aid in synthesizing the collaboration process in the case study that cannot be captured from the interviews. This document analysis allows a detailed and coherent view of the situation being studied (Yin, 2018). From these forum documents, the study can also understand the process and the methods used to discover stakeholders' interests and learn how that process operates in the setting of the LSSC forum. The forum coordinators uploaded the document forum to Google Drive, which is accessible to all forum participants. There are three main document folders created based on the forum dates listed in Table 3.

All of the document forums are in Bahasa Indonesia. This approach can be biased depending on the document's author (Yin, 2018). Nevertheless, in case of any ambiguity and unclarity in the documents, they are clarified with the forum coordinators during interviews and personal communication on WhatsApp. Another document is comprised of relevant regulatory and policy documents that were informed by the interviewee during the interview and mentioned in the meeting materials. These documents are generally related to collaboration or waste regulations in Jakarta.

Table 4. List of document forums

Date of the forum	Document content	Citation
First forum: June 30, 2022	<ul style="list-style-type: none"> - Minutes of the first forum initiation meeting - Invitation, terms of reference, agenda - Materials for the forum: presentation and discussion tools - Minutes of the forum, approved by Jakarta Environmental Agency - Attendance list 	First forum documents, 2022
Second forum: September 21, 2022	<ul style="list-style-type: none"> - Minutes of the preparation for second forum - Invitation, terms of reference, agenda - Materials for the forum: presentation, relevant MSW regulations, discussion tools - Minutes of the forum, approved by Jakarta Environmental Agency - Attendance list 	Second forum documents, 2022
Third forum: February 23, 2023	<ul style="list-style-type: none"> - Minutes of the preparation for third forum - Invitation, terms of reference, agenda - Materials for the forum: presentation and discussion tools - Minutes of the forum, approved by Jakarta Environmental Agency - Attendance list 	Third forum documents, 2023

5 The case study: Jakarta municipal solid waste sector

5.1 The setting of Jakarta



Figure 2. Jakarta's position in Indonesia (Nationsonline.org, n.d.) and its five municipalities (Lesniewski, 2022)

Jakarta, is Indonesia's capital city and economic center and home to 11,07 million inhabitants (World Population Review, 2022). Jakarta occupies an area of roughly 664 km² of land and 6,977 km² of the sea (Martinez and Masron, 2020). Moreover, Jakarta is the sixth most populous province in Indonesia and home to 3.94% of Indonesians (ibid). Furthermore, the metropolitan area of Jakarta, called Jabodetabek, is the second-most populous urban agglomeration globally (Edelman and Gunawan, 2020). Rapid urbanization in Jakarta has given rise to many informal settlements and slums in Jakarta. The physical condition of the slums can be in the location of residing in illegal dumping near rivers or sea or the form of densely populated areas with narrow and unpaved roads. Those conditions left them to live in inadequate urban infrastructure and services, one of which is waste collection (Alzamil, 2017).

In terms of the governance structure of Jakarta, it consists of the executive and legislative branches (Martinez and Masron, 2020). The executive branch, which is the Provincial Government, is led by a governor and vice governor. They are responsible for the strategic governance of Jakarta. On the other hand, the Provincial Legislature of Jakarta holds significant legislative powers, including budgetary and supervisory functions. Jakarta is divided into five administrative municipalities: South Jakarta, East Jakarta, Central Jakarta, West Jakarta, and North Jakarta. Unlike other provinces in Indonesia, where municipalities have their own autonomy rights, the municipal government in Jakarta (headed by the mayor) is elected by the Jakarta governor. This results in a centralized regional nature for the Jakarta government, with less autonomy granted to its municipalities (Martinez and Masron, 2020).

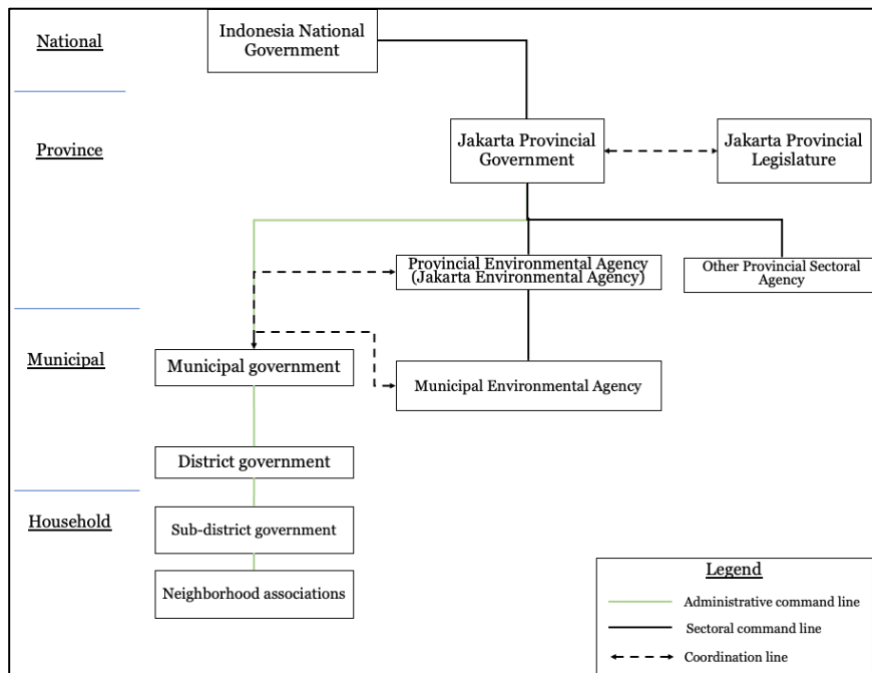


Figure 3. Governance structure of Jakarta (modified from Martinez and Masron, 2020 and Pasang et al., 2007)

The governance structure of Jakarta can be divided into two functions: administrative and sectoral (Figure 4). The administrative function deals with administrative issues related to the municipal area, such as population and civil registration, as well as land permits. On the other hand, the sectoral function focuses on specialized areas such as education, food, environment, finance, and others. The responsibility for managing municipal solid waste falls under the jurisdiction of the Jakarta Environmental Agency. Within the Jakarta Environmental Agency, there are subdivisions of municipal environmental agency for each municipality, which are under the control of the Jakarta Environmental Agency rather than the mayor (i.e., municipal government). The Jakarta Environmental Agency (JEA) is fully responsible for environmental matters in the region, including issues related to solid waste, water, air, and wastewater (Jakarta Environmental Agency, 2021).

