



A SUSTAINABLE CITY: A PARALLEL DIPLOMACY STUDY OF BANDUNG TOWARDS KAWASAKI IN HANDLING CARBON EMISSIONS

Rosania Laoli^{1*}, Windy Dermawan¹

¹Universitas Padjadjaran; Indonesia

*email: rosaniaalaolii@gmail.com

Abstrak

Perubahan iklim global telah meningkatkan suhu bumi dan emisi karbon, termasuk di Kota Bandung yang kini memiliki kualitas udara sedang. Menanggapi hal ini, Pemerintah Kota Bandung berupaya mengurangi emisi karbon melalui berbagai langkah, salah satunya diplomasi paralel dengan pihak internasional seperti Kota Kawasaki. Penelitian ini menggunakan konsep diplomasi paralel dan pendekatan pada metode kualitatif berupa metode analisis deskriptif. Hasil riset menunjukkan bahwa emisi karbon di Kota Bandung cukup tinggi dalam lima tahun terakhir. Upaya penanganan dilakukan dengan melibatkan kerja sama luar negeri, khususnya dengan Kota Kawasaki, yang telah terjalin cukup lama melalui berbagai program lingkungan, termasuk pengurangan emisi karbon. Namun dalam pelaksanaannya, diplomasi paralel Kota Bandung tetap mengacu pada hukum Indonesia. Kesimpulannya, diplomasi paralel Bandung-Kawasaki berjalan cukup baik dengan melibatkan banyak aktor, meski terdapat tantangan akibat perbedaan struktur dan tahapan tata kelola diplomasi kedua kota.

Kata Kunci: *diplomasi paralel, emisi karbon, kota Bandung, kota Kawasaki*

Abstract

Global climate change has increased the earth's temperature and carbon emissions, including in Bandung City, which now has moderate air quality. In response, Bandung City Government seeks to reduce carbon emissions through various steps, including parallel diplomacy with international parties such as Kawasaki City. This research uses the concept of parallel diplomacy and approaches qualitative methods through descriptive analysis methods. The results show that carbon emissions in Bandung City have been relatively high in the last five years. Handling efforts are carried out by involving foreign cooperation, especially with Kawasaki City, which has been established for a long time through various environmental programs, including carbon emission reduction. However, in its implementation, Bandung City's parallel diplomacy still refers to Indonesian law. In conclusion, Bandung-Kawasaki's parallel diplomacy runs quite well when many actors are involved. However, there are challenges due to differences in the two cities' structure and stages of diplomatic governance.

Keywords: Bandung city, carbon emissions, Kawasaki city, parallel diplomacy

Introduction

In the era of complex globalization, international relations are increasingly experiencing developments in various aspects (Buzan & Lawson, 2015: 17). This development brings global modernity in the form of a global order that does not only focus on political and military issues but various other issues are of concern to the global community such as environmental issues (Mingst et al., 2015: 417). One part of environmental issues in the international world is the issue of significant climate change. One of the significant impacts since the revolution is the increase in Earth's temperature by 1.1°C, with an increase in the 2000s more rapidly than in the 1900s. The increase in carbon dioxide in the 21st century has increased more than in previous times, with the largest concentration (Calvin et al., 2023: 4). The impacts of climate change do not only extend to the environmental sector but also the social, economic and political sectors, as climate change issues are embedded in all parts of human life (Betsill & Bulkeley, 2021: 141). Therefore, this research considers that international relations and environmental issues are important in the life of the global community because they impact daily life, considering the increasing factors that cause climate change in the world.

In studying international relations, especially in the global environment, various things can trigger environmental issues, such as the greenhouse effect, global warming, and carbon emissions (Mingst et al., 2015: 421). Carbon emissions are caused by an increase in greenhouse gases and carbon dioxide due to human activities, such as using vehicles fueled by non-renewable energy (gasoline, diesel, gas), increased use of electricity and water in human activities, and improper management of food waste. In a report issued by The International Energy Agency (IEA), energy production and coal carbon emissions have increased in 2022 (International Energy Agency, 2022: 23). The IEA states that the increase in carbon emissions in the world, especially in Asia, is due to many countries switching from using natural gas to coal as a result of rising natural gas prices due to the Russia-Ukraine war (Calvin et al., 2023: 15).

Various ways have been taken, from implementing forums to forming joint agreements between countries (Karunia et al., 2023: 81-82). Indonesia became one of the countries that participated in the commitment to reduce world emissions through the signing of the Paris Agreement and the existence of Law Number 16 of 2016 (Apriandi Zuhir et al., 2017: 231; Dimitrov, 2016: 4). This is because Indonesia was ranked fourth

in 2015 and tenth in 2020 as an emitter in the world. The country is expected to support the net-zero emission commitment in 2050-2060 through its forest areas (EBTKE, 2022). In Indonesia, environmental problems, especially carbon emissions, are not only contributed by the central government, but local governments also take part in overcoming this problem. One example is the Bandung city government. Carbon emissions in Bandung itself are also quite alarming, entering the medium-quality category, which does not rule out the possibility of getting worse later (Diskominfo Jawa Barat, 2023; Diskominfo Kota Bandung, 2023). Indicators of this problem include the low quality of air and water, the existence of sub-optimal waste management, the increase in the use of private vehicles that trigger congestion, frequent flooding in some parts of the city, and many more (Pramadhika & Syaodih, 2022: 140).

In addition, to tackle carbon emissions, Bandung City does not only initiate with local parties and the community but also with foreign parties through diplomacy activities. It is a parallel diplomacy (Dimitrov, 2015: 105). Indonesia has regulated the foreign relations of a region in several regulations, such as Law No. 37 of 1999. Through the rules established by the Indonesian government, local governments can conduct and develop their foreign relations in various sectors but adjust to national goals, namely national and regional development (Mukti, 2020: 10). Bandung City, as one of the larger cities, has developed its diplomatic activities with various parties, local governments, institutions, and individuals from abroad (Datisi, 2020: 11). Parallel diplomacy conducted by Bandung has taken place in various sectors, such as trade, tourism, education, and culture. In practice, this parallel diplomacy has experienced obstacles, such as communication that has not been well established between the two parties or between the city of Bandung and the people of Bandung through socialization. In addition, this diplomacy has not gone well because the Bandung city government has not yet provided facilitation in several aspects, such as its readiness in the administrative system and communication carried out by both parties, such as the absence of good data and information dissemination, especially in terms of optimizing the promotion of the city of Bandung to attract the interest of the international community (Adibowo & Putri, 2016). Researchers are interested in further examining Bandung's parallel diplomacy from aspects that may not have been or rarely discussed. This research will focus on the

environmental sector in the city of Bandung and involve the diplomacy process carried out by the city of Bandung itself.

