

Implementation of Sister City Between Jayapura-Vanimo-Wewak Cities As A Model of Paradiplomacy

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Abstract. The implementation of the Sister City concept between Jayapura City (Indonesia) and Vanimo and Wewak (Papua New Guinea) has become an important strategy in strengthening cross-border cooperation based on *paradiplomacy*. *Paradiplomacy* refers to a form of subnational diplomacy that allows local governments to establish international relations to support economic, social, and cultural development. This research aims to analyze the effectiveness of Sister City implementation among the three cities in improving trade connectivity, cultural exchange, and collaboration in education and health. This research uses a qualitative approach with policy analysis methods, in-depth interviews, and case studies of various Sister City implementations around the world. Data collected through interviews with local stakeholders and policy documents form the basis for developing practical recommendations for improving cooperation among the cities, with a focus on strengthening trade relations and cultural exchange. The results of this research are expected to contribute to the development of more effective bilateral policies, particularly in the context of local governments in both countries. The expected outputs of this study are policy recommendations in the form of policy briefs for Indonesia and Papua New Guinea, as well as publication in a *Sinta 2* indexed journal.

Keywords: Sister City, Paradiplomacy, Cross-border Cooperation, Local Government Diplomacy, Trade Connectivity, Cultural Exchange.

INTRODUCTION

Cross-border cooperation is an important strategy for enhancing diplomatic relations, trade, and cultural exchange between two countries sharing a border. One emerging model in international diplomacy is the Sister City concept, a partnership between two or more cities from different countries to strengthen cooperation in various fields, such as economics, education, culture, and infrastructure development (Borges et al., 2022; Brunet-Jailly, 2022; Kaucic & Sohn, 2022; Khmeleva et al., 2022; Silvers, 2020; Wong Villanueva et al., 2022). In the Indonesian context, Jayapura City, as the capital of Papua Province, plays a strategic role in building bilateral relations with Papua New Guinea, particularly with bordering cities such as Vanimo and Wewak.

Paradiplomacy, or subnational diplomacy, allows local governments to actively participate in building international relations to support the development and welfare of local communities. The implementation of the Sister City concept between Jayapura City, Vanimo, and Wewak is expected to become a model of *paradiplomacy* that not only strengthens Indonesia-Papua New Guinea relations but also opens opportunities for economic cooperation, increased trade connectivity, and knowledge transfer in the education and health sectors. Furthermore, this cooperation can strengthen social and cultural ties between the communities of the two countries, which share historical and ethnographic ties (ERDOĞAN & ATAR, 2023; Liu & Song, 2020; Margareth, 2017; Setzer, 2015; Головки, 2019).

A number of studies have discussed the practice of *paradiplomacy* and sister city cooperation in various contexts. Aldecoa and Keating (1999) explore how subnational

governments develop international relations independently. Acuto et al. (2019) highlight the role of city diplomacy in global networks, while Kuznetsov (2015) provides a theoretical framework on the practice of *paradiplomacy*. Especially in the Indonesian context, Susilo (2020) examines *paradiplomacy* in the Papuan border region with a focus on cross-border trade. Setyawati and Rumansara (2021) examined economic connectivity and cooperation challenges on the Papua-Papua New Guinea border. In addition, Pugu (2020) analyzed border dynamics during the Covid-19 pandemic. However, most of these studies focus on bilateral relations and have not studied the model of trilateral cooperation as the Jayapura-Vanimo-Wewak partnership has implemented.

This research contributes novelty by analyzing the implementation of Sister City partnerships in a trilateral model involving three cities from two countries. In contrast to previous studies that tended to focus on bilateral relations, this study explores the synergy and complexity of tripartite cooperation within the framework of *paradiplomacy*. In addition, this study integrates economic, social, cultural, and security aspects in one comprehensive analysis that has not been undertaken in many previous studies. The case study approach used also provides an in-depth analysis of the dynamics of cooperation at the local level that is often overlooked in the study of international relations.

However, in its implementation, various challenges must be overcome, such as differences in trade regulations and border policies, limited transportation infrastructure, and domestic political dynamics that affect the stability of bilateral relations. Therefore, this study seeks to analyze how the Sister City model can be effectively implemented as a sustainable *paradiplomacy* strategy. This study will also explore the roles of local governments, non-governmental actors, and the policies needed to support the long-term success of this program.