5.2 MSW sector and its collaboration in Jakarta

5.2.1 General overview of Jakarta MSW sector

In terms of the municipal solid waste domain, like many cities in developing countries, the waste management schemes in Jakarta still follow a traditional collect-transport-dispose system (Pasang et al., 2007). The municipal waste in Jakarta primarily comes from households, public markets, commercial sectors, streets, and parks, with 58% of the waste generating from household sector. In Jakarta, waste treatment facilities that focus on source reduction are still very few. Thus, every day, Jakarta's inhabitants produce 7,700 tonnes of waste, which accounts for approximately 75% of the total waste generated and is mostly handled through disposal methods (Pasang et al., 2007). This has resulted in Jakarta's only landfill, Bantargebang landfill, exceeding its capacity and it should have been closed in 2021 (Jakarta Environmental Agency, 2021).

Recycling initiatives in Jakarta are still in small-scale forms, such as district-level waste banks or small-scale aerobic digesters, composting, and manual segregation at transfer stations by informal sector. Nonetheless, only a small percentage of waste is managed through those initiatives (Pasang et al., 2007; Aprilia, 2021). On the other hand, households in Jakarta still lack awareness of the general waste and littering problems (Abdulnabi Ali et al., 2023). These drawbacks have prompted a shift in MSW governance in Jakarta towards involving stakeholders in collaborative efforts. Stakeholder participation has long been present in Jakarta, often at the neighbourhood to district levels, with the support of NGOs or the private sector. These initiatives commonly manifest in the form of waste banks, waste segregation education, and support in terms of waste logistics or infrastructure for specific neighbourhoods or areas (Pasang et al., 2007; Abdulnabi Ali et al., 2023). However, based on preliminary interview with the Jakarta Environmental Agency, it was found that collaboration is limited to a single organization working with the government. Sometimes, if one institution has established cooperation with certain neighbourhood, other organizations are unable to participate there. This subsequently influenced the formation of Large-Scale Social Collaboration in the Jakarta MSW sector back in 2021, which then is the primary focus of the case study here.

5.2.1.1 The Large-Scale Social Collaboration platform (LSSC platform) in municipal solid waste sector

During the pandemic in 2020, there was an extensive emerging collaboration initiated by the Jakarta Provincial Government called *Kolaborasi Sosial Berskala Besar (KSBB)*, or Large-Scale Social Collaboration (LSSC), responding to the Covid-19 situation (platform link: <https://corona.jakarta.go.id/>) (Jakarta Smart City, 2020). The LSSC is carried out as a collaborative platform by Jakarta Provincial Government, which was later adopted by Jakarta Environmental Agency, placing more emphasis on the solid waste sector. The LSSC platform in the solid waste sector is an online-based donation platform to accommodate interested private or non-government entities to support the sector through campaigns or waste equipment, which is launched in 2021 (platform link: <https://ksbbpersampahan.com>) (LSSC platform, 2021).

The type of stakeholders in the LSSC platform is differentiated into collaborator and aggregator. Collaborator refers to stakeholders providing resources, such as funds, infrastructure, logistics, or human resources, to support waste management initiatives. They act as donors who contribute to the cause. On the other hand, the aggregator is a facilitator or intermediary that helps the collaborator to realize their donation by coordinating and organizing the resources provided. For example, the aggregator may assist in finding suitable equipment or infrastructure based on waste management specifications or identify volunteers or human resources to support the waste management efforts.

Stakeholders who have already implemented their solid waste program or those who are planning to implement one can register for the programs on the LSSC platform. During its initial launch in 2021, 18 collaborators, comprising multiple stakeholders from private sectors, NGOs, state-owned companies, and social enterprises, registered their solid waste programs on the platform. Unfortunately, although there was great enthusiasm at the first launch of the LSSC of solid waste, the initiative has become lacklustre over time until the beginning of 2022, that only added three collaborators.

5.2.1.2 The Large-Scale Social Collaboration forum (LSSC forum)

Though not officially a continuation of the LSSC platform, the initiative of the LSSC platform has raised concerns for the Jakarta Environmental Agency (JEA) to not only have each collaborator work independently but also how these collaborators can work across sectors. This concern led to the initiation of the LSSC forum that was supported by the NGOs role. Over time, the forum has evolved to discuss not only solid waste management but also other environmental issues, such as air and water. Initially, the formation of the forum was not part of the government plan, but as time passed, it gained endorsement from the government. The establishment of the LSSC as a multi-stakeholder forum is officially acknowledged under the Decree of Jakarta Environmental Agency e-0064/2022. The purpose of the LSSC forum is to:

1. provide input to the government on environmental management,
2. support government work plans with independent and collaborative actions in environmental management, and
3. invite participation from various stakeholders in environmental management.

The forum is expected to be held every three months and has been conducted three times at the provincial level, that are on June 30, 2022; September 21, 2022; and February 23, 2023. The LSSC forum is the main focus of interest of the study analysis, focusing on solid waste management forum discussion-related issues (Forum document, 2023).

6 Results and analysis

In this section, the study demonstrated the key results and findings analyzed from the case study in Jakarta and its Large-Scale Social Collaboration (LSSC) forum in the MSW sector. The study aims to understand the initiation process and key factors in driving the collaboration and the operation of the collaboration process. Therefore, this section is structured into three main themes of analysis. First, I display the findings and analysis regarding the system context referred to as enabling conditions necessary in setting a collaboration climate in Jakarta. Second, I present the specific factors that drive the LSSC to occur. Third, I reveal the key dynamic factors operating the LSSC forum's process. Last, a concluding summary is presented.

6.1 System context: Enabling conditions for collaboration in Jakarta's MSW sector

Within the context of MSW collaboration in Jakarta, several key enabling factors that serve as the surrounding dimensional space for collaboration have been identified. These factors create the conditions necessary for collaboration or encourage its occurrence in the Jakarta case. These enabling factors align with the system context elements described in Emerson et al.'s (2012) framework (see section 3.2.1). The identified key enabling factors are as follows:

1. Socio economic issues and the limited resource conditions
2. Influences from political stances and policy frameworks
3. Previous collaboration in the LSSC platform

These three key enabling factors are found to be interconnected and mutually influencing each other at various points. The analysis is primarily based on interviews conducted with the Jakarta Environmental Agency (JEA) and findings from document reviews.

Socio-economic issues and the need to improve resource conditions

The first enabling factor is the socio-economic issues, as conveyed by the Jakarta Environmental Agency

"Jakarta is a densely populated city with informal and slum areas lacking proper waste management infrastructure. This results in low awareness regarding solid waste management, particularly in waste segregation at the source. Additionally, Jakarta has a very dense population, and there are still many areas where waste collection services are inadequate."
(Interviewee 1)

JEA sees this situation as urgent, thus necessitating collaboration with other stakeholders, especially regarding education and logistics for waste collection. Furthermore, environmental issues play a crucial role in intensifying the urgency for collaboration. Two primary environmental issues include Jakarta's landfills' limited capacity and marine debris in Indonesia. As stated by JEA

"The Bantargebang landfill, the only landfill in Jakarta, is already full and was supposed to be closed in 2021, making collaboration absolutely necessary because waste continues to be generated every day, and our landfill is no longer sufficient." (Interviewee 1)

These socio-economic issues are observed to interact with the limited resources faced by the government. The Jakarta Environmental Agency acknowledged that the agency still lacks three important resources, which necessitate the involvement of other stakeholders to supplement the limited resources and capacities (Interviewee 1, Interviewee 2). The three key

resources that are limited are budget, human resources, and knowledge. Therefore, these limitations create broader conditions that require collaboration in the MSW domain in Jakarta.

