



# Principled Engagement in Collaborative Governance Plus Multi-Helix on waste Governance

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**Abstract.** This research aims to find out how Principled engagement the helixes involved in the process of implementing Palembang Mayor Regulation Number 72 of 2018 concerning waste management. The informants for this research were 17 people consisting of 8 government elements, 2 private elements, 2 community elements, 2 academic elements, 2 NGO elements and 2 media elements. Data collection techniques used were interviews, documentation, observation and Focus Group Discussion. The data analysis used is the interactive model of qualitative data analysis [1]. Research findings show that Principled engagement, measured in terms of disclosure, suggests that the interests of some helixes are not accommodated and partial. Furthermore, in terms of deliberation, it shows that closed communication occurs between helixes, and in terms of determination, it shows that the Palembang City Government has strong primary and substantive determination. This study adds the importance of cultivating mutual cooperation in the context of policy implementation as an effort to facilitate the policy implementation process. Likewise, integrating implementation theory with Collaborative Governance Plus Multi-Helix [2] [3] then it can facilitate the implementation process and produce better.

**Keywords:** Principled Engagement, Collaborative Governance, Waste Governance.

## 1 Introduction

Waste management is an ongoing issue with increasingly severe environmental impacts as the global population grows. Research by Kaza et al. [4] in *What a Waste: A Global Snapshot of Solid Waste Management to 2050* estimates global waste production at 1.3 billion tons annually. Current data suggests the world produces about 2.59 billion tons of waste each year, with projections indicating a rise to 3.40 billion tons by 2050 [5].

Waste generation per capita in high-income countries is expected to increase by 19% by 2050, while low- and middle-income countries will see an increase of around 40% or more. Waste production in low-income countries is anticipated to more than triple by 2050. East Asia and the Pacific account for 23% of global waste, whereas the Middle East and North Africa produce only 6%. The fastest-growing regions include sub-Saharan Africa, South Asia, and the Middle East and North Africa, where waste generation is expected to triple, double, or more than double, respectively, by 2050.

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Data from the World Bank [6] indicates that over 2 billion tons of waste were generated in the past six years (since 2016), with over 30% inadequately managed. On average, each person generates about 0.8 kg of waste daily. By 2050, global waste volume is projected to reach 3.40 billion tons. In Indonesia, waste production was 68 million tons in 2019, with plastic waste estimated at 9.52 tons. The Director General of Waste Management notes that current waste management practices primarily involve direct landfill disposal, reducing the landfill's useful life.

In Palembang City, waste production is notably high, with residents generating 1,400 tons of waste per day, more than any other city in South Sumatra. Most of this waste comes from households, traditional markets, shops, offices, and other activities. According to SIPSN (2023), the largest waste source in Palembang is households, contributing 68.47% (808.13 tons), followed by commercial waste at 12.64% (149.15 tons), market waste at 8.45% (99.75 tons), public facilities at 7.75% (91.44 tons), and other sources like offices and areas, totaling 31.78 tons.

Effective environmental management requires coordinated efforts from government, private sectors, community organizations, and individuals to responsibly use and manage resources [8]. Research showed that addressing complex waste issues led the local government to collaborate with NGOs and the public. This approach enhanced public participation and addressed decentralization and urban environmental challenges. Consequently, the high waste volume in Palembang has prompted the city government to engage in collaborative governance with various stakeholders. This paper aims to improve the overall quality and effectiveness of scientific understanding and provide data on active participation principled engagement in collaborative and multi-helix waste supervision practices in Palembang City.

## **2 Literature Review**

### **2.1. Governance**

Cognitive governance has evolved in different countries, influenced by unique traditions, history, laws and societal structures. Trade unions in the 17th and 18th centuries were instrumental in encouraging public participation in political and governance processes [10]. In addition, the cognitive framework underpinning governance continues to evolve in line with the dynamic roles and functions of government today [11]. Governance is a dynamic interaction between the state and citizens, especially in terms of public interest and government intervention. This suggests that governance is not a static structure, but a process that is constantly changing according to the needs and expectations of society. In an evolving global landscape, this perspective ensures effective and inclusive governance.

The understanding of governance has been refined through several phases: First, the definition of "public" has expanded beyond just government to include various institutions and organizations previously considered outside traditional government. Second, in response to government failures, which often result in market policy decisions, there has been pressure to replace public officials with organized interest

groups advocating for deregulation. Alternatives such as coordination, voluntary self-regulation, business ethics codes, and co-regulation have been adopted to address government shortcomings. In this context, governance is viewed as "non-hierarchical, non-government coordinating" [14]. Third, the concept of governance has been influenced by institutional economics literature, where Williamson regards all coordination mechanisms—such as markets, hierarchies, networks, and informal norms—as forms of governance [14].

