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[MR. Khairul Muluk, Firstyarinda Valentina Indaswari, Wishnu Mahendra Wiswayana, Primadiana Yunita. "The Role of City Diplomacy for Sustainable Environment : Study Case of River Restoration in Bandung", KnE Social Sciences, 2022](#)

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BANDUNG AND KAWASAKI: A PARTNERSHIP IN ENVIRONMENTAL ISSUE Fadhlán Nur Hakiem 1 *, Gili Argenti 2, Nurbani Adine Gustianti 3 1, 2, 3 [International Relations Study Program, Faculty of Social and Political Sciences, Universitas Singaperbangsa Karawang, Indonesia](#) * Corresponding Author: fadhlán.nur@fisip.unsika.ac.id Abstract : [This research aims at](#) analysing [the](#) strategic role [of international cooperation](#) by local governments in addressing environmental issues in urban areas, focusing on the collaboration between Bandung and Kawasaki since 2016. Both cities have agreed to cooperate in the environmental sector, particularly in water management, air quality control, and waste management. The research employed qualitative research, with data collected through interviews and literature reviews. [The data analysis process involved data reduction, presentation, and conclusion drawing](#). The theories and concepts applied in this research were city diplomacy and city networks. The results shows that the partnership between Bandung and Kawasaki [has played an important role in](#) strengthening [the](#) capacity [of](#) Bandung's civil servants to address environmental challenges. By learning from Kawasaki's experience through technology and knowledge transfer, Bandung has been able to develop more structured and systematic environmental policies. However, the direct impact of this partnership on the local community remains limited. Challenges such as bureaucratic complexities, leadership changes that shift policy priorities, and budget constraints have slowed down the implementation of program. On a broader level, this research contributes to the understanding of city diplomacy and international city networks, demonstrating how partnership can be valuable strategy for addressing environmental issues. From a practical standpoint, the findings highlight the need for stronger cross-sector coordination, more flexible bureaucratic processes, and better communication strategies to engage the local community in environmental initiatives. Keywords : Bandung-Kawaski; City Diplomacy; Environmental Issue; International Cooperation; Waste Management INTRODUCTION International cooperation is one of the policies carried out by local governments in Indonesia, particularly city governments. It provides as an alternative method for cities to fulfil their interests and needs. [This cooperation](#) aimed [to foster](#) friendly relations [and mutual understanding between](#) countries. However, this has changed and is used as a way to obtain the needs and interests of cities/regions. Through international cooperation, local governments can establish collaborative networks that effectively address social, environmental, and public service challenges (Isnaeni, 2013). Bandung is one of the cities in Indonesia that actively conducts international cooperation. The local government of Bandung has established partnership with cities and institutions in various countries. Until 2024, Bandung has formed 14 international collaborations with foreign city governments. These cities include Braunschweig (Germany), Fort Worth (United States), Suwon and Seoul (South Korea), Liuzhou, Shenzen, and Yinkou (China), Petaling Jaya (Malaysia), Hamamatsu, Kawasaki, and Toyota City (Japan), Namur (Belgium), Cotabato (Philippines), Cuenca (Ecuador) (Bagian Kerja Sama Kota Bandung, 2020). The primary focus of Bandung's international cooperation is the economic, industrial, tourism, investment, education, cultural, social welfare, and government administration sectors (Bagian Kerja Sama Kota Bandung, 2020). In general, the main focus of Bandung's international cooperation is economic cooperation, trade, investment, and tourism. However, Bandung is starting to realize the need for international cooperation in other sectors to fulfil its needs to solve the problems it faces. One of the main problems facing Bandung is environmental problems, especially waste and water waste. Bandung, a city with a population of around 2.5 million, faces significant environmental challenges due to its dense population. From 2015 to 2023, the city produced around 1,600m³/day of waste (BPS Kota Bandung, 2015, 2024), a volume that the local government struggles to manage effectively, leading to a Waste Emergency condition (Kompas, 2023). In addition to poor waste management, another problem for Bandung is water waste. The rivers in the Bandung suffer from poor water quality.