The first limitation is budgeting constraints. As conveyed by Jakarta Environmental Agency

"the JEA's budget for environmental programs is very small, not even reaching 1% of the total budget for all environmental issues, let alone waste management sector" (Interviewee 2).

Moreover, the government's budgeting system is inflexible and rigid, as budgets for the following year must be finalized in the preceding year. Consequently, urgent issues or those not addressed in the previous year cannot be directly accommodated in the current year's budget. While budget adjustments can be made during the current year, such procedures involve bureaucratic decision-making at higher levels and may take a significant amount of time (Interviewee 2). Therefore, these budgeting constraints create a situation where collaborative approaches are needed for municipal solid waste issues. For example, as the JEA stated

"The private actors from their corporate social responsibility (CSR) programs have a more flexible budget. Thus, if an area in need of waste logistics is identified, private actors can contribute in that area" (Interviewee 2).

The second resource condition that is found to be lacking is human resources. Due to the large population of Jakarta, the JEA acknowledged that they alone could not reach all areas as they have limited human resources internally (Interviewee 2). JEA emphasized the importance of human resources in raising awareness among Jakarta's population about waste management practices, such as waste segregation and proper disposal (Interviewee 2). This demonstrated by JEA as

"..for example, collaboration with other municipal solid waste actors, such as NGOs or universities, can provide resources to engage volunteers who can educate the population about waste segregation practices through door-to-door campaigns." (Interviewee 2)

Another aspect of human resources needed is related to waste management operations. As Jakarta is a megacity, the existing government's waste operators could not cover all Jakarta areas, which is further exacerbated by the insufficient budget allocation in the environmental program. Hence, collaborating with stakeholders operating in the waste collection system can fill the inadequate waste collection coverage currently faced in Jakarta (Interviewee 2).

The third necessary resource is contextual knowledge, which is highlighted as essential for the creation of targeted waste management policies. The JEA acknowledges that when creating policies or developing strategies, they may not have enough perspective or contextual understanding at the ground level as stated by JEA

"we might lack views from the outside, from the people we govern, about how they respond and their needs from government regulations." (Interviewee 2)

The need to enhance contextual knowledge is also emphasized by Divers Clean Action, as one of the NGOs actively involved in waste collaboration Jakarta, where their program's focus is on a community-based approach. They highlight the importance of the government having grassroots-level knowledge, as stated

"As ultimately, it is households and communities that will implement waste management regulations. For example, regulations for waste segregation at source. However, if the policies are not targeted correctly, they may not be effective." (Interviewee 4)

Therefore, the contextual knowledge barrier underscores the necessity for the government to involve the stakeholders who are the target of the policies to ensure the policy's effectiveness and applicability.

Influences from political stances and policy frameworks

The second key enabler is the influence of political dynamics and policy frameworks. The pressure, in terms of policy frameworks, is initially observed by JEA through the Jakarta Regional Strategic Policy 2020. In this policy, the Jakarta Environmental Agency has been tasked by the Provincial Government to collaborate with five MSW stakeholders. However, the policy's success is solely measured based on the issuance of collaboration agreements with the parties, but not beyond that, as stated by JEA

"Yes, we have regulations regarding collaboration, but they are not significant because at that time, we [JEA] only need to perform as merely how many 'documents' agreement have issued." (Interviewee 2)

Nevertheless, the enforcement of the Strategic Policy has motivated JEA to be more open and proactive in engaging with stakeholders. On the other hand, a new regulation on community-level waste management (Governor of Jakarta Regulation 77/2020) has been issued, and JEA has a role in disseminating it to the district government and neighbourhood associations, who are the target of the policy. Governor of Jakarta Regulation 77/2020 mandates the district and neighbourhoods to have their own waste management, including the provision of solid waste facilities and infrastructure. However, during the dissemination of this regulation, JEA realized that their budget is insufficient to fulfil the demand for MSW facilities in all neighbourhoods, as the budget of neighbourhood associations is also very limited.

Political dynamics is another critical factor that fosters a conducive environment for collaborative governance in the Jakarta's MSW sector. This lies in the strong vision of the Jakarta governor at the time, who prioritized collaboration as an essential aspect of governing the city (Interviewee 1). This commitment is evident in the issuance of Governor of Jakarta Regulation 24/2020 in 2020, which established the Jakarta Development Collaboration Network and created a government task force focused on accelerating collaboration across various aspects of Jakarta's development (JDCN, 2020). While collaboration has been present in Jakarta for some time, it has primarily involved individual actors working independently with the government. However, the governor's vision and the support provided by the task force have enabled collaborations to be more extensive and foster interaction among various organizations. This strong vision has motivated the JEA to adopt a more robust collaborative approach to addressing MSW issues (Interviewee 1, Interviewee 2). As a result, the governor's political stance has played a significant role in establishing the Large-Scale Social Collaboration platform (LSSC platform) in Jakarta during pandemic, which later produced an LSSC platform specific to the MSW sector.

Previous collaboration networks in the LSSC platform

The third key enabling condition is the existence of the LSSC platform. The issuance of Governor of Jakarta Regulation 24/2020 took place slightly before the onset of the pandemic in Indonesia. This was seen as a catalyst for collaboration in Jakarta and presented a significant opportunity to enhance collaboration in the city's MSW sector. The pandemic situation in 2020 had a severe impact on the budget of the Jakarta Provincial Government, which was nearly negative. As a result, the Provincial Government engaged in extensive collaboration with interested stakeholders to distribute COVID-19 kits to affected

neighbourhoods.² This collaborative initiative at the provincial level subsequently influenced other sectoral governments, including the Jakarta Environmental Agency. Subsequently, in 2021, JEA established an online-based donation platform called the LSSC platform³ to facilitate stakeholders who were willing to support the solid waste sector (Interviewee 1; Interviewee 2).

The LSSC platform in the solid waste sector is an online-based donation platform to accommodate interested private or non-government entities to support the MSW sector through campaigns or waste equipment (LSSC platform, 2021). Stakeholders who have already implemented their solid waste program or those who are planning to implement one can register for the programs on the LSSC platform. During its initial launch in 2021, 18 collaborators, comprising multiple stakeholders from private sectors, NGOs, state-owned companies, and social enterprises, registered their solid waste programs on the platform. Although there was great euphoria during the initial launch, with 18 stakeholders joining at the beginning, only three new collaborators joined until early 2023 (First forum documents, 2022).