Etymologically, governance is different from government, because governance involves complex interactions between various stakeholders (stakeholder) in the public arena [15], whereas government only points to the role of the government as a sole actor. Several experts define governance as a new governing process where various actors manage the public arena through mutual interaction [11]. Kim, (2019) in his dissertation identified the definition of governance which in essence is a governance system involving the government, private sector and society. Kim, (2019), explains institutionally, governance covers three domains, namely state (country or government), private sector (business world), and society (public).

## **2.2. Collaborative governance**

Shergold [16] describes collaborative governance as a transformative process that evolves from hierarchical command relationships to collaborative interactions. Initially, collaboration between governments and stakeholders is command-based, characterized by a top-down approach with strong government control and no stakeholder input in decision-making. The process then progresses to coordination, where government and stakeholders engage in collective decision-making. This relationship evolves into cooperation, where there is mutual sharing of ideas and resources for joint benefits. Ultimately, the process culminates in collaboration, marked by the establishment of permanent and autonomous institutions through shared creation.

In contrast, the transformation of collaborative governance as a continuum of relationships ranging from informal to formal [17][18]. This process begins with recognition and coexistence, advances through communication, cooperation, and coordination, and reaches the stage of collaboration. [19] identifies several indicators for measuring the success of collaborative governance, including network structure, commitment to common goals, trust among participants, governance, access to authority, distributive accountability, responsibility, information sharing, and resource access.

Christine Carlson's book, "A Practical Guide to Collaborative Governance" [20], outlines six key principles of collaborative governance: 1) Transparency and Accountability—discussions should be open, and mechanisms must ensure commitments are met; 2) Justice and Inclusivity—all relevant and diverse interests must be represented; 3) Effectiveness and Efficiency—processes should be well-designed to yield practical results; 4) Responsiveness—public concerns must be genuinely addressed; 5) Forum Neutrality—the process should be impartial, with

shared responsibility for setting rules and achieving outcomes; and 6) Consensus-Based Decision Making—decisions should be made by consensus rather than majority rule.

### **2.3. Collaborative governance Plus Multi Helix (CGPMH)**

Model collaborative governance [2] was developed by Wijaya, (2023) to be collaborative governance plus multi helix (CGPMH) with its inner circle components called collaboration dynamic which consists of things that are principled engagement, Shared motivation and joint capacity. Model collaborative governance plus multi helix (CGPMH) is intended to understand the ways in which collaboration and participation can occur and be carried out well without forgetting the principles that must be adhered to by those involved in the collaboration [3]. The concept of principled engagement refers to six principles of collaboration, namely [3] namely: 1) Appropriate preparations should be made so that actors can participate optimally and feel valued in collaboration, 2) Significant exchanges that have been agreed upon by the actors involved in the collaboration. collaboration, 3) Awareness of interests where all actors must be aware of the various interests involved in collaboration to be discussed openly, 4) Effective communication so that there is a common understanding between collaboration actors, 5) Evaluation process in continuous integration so that collaboration can continue effectively.

The Collaborative Governance Plus Multi-Helix based public policy model offers advantages in the form of comprehensive knowledge, innovative solutions, broad involvement, enhanced legitimacy, adaptability, and better implementation. In the end, this model is expected to provide results and impacts that can be felt by target or marginalized groups or recipients. The impact results are not only felt momentarily/short term but also in the medium and long term. So that the problems in the public sector as mentioned in the introduction can be solved by utilizing a public policy model based on collaborative governance plus multi helix.

## **3 Method**

This study is a type of descriptive research with a qualitative approach [21]. this qualitative research method explores and understands the intentions of a number of individuals or groups of people originating from social problems. The location of this research is Palembang City, which is one of the cities in Indonesia that has Regional Regulations on Waste Management. The research informants consisted of several elements, namely government elements, in the form of the Mayor/Deputy Mayor of Palembang, Members of the Palembang City DPRD, Head of the Environment and Hygiene Service, Head of the Public Development Service, Secretary of the Environment and Hygiene Service, Head of the Waste and B3 Waste Management Division of the Environmental Service Life and Staff of the Waste and B3 Waste Management Division of the Environmental Service, as well as the Head of UPTD. The next informant is from the private sector, namely the business development manager of PT. Indo Green Power (IGP), Chairman of the Pempek Industrial

Center. The next informant is from the community, namely the Director of the Katini Waste Bank, Chair of TPS 3R in Palembang City. The academic elements in Palembang City are Sriwijaya University Lecturers and Candradimuka College of Social and Political Sciences Lecturers. The next element consists of the World Clean Up Day Community and the Non-Government Organization Indonesian Forum for the Environment. Next are the media elements, consisting of television media (TVRI South Sumatra) and the Sumatra Express/Sumeks Newspaper. Data collection techniques used were interviews, documentation, observation and Focus Group Discussion. The data analysis used is the interactive model of qualitative data analysis [1].