In this research, researchers searched for previous research as material to find the novelty of this research. Researchers divided previous research into three typologies, namely (1) Carbon emission issues, (2) Sub-state actors in carbon emission issues, and (3) Parallel Diplomacy of Bandung city in various sectors. In the first typology, namely carbon emission issues, researchers found several previous studies in Adi Pratama et al., 2022; Karunia et al., 2023; Pramadhika & Syaodih, 2022. In these three studies, most of them discuss the issue of carbon emissions and its relation to economic growth and the use of new renewable energy in every sector of society, so researchers bring novelty, namely the discussion of the issue of carbon emissions in the field of international relations studies through diplomacy and foreign relations activities. In the second typology, sub-state actors in carbon emission issues, researchers found some previous research in the form of Bernstein & Hoffmann, 2018; Hsu et al., 2020; Roppongi, 2016. These studies discuss the role and impact of sub-national actors in addressing problems in the environmental sector, such as climate change and carbon emissions. However, from the researcher's search, there is little research on sub-national actors in Indonesia's carbon emissions issue. Hence, the researcher wants to bring that novelty to this research. In the third typology, namely Parallel Diplomacy of Bandung city in various sectors, researchers found previous research, namely Domloboy Nst, 2016; Primawanti et al., 2023; Rabbani & Hayat, 2022. These three studies explain the various foreign relations activities in the form of Parallel Diplomacy between Bandung and other regions abroad in various sectors, such as the socio-cultural, economic, technological, and environmental sectors. Therefore, the researcher provides novelty regarding the development of Bandung's Parallel Diplomacy in the environmental sector, especially in addressing current carbon emissions. The researcher aims to examine the novelty in this research by focusing on the object of research, the city of Bandung, and the issue brought up is carbon emissions in the city in the form of foreign relations in the form of parallel diplomacy of the city of Bandung in various forms of foreign relations, either with other subnational actors or with non-governmental actors.

In this research, the researcher has a research objective, which is to explain the parallel diplomacy practices of Bandung City towards Kawasaki City in terms of

environmental aspects, especially in dealing with carbon emissions. This research aims to provide benefits for local governments in policy-making as well as institutions and individuals as a reference for implementation and efforts that should take place to overcome environmental problems, especially carbon emissions. They can learn about the impacts and benefits for the community and the city of Bandung's foreign relations with other international actors. In addition, the research aims to contribute to the conceptual development of parallel diplomacy in the model of addressing carbon emissions at the city level. It can spark ideas and thoughts about parallel diplomacy in Indonesia, especially for Bandung City in handling carbon emissions.

Parallel Diplomacy

International relations studies have experienced many developments, especially in the third debate. In the third debate, a different paradigm emerged from the mainstream: the constructivism paradigm initiated by Wendt, Onuf, and Kartocwil (Fathun, 2018: 324). Constructivism provides a new view that relationships and interactions in international relations are not limited to the state as an independent variable but also include other agents and actors in the social structure of international relations (Fathun, 2018: 320). The social structure or construction adopted by constructivist thinkers states that the premise is that individuals and groups can build their environment to interact, both from the smallest level (micro) and the most significant level (macro) actively. However, interacting with these actors is not entirely feasible as it comes under the constraints of various conditions and institutions that have or will continue to change historically. Constructivism's view of the characteristics of relationships between actors is described by Wendt (1992) through a hypothesis: "*Anarchy is what states make of it*". It has become a feature of constructivism's view on international relations (Wicaksana, 2018: 158).

In global political change that the view of constructivism has influenced, the actions of each actor show the direction of interests that adapt to the ideas and norms of the actors themselves. One of the ways to realize these interests is through diplomacy. Diplomacy is an instrument a country uses to implement its national interests and relate to organizations or countries in the international world. This instrument is used from the beginning as the primary tool in conducting relations with other countries or foreign organizations to build relationships to the next stage in the future (Nurika, 2017: 128).

Diplomacy can be categorized as both an analysis and a practice. Practitioners use the term to characterize various meaningful and socially structured approaches to achieving things in the global arena. In other words, diplomacy in practice embodies forms of knowledge and competence that are socially meaningful and recognizable at the level of action. According to Sending, Pouliot, & Neumann, the definition of diplomacy is a claim to represent a particular government to the outside world. In addition, diplomacy is a process of claiming authority and jurisdiction, is relational, operates between governments and other governments, and is political, involving representation and government (Sending, 2015).

In practice, diplomacy has various functions, the first of which is to represent the interests of the state and conduct negotiations or disputes designed to identify common interests and areas of disagreement between the two parties, aiming to achieve state goals and avoid conflict (Berridge, 2022). These two functions of diplomacy are the most important functions of diplomacy. Negotiation between two representatives is the key component because by doing so, representatives can discover common interests. It is important to negotiate because it can design solutions that suit the interests of both parties (Berridge, 2022). The following function in the practice of diplomacy is reporting on the collection of information and the identification and evaluation of the country's foreign policy objectives that the Ministry of Foreign Affairs will use in analyzing data and determining foreign policies that must take effect. In addition, diplomacy also protects citizens in other countries, as well as a promotional function to promote the country's national interests and maintain relations with the expansion of political, economic, and cultural relations between countries (Berridge, 2022; Kissinger, 1994). However, along with the times and the movement of globalization, diplomacy has increasingly developed, not just relations between countries on specific issues but various actors and issues that have developed rapidly to date (Cooper et al., 2008).

Complexity in international relations also occurs in the state's national interests, thus requiring the state to form relationships with other actors because it is no longer the dominating actor. Other actors, such as subnational actors, groups, or individuals within a country, have built diplomatic relationships to achieve national interests. The concept of developing diplomacy at a smaller level in a country, such as governments, groups, or individuals in a region or area, is called parallel diplomacy. Parallel diplomacy describes

diplomatic actions by sub-state organizations such as regional or local governments (Fathun, 2022: 308). Parallel diplomacy emerged with the concept of decentralization. The shift to a more decentralized approach to diplomacy will increase the resilience of communities and local governments, especially in Indonesia, where decentralization regulations have gradually come into effect. However, it also adds complexity to governance and the requirement to align with more comprehensive national policies (Surwandono & Maksum, 2020: 83). The history of diplomacy was heavily influenced by institutions, even seemingly simple ones, such as cross-border interactions. One of the clearest examples of positive border relations is the adoption of more formalized parallel diplomacy (Cornago, 1999: 42).

According to Lecours (2002), parallel diplomacy emerged in the wake of all these problems and historical events, such as the end of the Cold War, European integration, etc., which in turn led to other problems, so it is not surprising that another new development is the increasing global presence of subnational entities, particularly local governments. Although subnational involvement in international affairs may not have as significant an impact as civil or ethnic wars, the transition from communism to authoritarianism, or the changing structure of the global economy, it is still an important component in reorganizing international politics and diplomacy. As territorial institutions that cannot easily engage in global politics through lobbying, protests, or political/economic pressure, local governments are in a different and more difficult situation. They must rely on traditional, closed, state-centered diplomacy networks and mechanisms. Therefore, from an international perspective, the practice of parallel diplomacy still depends on the policies and politics of the central state (Lecours, 2002: 103).