The JEA reflected on the decrease in participation in the LSSC platform due to a limited number of stakeholders who were concerned about environmental issues, as stated by the JEA:

"It was observed that the same stakeholders were involved, and the participating stakeholders did not yet feel the benefits [of LSSC forum], except for gaining exposure." (Interviewee 2)

Additionally, during that time, the pandemic situation was considered an immediate and trending concern, as later emphasized by the JEA:

"During that time, the pandemic was of utmost urgency, and the impact of distributing Covid-19 aid was tangible. Additionally, the concept of large-scale collaboration was appealing. However, when it comes to environmental issues, the benefits were not immediate and perhaps not perceived as urgent compared to Covid-19." (Interviewee 2)

Despite the decrease in participation in the LSSC platform, the initiative has facilitated the establishment of a stakeholders network in the MSW sector, which this network is later observed to play a crucial role in influencing the collaboration process within the collaboration forum, the LSSC forum.

To conclude, the three identified key enabling factors are analysed as a surrounding dimensional space that creates and enables conditions for collaboration in Jakarta to occur (Figure 4). Those key factors are seen as interlinked, affecting each other. For example, the socio-economic conditions in Jakarta encourage the government to provide a proper waste management system, but on the other hand, the government is having constraints with its budgeting and human resources. Another observed interaction is that the governor's political stances enabled the previous collaboration on the LSSC platform to happen.

² <https://corona.jakarta.go.id>

³ <https://ksbbpersampahan.com>

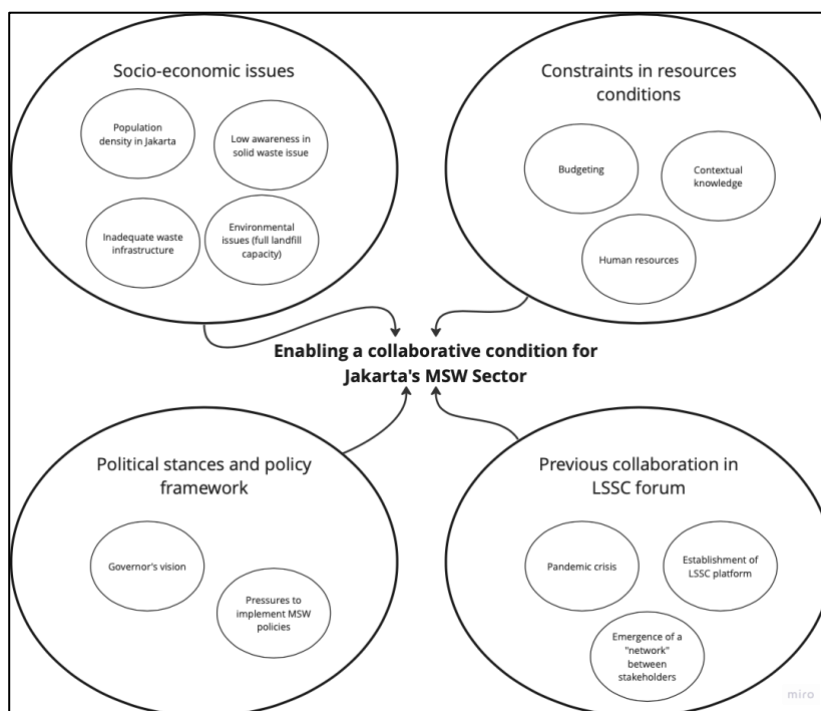


Figure 4. Key enabling conditions for collaboration in Jakarta’s MSW sector

6.2 Drivers: Factors that established the LSSC forum

Emerson et al. (2012) distinguish the *system context* and *driver* elements. The *system context* is appreciated as a broader enabling environment that provides conditions for a collaboration climate to take place. Meanwhile, the *driver* elements are fundamental components that play a significant role in the actual establishment of the collaboration. Here, the actual collaboration being analysed is the Large-Scale Social Collaboration (LSSC) forum. In addition, it is worth noting that Emerson et al. (2012) stated that the system context and driver elements have a mutual effect on one another.

It was discovered in this study that the earlier key enabling conditions have performed as an appropriate condition for the LSSC forum to take place, which the described “*drivers*” below substantially set the LSSC forum to go into action. Therefore, the analysis below primarily focuses on investigating the initiation process of the LSSC forum, which pieces of information derived from interviews. The study identified that *leadership*, *consequential incentives*, and *interdependence* elements (Section 3) are more prominently featured in the establishment of the LSSC forum. The *leadership* is observed in the form of an identified organization, non-governmental organization (NGO), that has an essential role in initiating and helping secure resources for the LSSC forum. Then *consequential incentives* and *interdependence* elements are seen as interlinked, which the actors in the LSSC forum see the MSW handling system varies from the collection at source to the recycling process. Thus, the actors are aware of the need for a space for exchanging knowledge, as they recognize that their organization alone cannot be independent in their solid waste intervention.

The initiator of the collaboration forum (LSSC forum)

Leadership roles in initiating the LSSC forum were found through an NGO community-based waste program called PHINLA, which is run by Divers Clean Action (DCA) and Wahava Visi Indonesia (WVI) (Interviewee 1, Interview 3). The previous key enabling conditions worked to awaken JEA to consider governing the MSW sector into a collaborative action,

which then met with the interests of the PHINLA program. On the other side, the earlier collaboration on the LSSC platform allowed the JEA to have the list of collaborators, but the JEA considered that the setting of actors on the SLSC platform was more working in a separate area, but they do not collaborate one another, as stated by JEA respondent:

".... it [the LSSC forum] started with LSSC platform, which led us to have a list of collaborators. We [JEA] had already been thinking of connecting these waste management collaborators. So that we can form a solid team, who knows, we [and those stakeholders] can collaboratively work on projects together for which each stakeholder fills a role according to their resources and capacities. Currently, some collaborators are only interested in a one-man standing approach." (Interviewee 1)

The government's reflection then perfectly meets the interests of the PHINLA program. Two noteworthy elements are found to enable NGOs and the JEA to carry out the LSSC forum to exist. Firstly, the NGOs are willing to advocate for concerns beyond their interests and program. The NGOs have been working in Jakarta's MSW sector since 2018 and have realized that many solid waste actors, not just NGOs, are interested and working together in the field. This further drove their interest to initiate a collaborative forum with the JEA, as stated by a respondent from WVI

"We thought then why we do not work collaboratively also with other MSW actors by making the forum so that the MSW advocacy can be stronger." (Interviewee 3)

Additionally, the Governor of Jakarta Regulation 77/2020 aligns with the program's goals. These conditions influenced the NGOs team to propose the idea of a collaboration forum to the JEA, which was well-received by JEA's realizations about connecting stakeholders they already had from the LSSC platform (Interviewee 2). Secondly, the good credibility of WVI and DCA work that has existed for years with JEA increased the agency's trust to collaborate and initiate this forum (Interviewee 1). As a result, the PHINLA program sets the initial commitment to secure resources to organize the event, including expenses related to food and venue rental and human resources to plan and execute the first forum effectively with the JEA team as at that time, JEA did not have a budget for carrying such forum.