## 4 Result and Discussion

Principled engagement in a collaborative process involving the City Government (Department of Environment & Public Works and Public Housing), Media (TVRI and SUMEKS), Private sector (PT. Indo Green Power), NGO Indonesian Forum for the Environment (WALHI), World Clean Up Community Day, Industry Group, Academia. Where the collaboration process seen in terms of Principled engagement consists of disclosure that needs to prioritize environmental interests, deliberation requires open and democratic communication, and determination has a strong primary and substantive basis. In context collaborative governance, the promotion of shared principles emphasizes the importance of commitment and active participation from various parties involved in implementing a particular policy or project, taking into account the values of ethics, integrity and collective responsibility.

In the specific context of implementing Palembang Mayor Regulation Number 72 of 2018 concerning waste management, active participation from all actors (helix) involved is considered very important. This section includes reaffirming shared goals and establishing and developing shared principles that reflect the various points of view of the actors involved. The unique characteristics of each actor also influence the effectiveness of implementing these shared principles. Identifying the actors involved in this collaboration is an initial strategic step. In collaboration, there are three critical principles: disclosure, deliberation, and determination. Disclosure is the first thing where all actors reveal their respective interests and positions in a discourse. Furthermore, as a means to open discussion and exchange of ideas, deliberation encourages the formation of comprehensive dialog and discussion in the collaboration space. Finally, after disclosure and deliberation are carried out, determination will result in concrete decisions and agreements to achieve common goals. These three elements are important in a collaboration space to ensure the collaboration process is inclusive and goal-oriented. This can ensure the success of the common goal that has been agreed upon.

Effective collaboration requires understanding the interests and values of each participant, and working together towards a common goal. Achieving this requires an in-depth look at the motivations behind each participant [2]. Collaboration also involves deliberation and thinking together in discussing a topic, as well as sharing opinions. Each participant will show their individual progress and achievements [2].

In collaboration, it is necessary to determine a common goal, which consists of primary determination and substantive determination. Primary determination relates to procedural matters such as collaboration techniques, agendas, meeting schedules, and the formation of working groups. While substantive determination is concerned with reaching agreements and making recommendations for future collaborative action [2]. This dual approach assures that the collaborative process is structured and goal-focused and increases the effectiveness and consistency of cooperation.

Research exploring shared principles highlights the importance of elements such as disclosure, deliberation and determination. The results showed that not all actors were involved in the process of articulating interests and expressing opinions. This emphasizes the importance of opportunities for all actors to express their perceptions. It also found that there are barriers to communication between actors that hinder the exchange of ideas and information as well as open discussions. These challenges can hinder the formation of effective agreements and prevent collaboration between the parties involved. However, the determination indicator shows that all parties managed to reach substantial key decisions. This indicates that parties were able to reach significant agreement on goals and action steps, despite barriers to disclosure and deliberation. This achievement demonstrates the need for a structured approach, adaptability, and persistence in overcoming communication challenges to achieve meaningful shared goals.

Overall, the research results confirm that the promotion of shared principles (Principled engagement) of all actors or helix involved, including the City Government (Department of Environment & Public Works and Public Housing), Media (TVRI and SUMEKS), Private sector (PT. Indo Green Power), NGO Indonesian Forum for the Environment (WALHI), World Clean Up Day Community, Groups Industry, and Academia, are still low on shared principles. To enhance the promotion of shared principles in collaborative governance, additional efforts are needed to improve transparency, foster open communication, and develop stronger agreements. Promoting shared principles is a gradual process that can be facilitated through direct interactions or technological tools. Throughout this process, common goals are reaffirmed, and shared principles are created and refined, incorporating the diverse viewpoints of all participants. Therefore, the central aim of this effort is to unify principles. [2].

The results of this study are in line with the findings of [9] show that in countries where the government generally has primary responsibility for public services, NGOs play a crucial role in engaging various stakeholders and encouraging them to integrate social and environmental responsibilities, as well as implement good governance practices. While initiatives like “green accounts” provide incentives, their success often depends on research and consulting services from parties like Aifen. However, the presence of NGOs is sometimes limited to providing services, following the priority agenda set by the government, which can cause certain problems in the implementation of these initiatives.

