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Implementation of Green Politics Theory in Green Sister City Cooperation

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Abstract

The Sister City partnership between Surabaya and Kitakyushu, established in 1997, has become a vital driver of sustainable development with a strong emphasis on environmental conservation and economic inclusivity. Grounded in Green Political Theory, this collaboration translates sustainability principles into actionable initiatives addressing pressing environmental issues while fostering socio-economic growth. This qualitative study explores the impacts and outcomes of the Surabaya-Kitakyushu partnership through methods such as document analysis and stakeholder interviews. It evaluates strategies, initiatives, and partnerships developed under the Sister City framework, highlighting their effectiveness and challenges. Central to this collaboration are commitments to ecological responsibility, social equity, and inclusive economic development. Notable initiatives include the Takakura composting method and the "Green and Clean" program, which have significantly improved resource efficiency and environmental quality. These efforts underscore Surabaya's emergence as a regional leader in sustainable development, as evidenced by hosting high-profile events and promoting global knowledge-sharing. Ultimately, the partnership showcases the transformative potential of cross-city collaboration in advancing environmental sustainability, community engagement, and equitable growth, reinforcing the importance of integrating ecological and social priorities into urban development strategies.

Keywords

Green Politics, Partnership, Collaboration, Environmental Conservation, Economic Inclusivity.

1. Introduction

Sister City, a collaborative initiative involving cities from different countries, has become a foundation for long-term cooperation in various fields such as culture, education, economy, and the environment. This collaboration is not merely a formal agreement between two cities but also a commitment to fostering cultural relationships, building social connections, and addressing shared challenges (Bakry, 2015; Shefer, 2019). In the era of globalization and the complexity of international relations, Sister City emerges as a proactive response to global conflicts and disputes among nations. Its goal is to promote cross-cultural understanding, strengthen cooperation, and encourage unity among residents of geographically and politically diverse cities (Kostetska et al., 2020; Mahyuni & Syahrin, 2021).

Surabaya, as one of the largest industrial cities in Indonesia, faces serious challenges related to environmental pollution due to high industrial activity. These impacts are felt across various aspects of life, including public health and environmental quality (Dai, 2017; Adamowicz, 2022). However, Surabaya is not alone in addressing these issues. Through the Sister City partnership with cities like Kitakyushu, Surabaya gains access to knowledge, technology, and best practices in environmental management that have proven effective elsewhere (Burchell, 2014; Nuralam, 2018). On the other hand, Kitakyushu, a dense industrial city in Japan, has a rich history of overcoming similar environmental issues. Through innovation and a commitment to sustainable development, Kitakyushu earned recognition as the world's first "Eco-City" (Zain et al., 2022). By sharing their experiences and best practices through the Sister City partnership, Kitakyushu provides meaningful contributions to Surabaya's efforts in tackling complex environmental challenges (Wang & Zhang, 2024).

The Sister City collaboration between Surabaya and Kitakyushu is not only about improving the environment but also about building a sustainable and mutually beneficial relationship (Rodrigues & Mattioli, 2017). Through this process, the two cities not only address environmental issues but also create opportunities for economic growth, cultural exchange, and enhancing the quality of life for their residents. Thus, this partnership has not only a local impact but also strengthens global cooperation networks in the effort to protect our precious planet (Dai, 2017; Chatterji & Saha, 2017; Ali et al., 2021).

From this background, this study aims to address the questions that arise concerning the cooperation between the Surabaya City Government and the City of Kitakyushu in the environmental context. By considering the key principles of Green Political Theory, such as environmental sustainability, social responsibility, and ecosystem protection, this research seeks to explore how this collaboration reflects and supports these values. Additionally, the study will examine the contribution of this partnership to efforts in climate change mitigation and adaptation and how its implementation can strengthen global efforts to preserve the environment. Consequently, this research will open discussions about the relevance, impact, and implications of Sister City cooperation within the broader framework of green political thought.