Networking as an interdependent means for exchanging knowledge

Another observed essential driver that influences the establishment of the LSSC is the need for networking to share knowledge. Through interviews, it was found that various stakeholders, including the government, private actors, NGOs, and social enterprises realize that waste management is a complex system from upstream to downstream. It is also examined that they have different interests in the waste management system, and to achieve their interests, they need to collaborate with other organizations where they found the cause of the LSSC forum, enabling space for them to share knowledge through networking. The government's interest in networking is already analysed in the system context section; for instance, to improve the JEA's resource conditions.

On the other hand, the private actor is driven by their company's vision, legal compliance, and geographical proximity to Jakarta (Interviewee 6). Collaborating with other stakeholders enables the company to work towards their company's goals and objectives in a more effective manner. For example, they have set a target for maximum recycling due to the harmful effects of plastic waste. However, they realize that they cannot achieve their vision of a fully circular plastic alone (Interviewee 6). Another motivation for private actors is the acknowledgment of the existence of legal and ethical responsibilities toward the issue of municipal solid waste. They know that the government has the authority to address this issue,

and the private sector is responsible for following the Jakarta government rules. Therefore by networking with the government's forum, they comply with one of their responsibility. Furthermore, their geographical and operational closeness to Jakarta has driven them to work collaboratively, as most of their customers are in Jakarta. Thus, they have responsibility for Jakarta's waste issue.

NGOs, on the other hand, emphasize the importance of avoiding duplication and synergizing efforts exercised by different MSW stakeholders (Interviewee 3 and Interviewee 4). By networking waste actors, resources can be utilized efficiently and effectively, resulting in synergy. Furthermore, the NGOs believe that collaborating with the JEA is crucial for the sustainability of their programs. Without the government's awareness of the NGOs' work, MSW policies may not align with the MSW initiatives that they have built on the ground. The NGOs also work closely with local champions in their communities. By connecting with the government, they believe that these champions can receive greater recognition and become examples and role models for other areas, which also the NGO's efforts can be replicated and scaled up by the government (Interviewee 4).

Meanwhile, social enterprises have realized that various types of waste are difficult to handle, such as organic or electronic waste, and their collection system should also consider such waste. However, only a few actors are working to tackle such waste (Interviewee 5). In addition, despite their scope being limited to waste collection, they understand that the collected waste should be further processed. Subsequently, they notice they need a network to expand their connections with actors delivering different waste interventions. Besides, there is a need to scale up their business, which requires obtaining the necessary infrastructure, permits, and recommendations for new residential areas. By collaborating with the Jakarta Environmental Agency, they can gain easier access to these resources.

6.3 The collaboration forum dynamics

The dynamics analysis here is referred to collaboration dynamics (see Section 3) that correspond to the processes that occur during collaboration, from problem definition to direction setting for joint action (Emerson et al., 2012). The collaboration dynamics include elements of discovering the principled engagement, interpersonal and relational factors that shaped the shared motivation, and arrangements for setting joint actions. These elements work together in a causal relationship and are important in shaping and nurturing the collaboration process. They are later significant in determining collaborative actions (e.g., action, output, impact) (Emerson et al., 2012). Below are illustrated dynamics that operate at the LSSC forum and how they shape the forum. The analysis is derived from findings from interviews and document analysis.

6.3.1 Stakeholders participated in the LSSC forum

Emerson et al. (2012) argued that one crucial aspect that influences collaboration dynamics is the stakeholders involved. Hence, this section first examines the stakeholder participating in the LSSC forum. In discussing the participants, it is interesting to note that, generally, there are two forms of stakeholder involvement in the LSSC forum, that are stakeholders involved as *coordinators* and *participants*. The *coordinators* are the stakeholders in preparing and directing the forum agenda, including determining discussion topics, methods, invited participants, and facilitating resources. Meanwhile, *participants* are stakeholders invited to the forum who have a more guest-like nature in the forum.

In the first forum, WVI and DCA, through the PHINLA program, along with the Jakarta Environmental Agency (JEA), were found to be the main initiators of the LSSC forum, were then seen as the first “informal” main coordinators who directed the first forum (First forum document, 2022). They determined the objective and setting of the forum, including who would be invited and how the agenda and discussion would flow. After the first forum, there was an interest in expanding the scope of the forum beyond the MSW issue, proposing the forum to cover climate change and air and water issue domains. This resulted in the addition of new domains and new stakeholders assigned as coordinators of the forum, where the role of the coordinators was distributed into each domain. This resulted in WVI as the main coordinator of the forum, with DCA as secretary, WWF as the coordinator for the MSW domain, ICLEI as coordinator for climate change, and Vital Strategies as coordinator for air and water clusters (Interviewee 2). In addition, relevant divisions under the Jakarta Environmental Agency accompany each coordinator (ibid). These coordinators and the forum were then formally institutionalized as an official decree under the Decree of Jakarta Environmental Agency e-0064/2022. Afterward, for the second and third forums, those forum coordinators become the main stakeholders along with the JEA who design the setting of the forum.

On the other hand, the participants in the LSSC forum are stakeholders who are invited to attend. The study observed that the previous LSSC platform network greatly impacted the list of participants who should be joined for the first forum. The study also observed that the coordinators are stakeholders with a good waste management actors network. Therefore, as the forum has evolved, new stakeholders have been added to the second and third forums. The stakeholders invited to attend are those known to have programs in the MSW sector or who have the potential to collaborate. Throughout the three forums that have been held from 2022 to 2023, the participants attending consist of about 20-30 institutions, are composed of a broad range of stakeholders, including the private sector, NGOs, social enterprises, academic institutions, the Jakarta provincial government, and relevant divisions under JEA. The private sector participants are diverse, from companies in the FMCG industry, logistics industry, banks, and financial services with corporate social responsibility (CSR) donors.

Meanwhile, types of social enterprises joined are those working in various areas of MSW handling, such as waste collection and recycling initiatives. In scoping the participants, the LSSC forum limits the participation of civil society organizations, such as waste banks or neighbor associations, who are typically considered key stakeholders in MSW programs. This is because these organizations are identified as potential beneficiaries of the collaboration activities that will take place later. In other words, they are (i.e., civil society organizations) mapped as targeted stakeholders of collaborative actions produced later rather than active participants in the ongoing forum discussions.