Through this research, it is hoped that an optimal strategy for building cross-border cooperation based on Sister City partnerships can be identified that can improve community welfare, strengthen bilateral relations between Indonesia and Papua New Guinea, and make a tangible contribution to strengthening regional diplomacy.

This research was formulated to answer several key questions, namely: what factors encourage the implementation of sister city relations between Jayapura City, Vanimo, and Wewak; what kind of impact does the sister city collaboration have on the economic and social development of each city; what challenges are faced in the implementation of the sister city program between these three cities; and to what extent local community participation occurs in the programs resulting from the sister city relationship.

This study aims to analyze the implementation of the Sister City concept between Jayapura City (Indonesia) and Vanimo and Wewak (Papua New Guinea) as a model of *paradiplomacy* in increasing cross-border cooperation. In addition, this study also seeks to identify the supporting and inhibiting factors for the success of Sister City cooperation in the economic, social, cultural, educational, and health sectors. Furthermore, this study aims to develop policy strategy recommendations for local governments and other stakeholders to optimize the role of Sister Cities in supporting sustainable development in border areas. Finally, this study will evaluate the role of local governments and non-governmental actors in supporting the implementation of Sister City partnerships to strengthen bilateral relations between Indonesia and Papua New Guinea.

MATERIALS AND METHODS

This research uses a qualitative approach with descriptive-analytical methods to understand the implementation of Sister City partnerships between Jayapura City, Vanimo, and Wewak in the context of *paradiplomacy*. This approach aims to analyze the dynamics of cross-border inter-city cooperation and the factors influencing its success.

1. Research Approach and Type

This research uses a case study research approach, where the implementation of Sister City partnerships between Jayapura City and two cities in Papua New Guinea (Vanimo and Wewak) is the primary object of study. This approach allows for an in-depth exploration of the collaboration process, challenges, and potential for long-term development.

2. Research Location and Subjects

Research location: Jayapura City (Indonesia)

Research subjects: The local government of Jayapura City, the local governments of Vanimo and Wewak, diplomatic officials, business actors, academics, and border communities involved in the implementation of this collaboration.

3. Data Collection Techniques

The data in this study were obtained through the following techniques:

1. Library Research

- Reviewing literature related to the Sister City concept, *paradiplomacy*, cross-border diplomacy, and government policies related to Indonesia-Papua New Guinea cooperation.
- Analyzing policies that have been implemented in similar cooperation initiatives in various countries.

2. In-Depth Interviews

- Conducted with key stakeholders such as:
- Government officials from the cities of Jayapura, Vanimo, and Wewak.
- Representatives of the Ministry of Foreign Affairs and related agencies.
- Business actors and border economic communities.
- Academics researching international relations and *paradiplomacy*.

3. Field Observations

- Observing directly how interactions between cities operate, including cross-border trade, cultural exchange, and local economic policies.
- Identifying barriers and opportunities for cooperation in regulatory, infrastructure, and socio-economic aspects.

4. Document Analysis

- Reviewing official documents such as the Sister City cooperation agreement, Indonesia-Papua New Guinea border policies, and cross-border economic and trade reports.

4. Data Analysis Techniques

The data obtained were analyzed using thematic analysis techniques, which involved several stages:

1. **Data Reduction** → Filtering relevant information from interviews, observations, and documents.

2. **Categorization** → Grouping data based on main themes such as policies, challenges, and opportunities for cooperation.
3. **Interpretation** → Analyzing patterns of relationships between data and drawing conclusions regarding the effectiveness of Sister City implementation.
4. **Data Triangulation** → Confirming the validity of findings by comparing the results of interviews, observations, and official documents.

5. Data Validity and Reliability

To ensure data validity, this study used source triangulation (comparing data from various sources) and method triangulation (using interviews, observations, and document analysis). Furthermore, findings were confirmed by seeking validation from relevant sources.

With this method, the research can provide a comprehensive overview of the implementation of Sister City partnerships as a *paradiplomacy* model, as well as formulate strategic recommendations for the government and stakeholders in developing cross-border cooperation between Indonesia and Papua New Guinea.

RESULTS AND DISCUSSION

The implementation of the Sister City Program between Jayapura, Vanimo, and Wewak from 2016 to present is as follows:

Since the signing of a Memorandum of Understanding (MoU) on April 27, 2016, Jayapura City, Indonesia, has established sister city relations with two cities in Papua New Guinea (PNG), Vanimo and Wewak. This collaboration aims to strengthen bilateral relations, improve community welfare, and capitalize on the shared geographical and cultural potential of the three cities.