2. Literature Review

This research explores the collaborative efforts between Surabaya and Kitakyushu under the Green Sister City program, focusing on environmental sustainability and innovative waste management practices. The study adopts a qualitative approach by identifying the research problem and conducting a thorough literature review using reliable sources such as books, journals, articles, and news. The findings provide a strong foundation to analyze the partnership's effectiveness

in addressing urban environmental challenges and promoting sustainable development. Surabaya, facing significant issues related to pollution and waste management, has actively sought solutions through this partnership, drawing on Kitakyushu's experience as a global leader in environmental innovation.

Several key studies support this research. Octavia (2017) highlights Surabaya's efforts to improve waste management by establishing the Super Depo Suterejo waste sorting facility in collaboration with Nishihara Corporation, a Japanese company. This initiative demonstrates the tangible outcomes of the partnership in tackling local waste problems. Husni & Afrizal (2017) emphasizes the broader framework of the Joint Crediting Mechanism (JCM) agreement between Indonesia and Japan, which underpins the Green Sister City program. Through this initiative, the cities focus on energy, solid waste management, transportation, and water resources as part of their low-carbon growth strategy. Nuralam (2018) provides a deeper context by examining Surabaya's transformation from being one of Indonesia's most polluted cities to a cleaner, greener urban center. This change was facilitated by collaborative efforts with Kitakyushu, which introduced effective waste management practices and supported Surabaya's environmental policies. Together, these studies underscore the role of the Green Sister City program in advancing urban sustainability while fostering international cooperation.

The difference between the author's research and the three previous studies lies in its deeper focus, broader context, and more detailed theoretical approach in analyzing the Sister City collaboration between Surabaya and Kitakyushu. These differences can be seen in aspects such as focus, scope, and the approach adopted in each study. First, the studies by Octavia (2017), Husni & Afrizal (2017), and Nuralam (2018) have a more specific focus on particular issues during specific years. For instance, Octavia and Husni & Afrizal (2017) research highlights waste management issues in 2013, while Nuralam (2018) examines Surabaya's efforts to address environmental pollution in the same year. Although relevant and valuable, these studies tend to focus on a limited timeframe and specific issues occurring at that time. Meanwhile, the author's research emphasizes the implementation of the collaboration between Surabaya and Kitakyushu in realizing the vision of Surabaya Green City, encompassing more than just a single year.

By examining this collaboration within a broader context, the author's research aims to explore its comprehensive impact and connect it with Green Political Theory to uncover deeper political and environmental implications. The studies by Octavia (2017), Husni & Afrizal (2017) and Nuralam (2018) focus more on the technical aspects of the issues discussed, such as waste management strategies or pollution reduction efforts. In contrast, the author's research not only addresses technical aspects but also integrates broader political and environmental dimensions into the analysis of the Sister City collaboration. Through a theoretical approach based on Green Political Theory, this study seeks to explore the political and environmental implications of the collaboration, offering a more holistic and contemporary perspective on Surabaya's vision as a green city.

3. Methods

This research will use a qualitative method, with the primary focus on gaining an in-depth understanding of the phenomenon being studied, both from the participants' and the researcher's perspectives. The qualitative method allows the researcher to explore the complexity and context of an issue or phenomenon, as well as to understand the meanings contained within it. This approach often involves data collection through participatory observation, in-depth interviews, and the analysis of texts or documents. By using a qualitative approach, this study will explore the perceptions, experiences, and understandings of stakeholders regarding the Green Sister City collaboration between the Surabaya City Government and the

Kitakyushu City Government within the context of Green Political Theory. In this research method, the author uses a case study approach to study and explain in more detail how the performance of the Green Sister City collaboration between the Surabaya City Government and the Kitakyushu City Government is viewed from the perspective of green political theory.

4. Results and Discussion

4.1. Sister City Cooperation between Surabaya and Kitakyushu

Green Politics is a theoretical concept in the field of international relations defined by Goodin (1996), where in decision-making or policy formulation, environmental interests are prioritized over other interests (McGlinchey et al., 2017). By prioritizing environmental interests, this concept acknowledges the crucial relationship between human activities and the sustainability of the Earth's environment, emphasizing a holistic approach to governance (Ali et al., 2021). Essentially, Green Politics aims to foster a symbiotic (mutual) relationship between humanity and the environment, recognizing that the continuity of human life is closely related to the health and sustainability of the ecosystems and environment in which it exists (Burchill, 2005; Sagena, 2023). The application of this theory is seen in the Sister City collaboration between Surabaya and Kitakyushu.