According to Kuznetsov (2015), the politics and policies of parallel diplomacy tend to be looser in federal states. However, the parallel diplomacy practices of unitary states show that regional governments also engage in intensive study of international relations. There are three categories of parallel diplomacy: political, conservative, and progressive, based on the diversity of parallel diplomacy policies and tactics used in international forums. Some indications can make sense of a nation's policies and politics in each category. The indications include the preparation of cooperation documents with foreign parties, foreign policy, the role of diplomacy, and representative offices abroad (Mukti,

2020: 39-44). First, diplomacy and foreign policy. This indicator is central based on its isolative, conservative, and progressive categories. This indicator believes that parallel diplomacy must be compliant and aligned with the Republic of Indonesia's foreign policy objectives to work within its framework. This notion of parallel diplomacy is consistent with Cornago's view of "normal Parallel Diplomacy," which requires alignment with the central government's foreign policy in order for local government operations to be "parallel" to the "diplomacy" conducted at the federal level. Before regionally proposed cooperation plans are approved, the Ministry of Home Affairs and the Ministry of Foreign Affairs coordinate interdepartmental meetings to oversee the control of regional diplomatic missions in Indonesia. The second indicator is the diplomatic role when viewed through three categorizations in the politics of parallel diplomacy, based on the isolative category, there is no initiation of foreign cooperation, and it is an assignment from the central government. If viewed from the conservative category, such cooperation can be carried out, but the central government must supervise it. In contrast, according to the third category, namely progressive, local governments can carry out some foreign cooperation. Based on these three things, the central government is designated as having diplomatic responsibilities. Activities relating to local government that include interstate contacts must be coordinated and consulted with the center (Mukti, 2020: 44-45). The third indicator is foreign representative offices. Based on the isolative and conservative categories, there are only offices from the central government, while based on the progressive category, offices can be established with specific predetermined criteria. In establishing these representative offices in countries that follow a federal structure, parallel diplomacy allows local governments to establish representatives abroad. It is a tactic that is commonly used. However, this is very limited for countries with a unitary state structure. Then, the fourth indicator, namely, the creation of cooperation documents. The isolative and conservative categories can only be formed if they get a mandate letter from the central government, unlike the progressive typology, which only requires coordination in its creation. The distinction is in legal procedures; the concept of a unitary state means that a local government must always have a "Full Power Letter" or a letter of authorization from the government before signing a cooperation agreement (Mukti, 2020: 51-54).

Research Methods

In conducting research, researchers use a qualitative approach. The qualitative method approach is a data collection approach that uses non-numerical data. Qualitative methods deepen our understanding of how we can make sense of the world around us, thus requiring a focus on the various meanings and processes that define the international political system (Lamont, 2020: 94). This research uses analytical descriptive methods that include questionnaires and some form of fact-finding questions. The primary purpose of the analytical descriptive approach is to describe current events (Lamont, 2022: 110). As for data collection, researchers use data collection techniques in the form of internet-based research techniques by using official websites, electronic books, electronic journals, and relevant previous research; document-based research by using archived data and documents from official government records, news from various media, and documentation from organizations or parties involved; interviews by preparing questions on interview guidelines to relevant informants (Lamont, 2020: 96-104).

Results and Discussion

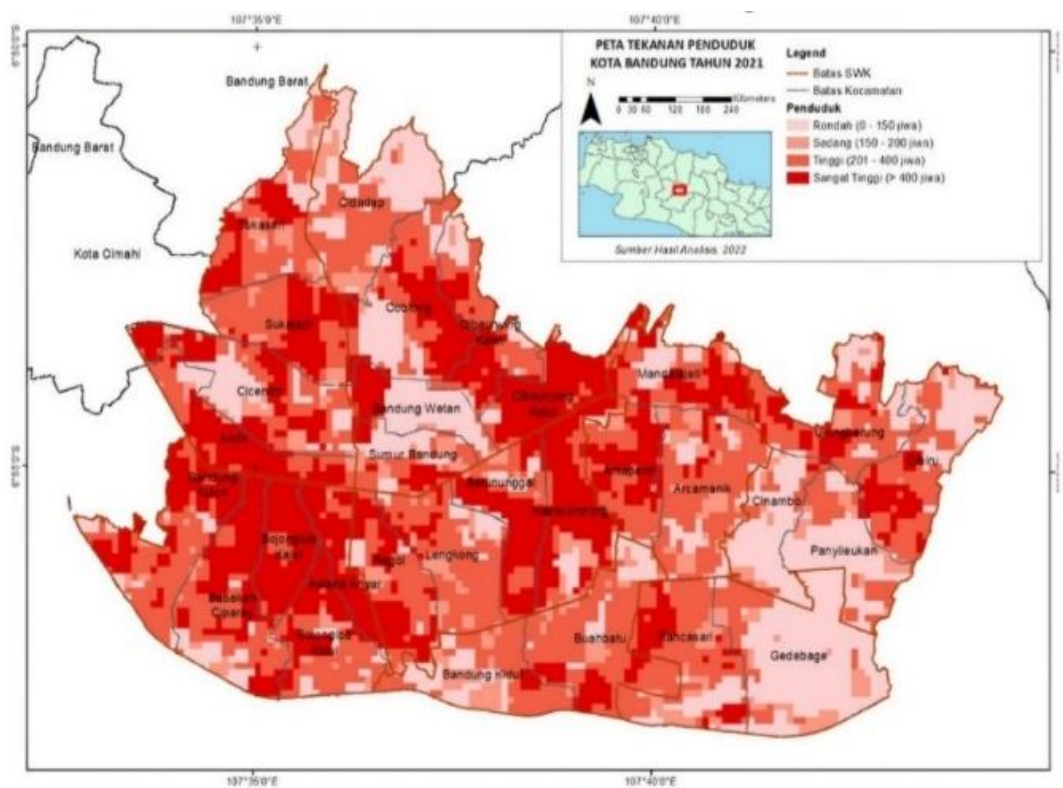
Environmental Aspects of Bandung City

The climate of the surrounding highlands influences the climatic conditions of Bandung City. However, temperatures have risen recently and the rainy season has lasted longer than usual. At the turn of the year, the local government of Bandung City prioritized infrastructure, education, and transportation to improve people's lives. In addition, environmental factors were also considered, especially in the water sector and waste management, to achieve a cleaner and better lifestyle for the community (Diskominfo Kota Bandung, 2024). Carbon emissions have increased significantly over the past 20 years, causing problems for Bandung. The city's air quality has declined as pollution levels continue to rise. The city's green open space (RTH) capacity cannot counteract carbon emissions, especially from the transportation sector. High levels of private vehicle ownership and loss of forest cover, which acts as a natural carbon sink, exacerbate this problem (Haq, 2023: 91-95; Wellid et al., 2024: 129-130). The most significant transportation industry contributes to the carbon emission problem in Bandung City. According to the Department of Environment and Hygiene (DLHK) of Bandung City, up to 70% of the city's air pollution comes from transportation gas emissions. This

fact is supported by statistics from IQAir stating that PM2.5, the primary pollutant that degrades the city's air quality, is mainly produced by motorized vehicles that use fossil fuels (Diskominfo Jawa Barat, 2023).

On the other hand, issues regarding the environmental aspects of Bandung are also contained in the Bandung City Long-Term Development Plan (RPJPD) 2025-2045. In the RPJPD, several evaluations were mentioned related to Bandung's management and environmental conditions from 2005-2025, namely pollution due to waste, river pollution, and greenhouse gas emissions due to population pressure. Based on Figure 4.1 below, with this population pressure, carbon emissions can increase due to the conversion of land that can be used for green open space into residential areas (Bandung City Regional Regulation Number 5 of 2024 concerning the Bandung City Regional Long-Term Development Plan 2025-2045, 2025). Based on the graph below from the evaluation of Bandung City's RPJPD 2025, greenhouse gas (GHG) emissions in Bandung City from 2013 to 2022 show considerable dynamics in the pattern of carbon emissions in urban areas.