In the education sector, Vanimo City sends its students to State Vocational High School 3 Jayapura City to study vocational courses such as mechanical engineering, electronics, and construction. This step aims to improve the quality of human resources in Vanimo through the transfer of practical knowledge and skills from Jayapura.

In agriculture, there are plans to send residents from Vanimo City to Jayapura to learn agricultural and fisheries techniques that can be applied in their region. The goal is to improve food security and the welfare of farmers in Vanimo.

Cooperation in sports is realized through friendly soccer matches between youth and students from Vanimo and Jayapura. The match, held in West Koya, Jayapura City, aims to strengthen ties between young people and promote a spirit of friendship and cross-border cooperation.

The tourism sector is a key focus of this collaboration. Jayapura City seeks to promote the potential of natural and cultural tourism to the communities of Vanimo and Wewak. Conversely, Vanimo City also plans to send a delegation to study tourism management in Jayapura. This step is expected to increase tourist visits and promote the cultural diversity of each city.

Cooperation in trade and infrastructure is also a priority. The construction of the Youtefa Bridge in Jayapura City is expected to streamline transportation access between Jayapura and Vanimo, facilitate the distribution of goods, and increase cross-border economic activity. Furthermore, the opening of public transportation routes between the cities is being considered to facilitate the mobility of people and goods.

In the health sector, the two cities plan to exchange information on drug standards and regulations. This collaboration involves the Indonesian Food and Drug Monitoring Agency (BPOM) and health authorities in Vanimo to improve the capacity and accessibility of healthcare services in both cities.

Despite various initiatives, the implementation of this collaboration faces several challenges. Security constraints, particularly on the land route between Wutung and Vanimo, as well as language and cultural differences, have hampered the implementation of agreed programs. Furthermore, the lack of clear technical guidelines for each area of cooperation has also challenged the sustainability and effectiveness of these programs.

On April 7, 2022, the MoU between the cities of Jayapura, Vanimo, and Wewak was renewed for another five years. The signing took place at the Horison Hotel in Abepura, Jayapura, and was witnessed by officials from all three cities. This renewal of the MoU reflects the three cities' ongoing commitment to strengthening cooperation in various fields and ensuring that the benefits of the sister city relationship are directly felt by the community.

The sister city cooperation between the cities of Jayapura, Vanimo, and Wewak since 2016 has demonstrated significant potential for enhancing bilateral relations and improving public welfare. Through collaboration in education, sports, tourism, trade, health, and agriculture, the three cities seek to leverage their geographical and cultural similarities to achieve common goals. However, challenges such as security, language barriers, and a lack of clear technical guidelines need to be addressed to ensure the success and sustainability of this collaboration. With strong commitment and joint efforts, this collaboration is expected to serve as a model for other cities in the Pacific region in establishing mutually beneficial and sustainable relationships.

As a comparison, the state of Papua New Guinea's economic growth can be illustrated as follows: Specific data on the economic growth of Sandaun Province (formerly known as West Sepik) in Papua New Guinea is not available separately in official publications. However, several economic and social indicators can provide a general overview of the province's economic condition.

Economic and Social Indicators of Sandaun Province

Gross Domestic Product (GDP): Papua New Guinea's nominal GDP in 2023 is estimated to reach approximately USD 31.60 billion, although specific data for Sandaun is not available. Key Economic Sectors: Sectors that contribute significantly to Papua New Guinea's economy include mining, agriculture, forestry, and fisheries. Sandaun Province, with the capital city of Vanimo has potential in the mining sector, particularly through the Frieda River project, a large copper-gold deposit located in the region. Human Development Index (HDI): Sandaun had a HDI of 0.542 in 2022, placing it in the low human development category among provinces in Papua New Guinea. Social and Infrastructure Challenges: Sandaun Province faces various challenges, including limited infrastructure, limited access to health and education services, and reliance on the informal sector. However, there are efforts by the government and the private sector to improve these conditions through infrastructure development and community empowerment programs.