Cultivating a culture of mutual cooperation in the Palembang community to be actively and passively involved in waste management has very important relevance in the context of Outcome or the impact of Collaborative Governance Plus Multi-Helix. The impacts that can be achieved include various improvements in social, economic, and environmental conditions, which are a common goal for all parties involved, such as increasing efficiency in resource management, reducing levels of environmental pollution, improving the quality of life of the community, and improving public services. Cultivating mutual cooperation has several significant implications in social, economic, and environmental contexts. Gotong royong refers to the spirit of cooperation and togetherness in society to achieve common goals without expecting direct material rewards. The practice of gotong royong has a positive impact on increasing unity and harmony in a community, which can help increase mutual respect, care, and help among community members. In addition, the positive impact of the practice of gotong royong can be seen in the increased social cohesion and sense of responsibility to achieve common goals and create an environment of mutual support and respect. This can improve a community's ability to deal with challenges and uncertainties, thereby strengthening overall community resilience. Stability and prosperity can also be created through sustainable cooperation.

Involving community cooperation in waste management can also increase efficiency and reduce the cost of waste segregation. This collaborative approach has a positive impact on ecosystem preservation and sustainable practices. Initiatives such as plastic waste reduction and community river clean-ups provide opportunities to protect the environment and raise awareness of natural resource conservation for future generations. By working together, communities can promote environmental conservation, reduce costs, and optimize the preservation of natural resources. Such cooperation strengthens communal bonds and a sense of shared purpose. As a result, mutual aid becomes an important tool in addressing economic and environmental challenges and building the foundation for shared prosperity and long-term resilience.

The active involvement of community members and mutually beneficial cooperation are necessary to implement effective policies and sustainable development. This collaborative approach builds resilient communities, strengthens social relationships and interactions, and aligns public policies with community aspirations. Gotong royong is also highly influential in the resilience and well-being of current and future social relations. Palembang City plans to establish a specialized agency for waste management and will engage stakeholders and students to facilitate practical solutions to this problem. In addition, an inclusive and collaborative forum will be initiated and established to unite various voices in achieving effective and sustainable waste management solutions in Palembang.

The collaboration flow is "Collaboration dynamics deliberatif" which is based on the principle of deliberation is a process that prioritizes active participation and involvement of all parties in discussions, planning and collective decision making. This concept draws a complete circle, symbolizing the whole and completeness of the collaborative process. In this context, deliberation is a principle. The principal emphasizes that each participant has the same opportunity to express his opinion, and

every view is respected in reaching a mutual agreement, as an inherent value in Indonesian culture, becoming an additional basis in this collaboration flow community or related parties in solving common problems. In its implementation, the principle of mutual cooperation drives collaboration to be more than just discussion or exchange of ideas. This involves real contributions from all parties, both in terms of resources, energy and expertise, to achieve common goals.

In practical terms, this collaboration flow was modified to reflect unity and unity in every step. Starting from the problem identification stage to the solution implementation stage, this process ensures that every voice is heard and considered fairly. Equal involvement from various parties, including the government, community, private sector and educational institutions, is the key to success in facing common challenges, such as waste management in Palembang City. Thus, collaboration "Collaboration dynamics deliberatif" based on deliberation and mutual cooperation is not just a method, but also a commitment to creating sustainable solutions that have a positive impact on the environment and society at large. This is an effort to build collective awareness and shared responsibility in maintaining the balance of the ecosystem and improving the quality of life for future generations.

A study conducted by Purnomo et. al. [22] shows the important role of community participation in creating a clean and waste-free environment. One form of community participation in waste management is through the practice of mutual cooperation. Poor waste management can have a negative impact on health, environmental sustainability, as well as social, economic and cultural aspects of society. Community service activities aim to increase knowledge and understanding of rural communities regarding waste management. The community successfully implemented community-based waste management practices, which contributed to creating a clean and comfortable environment for them.

Effendi [23] defines mutual cooperation as a collaborative effort among a group aimed at achieving positive outcomes through deliberation and consensus. Conceptually, it can also be viewed as a cooperative model agreed upon by all parties. Cooperation is considered a tangible form of social capital, representing a network of collective efforts by individuals or groups working together to reach a shared goal [24].

## 5 Conclusion

Dimensions Principled engagement in this research measured in terms of disclosure suggests that the interests of some helix are not accommodated and are partial. Furthermore, in terms of deliberation, it shows that closed communication occurs between helixes, and in terms of determination, it shows that the Palembang City Government has strong primary and substantive determination. Due to the limitations of dimensions Principled engagement cause waste management in Palembang City has not been able to provide impact or real impact on society. Therefore, the Palembang City Government is advised to prioritize environmental interests, carry out open and democratic communication and strong primary and substantive



determination to be maintained as a helix involved in waste management. This research adds to the importance of cultivating mutual cooperation in the context of policy implementation as an effort to facilitate the policy implementation process. Likewise, integrating implementation theory with Collaborative Governance Plus Multi-Helix [2] [3] then it can facilitate the implementation process and produce better.

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