The cooperation between the two cities is an effort to address the problems that occur in both Surabaya and Kitakyushu. Waste is not a new issue in various capital cities. Several major cities in Indonesia, such as Jakarta, Bandung, and Surabaya, are struggling to tackle waste problems. Around 80% of the total waste generated is generally organic waste (Oktariani et al., 2022; Fitriana & Rubiyanto, 2022). This waste is often considered just kitchen scraps that have no economic value. It is not surprising that organic waste accumulates, leading to discomfort and diseases. The accumulation of waste and the lack of organic waste management, along with the continued practice of disposing of waste in vacant lots, water channels, or burning it, are other contributing factors to environmental damage (Nurliah et al., 2022).

In 1997, the Surabaya city government and the Kitakyushu city government established a Sister City partnership. Evidence of this collaboration is seen when the Kitakyushu government held the "Joint Declaration of The Kitakyushu Conference on Environmental Cooperation among Cities in the Asian Region," and the Surabaya government participated in this conference. Additionally, this partnership was marked by the signing of a Memorandum of Understanding (MoU) between the two parties regarding Surabaya Green City in November 2012, given that Kitakyushu, which once was an environmentally unfriendly industrial city, has transformed into one of the best examples of an environmentally-friendly industrial city (Dai, 2017; Utomo & Widiana, 2024).

Table 1. History of cooperation between the city of Surabaya and Kitayushu from 2012 to 2018

Year	Program
2012	Low Carbon City and Waste Recycling
2013	Training Water Management
2014	City Potential Exploration
2015	Drinking Water Management
2016	Energy Source Management
2017	Dengue Fever Prevention
2018	Forest Conservation and Ecotourism Development

This collaboration involves aspects of paradiplomacy, which refers to long-term cooperative relationships between two cities in different countries, encompassing various development initiatives, including programs aimed at raising environmental

awareness and protecting mangrove ecosystems. The focus on developing ecotourism in mangrove forests highlights the shared commitment to utilizing natural resources sustainably while increasing local income and strengthening economic sustainability. This collaboration is also part of Surabaya's efforts to become a Green City that is environmentally friendly and globally competitive. The vision of "Surabaya, a Prosperous City with Character and Global Competitiveness Based on Ecology" places the environment at the center of sustainable urban development. Therefore, the programs within the Surabaya Green City framework, including Green Society and ecotourism development, are not merely practical steps but also expressions of a long-term commitment to building an environmentally conscious society and a sustainable economy (Rudiany et al., 2021; Francinni et al., 2022).

The sister city collaboration between Surabaya and Kitakyushu has had a profound and diverse impact on local communities in both cities, fostering the exchange of ideas, resources, and experiences. One of the most notable impacts is the significant improvement in environmental management practices. Through the implementation of eco-friendly technologies and innovative approaches such as the Takakura method in waste management, the collaboration has led to positive outcomes. In the energy sector, for instance, the implementation of a co-generation system in the SIER industrial area and energy savings in buildings have contributed positively to reducing greenhouse gas emissions. In the solid waste sector, initiatives such as waste sorting, recycling, composting, and waste-to-energy projects have helped reduce the amount of waste sent to landfills. In the transportation sector, the switch to environmentally friendly fuels for vehicles and improved management of waste truck operations have contributed to reducing vehicle emissions (Oktariani et al., 2022).

One successful implementation example is the waste management project in Nishihara, which involved a partnership between Nishihara Co. and the Surabaya Department of Cleanliness and Parks, resulting in positive outcomes, such as the operationalization of the Nishihara Depo, which is able to sort up to 85% of waste for resale. In addition, the Nishihara Composting Center, which started operating in 2015 with funding from JICA, is also a key part of Surabaya's waste management efforts. Receiving 8 tons of waste daily from 4 traditional markets and parks in Surabaya, this composting center has made a significant contribution to reducing the amount of waste sent to landfills. The sister city collaboration between the Surabaya and Kitakyushu governments creates new programs each year, with these programs being carried out by both parties. One such program focuses on waste management, with various efforts being made in areas like waste recycling, reusing waste as an energy source, pollution control, and handling polluted rivers. These activities are carried out through mentoring programs, serving as an expression of People to People Contact.