Economic Growth of Papua Province (2022-2025)

In 2022, Papua Province experienced very positive economic growth, reaching 8.97%. This

significant recovery was primarily driven by sectors such as financial services, government consumption, and exports of goods and services, which contributed significantly to the region's economy post-COVID-19. This growth rate reflects a significant increase in economic activity, both in the domestic sector and in foreign trade.

Entering 2023, Papua's economy experienced a decline to 5.22%, although it still recorded positive growth. This decline was caused by a number of global challenges, such as fluctuating commodity prices and disruptions in the agricultural production and natural resource sectors. However, the financial services sector and goods exports continued to show strong performance, contributing to the province's economic growth. In 2024, Papua's economic growth projection is expected to slow slightly to 4.11%. This decline is likely influenced by ongoing global challenges and reliance on commodity exports, which are vulnerable to market price fluctuations. Nevertheless, government investment in infrastructure and the services sector is expected to maintain a stable growth rate.

Entering 2025, Papua's economic growth is projected to experience another slight decline to 3.91% in the first quarter and 3.55% in the second quarter. Despite this slight slowdown, these figures indicate that Papua remains on a consistent growth path. This projection indicates that the Papuan economy continues to grow despite facing various challenges, particularly in the natural resource sector and human resource management. Overall, the economic growth of Papua Province from 2022 to 2025 shows a stable trend, despite facing several obstacles. 2022 recorded very positive growth figures, while subsequent years experienced a slight slowdown. Sectors such as goods exports, financial services, and government consumption are the main drivers of the economy, which continues to grow despite challenging global economic conditions.

The economy of East Sepik Province in Papua New Guinea has shown a significant growth trend in recent years. Although official statistics are limited, various indicators and development efforts paint a positive picture of the region's economic conditions. Wewak, the capital of East Sepik Province, has seen a significant increase in economic activity. The city is now bustling with residents from across the province, reflecting a dynamic economic movement. This indicates improvements in the trade, services, and infrastructure sectors in Wewak.

The agricultural sector remains a key pillar of the East Sepik Province economy, with a focus on commodities such as cocoa, vanilla, and coffee. The local government has implemented programs to support agriculture, including road rehabilitation and the construction of port facilities to improve market access for farmers. Large projects such as the Frieda River Project, located on the border of East Sepik and Sandaun Provinces, have the potential to have significant economic impacts. The project includes the construction of a copper-gold mine and supporting facilities such as hydroelectric power and road infrastructure. International cooperation also plays a crucial role in supporting East Sepik Province's economic growth. Programs such as the EU-STREIT PNG, funded by the European Union, aim to promote sustainable agricultural development and support local entrepreneurs in coastal and rural areas.

However, East Sepik Province also faces significant natural challenges. Major earthquakes in 2023 and 2024 caused damage to infrastructure and homes, and impacted economic activity in several districts. The government and international partners have launched relief and

reconstruction efforts to recover from the disasters. Overall, East Sepik Province is showing signs of progress positive economic growth due to increased urban activity, support for the agricultural sector, infrastructure investment, and international cooperation. Although natural challenges pose obstacles, recovery efforts and sustainable development are expected to strengthen the region's economy in the future.

Driving Factors for the Implementation of the Sister City Relationship Between Jayapura City, Indonesia, and Vanimo and Wewak, Papua New Guinea

The implementation of the sister city relationship between Jayapura City, Vanimo, and Wewak is driven by various interrelated factors. The following are some of the main factors contributing to the formation and development of this collaboration: First, Geography and Cultural Proximity: These cities are located geographically close together, facilitating interaction and communication. This proximity creates opportunities for collaboration in various fields. The geographical proximity between Jayapura City, Vanimo, and Wewak is crucial for establishing an effective relationship. The close proximity allows for greater mobility between the three cities, both for travel and trade. Easy accessibility supports the exchange of information, goods, and services, thus increasing opportunities for collaboration in various sectors such as education, tourism, and business. Furthermore, frequent interaction can strengthen social networks between the communities in the three cities, creating a sense of belonging and enhancing cooperation.

Geographical proximity also allows for a rapid response to issues that may arise, such as natural disasters or other social challenges. In emergency situations, coordination and assistance between cities can be carried out more efficiently. This not only strengthens intercity relationships but also promotes a sense of solidarity and shared responsibility among communities, ultimately building community resilience.