According to Dinas Lingkungan Hidup kota Bandung, in 2018, 59% of the 24 rivers in the Bandung area experienced light pollution, 34% gained moderate pollution, 5% had severe pollution and only 2% met the standard water quality (Dinas Lingkungan Hidup Kota Bandung, 2018). This condition will still occur until 2024, with the majority of rivers in Bandung still exhibiting light and moderate scale (BPS Kota Bandung, 2024). This condition is a serious problem that must be resolved by Bandung. This city policy involves collaboration with various stakeholders, including international partners. To overcome these challenges, Bandung initiates international cooperation with the city government of Kawasaki, Japan, with the hope that such partnerships will assist in tackling the city's environmental problems. Bandung and Kawasaki began their collaboration in 2015 with both cities government agreed on a letter of intent that year, followed by a memorandum of understanding in 2016. Their cooperation spanned several areas: [1\) Solid waste management](#); [2\) wastewater management](#); [3\) air quality management](#); [4\) energy management](#); [5\) transportation technologies](#); and [6\) other mutually agreed environmental fields](#) (Pemerintah Kota Bandung, 2016). Several studies have discussed international cooperation carried out by city governments. However, most previous research has mainly focus on economic, social, and cultural cooperations. Isnaeni emphasizes the importance of international cooperation in addressing local needs (Isnaeni, 2013). This research highlights how the partnership between Surabaya and Kitakyushu has successfully implemented [community-based waste management](#) by adopting the [3R principles \(reduce, reuse, recycle\)](#) (Isnaeni, 2013). However, the research does not explore how similar cooperation could be replicated in other cities in Indonesia. Siregar and Rizqullah analysed the cooperation between Bandung and Kawasaki, highlighting on how this cooperation has successfully improved waste management capacity (Siregar & Rizqullah, 2022). However, this research does not explore in depth the long term challenges or the sustainability of the cooperation. Sabati further supports these findings, showing that the Bandung-Kawasaki Sister City Partnership has helped enhance waste management infrastructure and reduce daily waste (Sabati, 2024). Nevertheless, this research identifies challenges, particularly in securing funding and implementing program effectively. Pluijm and Melissen, as well as Karvounis, discuss [city diplomacy](#) and [the political role of cities in international relations](#) (Karvounis, 2023; Pluijm & Melissen, 2007). However, this research does not go into detail about how city diplomacy can be leveraged to address environmental issues. Research on international cooperation carried out by local government in environmental matters are still limited, although some studies have started to focus on this topic. For instance, research on city diplomacy in the restoration of the Cikapundung River, which involved cooperation between Bandung and Seoul (Muluk et al., 2022). This research highlights the positive impact of international cooperation in improving water quality and raising public awareness about the importance of river cleanliness (Muluk et al., 2022). However, this research also highlights challenges in implementing these programs, particularly regarding public participation. In a broader context, research on the role of cities and the environment highlight how major cities like New York and California are taking the lead in international climate agreements (Strachova, 2021). However, this research has yet to explore how initiatives can be applied to developing cities, such as those in Indonesia. Additionally, research on environmental diplomacy emphasize the importance of international cooperation in addressing environmental challenges (Tayebi et al., 2016). Yes, these research often fall short of explaining how local governments can incorporate environmental diplomacy inti their own policies. Based on the review, there are several research gaps that need further exploration. First, studies that specifically and consistently examine the role of international cooperation among city governments in environmental issues remain limited. Second, there is still a lack of in depth analysis on how effectiveness of international cooperation in addressing environmental challenges, particularly in waste and wastewater management. Third, research on the role of diplomacy and city network in bilateral environmental cooperation is still scarce. Addressing these gaps could provide valuable insights for strengthening international cooperation on environmental issues. This research aims to analyse the strategic role of