Figure 1 Population Pressure Map of Bandung City in 2021



Sumber: RPJPD Kota Bandung Tahun 2025-2045

In addition, through interviews with the Bandung City Environment Agency, Bandung City has experienced an upward trend in carbon emissions over the past 5 years. However, in 2020 there was a significant decline due to Covid-19. These emissions are caused mainly by the transportation sector, followed by the industrial sector. These carbon emissions have an impact on society, including air pollution, which ultimately affects the health of the people of Bandung, climate change that affects ambient air quality and drought, as well as several other derivative effects such as increased climate disease, decreased vegetation, and many more. The actions that the Bandung City Environment Office has taken to deal with carbon emissions are greenhouse gas inventories and implementing various programs such as the Climate Village program, which was derived and initiated by the Ministry of Environment and Forestry, as well as waste management programs to achieve the target of West Java Province which is 13.45 million tons of CO₂ in 2030. In addition, the transportation sector, the leading cause of Bandung's carbon emissions, has been outlined in the Bandung City RPJMD as undergoing programs to unravel and deal with congestion in Bandung. However, in its implementation, the Bandung City Environment Agency experienced various challenges and obstacles, such as the lack of public awareness and the need to increase community resilience in the educational programs that had already begun. In addition, coordination and communication between other related agencies are also obstacles (Interview with Bandung City Environmental Agency, 2025).

Bandung City's Foreign Relations

In addressing these issues, Bandung City not only relies on its domestic programs but also takes advantage of opportunities in foreign relations that they can do. Bandung, one of the cities in Indonesia, actively participates as a sub-state actor in foreign affairs through various foreign relations activities, such as parallel diplomacy. Within this framework, Bandung City engages in diplomacy, international collaboration, and delegations sent by subnational players to address the city's political, economic, and cultural issues. In an interview with the Bandung City Cooperation Section, Bandung City's overseas activities include seeking long-term and short-term investments, receiving grants and infrastructure assistance, and organizing youth exchanges and scholarships. In addition, Bandung City actively engages with many international institutions and foreign non-governmental organizations (NGOs) to enhance local development capabilities and

promote community welfare. These overseas activities are conducted according to national and international legal norms and do not jeopardize political stability or national security (Interview Kota Bandung Cooperation Section, 2025).

The city's participation in foreign relations is also evident from sending delegations to international forums, which supports the city's position as a sub-state actor capable of expressing Indonesia's interests on a global scale. Thus, Bandung City contributes to national development while increasing Indonesia's diplomatic network through a strategic and long-term parallel diplomacy approach (Alam & Sudirman, 2020; Bramastya & Septiarika, 2020; Rodiah Gusman, 2020). Bandung City has carried out various activities related to its foreign relations with foreign parties, both between local governments and other institutions and actors. These foreign relations were carried out in various forms, such as forums and meetings to form collaborations on various programs. Foreign activities carried out by the city of Bandung within the scope of foreign relations are managed through the Bandung City Government Cooperation Section. In particular, there are two primary forms of foreign cooperation activities carried out by the Bandung City Government, namely regional cooperation with local governments abroad and regional cooperation with institutions abroad (Bagian Kerja Sama Kota Bandung, 2024).

The city of Bandung has implemented foreign relations in various sectors, as follows.

1. Bandung City's Foreign Relations in the Economic Sector. In the economic sector, Bandung city has conducted foreign relations with various foreign local governments, such as Suwon and Seoul, South Korea; Petaling Jaya, Malaysia; and Cuenca, Ecuador (Bagian Kerja Sama Kota Bandung, 2024).
2. Bandung City's Foreign Relations in the Culture Sector Bandung City has cultural relations with several local governments abroad, such as Cuenca and Ecuador, by promoting Angklung and Batik products, which are part of the cultural heritage of West Java province. The marketing involves making and sending Robot Angklung and Batik with Ecuadorian designs to the government of Cuenca, Ecuador (Bagian Kerja Sama Kota Bandung, 2024).
3. Bandung City's Foreign Relations in the Education Sector Bandung City has various forms of foreign relations realized in the education sector. In this regard, the city of Bandung is involved in foreign relations with Fort Worth, United

States, in educational programs for human resource development, such as the Emergency Preparedness Grant program, scholarships and training for students, and the Leadership International Academy (Gusman, 2020). In addition, the city of Bandung also actively participates in UNESCO forums and was even awarded the City of Design (Bagian Kerja Sama Kota Bandung, 2024).

4. Bandung City's Foreign Relations in the Technology Sector

In the technology sector, Bandung City's foreign relations with other local governments abroad have not been extensive. Relations established by the city of Bandung include information exchange with the cities of Toyota and Kawasaki, Japan, such as the city of Kawasaki's increased understanding of technology in managing wastewater or garbage (Bagian Kerja Sama Kota Bandung, 2024).

5. Bandung City's Foreign Relations in the Human Resource Development Sector.

In general, the city of Bandung's foreign relations activities in human resource development has a correlation with activities in other fields. These activities can take the form of youth exchanges, assistance in medical equipment, assistance for natural disasters, and so on, and are carried out with cities such as Fort Worth, United States; Braunschweig, Germany; and Cuenca, Ecuador (Bagian Kerja Sama Kota Bandung, 2024).

6. Bandung City's Foreign Relations in the Environmental Sector

Bandung City's foreign relations in the environmental sector show an active role as a sub-state actor that cooperates with various local governments abroad, especially with Japanese cities such as Toyota, Kawasaki, and Hamamatsu. For example, cooperation with the local government of Hamamatsu successfully implemented a capacity-building program to reduce water leakage rates in Bandung City. Meanwhile, with the Kawasaki City government, Bandung implemented a wastewater management program as well as a zero-carbon community initiative aimed at improving environmental quality and reducing carbon emissions (Bagian Kerja Sama Kota Bandung, 2024; Kawasaki City, 2025; Siregar & Rizqullah, 2022).

Based on this, Bandung City has actively conducted foreign relations in various sectors of life. Foreign relations can be used as a form of diplomacy. Diplomacy is an

important means for the state to carry out its foreign policy, which is still formed by the foreign ministry. The capacity to conduct diplomatic relations has become one of the main requirements of state sovereignty. However, various forms of diplomatic public relations between groups have occurred since the beginning of diplomacy (Berridge, 2022: 24). An activity can be categorized as diplomacy if it meets the definition of diplomacy formulated by experts. One of the relevant definitions is proposed by Berridge, who states that an activity can be said to be diplomacy if it meets several main criteria. These criteria include implementation by official actors with authority in interstate or inter-institutional relations, aiming to achieve national interests based on negotiations, using structured communication, peacefully carrying out peacefully, and paying attention to applicable international norms and laws (Berridge, 2022). By referring to this definition, it is possible to identify various activities carried out by the city of Bandung to determine whether these activities can be categorized as part of the practice of diplomacy.