Cultural Commonalities: The shared culture and history between the communities in these three cities also strengthens social bonds, allowing for smoother cultural exchange. The cultural commonalities between the communities in Jayapura, Vanimo, and Wewak are a crucial factor in strengthening social ties. Communities in these three cities share a similar cultural heritage, customs, and values, creating a strong foundation for cooperation. Cultural exchanges that occur through sister city programs, such as arts festivals and sports activities, allow communities to celebrate their similarities while also appreciating their differences. This creates a deeper sense of unity and mutual understanding.

Furthermore, cultural commonalities facilitate more effective communication between communities. When people share a common cultural background, they tend to be more open and understanding of one another, which reduces the potential for conflict. This also increases community participation in collaborative programs, as they feel more connected and engaged. By strengthening cultural ties, sister city relationships can develop into deeper and more sustainable collaborations.

The second factor is Economic Potential, namely Local Economic Development. Sister city cooperation can open access to new markets, investment, and trade opportunities. This is crucial for the development of the local economies in Jayapura, Vanimo, and Wewak. Sister city cooperation between Jayapura, Vanimo, and Wewak plays a significant role in local economic development. By opening access to new markets, these three cities can increase trade volume and attract foreign investment. This collaboration not only benefits local businesses

but also creates new jobs for the community. Furthermore, the exchange of technology and knowledge between the cities can encourage innovation and efficiency in various sectors, such as small and medium-sized industries, which are the backbone of the local economy.

Furthermore, this collaboration can strengthen the three cities' position on the regional economic map. By jointly promoting local products, they can increase their visibility and competitiveness in the international market. Joint promotional activities, such as exhibitions and trade missions, can help attract new investors and business partners. This will ultimately have a positive impact on the economic growth and well-being of the people in each city.

Natural Resources: These three cities possess the potential for shared natural resources, such as fisheries and tourism, which can improve community well-being. These three cities possess abundant natural resource potential, including the fisheries and tourism sectors. Collaboration in managing these natural resources is crucial to maximize community benefits. By sharing best practices and experiences, these three cities can develop sustainable strategies for utilizing their resources. For example, developing eco-tourism and environmental conservation can increase tourist appeal while maintaining the sustainability of natural resources.

Furthermore, collaboration in the fisheries sector can improve the production and quality of seafood, thereby increase the income of local fishermen. By jointly utilizing the potential of natural resources, the three cities can create mutually beneficial economic opportunities and improve community welfare. This collaboration can also raise awareness of the importance of conservation and sustainable management, which will benefit future generations.

The third factor is government policy support. Support from local and central governments, including policies that encourage interregional cooperation, plays a key role in implementing sister city relationships. Support from local and central governments is crucial in implementing sister city relationships. Policies that encourage interregional cooperation can create a framework that enables more effective collaboration. Through initiatives such as the sister city program, the government can provide the resources, financing, and technical support necessary to implement various projects. This policy also creates a conducive environment for investment and exchange, thereby strengthening economic and social ties between the three cities.

Furthermore, the government's commitment to supporting international cooperation demonstrates its recognition of the importance of cross-border collaboration. This can attract stakeholders, including investors and international organizations, to participate in existing programs. With clear policy support, communities are also more motivated to participate in these initiatives, knowing that there is government backing to ensure the program's sustainability and success.

Local Diplomacy: Paradiplomacy conducted by local governments in seeking international collaborations increases the legitimacy and support for sister city programs. Local diplomacy, or paradiplomacy, conducted by local governments plays a key role in seeking international collaboration. Through these diplomatic efforts, local governments can establish relationships with other city governments abroad, creating broader and mutually beneficial networks. Local diplomacy activities include not only formal meetings but also participation in international forums, cultural exchanges, and other collaborative programs. This helps increase the legitimacy of sister city programs, due to the support from recognized international actors.

Local diplomacy can strengthen community support for sister city programs. When communities see local governments actively engaging in international relationships, they are

more likely to trust and support these initiatives. This creates a greater sense of community ownership and participation in the programs. Thus, government policy support and local diplomacy complement each other to ensure the success of sister city relationships, which are sustainable and beneficial for all parties.

The Fourth Factor is Education and Knowledge Exchange, Educational Programs: Cooperation in the field of education, including student and lecturer exchange programs, is a crucial driver. This enables the transfer of knowledge and skills that are beneficial for human resource development. Cooperation in the field of education is a key driver of the sister city relationship between the three cities. Student and lecturer exchange programs enable the transfer of knowledge and skills that are highly beneficial for human resource development. Through these programs, students can learn from diverse experiences and cultures, which not only broadens their horizons but also enhances their ability to adapt to diverse environments. Lecturers, on the other hand, can share knowledge and innovative teaching methodologies, which can be implemented in local educational institutions.