international cooperation between the city governments of Bandung and Kawasaki in addressing environmental issues. It also aims to identify the obstacles in their cooperation and examine how city diplomacy and city networks can serve as effective approaches in international cooperation. This research aims to explore several questions: 1) what is the background and process behind the international cooperation between Bandung and Kawasaki in the environmental issues?; 2) What progress has been made through this partnership in addressing waste and wastewater management issues?; 3) What challenges have emerged in the implementation of this international cooperation? The concepts central to this research are city diplomacy and city networks. City diplomacy is a derivative concept of Para diplomacy. Traditionally, diplomacy has been the exclusive domain of states, conducting international relations as part of the global system. Karvounis defines diplomacy as a method of political interaction on the international stage, involving negotiations between states and other international actors (Karvounis, 2023). However, as international politics has evolved, so too has the scope of diplomacy. Globalization and interdependence have broadened its reach, introducing new issues considered strictly domestic. Similarly, the actors in international relations have diversified, and states are no longer the sole dominant players. These new actors can significantly affect international dynamics. This development has encouraged the emergence of the idea of paradiplomacy. According to Butler in Karvounis, Paradiplomacy is an acronym for "parallel diplomacy" which is interpreted as diplomacy that complements or competes with the foreign policy of a government (Karvounis, 2023). Paradiplomacy is utilized to describe the international activities of sub-national actors that aim to complement, correct, duplicate, or oppose the nation state (Michelmann & Soldatos, 1991). Hocking, as cited by Karvounis, argues that the involvement of sub-national actors in international dynamics is a consequence of globalization's impact on modern diplomacy (Karvounis, 2023). Rather than challenging state dominance, as previous scholars suggested, paradiplomacy has been a key component of multilevel diplomacy. States are now hoped to expand their foreign policy development and implementation to involve various actors in the diplomatic landscape (Karvounis, 2023). Within this context, the concept of city diplomacy has emerged. The Congress of Local and Regional Authorities of the Council of Europe defines city diplomacy as "a tool of local governments and their associations to promote social cohesion, conflict prevention, conflict resolution, and post-conflict reconstruction, creating a stable environment where citizens can live in peace, democracy, and prosperity" (Council of Europe, 2008). This definition underscores the growing significance of cities as political actors in international dynamics. Karvounis explains the crucial role that cities and megacities play in international cooperation, particularly through the formation of international networks (Karvounis, 2023). Additionally, Pluijm and Melissen reveal city diplomacy as both an institution and a process involving cities cooperating with other international actors to represent their interests on the global stage (Pluijm & Melissen, 2007). Cities assumes various roles in international affairs: they may act as lobbyists, promoting and defending the interests of their citizens, serve as mediators, negotiate agreements with local authorities, partner on specific projects, and collaborate with other governments to advance particular policies (Karvounis, 2023). This multifaceted involvement positions cities as significant contributors to global governance and diplomacy. City diplomacy can be emphasized as a political process through which cities create and maintain bilateral or multilateral relationships in a manner that complements and supports traditional state diplomacy. Cities have the ability to promote their own interests within the framework of international and national law (Karvounis, 2023). In the context of cooperation between Bandung and Kawasaki, city diplomacy has a significant role in addressing the challenges got by both cities without conflicting with the national interests of their respective countries. This cooperative framework lets cities to work collaboratively on common issues while maintaining alignment with broader diplomatic policies. The next concept employed in this research is the city network. According to Labaeye, as cited by Karvounis, a city network can be broadly comprehended as a collaborative initiative, either formal or informal, aimed at sharing information and disseminating