6.3.2 The process of discovering *principled engagement*

Another essential factor in nurturing collaboration is principled engagement, which serves as a collaboration dynamic in discovering and understanding shared interests and concerns (Emerson et al., 2012). As analyzed earlier, the LSSC forum participants are diverse and broad. Thus, the coordinators struggle to discover the shared interest among those stakeholders (Interviewee 2). However, the process of discovering participants' interests in the LSSC forum is employed by mapping the stakeholder programs based on the existing MSW regulations and strategies in Jakarta. This discovery process is developed through the presentation of the Jakarta Environmental Agency in the first forum. First, the JEA introduces

the existing Governor of Jakarta Regulations related to the MSW domain, such as regulations on community-level waste management, solid waste management obligations in commercial areas, and the obligation to use environmentally friendly shopping bags. This is followed by presenting existing programs done by the JEA and some partnership backgrounds between JEA and other stakeholders, such as LSSC platform. Then, the Waste Management Strategic Plan 2023-2026 was introduced, later observed as the umbrella policy to build a shared sense of action (First forum documents, 2012). Afterward, the mapping is done by distinguishing the stakeholders into the concept of waste minimization and waste handling. Waste minimization includes waste reduction, reuse initiatives, and waste upcycling initiatives, for which this approach is more concentrated on education initiatives that raise awareness. Meanwhile, waste handling focuses on waste collection, treatment facilities (e.g., material recovery facilities), and waste transport to landfills.

Discovering shared interest is done through smaller discussions, with each group comprising 4-6 institutions. These small groups are given space to share their programs related to waste minimization and waste handling in 2022, including sharing lessons learned and challenges encountered by stakeholders during program implementation. Later, the smaller discussion discussed potential collaborations in 2023, including their resources and expected support from JEA and other participants. Finally, the participants are asked to express their expectations for the LSSC forum.

Observing the results of discussion, there is a notable amount of interest from the participants. The mapping of programs carried out in 2022 and planned for 2023 by the participants is extensive and diverse. The initiatives range from raising awareness and community empowerment through public socialization, public webinars on waste management, creation of waste management modules, upcycling and waste treatment programs such as black soldier flies and used cooking oil, and refill initiatives like the development of refill stores. However, it has also been found that the process of elaborating the interests is still challenging for the coordinators as some participants tend to stray off-topic when discussing their ideas, and the concepts of waste minimization and waste handling are also quite broad (Interviewee 2).

Another interesting discussion results are the expectations of the forum participants. In the LSSC forum, participants expressed a wide range of hopes. The hope to have this forum as "a space for sharing" is analyzed as the significant "shared" incentive expected by the participants. This includes making the forum a space for participants to share knowledge and network (First document forums, 2022). As the solid waste sector is a complex system from upstream to downstream, this forum is an arena for participants to exchange their knowledge about the best practices and challenges they experience from the programs they have implemented and will be carried out in the future. Where later, they can network with each other (First document forums, 2022).

Furthermore, reaching a joint determination as one voice of the forum is still challenging, especially when concluding substantive determinations (such as agreeing on the next "real" action plan derived from the forum discussions). For example, although an idea to create a joint action plan or pilot project is proposed in the third forum, any concrete steps to execute it have not been discussed further (Third forum document, 2023; Interviewee 2). Conversely, some procedural decisions are studied to be easier to agree on jointly and are still found as essential in maintaining the LSSC forum. This procedural agreement is, for example, to

decide the coordinator structure and to hold the forum every three months to keep the forum going.

6.3.3 Shared motivation: the interpersonal and relational factors

Shared motivation is seen as interpersonal and relation factors that could be perceived as bounding factors that drive the actors willing to work cooperatively with each other. This element comprises *mutual trust, understanding, legitimacy, and commitment* (Emerson et al., 2012). The study analysed that the interactions in *principled engagement*, which is the discovering process of shared interests where participants have space in smaller groups to share their programs, are shown to operate in developing trust and mutual understanding among participants. This space not only allows stakeholders to learn about other institutions' waste management programs but also enables them to appreciate the efforts of others (Interviewee 1). The space of sharing challenges also reconfigures the participants' own perspectives to understand and make them aware of the mutual concerns in delivering waste management initiatives (Interviewee 5). As stated by the private actor,

"from the [smaller] discussion, we know what solid waste programs other organizations run and the challenges they face. It is also connected us to be interested in collaborating with them, especially stakeholders whom we feel our solid waste initiative still has a gap in, and they [the respective stakeholder] have worked or are working on that gap."

The trust is also built through informal discussion after the forum, where, for example, a stakeholder might be interested in a respective stakeholder during the smaller discussion. Therefore, some will approach the respective stakeholders during lunch and have a more further "informal" discussions with each other (Interviewee 1).

Another interesting interpersonal factor to highlight is the legitimacy element, which refers to a confirmation that participants in the collaboration are trustworthy and credible enough. The study observed that the validation of the participating stakeholders is credible is shown through the forum is endorsed under the Jakarta Environmental Agency label, in which the forum is claimed as a "Jakarta" regional forum. This adds trustworthiness value that participants in the forum are reliable (Interviewee 4; Interviewee 6). This is nurtured through the forum opening welcomed by the Head of JEA, the forum invitation under JEA's label, and the narrative that the forum is Jakarta's extensive collaboration. The forum is also exposed to the media. Those narratives and activities then add legitimacy and pride that participants are part of the government program (Interviewee 4). Also, that validation is observed as providing specific confirmation for certain stakeholders, such as private actors who are obligated to align with the government, which could add credibility to their company (Interviewee 2). In addition, legitimacy and trust are also built from the previous collaboration on waste management in Jakarta. As discussed earlier, collaboration in Jakarta already exists but is more in a person-to-person form. However, that history of collaboration sets as interpersonal validation and strengthens the perception that participants who joined the forum are reliable to work with (Interviewee 1; Interviewee 4).

6.3.4 Capacity for joint action: attributes for setting prospective actions

Capacity for joint action is referred as attributes necessary for the collaboration so that the collaboration can have prospective joint action (Emerson et al., 2012). Emerson et al. (2012) see the capacity for joint comprising four attributes: *institutional arrangements, leadership, knowledge, and resources*. After which, the dynamics in deliberating a shared sense of action in the principled engagement process and in building interpersonal legitimacy and trust are

set; these attributes work more as organizing those "dynamics" to possess the capability for potential action (ibid). In the LSSC forum, it is investigated that institutional and procedural arrangements are crucial initial attributes that produce "leadership." The leadership itself then functions to provide the resources that nurture the forum to keep occurring.