These educational programs also facilitate collaboration between universities and educational institutions in the three cities, creating a stronger academic network. Through this collaboration, educational institutions can develop curricula that are relevant to local and global needs and improve the quality of education received by students. Furthermore, student exchanges can strengthen inter-community ties, fostering a greater sense of mutual understanding and tolerance among the younger generation.

Training and Workshops: Exchanging experiences through training and workshops can enhance the capacity and competence of communities in the three cities. In addition to educational programs, training and workshops also play a vital role in knowledge exchange between the cities of Jayapura, Vanimo, and Wewak. These activities provide opportunities for the community to learn from the practical experiences and expertise brought by experts from various fields. Through training, participants can develop skills relevant to their respective fields the needs of local industries increase their competitiveness in the job market. Regular workshops can also serve as a platform for sharing experiences and best practices between communities in the three cities.

By enhancing community capacity and competency, training and workshops contribute to sustainable economic and social development. A more skilled and knowledgeable community will be better able to face existing challenges, whether economic, social, or environmental. Therefore, knowledge exchange through training and workshops is a crucial component in strengthening sister city relationships, creating synergies that benefit all parties involved.

Factor Five: Regional Security and Stability, Cooperation in Security: Sister city relationships can help improve security and stability in the region, focusing on shared issues such as resource management and disaster management. The sister city relationship between Jayapura, Vanimo, and Wewak plays a crucial role in enhancing security and stability in the region. By collaborating, the three cities can jointly address common challenges, such as natural resource management and disaster management. This collaboration allows for the exchange of information and effective strategies to manage potential conflicts that may arise from competition for resources. For example, through collaborative programs focused on fisheries or forest management, the three cities can ensure sustainable resource exploitation and reduce the risk of intercommunity conflict.

Furthermore, cooperation on disaster management, such as emergency response training and the development of early warning systems, can strengthen community resilience to natural disasters. By sharing experiences and resources, the three cities can be better prepared for emergencies, which in turn increases the sense of security and stability in the region. This collaboration not only creates a safer environment but also builds trust among communities, which is a crucial foundation for long-term stability.

Enhanced Diplomatic Relations: This collaboration also contributes to improved diplomatic relations between Indonesia and Papua New Guinea, creating a more conducive environment for international cooperation. The sister city relationship also contributes to improved diplomatic relations between Indonesia and Papua New Guinea. Through collaboration at the local level, the two countries can strengthen mutual understanding and trust, creating a more conducive environment for international cooperation. A strong relationship between local and central governments can open up opportunities for more constructive dialogue at higher levels, including on political and economic issues.

With close cooperation, the two countries can more easily coordinate on complex regional issues, such as migration, maritime security, and climate change. This enhanced diplomatic relationship benefits not only the three cities but also society as a whole, as it creates the stability necessary for economic growth and prosperity. Thus, the sister city relationship serves as a bridge connecting the two countries, strengthening cooperation in a variety of mutually beneficial areas.

Sixth Factor: Environmental Initiatives and Natural Resource Management: Cooperation in environmental and natural resource management, such as marine and forest conservation, is a key driver of this relationship. Collaboration in environmental and natural resource management is a key driver of the sister city relationship between the three cities. By sharing knowledge and best practices in conservation, such as marine and forest resource management, the three cities can create more effective strategies for environmental sustainability. For example, a marine conservation program that involves local communities in protecting aquatic ecosystems can improve the sustainability of fisheries, which are a source of livelihood for many residents.

Through this collaboration, the three cities can also develop joint initiatives that address broader environmental challenges, such as climate change and deforestation. Through joint projects, they can utilize resources more efficiently and responsibly, ensuring that future generations can also benefit from existing natural resources. Cooperation in natural resource management not only positively impacts the environment but also improves the quality of life of the communities that depend on those resources.

Environmental Awareness: Increased awareness of environmental issues encourages collaboration in sustainability-focused activities. Increasing public awareness of environmental issues also encourages collaboration in sustainability-focused activities. This awareness encourages communities to actively participate in programs aimed at protecting and preserving the environment. Activities such as recycling campaigns, tree planting, and beach cleanups are concrete examples of collaboration that can be carried out within a sister city framework. Through these activities, communities not only learn about the importance of environmental preservation but also experience the positive impact of their contributions to the environment.