experiences related to urban policy, management, and sustainable development (Karvounis, 2023). Bouteligier, also cited in Karvounis, reveals that city networks provide international functions, acting as platforms for cities to exchange experiences, knowledge, and best practices. These networks enhance cities' operational capacity and represent their interests on the global stage (Karvounis, 2023). City networks are bottom-up initiatives. Their outcomes or roles are widely recognized in the dynamics of international relations. These networks are not confined to local government actors alone. They also include various stakeholders such as universities, chambers of commerce, and private sector entities (Karvounis, 2023). As a result, the urban network landscape has complex ecosystem, comprising a variety of public-public, public-private, and other multi-stakeholder collaborations. Based on this definition above, City networks can be understood as initiatives that extend beyond traditional bilateral or sister city agreements in terms of scope, purpose, and composition. They encompass both city and non-city actors, serving the essential infrastructure that enables cities to participate at the international level. The partnership between Bandung and Kawasaki is a clear example of how city diplomacy and city networks can be leveraged to address urban environmental challenges. However, a deeper analysis is needed to assess the effectiveness and sustainability of this partnership. Therefore, this research is expected to gain a better understanding of the role of international cooperation in addressing environmental issues. METHODOLOGY This research employed a qualitative approach. According to Alan Bryman, qualitative research emphasized the use of words rather than quantification in data collection and analysis (Bryman, 2012). John W. Creswell further assumed that qualitative research explored and sought to understand meanings derived from social or humanitarian issues (Creswell & Creswell, 2018). The population in this research focused on stakeholders who are directly involved, particularly Bandung City Cooperation Section (Bagian Kerjasama Pemerintah Kota Bandung), as well as practitioners and academics. The sampling technique employed purposive sampling, which involves selecting informants based on specific criteria that align with the objectives of the research (Bryman, 2012). The selected informants are chosen on their knowledge, experience, and involvement in the issues addressed in this research. This research relied on a semi-structured interview guide as its primary tool for gathered in-depth data. Semi-structured interview follow set of predetermined questions, this approach allowed respondent the flexibility to share their insights more freely. The open-ended questions allowing the interviewer to explore additional topic that may not be included in the interview guide (Bryman, 2012). To ensure the validity, we used triangulation technique. Triangulation is based on the idea that looking at something at something from multiple point of view improves accuracy (Neuman, 2014). This research employed triangulation of source, comparing data obtained from various sources to improve accuracy and minimize bias. The data collection techniques included interviews and literature review, aimed at obtaining both primary and secondary data. The interviews were conducted in person, with each session recorded with the informant's consent to ensure accuracy. Additionally, secondary data was gathered through a literature review, including books, academic journals, conference papers, and online articles relevant to the research topic. Data analysis was performed through data reduction, data presentation, and conclusion drawing, all conducted simultaneously. According to Lexy Moleong, data analysis involved simplifying and organizing data into a readable and interpretable form (Moleong, 2014). The information from the collected data was carefully selected through a data reduction process. Data presentation was conducted by organizing the data into themes that aligned with the research objectives. Conclusions were drawn by identifying patterns and connections between the emerging themes. The analysis was conducted manually without the use of software such as Nvivo. However, thematic coding was still applied to ensure consistency. This process played a crucial role in addressing the research questions outlined at the beginning of the research. The research encountered several limitations. First, access to key informants was constrained due to their busy schedules, which required rescheduling interviews. Second, the considerable distance between the researcher and the informants made mobility more challenging. These

limitations may have impacted the depth and completeness of the data collected. RESULTS AND DISCUSSION

International cooperation is a key policy area for many city governments in Indonesia, with Bandung being one of the most active cities in this regard. As of 2024, the Bandung city government has established has had 14 international partnerships with local governments abroad. One of the cities that agreed to collaborate with Bandung is the Kawasaki city, Kanagawa Prefecture, Japan (Bagian Kerja Sama Kota Bandung, 2020). Table 1. International Cooperation between the City Government of Bandung and Local Governm ents Abroad No City government States Scope of Cooperation

1. Braunschweig Germany Culture, education, economy and trade, tourism, sports
2. Fort Worth United States of America Economics, trade, industry, tourism, science and technology, social and community
3. Suwon South Korea Trade, youth and sports, investment
4. Seoul South Korea Culture, economy and investment, tourism, urban planning, e-government
5. Liuzhou China [Economy, trade, industry, education, culture](#), tourism, [science and technology](#)
6. Yingkou China [Economy, trade, industry, education, culture](#), tourism, [science and technology](#)
7. Shenzhen China Industry, tourism, culture
8. Petaling Jaya Malaysia Economy, trade, tourism, culture, education
9. Hamamatsu Japan Education, research, environmental preservation, clean water management, creative city cooperation
10. Kawasaki Japan Environmental technology transfer, human resource development, cooperation between academic institutions, research
11. Toyota City Japan Information and technology, transportation systems, education, social welfare, human resource empowerment, administrative reform
12. Namur Belgium Economy, trade, education, health, environment, science and technology
13. Cotabato Philippines Economy, trade, education, culture, youth
14. Cuenca Ecuador Arts, culture, tourism, economy, trade, education