Based on the perspective of diplomacy proposed by Berridge, the activities carried out by the city of Bandung can be categorized as diplomacy because they fulfil several fundamental aspects in the definition. First, the activities are carried out by official actors, namely state representatives in the form of sub-state actors, such as the Governor or Mayor of Bandung, who have the authority to establish international relations on behalf of the local government. In the Minister of Home Affairs Regulation No. 3/2008 on Guidelines for the Implementation of Local Government Cooperation with Foreign Parties, the governor/mayor will get a letter of authorization to represent the government of the Republic of Indonesia in such diplomatic activities, but still under the supervision of the minister of home affairs. Second, the main objective of the cooperation is to achieve national interests, which in this context is realized through strengthening the development of Bandung City in various sectors that contribute to welfare. Based on Law No. 37/1999 on Foreign Relations, the city of Bandung can be part of fighting for and achieving national interests coloured by various international relations such as diplomacy in order to achieve cooperation in various fields.

In addition, these activities are based on negotiations, where the parties involved conduct discussions and negotiations in various forums and official meetings. Through structured negotiations, both parties can reach an agreement outlined in the form of a formal agreement, such as a Memorandum of Understanding (MoU), which regulates the

commitments and obligations of each party in the agreed cooperation. The negotiations or diplomatic discussions that the city of Bandung has carried out are the Asia-Africa Conference, the Global Compact of Mayors Forum, and so on. Fourth, these activities are also carried out with due regard to applicable norms and laws at the national and international levels. As part of the Indonesian government system, the Bandung City Government, in establishing international cooperation, always refers to applicable laws and regulations, such as Law Number 23 of 2014 concerning the Regional Government, which regulates the mechanism of regional cooperation with foreign parties. In addition, foreign relations must be carried out based on the principles of international law that apply in relations between countries and between regions, such as the SDGs issued by the United Nations (UN) (Bagian Kerja Sama Kota Bandung, 2024).

Other than that, based on the political concept of parallel diplomacy, according to Kuznetsov & Cornago, there are four main pillars with 3 points of indication in the implementation of parallel diplomacy. In the first point, namely foreign policy, the activities of the city of Bandung are included in parallel diplomacy in an isolative, conservative, and progressive manner because they are carried out in harmony with the goals of the central government and national interests, it also shows parallel diplomacy between the central government and local governments. At this point, the city of Bandung has harmonized the implementation of its relations with foreign parties as outlined in the Bandung City RPJPD, which refers to the Indonesian RPJPN. One of them is the effort to realize Indonesia into a developed country; Indonesia has a goal with a strong commitment to carry out development in a sustainable and environmentally friendly manner in the framework of a green economy, which is mainly indicated by reducing the intensity of GHG emissions to 93.5 percent. By 2045, compared to the intensity of GHG emissions in 2010 towards net emissions in 2060, this goal has been harmonized with the Bandung City RPJPD 2005-2025 and Bandung City RPJPD 2025-2045; furthermore, on the second pillar, namely the diplomatic role. The activities of the city of Bandung are isolative, namely diplomatic activities, which can be carried out with an assignment from the central government, and conservatively, diplomatic activities, which can be carried out with supervision from the central government. It is in line with the implementation and governance of laws and regulations, namely Law Number 37 of 1999 concerning Foreign Relations, Regulation of the Minister of Foreign Affairs of the Republic of

Indonesia Number 09/A/KP/XII/2006/01 concerning General Guidelines for Procedures for Foreign Relations and Cooperation by Local Governments, Regulation of the Minister of Home Affairs Number 20 of 2005 concerning Guidelines for Foreign Service Travel for Officials / Employees within the Ministry of Home Affairs, Local Government and Leaders and Members of the Regional People's Representative Council and other regulations governing diplomatic roles that local governments can carry out with a mandate and supervision from the central government.

Additionally, the third pillar of this concept is the existence of foreign representative offices. By identifying it based on the three main points in this concept, Bandung's activities refer to parallel diplomacy's isolative and conservative politics because the foreign representative office is owned only by the central government, not the Bandung city government. It also indicates that Bandung is a sub-state actor of the Republic of Indonesia, a unitary state, so it is impossible to establish a special foreign representative office for local governments. Then, on the last pillar, namely document-making. When viewed according to 2 elements of parallel diplomacy politics, namely isolative and conservative, the city of Bandung can only prepare documents for its foreign activities if it has received instructions from the central government in the form of a power of attorney or Full Power Letter with various stages of implementation before a cooperation document or MoU is made. Based on this review, the activities of the city of Bandung can be referred to as diplomatic activities in the form of parallel diplomacy because it has implemented the central concept of the function of diplomacy in general according to Berridge and the political concept of the implementation of parallel diplomacy according to Kuznetsov & Cornago (Berridge, 2022; Cornago, 1999).

Bandung City's Parallel Diplomacy towards Kawasaki City in Handling Carbon Emissions

The relationship between Bandung City and Kawasaki City began in 2015 with a regional meeting between Bandung City Mayor Ridwan Kamil and a delegation of Kawasaki City Government, facilitated by JICA as part of Japan's environmental diplomacy program in Southeast. Kawasaki was selected as a partner based on its reputation as a leading industrial city in Japan that has effectively developed environmental quality, especially regarding industrial waste management and the application of environmentally friendly

technologies. This initial meeting resulted in a collaborative commitment to establish an overseas relationship focusing on knowledge and technology exchange for urban environmental management, given that Bandung faced considerable waste management and water pollution problems at the time (Interview Bandung City Cooperation Section, 2025).

The first phase of this overseas relationship officially began in May 2016 with the signing of a three-year Memorandum of Understanding (MoU), primarily focusing on waste management and human resource capacity building. This collaboration has resulted in several significant achievements, including developing a waste treatment pilot project at Sarimukti Landfill, which reduced the volume of waste disposed to the landfill by 18% in the first two years. Furthermore, as part of the human resource competency improvement initiative, 15 Bandung City Environmental Agency employees underwent intensive training at Kawasaki on integrated waste management systems and environmental policy development. The success of this first phase laid the foundation for the two cities to expand their relationship through a second MoU in 2020 with a broader scope. In this second phase, an expansion of cooperation for 2020-2025, the scope of cooperation was extended to include water and air quality management, reflecting the development of environmental concerns in Bandung City. This second phase was characterized by improved coordination through regular quarterly meetings and the development of joint working groups with various stakeholders from both cities. Among the significant achievements of this phase was implementing a real-time air quality monitoring system in Bandung using Kawasaki technology and a wastewater treatment program for small and medium-sized enterprises. The relationship was funded through dedicated budget allocations from both parties, with Kawasaki providing ¥50 million per year for priority activities. However, at the beginning of this second phase, both cities had constraints on communication and further program implementation due to the COVID-19 pandemic.