Collaboration in environmental awareness also opens up opportunities for relevant

education and training, increasing public understanding of the challenges facing their environment. By involving communities in sustainability efforts, sister city relationships can foster a stronger culture of environmental responsibility. This not only benefits all three cities but also contributes to global efforts to address increasingly pressing environmental issues. Thus, environmental initiatives are a crucial aspect of strengthening intercity ties and improving the quality of life for the community.

Factors driving the implementation of sister city relationships between Jayapura, Vanimo, and Wewak include geography, economics, policy support, education, security, and the environment. The synergy between these factors not only strengthens cooperation between the three cities but also positively contributes to sustainable development and the well-being of the people in the region. The driving factors for implementing sister city relationships—geography, economy, policy support, education, security, and the environment—function synergistically to build solid cooperation between the three cities. Geographical proximity not only facilitates easier interaction but also enables more effective collaboration in economic and environmental aspects. For example, cooperation in natural resource management can be carried out more efficiently because the three cities have direct access to each other.

Interconnected economies provides incentives for communities to participate in sister city programs. When communities experience direct benefits from this collaboration, such as increased income through trade or tourism, they are more motivated to engage. Government policy support strengthens this framework, creating a conducive environment for joint initiatives and strengthening the program's legitimacy. In the context of education and knowledge exchange, this synergy fosters the development of quality human resources, which are crucial for social and economic progress. The training and workshops held not only improve community skills but also build awareness of the importance of environmental sustainability. This awareness, in turn, encourages communities to engage more actively in conservation activities, fostering a culture of environmental responsibility.

The security and stability resulting from this collaboration create a safer environment for communities, supporting more sustainable social and economic growth. By strengthening diplomatic relations between Indonesia and Papua New Guinea, this initiative also brings broader benefits, creating opportunities for greater international cooperation in the future.

Based on economic growth data provided for Papua New Guinea (PNG), Papua Province, and East Sepik Province, here is a comparison and analysis of which province experienced the highest growth:

1. Papua New Guinea (PNG)

2022: 5.71%

2023: 3.04%

2024 (Projected): 2.60%

2025 (Projected): 4.70%

Papua New Guinea experienced a significant economic recovery in 2022 following the COVID-19 pandemic, but experienced a slowdown in 2023 and the projected 2024. However, the projection for 2025 shows a positive increase of 4.70%.

2. Papua Province

2022: 8.97%

2023: 5.22%

2024: 4.11%

2025 (Quarter One): 3.91%

2025 (Quarter Two): 3.55%

Papua Province recorded the highest growth in 2022 at 8.97%, an impressive figure. However, growth has slowed in subsequent years, and projections for 2025 indicate a further decline.

3. East Sepik Province

Specific economic growth data is not available, but based on economic indicators and infrastructure development efforts, the agricultural sector, and major projects like the Frieda River Project, it can be estimated that the economy in East Sepik is showing positive growth, although not as fast as Papua or Papua New Guinea as a whole. Papua Province experienced the highest growth in 2022 at 8.97%, far surpassing Papua New Guinea (5.71%) and East Sepik, for which specific data is not available. Papua New Guinea as a country showed a strong recovery in 2022 but then experienced a slowdown in the following years, despite positive projections for 2025. East Sepik Province does not have directly comparable growth figures, but based on other indicators (agriculture and infrastructure), it is projected to experience slower growth than Papua and Papua New Guinea. Papua Province experienced the highest economic growth in 2022 at 8.97%, the largest growth rate among the three regions.

Since the sister city relationship between Jayapura City (Indonesia) and Vanimo and Wewak (Papua New Guinea) began in 2016, collaboration between the regions has continued to expand, focusing on improving connectivity and strengthening trade, culture, education, and health. The economic growth occurring in these three regions provides a deep foundation for strengthening these relationships, creating opportunities for synergy that can accelerate cross-border development.