Source: Author's Compilation

Bandung and Kawasaki cooperation is one of the cooperations carried out by the city government of Bandung. the two cities have developed networks and collaborated on various projects, including the Eco Town Project under [the United Nations Environment Programme \(UNEP\), the International Environmental Technology Center \(IETC\), and the Asia-Pacific Eco Business Forum](#) (Siregar & Rizquallah, 2022). The initiation of cooperation between Bandung and Kawasaki began during the Ridwan Kamil era when the Bandung city government received an invitation to Japan to participate in an international forum organized by the Institute for Global Environmental Strategies (IGES) (Ketua Tim Fasilitasi Kerja Sama Luar Negeri, personal communication, May 2024). The head of the Bandung City Environmental Service represented Bandung at this event Bandung optimized this event by actively seeking to build networks with other cities. Through this agenda, Bandung successfully participated with the Kawasaki city government, leading to a potential collaboration. Kawasaki was proffered as a partner due to its extensive experience and achievements in overcoming environmental challenges (Tim Fasilitasi Kerja Sama Luar Negeri, personal communication, April 2024). Bandung and Kawasaki agreed to sign a letter of intent on [city cooperation towards low carbon and sustainable cities on](#) July 7, 2015 (Pemerintah Kota Bandung, 2016). The cooperation between the two parties was then continued with [the signing of an memorandum of understanding in 2016](#) (Tim Fasilitasi Kerja Sama Luar Negeri, personal communication, April 2024). The aim of this collaboration is to develop cooperation between Bandung and Kawasaki, as well as to promote and expand effective and mutually beneficial cooperation in the environmental sector (Pemerintah Kota Bandung, 2016). Both parties agreed to promote the transfer of environmental technology, human resource development, information exchange, and cooperation between academic and research institutions covering several areas: 1) [Solid waste management](#); 2) [waste water management](#); 3) [air quality management](#); 4) [energy management](#); 5) [transportation technologies](#); and 6) [other environmental](#) field [that shall be mutually agreed by](#) the Parties (Pemerintah Kota Bandung, 2016). Implementation of Bandung and Kawasaki Cooperation The collaboration between Bandung and Kawasaki has successfully applied several programs: [Program Waste Management Support toward a Sustainable Resource Recycling Society in Bandung](#). This program lasts for 3 years, from 2017 to 2020, aimed to achieve the following objectives: 1. Encouraging activities that support waste management through