In its implementation, diplomacy between the city of Bandung and the city of Kawasaki is based on foreign relations conducted by the Indonesian government with the Japanese government through the Ministry of Environment and Forestry in the form of the JCM program. The Joint Crediting Mechanism (JCM) program is an initiative resulting from bilateral cooperation between the Japanese and Indonesian governments,

which officially began with an agreement in 2013 after a three-year negotiation process since 2010. The program is intended to support Japanese companies investing in low-carbon development projects in Indonesia, including energy efficiency, renewable energy, waste management, forestry, transportation, and agriculture. In addition, Japan also offers grants and technical assistance through the Japan Fund for Joint Crediting Mechanism (JFJCM) coordinated by the Asian Development Bank, as well as incentives through the JCM in the form of subsidies of up to 50% of the initial investment cost of the project. In order to achieve the goal of reducing greenhouse gas (GHG) emissions through the Kyoto Protocol and the Paris Agreement, this initiative promotes the deployment of low-emission technologies and green infrastructure and strengthens bilateral collaboration (Fasadenna, 2022; Ministry of Foreign Affairs of Japan, 2024; Refina, 2022).

In the parallel diplomacy between Bandung City and Kawasaki in addressing carbon emissions, institutional structures play a central role as the backbone of this parallel diplomacy. The Bandung City Cooperation Section is the leading facilitator in Bandung City, bridging communication and coordination between various related parties. The Department of Environment and Hygiene (DLHK) and the Development Planning, Research and Development Agency (Bappelitbang) are responsible for designing environmental policies and integrating emission reduction targets into the city's comprehensive development planning. The involvement of these various departments and agencies demonstrates a cross-sectoral approach to achieving sustainability goals (Bagian Kerja Sama Kota Bandung, 2022). In Kawasaki City, the Environmental Bureau and International Affairs Division are key in developing the low carbon strategy and coordinating international cooperation. Both agencies collaborate to develop innovative programs to reduce GHG emissions, such as renewable energy development, energy efficiency, and sustainable waste management. Close collaboration between the city government, private sector, and civil society is also key to implementing environmental policies in Kawasaki (Siregar & Rizqullah, 2022).

Furthermore, in its implementation, the Bandung City Cooperation Department, as one of the institutions that will facilitate, mentioned that several stages must be followed in conducting relations with foreign parties, namely exploration, signing of LoI (Letter of Intent), preparation of a cooperation plan, approval by DPRD, request for government

facilities, preparation of a draft MoU, signing of the MoU, then implementing cooperation. At each stage, the Bandung City Cooperation Department is a facilitator responsible for facilitating every need from agencies related to foreign activities. Based on interviews with the Cooperation Section of Bandung City and the Development Planning, Research and Development Agency (Bappelitbang) of Bandung City in 2025, the author was able to find that the governance on the implementation of parallel diplomacy between Bandung City and Kawasaki City has different structures and stages, resulting in various challenges in diplomatic relations. One of the most significant challenges is the difference in laws, regulations, and procedures in conducting foreign relations between the two cities. On the other hand, Kawasaki City has greater authority and can conduct foreign agreements or activities with other foreign parties without going through lengthy bureaucratic procedures, as done in Bandung City. It often results in lengthy diplomatic processes between the two cities, especially when signing Memorandums of Understanding (MoU), organizing international meetings, and implementing related programs (Interview with Bandung City Cooperation Section, 2025).

In addition, the Bandung City Development Planning, Research and Development Agency (Bappelitbang) also emphasized the dissimilarity in handling carbon emissions in the two cities. The transportation and waste management sectors contribute the most carbon emissions in Bandung City, while the industrial sector produces the most in Kawasaki City. This difference poses problems in developing practical and appropriate initiatives for both cities. However, the Bandung City Cooperation Section underlines that this international relationship is based on the desire to develop technology in the environmental sector and that this difference is not a significant obstacle (Interview Bappelitbang, 2025). In its implementation, the parallel diplomacy between Bandung and Kawasaki city has conducted various programs based on the scope of the foreign relations agreement between the two cities. Based on the three scopes, the programs that have been implemented so far are as follows.

1. Waste Management. In this scope, human resource development programs are often conducted, such as seminars related to the improvement of city wastewater by involving the community as the primary target, as well as education to school children as one of the ways for the Bandung city government to adopt the

Japanese Government's way of providing education and knowledge as early as possible. In this waste management, the program focuses on domestic waste generated by the community. Domestic waste, especially that generated by urban communities, significantly influences carbon emissions through anaerobic decomposition and waste combustion mechanisms (Manea et al., 2024). The flagship program in this management is the BKG (Bandung-Kawasaki Gesindo) program for community-based domestic wastewater management. The BKG (Bandung-Kawasaki Gesindo) program is the latest effort in the context of the Bandung-Kawasaki cooperation in the second phase (2020-2025), specifically focusing on improving household waste management capabilities. Unlike previous initiatives focused on river rehabilitation, this program is intended to address the issue of household environmental hygiene, given that 65% of household waste in Bandung is not managed correctly.

2. **Water Environment Management.** In the second scope, the program is more focused on programs derived from the agreement between the Indonesian central Government and Japan through the Ministry of Environment and Forestry (KLHK). One of the main programs is water quality management in the Citarum River. The Citarum River water quality improvement program, launched under the Inter-Municipal Cooperation in Water Quality Improvement scheme, began with the 2017 Indonesia-Japan Environmental Cooperation Agreement between the Ministry of Environment and Forestry of the Republic of Indonesia (MoEF) and the Ministry of Environment of Japan (MoEJ). The agreement centers on rehabilitating key rivers, with Citarum as the main pilot project. Through a top-down hierarchical implementation process, the program was handed down to the West Java Provincial Government through Governor Decree No. 660/XX/2020, which the Bandung City Government then operationalized as the responsible party for the upstream area of the Citarum watershed.
3. **Air Quality Management.** In the scope of air quality management, several program initiatives have been implemented by the Bandung City and Kawasaki City governments. One of the programs is the City-to-City Collaboration for Zero Carbon. The City-to-City Collaboration for Zero Carbon program is a collaborative effort between the Bandung City Government and the Japanese

Government that uses the Joint Crediting Mechanism (JCM) system to improve air quality while reducing carbon emissions through energy savings. The initiative, which runs from 2021 to 2024, focuses on three main pillars: (1) improving energy efficiency in the public and private sectors, (2) transitioning to low-carbon technologies, and (3) strengthening institutional capacity. However, only two proposals could be fully operationalized due to bureaucratic constraints and procurement regulations (Interview Bandung City Cooperation Section, 2025).

Conclusion

Bandung, as one of the metropolitan cities in Indonesia, is also an actor in foreign movements and activities, without exception in various foreign activities related to addressing carbon emission issues. In this research, researchers found that the issue of carbon emissions is not only a concern on a local or domestic scale, but the Bandung City government also involves various related institutions and agencies in its opportunities and opportunities for activities on a global scale. Bandung City has been involved in various foreign relations activities. These foreign relations have been carried out in various sectors of community life, such as parallel diplomacy in various sectors ranging from the economy to the environmental sector. Bandung City's foreign relations activities in the environmental sector refer to parallel diplomacy, such as Bandung City's parallel diplomacy towards Kawasaki City. Bandung City's parallel diplomacy towards Kawasaki City has been going on for quite a long time, dealing with various environmental issues and technology transfer. Through this parallel diplomacy of Bandung City towards Kawasaki City, researchers found that various programs, such as waste management to air quality management to deal with emissions, have been applied.