Institutional and procedural arrangements in the LSSC forum operate in different forms, and their level of influence also varies. Regarding the forum activity, first, as discussed, discovering shared interests is challenging because participants' interests vary and sometimes veer off-topic (Interviewee 2). Therefore, the coordinator sets a term of reference (ToR) for each discussion forum, so before attending, the participants are expected to know what they should participate with. However, conditions during the actual event are seldom smooth as participants often deviate from the Terms of Reference (ToR) and tend to speak at length. Thus, time runs out, and no substantive joint agreements (e.g., concrete follow-up steps) are agreed upon, which stated more by the respondent from JEA

"Due to time constraints, in the end, we only collect interests and ideas without reaching a conclusion, and as a result, no tangible joint action is taken." (Interviewee 2)

Another institutional arrangement that is investigated essential is the institutionalization of the forum itself. Where initially, the forum was initiated by an external organization outside the government but then institutionalized as a formal forum under the Decree of the Jakarta Environmental Agency and is regulated and agreed to be held every three months. This institutional arrangement is deemed essential in keeping the forum functioning as the coordinators have more assigned responsibilities (Interviewee 4). The institutionalizing of the coordinator resulted in the emergence of the roles responsible for planning and facilitating the forum. This also includes a critical role in providing resources, including the budget, time, and technical support for the preparation and execution of all three forums. However, in terms of leadership function as a facilitator or mediator for the forum discussion, the coordinator is still lacking such facilitating skills, as stated by a respondent from JEA,

"... we do not have the skills to moderate or cut off participants who go off-topic, which then the discussion got prolonged, which could actually be used to discuss the next real joint action." (Interviewee 2)

Despite the agreement that the forum should take place every three months, it is not always the situation. As the forum coordinators also consist of different organizations, the timing of subsequent forums is sometimes affected by the schedules or conditions of the coordinator's organization. For example, as stated by an interviewee from DCA

"from the second to the third forum, which was supposed to take place in December or January, it has not been conducted yet as each coordinator is occupied with their respective organizational year-end closing tasks." (Interviewee 4)

Moreover, at the time this study was conducted in May, JEA underwent internal organizational restructuring. As a result, the subsequent forum, initially scheduled for May, had to be postponed, and no planning has been initiated yet to determine the next forum date.

6.4 Concluding remarks of the results and analysis

To conclude, the study has conducted a comprehensive analysis of the initiation and dynamics of the collaboration forum in the MSW sector, based on interviews with stakeholders participating in the LSSC forum and document analysis of relevant documents in Jakarta. The analysis has revealed three main themes.

Firstly, the study has identified key enabling conditions within the system context that create a climate of collaboration. These include socio-economic issues in Jakarta, limited resource conditions of the government, influences from political stances, the pressure to implement relevant MSW policies, and previous collaboration in the LSSC forum. These enabling conditions are interlinked and affect each other.

Secondly, the study has observed the essential driver factors that contribute to initiating the LSSC forum. The role of NGOs in advocating and initiating forums beyond their own interests has been highlighted. Additionally, the study has seen the importance of networking between stakeholders, recognizing their interdependence in delivering waste interventions.

Finally, the study has examined the dynamics of collaboration, comprising the discovery processes of principled engagement, shared motivation in terms of interpersonal and relational aspects as shared motivation, and attributes for joint action. The discovery process of principled engagement involves diverse MSW stakeholders, while the study also observed it as presenting challenges in deliberating joint action. Shared motivation is fostered by establishing trust and legitimacy, which is built upon a space for discussions for each stakeholder in the discovery process and the endorsement of the forum by the government. Meanwhile, the attributes for joint actions are highlighted through the institutionalization of the forum and the coordinator under the environmental agency decree. This further shapes the leadership role, which further provides necessary resources for the collaboration forum.

7 Discussion and conclusion

Enabling conditions and drivers of collaboration in the MSW sector

One of the interests of this study is to understand how collaboration in the MSW sector is initiated and to identify its key driving factors. Using Emerson et al. (2012), it is found that there are two key factors that allow the collaboration in Jakarta's MSW sector to occur.

First are enabling conditions referring to the actual system context of collaboration in the Jakarta case, and second are the factors driving the collaboration forum to occur. Ahmed and Ali (2004) and Kumari and Raghubanshi (2023) briefly discussed crucial factors that need to be considered in the MSW sector, such as trust, inclusiveness, and transparency. However, those factors primarily operate as interpersonal features between stakeholders. This study, however, finds that an additional critical aspect that was previously overlooked in studies on MSW collaboration processes is the influence of external conditions. The case study highlights the significance of these external conditions, which comprise the government's political stance, the presence of relevant collaboration and waste management policies, and the existence of identified organizations facilitated by NGOs willing to advocate for collaborative efforts beyond their programs. These elements serve as fostering factors to facilitate the initiation process of the collaboration.

Meanwhile, the case study finds that the political stances of the governor play a crucial factor in setting the climate of collaboration and later observed that the government's legitimacy fosters the condition for stakeholders in MSW to collaborate. In the case study, the governor has a strong vision for departing a collaborative climate in Jakarta development, in which there is an assigned special task force and policies related to collaboration in Jakarta. Also, pressure to implement the MSW policy in Jakarta is interlinked with the government's resources constraints which then made the Jakarta Environmental Agency (JEA) aware that their resources alone are not enough to cover the different demands of waste interventions in the city (such as raising awareness through education or delivering waste services). Therefore, the JEA considers collaboration as essentially needed.

Emerson et al (2012) describe certain elements that act as drivers for collaboration to occur, particularly leadership, which they define as an identified organization in a position to initial and help secure collaboration resources (p. 9). In the case study, NGOs play an essential part as the "leadership," in which two important features are observed as pivotal to their role. First, the NGOs are willing to initiate collaboration efforts beyond their own interest, wherein they do not manifest the forum under their own organization flag but instead advocate the collaboration forum as the city's collaboration forum. Second, the NGOs are investigated to have a good reputation and history of collaboration in the MSW sector and Jakarta, which gives the government a high sense of trust to form the regional forum with them. Moreover, later in the collaboration processes, these NGOs are still crucial in nurturing the forum's operations.

Another discussion to highlight is the interactions between the enabling conditions and drivers. Some collaborative governance frameworks combine those elements (for example, Ansel and Gash, 2007). However, Emerson et al. (2012) differentiate between enabling conditions and drivers, with enabling conditions referring to the surrounding environment

that can influence the drivers. The drivers are considered the specific features that facilitate collaboration. However, to some extent, enabling conditions can also work causally (ibid), as demonstrated in the case study. In this study, the leadership role of NGOs appears to be a crucial factor in driving the collaboration forum. For instance, although the enabling conditions, such as the JEA's awareness of resource constraints, could have served as a driver for initiating the large-scale collaboration forum, it is the NGO that played the specific role in making the forum a reality. On the other hand, many have already examined that NGOs play an essential role in initiating collaboration initiatives in the MSW sector. However, it is more evaluated at the community level, such as Ahsan et al. (2012) examined their significant role in implementing waste collection and education at the community level. This study also sheds light on the substantial role played by NGOs in initiating collaboration forums at the regional level.