sustainable reduce, reuse and recycle (3R) activities.; 2. Increasing human resource capacity in sorting organic and non-organic waste into recycled materials 3. Increasing the capacity of government officials in preparing and implementing the master plan for waste management (Siregar & Rizqullah, 2022). The memorandum of understanding (MoU) signed in 2016 remains valid until 2020. In 2020, both parties agreed to extend the cooperation, making the new agreement more specific than the previous one. Both parties agreed that they would cooperate in 3 aspects: 1) Water environmental management program; 2) Air quality management program; and 3) Waste management program (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024). The water environmental management program is implemented based on a joint agreement between the Japanese [Ministry of Environment and the](#) Indonesian [Ministry of Environment and Forestry](#). This agreement aims to improve the water quality [of the Citarum River in West Java. The](#) derivative program [of the](#) agreement is the "Citarum Harum" program which is a policy at the provincial level. The city government of Bandung and Kawasaki are cooperating at the city level (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024). The environmental management program was initiated in 2019. Some of the outputs produced from this program include: 1) Cipamokolan masterplan; 2) manual book for managing tofu industry wastewater; 3) manual book for managing laundry business wastewater (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024). The next program is the Air Quality Management Program. This program is carried out with a mechanism called [the Joint Crediting Mechanism \(JCM\)](#). [JCM facilitates the diffusion of leading decarbonizing technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributes to sustainable development of](#) Indonesia (JCM Indonesia - Japan, [n.d.](#)). [The aim of the](#) program [is to](#) assist partner countries [to reduce greenhouse gas emissions and promote sustainable economic growth. The](#) air quality management program has been running since 2021 until April 2023. This program has carried out a visibility study to find the right program for Bandung in the JCM scheme. The visibility study activities implemented includes: 1) activities targeting the use of high-efficiency Air Conditioners in public facilities; 2) planning for green building development; 3) use of smart LEDs for public street lighting (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024). The next program is the waste management program. It is implemented in cooperation with the Kawasaki Water and Waste Management Bureau. This program started in 2023 and will conclude in April 2026, utilizes the Japan International Cooperation Agency (JICA) Partnership Program: Local Government Type. The targets of this program are: 1. Increasing the capacity of the Bandung city government's civil servants who have the main task and function of handling domestic wastewater. 2. Increasing public awareness. The output will be carried out by conducting socialization to the community and instilling good habits as early as possible. The pilot project of this activity will be carried out in Nyengseret sub-district, Astana Anyar district, Bandung. The city government of Bandung plans to include waste and environmental issues in the basic education curriculum. Challenges of Implementing Bandung and Kawasaki Cooperation Bandung and Kawasaki have been cooperation since 2016 and have been extended since 2020. In the process, the cooperation between the two parties that focuses on environmental issues has experienced various challenges. One significant challenge is the complicated bureaucracy in Indonesia, which can hinder the smooth implementation of collaborative initiatives. The Bandung and Kawasaki cooperation has various funding sources. Bandung and Kawasaki can propose sponsorship from donor institutions in Japan, such as JICA. Funding provided by JICA is in the form of grants. As the assistance is in the form of grants, It cannot be immediately accessed freely. Bandung cannot simply obtain the grant. The city must comply with the rules of the central government regarding the receipt of the grant (Ketua Tim Fasilitas Kerja Sama Luar Negeri, personal communication, May 2024). This bureaucratic process takes a long time so that the grant assistance can be immediately received and implemented by Bandung. In addition, the difference in the way the bureaucracy works is also a challenge in implementing cooperation between the two parties. This is

evident in the waste management program, where Kawasaki's waste management is centralized under one institution, the Water and Waste Management Bureau. In contrast, Bandung's approach involves multiple agencies, complicating coordination and implementation efforts. Meanwhile, waste management in Bandung is carried out by at least four (4) local government agencies of Bandung. there is a Domestic Component Level (TKDN) policy of 40%. For example, goods imported from Japan must meet the TKDN rules (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024). This is a challenge because grants and assistance from Kawasaki cannot meet these demands. The difference in the bureaucracy works is a challenge for the implementation of cooperation between the two cities. The next challenge is leadership. A change of leader brings changes to the vision, mission and leadership objectives. This has an impact on the planning and policy priorities of local governments. This is also a challenge faced by the city government of Bandung in conducting international cooperation. International cooperation received extraordinary attention during the leadership of Mayor Ridwan Kamil. However, attention to international cooperation decreased when there was a change in leadership in the city government of Bandung. The challenges in implementing the Bandung and Kawasaki collaboration also include budget constraints. Budget availability is a significant factor in employing the policies. The cooperation between the two parties is progressing smoothly, with the budget being entirely covered by the Japanese side. Both parties can implement activities with insignificant obstacles. However, the situation differs when the budget is not fully covered by Japan. Several programs in the Bandung and Kawasaki cooperation use a subsidy budget scheme. In the air quality management program, for instance, the Japanese government only provides 40% of the budget based on the partner's capability to reduce greenhouse gas emissions (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024). The reliance on foreign funding and the limited local budget pose significant challenges to sustaining the program (Sabati, 2024; Siregar & Rizqullah, 2022). This becomes a challenge in the implementation of cooperation for both cities. The challenges faced in the partnership between Bandung and Kawasaki reflect broader issues found on environmental cooperation undertaken by city governments. According to Kern and Bulkeley, the common obstacles in that partnership include limited local institutional capacity, a lack of cross-sectoral integration, and dependence on external funding sources (Kern & Bulkeley, 2009). Meanwhile, Acuto et al argue that the success of city diplomacy depends on the ability of local bureaucracies to manage the complexities of policies involving both national and international actors (Acuto et al., 2016). Therefore, these challenges indicate that, while Bandung-Kawasaki partnership has strong potential to tackle environmental challenges. To make a real and lasting impact, the Bandung-Kawasaki partnership will need reforms within local bureaucracies, stronger leadership commitment, dan more reliable funding. Discussion Interpretation of Findings This research highlights the strategic role of international cooperation between Bandung and Kawasaki in addressing urban environmental challenges. Through this partnership, Bandung has benefited in various ways, particularly in strengthening the capabilities of its civil servants responsible for environmental management. Programs like waste management, air quality control, and water conservation have not only been implemented but have also facilitated valuable knowledge and technology transfer from Kawasaki to Bandung. This partnership serves as an example of how cities can work together to create sustainable environmental solutions. Although the partnership between Bandung and Kawasaki has brought valuable contributions and sparked various initiatives, its impact on the community remains limited. Several challenges have contributed to this. One major issue is the gap between policy and implementation. While this cooperation has resulted in important master plans and technical guidelines—such as the Cipamokolan Master Plan, the Manual for Managing Tofu Industry Wastewater, and the Manual for Managing Laundry Business Wastewater (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024)—putting these plans into action has been far from smooth. Limited budgets, shifting policies, and a lack of seamless coordination among institutions have all hindered progress. Another significant challenge comes from