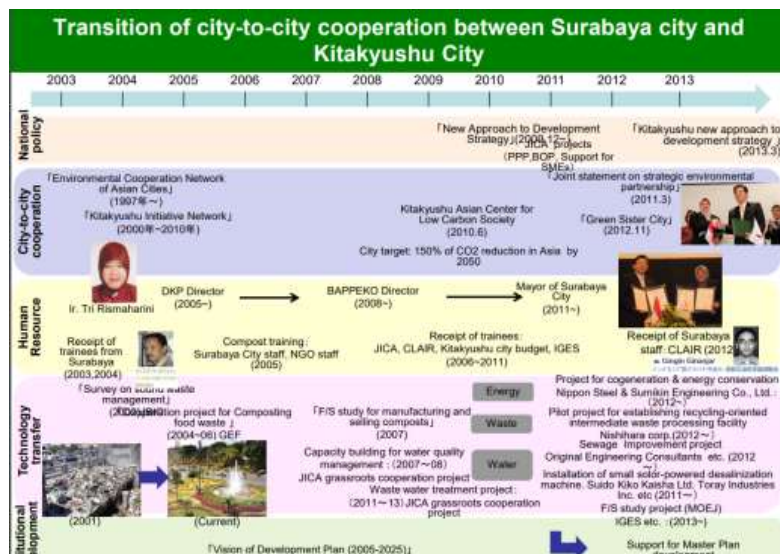


Figure 1. Implementation efforts made to realize a green city

4.2. Collaborative Efforts to Create a Green City

The Green Sister City collaboration between Surabaya and Kitakyushu is a concrete step in realizing a commitment to promote sustainable practices and engage the community in environmental preservation efforts. In the context of Green Politics Theory, which emphasizes the importance of environmental sustainability, this collaboration serves as a real example of how the principles of the theory can be applied in practice. The implementation of programs such as waste management and sustainable drinking water supply reinforces the commitment of both cities to create an environmentally friendly and inclusive environment (Nuralam, 2018). The collaboration in water management includes monitoring water quality, promoting decentralized wastewater treatment facilities, and assisting in the formulation of waste improvement plans. For the drinking water supply, Kitakyushu conducted surveys and studies to address issues such as aging pipelines and unsafe water quality in Surabaya.

Clean water is a vital resource for human health, well-being, and security. However, issues related to clean water remain a global problem, including in Surabaya, which faces challenges such as scarcity, poor quality, lack of sanitation facilities, as well as water-related disasters such as floods and droughts. Additionally, there is limited access to water with adequate quality and quantity (Sagena, 2023). Overall, the collaboration between Kitakyushu and Surabaya involves comprehensive efforts in waste management, water treatment, and drinking water supply, with a focus on technological development, community engagement, and environmental sustainability (Institute for Global Environmental Strategies, 2018). When linked to Green Politics, essentially, Green Politics aims to foster a symbiotic relationship between humanity and the environment, recognizing that the sustainability of human life is closely tied to the health and sustainability of the ecosystems and environments in which we live (Siregar & Sagena, 2023).

In the effort to create a green city, Surabaya and Kitakyushu focus on various aspects, including technology development, community involvement, and environmental sustainability. For example, the development of the Takakura composting method to accelerate the recycling of organic waste shows an effort to improve the efficiency of natural resource use. Additionally, the "Green and Clean" program and the enhancement of recycling centers reflect awareness of the environmental impact of economic policies. However, this collaboration is not just

about environmental aspects alone. Through student exchanges and joint research, both cities also strive to create inclusive economic growth. Therefore, this collaboration reflects the application of the principles of Green Politics Theory in various relevant indicators, not only in environmental aspects but also in social and economic aspects. As a concrete example, Surabaya hosted the High-Level Seminar on Environmentally (Shefer, 2019).