Furthermore, in the implementation of Bandung City's parallel diplomacy towards Kawasaki City, the practice of Bandung City's governance in conducting foreign relations, such as parallel diplomacy with foreign parties, as well as the impacts and various challenges faced during the practice of parallel diplomacy governance, were found. In practice, Bandung City's parallel diplomacy with Kawasaki City has been running for a long time. It has resulted in various programs, such as waste management, air quality management, and water management programs. In addition, the practice of

parallel diplomacy between Bandung City and Kawasaki City continues in various forms of foreign relations activities in environmental aspects, especially in dealing with carbon emissions. In dealing with carbon emissions, Bandung City, through its parallel diplomacy towards Kawasaki City, has carried out activities such as exchanging science and technology, improving the quality of human resources, and other assistance to deal with carbon emissions in Bandung City. Therefore, the author finds that the practice and governance of parallel diplomacy conceptually does not yet have a diverse concept, especially in parallel diplomacy based on its aspects, such as environmental parallel diplomacy, so that future research can explore more deeply the concept of parallel diplomacy in every aspect of life as well as in its practice and governance. Then, in its implementation, governance in the practice of parallel diplomacy can continue to improve its coordination while still paying attention to the applicable laws.

References

- Adibowo, R., & Putri, S. O. (2016). Penerapan E-Government Dalam Paradiplomasi Pemerintah Kota Bandung. *Jurnal Ilmu Politik Dan Ilmu Komunikasi*, 6(2). <https://doi.org/10.34010/JIPSI.V6I2.325>
- Alam, G. N., & Sudirman, A. (2020). Paradiplomacy Pemerintah Kota Bandung Melalui Kerja Sama Sister City. *Jurnal Ilmiah Hubungan Internasional*, 16(1), 31–50. <https://doi.org/10.26593/jihi.v16i1.3365.31-50>
- Apriandi Zuhir, M. A. Z., Nurlinda, I., Imami, A. D., & Idris, I. (2017). Indonesia Pasca Ratifikasi Perjanjian Paris 2015; Antara Komitmen Dan Realitas. *Bina Hukum Lingkungan*, 1(2), 231–248. <https://doi.org/10.24970/jbhl.v1n2.18>
- Bagian Kerja Sama Kota Bandung. (2022). *Kick Off Meeting Zero Carbon Society Development in Bandung City Through Energy Saving of Infrastructure System and Mobility Improvement*. <https://kerjasama.bandung.go.id/2022/09/>
- Bagian Kerja Sama Kota Bandung. (2024). *Kerja Sama Daerah Dengan Pemerintah Daerah Di Luar Negeri (KSDPL)*. <https://kerjasama.bandung.go.id/ksln/ksdpl>
- Bernstein, S., & Hoffmann, M. (2018). The Politics of Decarbonization and the Catalytic Impact of Subnational Climate Experiments. *Policy Sciences*, 51(2), 189–211. <https://doi.org/10.1007/s11077-018-9314-8>
- Berridge, G. R. (2022). *Diplomacy: Theory and Practice*. Springer Science+Business Media. <https://doi.org/10.1007/978-3-030-85931-2>
- Betsill, M. M., & Bulkeley, H. (2021). Cities and the Multilevel Governance of Global Climate Change. In K. Mills & K. Stiles. (Eds.) *Understanding Global Cooperation* (Vol. 12, Issue 2, pp. 219–236). Leiden & Boston: BRILL. https://doi.org/10.1163/9789004462601_014
- Bramastya, R., & Septiarika, F. T. (2020). Kota Bandung sebagai Subnational Government dalam Kerja Sama Smart City dengan Kota Seoul Tahun 2016-2019.

- Publicio: Jurnal Ilmiah Politik, Kebijakan Dan Sosial*, 2(2), 7–14.
<https://doi.org/10.51747/publicio.v2i2.596>
- Buzan, B., & Lawson, G. (2015). *The Global Transformation: History, Modernity and The Making of International Relations* (pp. 17–43). Cambridge: Cambridge University Press. <http://eprints.lse.ac.uk/id/eprint/60506>
- Calvin, K., Dasgupta, D., Krinner, G., Mukherji, A., Thorne, P. W., Trisos, C., Romero, J., Aldunce, P., Barrett, K., Blanco, G., Cheung, W. W. L., Connors, S., Denton, F., Diongue-Niang, A., Dodman, D., Garschagen, M., Geden, O., Hayward, B., Jones, C., ... Ha, M. (2023). *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. <https://doi.org/10.59327/IPCC/AR6-9789291691647>
- Cooper, A. F., Hocking, B., & Maley, W. (2008). *Diplomacy and Global Governance: Contextual Challenges* (pp. 1–28). Palgrave Macmillan.
- Cornago, N. (1999). Diplomacy and Paradiplomacy in the Redefinition of International Security: Dimensions of Conflict and Co-operation. *Regional & Federal Studies*, 9(1), 40–57. <https://doi.org/10.1080/13597569908421070>
- Datsi, B. (2020). *Diplomasi Publik Kota Bandung Melalui Program-Program Sister City Tahun 2014-2017* [Universitas Katolik Parahyangan]. <https://repository.unpar.ac.id/bitstream/handle/123456789/10750/Cover%20-%20Bab1%20-%20313023sc-p.pdf?sequence=1&isAllowed=y>
- Dimitrov, R. S. (2015). Climate Diplomacy. In K. Bäckstrand & E. Lövbrand. (Eds.). *Research Handbook on Climate Governance* (pp. 97–108). Edward Elgar Publishing Ltd. <https://doi.org/10.4337/9781783470600.00018>
- Dimitrov, R. S. (2016). The Paris Agreement on Climate Change: Behind Closed Doors. *Global Environmental Politics*, 16(3), 1–11. https://doi.org/10.1162/GLEP_a_00361
- Diskominfo Kota Bandung. (2023, August 22). Kualitas Udara Kategori Sedang, DLH Kota Bandung Beri Imbauan ke Masyarakat. *Portal Jabar*. <https://jabarprov.go.id/berita/kualitas-udara-kategori-sedang-dlh-kota-bandung-beri-imbauan-ke-masyarakat-10055>
- Ditjen EBTKE Kementerian ESDM (2022, September 14). *Energi Baru Terbarukan Berperan Besar dalam Upaya Penurunan Emisi di Sektor Energi*. <https://ebtke.esdm.go.id/post/2022/09/14/3260/energi.baru.terbarukan.berperan.besar.dalam.upaya.penurunan.emisi.di.sektor.energi?lang=id>
- Domloboy Nst, E. N. (2016). Implementation Cooperation Sister City of Bandung and Suwon Years 1997-2015. *The 4th University Research Colloquium (URECOL)*. <http://hdl.handle.net/11617/7696>
- Fasadenna, F. (2022). *Kerja Sama Indonesia-Jepang Melalui Joint Crediting Mechanism (JCM) dalam Penerapan Teknologi Rendah Emisi di Indonesia 2013-2016*. 1–22.
- Fathun, L. M. (2018). Geo Strategi Kebijakan Luar Negeri Indonesia di Era Jokowi dalam Perspektif Konstruktivisme. *Journal of Islamic World and Politics*, 2(2). <https://doi.org/10.18196/jiwp.2219>
- Fathun, L. M. (2022). The Role of Paradiplomacy and the Potential Proto-Diplomacy in the Unitary State. *Journal of Islamic World and Politics*, 6(2), 298–319. <https://doi.org/10.18196/Jiwp.V6i2.15677>