bureaucratic and regulatory hurdles. As a local government, Bandung must comply with national regulations, which can make accessing grants—particularly from Japan through the Japan International Cooperation Agency (JICA)—more complicated. Lengthy bureaucratic procedures often delay both the approval and execution of collaborative programs. For example, imported goods from Japan must adhere to TKDN (Local Content Requirement) regulations (Tim Fasilitas Kerja Sama Luar Negeri, personal communication, April 2024), adding another layer of complexity. Furthermore, environmental management in Bandung is divided among four different agencies, making the system even more intricate and requiring strong inter-agency coordination to achieve meaningful impact. These findings highlight that the partnership between Bandung and Kawasaki plays a crucial role in strengthening human resource capacity, urban planning, and environmental management. It also reinforces the finding of earlier research by Muluk et al, which highlights that international cooperation on environmental issues undertaken by city government often depends on strong public participation and effective coordination between agencies (Muluk et al., 2022). However, despite its contributions, the collaboration still faces several [challenges that need to be addressed to ensure a more meaningful and lasting impact on the community](#). Comparison With Previous Literature This research contributes to bridging the gap in previous research on international cooperation undertaken by local government, particularly in the environmental sector. Most earlier studies have focused on economic, social, and cultural cooperation, while research examining environmental cooperation remains limited. For example, Isnaeni highlights the importance of such partnerships in helping local governments meet their needs (Isnaeni, 2013). Her research showcased how Surabaya's cooperation with Kitayushu successfully implemented [community-based waste management using the 3R \(reduce, reuse, recycle\) approach](#). However, her research does not explore in detail how similar cooperations could be replicated in other cities, such as Bandung. Siregar and Rizqullah investigated the success of this cooperation in improving waste management capacity (Siregar & Rizqullah, 2022). However, it does not go into detail about the long-term sustainability of the partnership or its broader impact over time. Similarly, Sabati showing that the partnership had improved waste infrastructure and reduced daily waste volumes in Bandung (Sabati, 2024). However the research also highlights financial constraints and difficulties in implementing the program effectively. Previous studies by Pluijm and Melissen, as well as Karvounis, discuss [the role of city diplomacy in the broader dynamics of international relations](#). They argue that cities are increasingly emerging as key political actors on the global politics through networks and cross-border cooperations (Karvounis, 2023; Pluijm & Melissen, 2007). However, they do not specifically examine how city diplomacy can be leveraged to tackle environmental issues. This research builds on those perspectives by showing that the partnership between Bandung and Kawasaki is not just about strengthening diplomatic ties—it also serves as a strategic tool to address environmental challenges in urban areas. In addition, Muluk et al looked at international cooperation [in the context of the Cikapundung River restoration and](#) found that such partnerships can improve water quality and raise public awareness (Muluk et al., 2022). However, they also noted that getting the public involved remains a challenge. On a global context, Strachova showed that [major cities such as New York and California](#) have led [the way in international climate agreements](#) (Strachova, 2021). However, implementing these kinds of initiatives in developing cities like Bandung still requires adaptation. Tayebi et al also highlight the value of environmental diplomacy in strengthening international cooperation for sustainable development. Nonetheless, they did not explore how local governments can apply this approach within their own policy frameworks. Therefore, our research offers a valuable contribution by combining the concepts of city diplomacy and city networks within the framework of environmental collaboration. Additionally, it sheds light on the key factors that influence the effectiveness of international partnerships in tackling environmental issues. Theoretical and Practical Implication The following are the theoretical and practical implications of this research: a. Theoretical Implications This research reinforces the theory that city diplomacy is not merely a tool for establishing foreign