The High-Level Seminar on Environmentally Sustainable Cities (HLS ESC) in 2014 was part of a flagship collaborative initiative involving several participating countries of the East Asia Summit (EAS), including Surabaya and Kitakyushu. From February 28 to March 1, 2014, Surabaya hosted the High-Level Seminar on Environmentally Sustainable Cities (HLS ESC), which was held concurrently with the Fifth Regional BR Forum in Asia and the Pacific at the Sheraton and Towers Hotel, Surabaya. This event was part of a collaborative initiative involving 18 countries from the East Asia Summit (EAS), including Surabaya and Kitakyushu. The event aimed to promote concrete activities related to Environmentally Sustainable Cities in the region. The initiative created a platform for various stakeholders, including local and national governments, international organizations, NGOs, academics, and urban environmental management practitioners, to discuss current issues and explore collaborative opportunities (Mahyuni & Syahrin, 2021).

Through this event, both cities were able to actively raise their environmental issues to the international stage, discuss current challenges, and share experiences in search of joint solutions. Thus, the collaboration between Surabaya and Kitakyushu not only strengthened their relationship as sister cities but also became a driving force for sustainable solutions that could be adopted by cities worldwide. Through this platform, they not only built a strong relationship as sister cities but also became a driving force for sustainable solutions that could be adopted by other cities around the world.

5. Conclusion

The collaboration between the city governments of Surabaya and Kitakyushu in the form of a Sister City partnership demonstrates a practical implementation of the principles of Green Political Theory and Paradiplomacy. Through programs such as waste management and knowledge exchange, both cities show their commitment to promoting sustainable practices and involving the community in environmental preservation efforts. In the context of Green Political Theory, this collaboration emphasizes the importance of environmental sustainability and community involvement in achieving these goals. Efforts such as waste management and the "Green and Clean" program reflect an awareness of the environmental impact of economic policies and the effort to engage the community directly in environmental preservation. On the other hand, this collaboration also reflects the principles of Paradiplomacy by allowing the city governments of Surabaya and Kitakyushu to actively engage in international relations and bring their environmental issues to the global stage. Through participation in events such as the High-Level Seminar on Environmentally Sustainable Cities (HLS ESC), both cities demonstrate their willingness to share experiences and create joint solutions for environmental challenges. Thus, this collaboration not only strengthens the relationship between the two cities as sister cities but also serves as a model for other cities around the world in efforts to create sustainable and inclusive environments. Through this platform, Surabaya and Kitakyushu provide a concrete example of how cities can act as driving forces in addressing global environmental challenges.