- Gusman, I. R. (2020). Implementasi Kerja Sama Sister City Kota Bandung-Kota Fort Worth di Bidang Pendidikan. *Journal of Diplomacy and International Studies*, 26–35.
- Haq, H. D. (2023). Tingkat Efektivitas Ketersediaan Ruang Terbuka Hijau di Kota Bandung dengan Penyerapan Emisi CO₂. *CR Journal (Creative Research for West Java Development)*, 9(2), 89–100. <https://doi.org/10.34147/crj.v9i2.315>
- Hsu, A., Höhne, N., Kuramochi, T., Vilariño, V., & Sovacool, B. K. (2020). Beyond States: Harnessing Sub-National Actors for the Deep Decarbonisation of Cities, Regions, and Businesses. *Energy Research & Social Science*, 70, 1–7. <https://doi.org/10.1016/j.erss.2020.101738>
- International Energy Agency. (2022). *An Energy Sector Roadmap to Net Zero Emissions in Indonesia*. www.iea.org/t&c/
- Karunia, M. R., Komaruzaman, A., & Tjahjawardita, A. (2023). Konsumsi Energi, Pembangunan Sektor Keuangan dan Emisi Karbon di Indonesia. *Jurnal Ekonomi Dan Pembangunan Indonesia*, 23(1), 81–92. <https://doi.org/10.21002/jepi.2023.06>
- Kawasaki City. (2025). *Kawasaki City Profile*. <https://www.city.kawasaki.jp/>
- Kissinger, H. (1994). *Diplomacy* (pp. 218–245). New York et al.: Simon & Schuster.
- Lamont, C. (2015). *Research Methods in International Relations*. SAGE Publications.
- Lecours, A. (2002). Paradiplomacy: Reflections on the Foreign Policy and International Relations of Regions. *International Negotiation*, 7(1), 91–114. <https://doi.org/10.1163/157180602401262456>
- Manea, E. E., Bumbac, C., Dinu, L. R., Bumbac, M., & Nicolescu, C. M. (2024). Composting as a Sustainable Solution for Organic Solid Waste Management: Current Practices and Potential Improvements. *Sustainability*, 16(15), 6329. <https://doi.org/10.3390/su16156329>
- Mingst, K. A., Mckibben, H. E., Arreguín-Toft, I. M. (2015). *Essentials of International Relations* (8th ed.). New York & London: W.W. Norton and Company. <https://lccn.loc.gov/2018034410>
- Ministry of Foreign Affairs of Japan. (2024). *Joint Crediting Mechanism (JCM) Report*. https://www.mofa.go.jp/ic/ch/page1we_000105.html
- Mukti, T. A. (2020). Politik Paradiplomasi Pemerintah Republik Indonesia. *MPR: Arah Kebijakan Politik Luar Negeri*, 6. <https://www.mpr.go.id/pengkajian/jurnal>
- Nurika, R. R. (2017). Peran Globalisasi di Balik Munculnya Tantangan Baru Bagi Diplomasi di Era Kontemporer. *Jurnal Sosial Politik*, 3(1), 126. <https://doi.org/10.22219/sospol.v3i1.4404>
- Pramadhika, M. E., & Syaodih, E. (2022). Kajian Kinerja Pemerintah Kota Bandung dalam Mendukung Pembangunan Rendah Karbon. *Jurnal Riset Perencanaan Wilayah Dan Kota*, 139–146. <https://doi.org/10.29313/jrpk.v2i2.1318>
- Pratama, B. A., Ramadhani, M. A., Lubis, P. M., & Firmansyah, A. (2022). Implementasi Pajak Karbon Di Indonesia: Potensi Penerimaan Negara Dan Penurunan Jumlah Emisi Karbon. *Jurnal Pajak Indonesia (Indonesian Tax Review)*, 6(2), 368–374. <https://doi.org/10.31092/jpi.v6i2.1827>
- Primawanti, H., Dermawan, W., Rahman, S. V., & Khurrahman, Z. A. (2023). Substate Actor and Implementation of Sustainable Development Goals: Bandung City's Paradiplomacy Practices in Water Leakage. *Proceeding of International Conference on Business, Economics, Social Sciences, and Humanities*, 6, 832–845. <https://doi.org/10.34010/icobest.v4i.477>

- Rabbani, D., & Hayat, W. (2022). *Paradiplomasi Kota Bandung dan Kota Kawasaki Melalui Kerja Sama Sister City di Bidang Lingkungan Hidup*. <https://www.researchgate.net/publication/366588396>
- Refina, G. (2022). *Kerja Sama Joint Crediting Mechanism (JCM) Indonesia dengan Jepang dalam Mengurangi Emisi Gas Rumah Kaca*.
- Roppongi, H. (2016). *The Role of Sub-National Actors in Climate Change Policy: the Case of Tokyo* (Vol. 48). Ifri, Center for Asian Studies. https://inis.iaea.org/search/search.aspx?orig_q=RN:48009700
- Sending, O. J. (2015). *Diplomacy and the Making of World Politics* (1st ed., pp. 1–31). Cambridge: Cambridge University Press.
- Shafiyah, H., Alam, G. N., & Affandi, R. M. T. N. (2022). Hubungan Luar Negeri Aktor Subnasional: Kasus Kabupaten Garut di Indonesia dan Damyang-gun di Korea Selatan. *JISPO Jurnal Ilmu Sosial Dan Ilmu Politik*, 11(2), 219–240. <https://doi.org/10.15575/jispo.v11i2.12805>
- Siregar, N. A. S., & Rizqullah, M. F. S. (2022). Sister City Partnership of Bandung and Kawasaki in the Environmental Sector during 2017-2020. *Journal of Paradiplomacy and City Networks*, 1(2), 98–111. <https://doi.org/10.18196/jpcn.v1i2.23>
- Surwandono, S., & Maksum, A. (2020). The Architecture of Paradiplomacy Regime in Indonesia: A Content Analysis. *Global: Jurnal Politik Internasional*, 22(1), 77. <https://doi.org/10.7454/global.v22i1.443>
- Wellid, I., Simbolon, L. M., Falahuddin, M. A., Nurfitriani, N., Sumeru, K., Bin Sukri, M. F., & Yuningsih, N. (2024). Evaluasi Polusi Udara PM2.5 dan PM10 di Kota Bandung serta Kaitannya dengan Infeksi Saluran Pernafasan Akut. *Jurnal Kesehatan Lingkungan Indonesia*, 23(2), 128–136. <https://doi.org/10.14710/jkli.23.2.128-136>
- Wicaksana, I. G. W. (2018). Konstruktivisme. In V. Dugis (Ed.), *Teori Hubungan Internasional: Perspektif-Perspektif Klasik* (Revisi, pp. 157–178). Surabaya: Airlangga University Press.