relations. Instead, it can serve as a strategic approach for local governments to address their challenges, including environmental issues. The concept of paradiplomacy, as described by Karvounis (Karvounis, 2023), is becoming more relevant as cities like Bandung step onto the international stage to pursue sustainable development, especially when it comes to managing environmental challenges. The partnership between Bandung and Kawasaki further demonstrates that international cooperation led by local governments can be an essential instrument in achieving sustainable development goals, particularly in environmental issues. Additionally, this research highlights how Bandung has successfully leveraged international networks, such as the United Nations Environment Program (UNEP), to secure technological support and foreign funding. This underscores that city networks are not only platforms for information exchange but can also function as advocacy tools and gateways to global resources.

b. Practical Implication This research highlights the importance of stronger cooperation among government agencies in Bandung to prevent sectoral divisions that could slow down policy implementation. Streamlining bureaucracy is also crucial to ensuring that international cooperation programs run smoothly and effectively. Beyond government efforts, better communication strategies are needed to raise public awareness and encourage community participation in environmental management. Introducing environmental education into school curriculums from an early age can help instill a sense of responsibility and awareness about sustainability, ensuring that future generations are more engaged in protecting the environment.

CONCLUSION Bandung is one of the cities in Indonesia that actively cooperates with local governments abroad. The cooperation between Its partnership with Kawasaki stands out from other collaborations initiated by the city, as both parties have committed to working together in the environmental sector. This cooperation is the result of the city's hard work in building its network. Bandung has established a strong foundation for promoting environmental initiatives on a global scale. Bandung has successfully conducted diplomacy and has successfully utilized its network to fulfil its interests. The environment is one of the main problems faced by Bandung. Kawasaki, a city experienced in dealing with environmental issues offers one thing that Bandung needs. Both parties are able to work together to overcome environmental problems. However, the cooperation between the two parties is not without its obstacles. they face several challenges, including bureaucracy, leadership, and budget issues. Bandung as a regional government is bound by central government regulations. The central government regulates regional behaviour and authority. These policies are sometimes counterproductive because they make local governments inflexible and face complicated bureaucracy. In addition, changes in leadership impact policy orientation and budget issues also affect the effectiveness of cooperation, particularly if budget procurement must be shared by both parties. The cooperation between Bandung and Kawasaki has been running with various programs, enhancing the knowledge and understanding of Bandung civil servants. This partnership has yet to have a direct impact on the community. This research contributes to the study of city diplomacy by focusing on international cooperation, particularly in addressing environmental challenges through collaboration between city governments. Unlike previous studies that have largely emphasized economic, social, and cultural partnerships, this research highlights the importance of environmental cooperation. One key finding is the need for better coordination among government agencies within the Bandung city administration to ensure policies are implemented effectively. Bureaucracy flexibility would also help streamline programs, making them easier to execute. Additionally, raising public awareness through clearer and more engaging communication strategies is crucial for long-term success. Finally, this research has its limitations. Limited access to key informants posed a challenge in gathering primary data. Future research could dive deeper into the real impact of international cooperation by incorporating more perspectives from the public and policymakers. Comparative studies with other cities involved in similar partnerships could also offer valuable insights into the factors that contribute to successful environmental collaboration.

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