References

- Adamowicz, M. (2022). Green deal, green growth and green economy as a means of support for attaining the sustainable development goals. *Sustainability*, 14(10), 5901.
- Ali, E. B., Anufriev, V. P., & Amfo, B. (2021). Green economy implementation in Ghana as a road map for a sustainable development drive: A review. *Scientific African*, 12, e00756.
- Bakry, U. S. (2015). *Metode Penelitian Hubungan Internasional*. Yogyakarta: Pustaka Pelajar.
- Burchell, J. (2014). *The evolution of green politics: development and change within European Green Parties*. London: Routledge.
- Burchill, S. (2005). *Theories of International Relations* (Third Edition). New York: Palgrave Macmillan.
- Chatterji, R., & Saha, S. (2017). Para-diplomacy: Concept and the Context. *India Quarterly*, 73(4), 375-394.
- Dai, I. A. (2017). *Kerjasama Sister City Surabaya-Kitakyushu Dalam Pengelolaan Limbah Sampah*. Yogyakarta: Universitas Muhammadiyah Yogyakarta.
- Fitriana, N. M. N., & Rubiyanto, C. W. (2022). The Impact of Sister City Surabaya-Kitakyushu Cooperation on Environmental Development in Surabaya. *Journal of Paradiplomacy and City Networks*, 1(1), 27-38.
- Francinni, R., Wibisono, B. H., & Matsunami, J. (2022, October). An Institutional Analysis of Surabaya (Indonesia)-Kitakyushu (Japan) Green Sister City Cooperation. In *International Conference on Indonesian Architecture and Planning* (pp. 163-177). Singapore: Springer Nature Singapore.
- Goodin, R. E. (1996). Enfranchising the Earth, and its Alternatives. *Political studies*, 44(5), 835-849.
- Husni, Z., & Afrizal, A. (2017). *Kerjasama Indonesia-Jepang Melalui Joint Crediting Mechanism Dalam Green Sister City Surabaya-Kitakyushu Tahun 2013*. Pekanbaru: Riau University (Doctoral dissertation).
- Kostetska, K., Khumarova, N., Umanska, Y., Shmygol, N., & Koval, V. (2020). Institutional qualities of inclusive environmental management in sustainable economic development. *Management Systems in Production Engineering*, 28(1), 15-22.
- Mahyuni, M., & Syahrin, M. N. (2021). Sister city cooperation model in wetland environmental governance: case study in Banjarmasin, south of Kalimantan. *International Journal of Politic, Public Policy and Environmental Issues*, 1(02), 115-125.
- McGlinchey, S., Walters, R., & Scheinplflug, C. (2017). *International relations theory*. E-International Relations.
- Nuralam, I. P. (2018). Peran Strategis Penerapan Konsep Sister City Dalam Menciptakan Surabaya Green-City. *Journal of Applied Business Administration*, 2(1), 144-151.
- Nurliah, N., Elika, S., & Sagena, U. W. (2022). Sosialisasi Pengelolaan dan Pemanfaatan Sampah Organik Rumah Tangga Dalam Memproduksi Ekoenzim. *Jurnal Pengabdian Masyarakat Madani (JPMM)*, 2(1), 33-39.
- Octavia, M. B. (2017). Kerjasama Green Sister City Surabaya Dan Kitakyushu (Studi Kasus Pengelolaan Sampah) Melalui Super Depo Suterejo. *E-journal Ilmu Hubungan Internasional*, 2.
- Oktariani, P., Kumalasari, O. W., & Kurniawati, D. E. (2022). Pengimplementasian Metode Takakura Sebagai Bentuk Kerjasama Sister City Surabaya-Kitakyushu. *Ganaya: Jurnal Ilmu Sosial Dan Humaniora*, 5(1), 82-93.
- Rodrigues, G. M. A., & Mattioli, T. (2017). Paradiplomacy, security policies and city networks: the case of the Mercocities Citizen Security Thematic Unit. *Contexto Internacional*, 39, 569-587.
- Rudiany, N. P., Anggraeni, S. D., Nurhidayah, G. M., & Firmansyah, M. (2021). The Role of Cities in Energy Diplomacy: Indonesia, Japan and the Surabaya-Kitakyushu Partnership. *The Hague Journal of Diplomacy*, 17(1), 64-90.
- Sagena, U. W., Azizsyah, S. N., Panjaitan, O., Masjaya, M., & Sharifuddin, M. D. K. (2023). Program Triple C (Climate Change Class) Untuk Peningkatan Kesadaran Lingkungan Bagi Anak. *JMM (Jurnal Masyarakat Mandiri)*, 7(4), 3238-3249.
- Shefer, I. (2019). Policy transfer in city-to-city cooperation: Implications for urban climate governance learning. *Journal of Environmental Policy & Planning*, 21(1), 61-75.

- Siregar, K. R., & Sagena, U. W. (2023). Implementasi Kerja Sama Lingkungan Hidup di ASEAN dalam Kerangka Konvensi Perubahan Iklim. *Jurnal Pendidikan Tambusai*, 7(3), 27987-27995.
- Utomo, A. B., & Widian, F. (2024). Green Sister City Cooperation of Surabaya and Kitakyushu: Beyond Ceremonial Paradiplomacy. *Thammasat Review*, 27(2), 316-334.
- Wang, S., & Zhang, H. (2024). Inter-organizational cooperation in digital green supply chains: A catalyst for eco-innovations and sustainable business practices. *Journal of Cleaner Production*, 472, 143383.
- Zain, A. F., Pribadi, D. O., & Indraprahasta, G. S. (2022). Revisiting the green city concept in the tropical and global south cities context: The case of Indonesia. *Frontiers in Environmental Science*, 10, 787204.



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