Dynamics and dilemmas of collaboration in the MSW sector

Another aim of the study is not only to understand how the collaboration is initiated but also how it continues to operate in the MSW sector. By employing the collaboration dynamics elements identified as essential by Emerson et al. (2012) for nurturing collaboration, this study examined how those elements operate within the LSSC forum. The findings also reflect associated challenges in showcasing these elements in reality.

The first essential element is the process of discovering principled engagement. The LSSC forum involves participation from various types of stakeholders where their solid waste interventions differ in the MSW scheme. Their interventions cover a range of activities, from raising awareness and creating education modules to implementing technological approaches such as upcycling and waste treatment programs and others. Nevertheless, the discovery process of incorporating common interest and a shared sense of action is operated through a smaller group discussion in which participants' interests are mapped to existing government regulations. The study noted the significance of this method, as it provides a space for participants to have transparency and inclusivity of deliberating joint action as found imperative in collaboration in the MSW sector (Pasang et al., 2007 and Kumari and Raghubanshi, 2023). Subsequently, the study case shows that the discussion space also allows stakeholders to build trust with each other participants. However, undoubtedly, the process of discovery remains challenging, which can be attributed to the diversity of the participants and the expansive scope of the MSW sphere, stretching from upstream to downstream.

Another element is factors that work in an interpersonal and relational manner, that is, shared motivation (Emerson et al., 2012). Two highlighted shared motivation elements identified in the study are trust and legitimacy, which are also emphasized by Ahmed and Ali (2004) as essential factors in stakeholders involved in MSW efforts. The case study demonstrated that trust and legitimacy work in a causal manner. The legitimacy is effectively established through the forum being endorsed under the government's name, leading participants to trust other stakeholders' credibility. Furthermore, as discussed, the space for participants to share their waste management programs has been shown to influence trust, as it allows stakeholders to learn about the initiatives of others. As a result, interested stakeholders become aware of gaps in their waste initiatives that other stakeholders have filled.

The last element is the capacity for joint action, the elements where it functions when principled engagement and shared motivation are set. Then it works in terms of organizing those "dynamics" elements to possess the capability for potential action. The case study reveals that these elements operate through formalizing the forum and institutionalizing a coordinator structure under the Jakarta Environmental Agency decree. This is also found to be vital in maintaining the continuity of the forum, as the coordinator subsequently serves as the leader and source of resources for the forum in terms of preparation, executing the forum, and budgeting.

However, while examining these collaboration dynamics, the study observed that operating these elements is not without challenges and dilemmas. The study highlighted several issues in this regard. Firstly, despite the forum's institutionalization, challenges are still encountered where the intended frequency of the forum, which was supposed to be held every three months, was not consistently met due to the schedules or conditions of the coordinator's organization. On the other hand, a crucial dilemma arises from the inherent complexity of the MSW sphere, which encompasses both technical and non-technical aspects. Furthermore, the solid waste management schemes themselves encompass a wide range of stages, starting from waste at the source to final processing, further adding to the complexity. Therefore, it can be perceived that the greater the diversity of participants, the more enriching the collaboration can become, as it allows for the identification and filling of existing gaps in the complexity of the MSW sphere. However, this diversity also presents challenges when discovering and deliberating joint action. While the case study revealed that some participants still view the forum positively, which is understandable considering it is the first regional collaboration in the Jakarta MSW sector. Nevertheless, as the collaboration continues to operate, there is a need to consider effective and organized deliberation, as emphasized as necessary in MSW collaboration by Kumari and Raghubanshi (2023). This can be attained by having leaders skilled in moderating or facilitating discussions.

Lastly, it is crucial for MSW scholars to perceive collaborative efforts in the MSW sector as dynamic processes. As Ansel and Gash (2007) highlighted, collaborative governance should be seen as an ongoing "process" rather than an outcome. It is clear that collaborative efforts evolve with the dynamics in which the elements interact nonlinearly within the process, making it challenging to be a linear process. Therefore, despite the inherent complexity of the MSW sector and collaboration processes, the study consistently suggests that effective collaboration in the MSW sector should involve diverse participants engaging in fruitful discussions. And lastly, but most importantly, it is crucial for the progress of collaboration to seek evaluation input from participants regarding the processes actively.

Limitations and scope for further research

The study's findings allow insights into understanding the key factors in the collaboration processes in the MSW sector, as few studies have undertaken this topic. To begin with, it is crucial to acknowledge the diverse forms of collaboration within the MSW sector. For instance, Olukanni and Nwafor (2019) focused on public-private partnerships where waste collectors deliver waste services. Pariatamby and Tanaka (2014) examined collaboration by integrating informal waste pickers, while Pasang et al. (2007) highlighted the necessity for collaboration in the form of a neighbourhood-based waste management system.

Meanwhile, the study adopts a forum-based stakeholder involvement approach, which may not directly address the technical aspects of the MSW sector, as seen in the aforementioned

collaboration examples. These technical aspects can pose significant challenges, which may lead to other crucial factors that must be highlighted. Nevertheless, the study of the LSSC forum offers valuable insights that address a research gap related to the initiation process of collaboration. This is particularly significant as the collaboration process originates from non-governmental organizations and operates at the regional level. Therefore, further research in analysing the collaborative governance in other settings of MSW collaborations would allow more vigorous discussion on how collaboration process elements apply to different collaboration settings in the MSW sector.

Another limitation of the study is that it systematically describes the elements of the collaboration process in the MSW sector using the Emerson et al. 2012 framework. However, while some causality between the elements is identified, such as the interconnection of enabling conditions and drivers, the study does not analyse the performance of these elements and the extent to which they influence each other. For instance, although the study found that the discovery process influenced the capacity of joint action, the study does not analyse the extent of its importance and whether other elements can enhance the capacity of joint action. Further analysis addressing these gaps can help identify the effectiveness of the elements and determine which elements are more essential or serve as facilitators.

To conclude, stakeholder involvement through collaboration is crucial in the MSW sector, as the government alone cannot handle the sector. However, initiating collaboration itself is not an easy task, and there is a lack of studies that specifically observe MSW collaboration with a focus on the initiation and process of collaboration. Therefore, this study aims to understand the collaboration between stakeholders in the MSW, explicitly focusing on the key initiation factors and their operation in the collaboration process. Furthermore, the study employs a collaborative governance framework by exploring a single case study of a collaboration forum in Jakarta's MSW sector.

Employing the concept of collaborative governance in the case study allows findings on key enabling conditions that set collaboration in Jakarta's MSW sectors, which highlights the influence is the governor's vision and pressure to implement relevant policies. The inherent complexity of the MSW sphere presents challenges in the process of discovering and deliberating joint action. Additionally, the legitimacy of the collaboration forum through government endorsement and the institutionalization of collaboration through government decree support play crucial roles in nurturing collaboration. The study suggests further research to apply the concept of collaborative governance in different settings of MSW collaboration and also to test the interconnections within the elements.

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