1. Economic Growth of Papua Province (Indonesia)

In 2022, Papua Province recorded very high economic growth of 8.97%, reflecting a very strong recovery from the impact of the COVID-19 pandemic. This year marked peak growth, driven by key sectors such as goods exports, financial services, and increased government consumption. Despite a slowdown in 2023 to 5.22%, Papua Province continues to demonstrate strong economic stability, despite facing global challenges such as fluctuating commodity prices and other domestic challenges. In 2024 and 2025, despite the downturn, growth remains stable, with projections of 3.91% in the first quarter and 3.55% in the second quarter, indicating that the economy remains on a stable growth path. As part of its sister city relationship with Vanimo and Wewak, Jayapura City serves as an economic hub that can offer experience in managing major sectors such as goods exports and infrastructure development, which are crucial for strengthening trade and social connectivity between cities.

2. Papua New Guinea (PNG) Economic Growth

In 2022, the Papua New Guinea (PNG) economy recorded a significant recovery with growth of 5.71%, driven by natural resource sectors such as gold and copper mining. However,

in 2023, growth slowed to 3.04%, impacted by declining commodity prices and challenges in the agriculture and energy sectors. Projections for 2024 show a further decline to 2.60%, although there is hope for a rebound in 2025, with a projected growth of 4.70%. Despite PNG's economic slowdown, the natural resource sector remains a key pillar, with significant potential in the mining and energy sectors. As partners in a sister city relationship, Vanimo and Wewak are strategically positioned to benefit from Papua New Guinea's natural resource management practices and learn from the challenges faced in the agriculture and energy sectors. This collaboration provides opportunities for both countries to develop new sectors through the sharing of knowledge and technology that can enhance the economic competitiveness of each city.

3. Economic Growth of East Sepik Province (East Sepik, Papua New Guinea)

Although East Sepik Province, where Wewak is located, does not have specific economic growth data, various economic indicators indicate that the region is experiencing increased economic activity, particularly in the local trade and agriculture sectors. The agricultural sector, the backbone of the region's economy, faces challenges, but with major projects like the Frieda River Project, located on the border with Sandaun, there is hope for increased investment and new job creation. Continuously developing infrastructure also plays a crucial role in accelerating connectivity, not only between Wewak and Vanimo, but also with other regions in Papua New Guinea and Indonesia.

The sister city partnership between Jayapura City, Vanimo, and Wewak provides a strong foundation for promoting the development of the agricultural and trade sectors in East Sepik. Furthermore, infrastructure projects, such as road and port improvements, are expected to increase the flow of goods and people, strengthening Wewak's position as an economic hub in the province. Enhancing Cooperation Based on Mutually Supportive Economic Growth With rapidly growing economies, despite facing their own challenges, Jayapura City, Vanimo, and Wewak have significant potential to support each other through their sister city relationship. Papua Province, with its relatively stable economic growth, offers experience in managing key sectors such as goods exports and infrastructure development, which can improve connectivity between cities. Papua New Guinea as a whole, while facing challenges in economic growth, still holds significant potential in the natural resources and energy sectors. Meanwhile, East Sepik Province can benefit from ongoing major projects to boost the agricultural sector and the local economy. Through this collaboration, the three cities are expected to create synergies in economic development, strengthen the trade sector, and improve the quality of life of the community through collaboration in education, health, and culture. With a strong commitment to addressing challenges and leveraging the potential of each region, the sister city relationship between Jayapura, Vanimo, and Wewak is expected to continue to thrive, bringing benefits to the community and strengthening connectivity and economic stability in the Pacific region.

Impact of Sister City Cooperation on the Economic and Social Development of the Three Cities

The sister city collaboration between Jayapura, Vanimo, and Wewak has had a significant impact on the economic and social development of the three cities. This relationship creates various opportunities that not only strengthen cooperation between the cities but also improve the overall well-being of the community. Several key impacts have been identified,

including:

1. Increased Economic Growth

This collaboration opens access to new markets and investment opportunities, contributing to local economic growth. Through trade exchange programs and local product promotion, businesses in the three cities can expand their business networks. This not only increases income but also creates new jobs, which in turn reduces unemployment and improves the community's quality of life. The sister city collaboration between Jayapura, Vanimo, and Wewak significantly opens access to new markets and creates investment opportunities that support local economic growth. Through the trade exchange program, businesses in the three cities can collaborate in promoting their local products, thereby increasing their competitiveness in regional and international markets.

By expanding their business networks, businesses can not only increase sales volume but also establish profitable strategic partnerships. This contributes to increased revenue that can be allocated to innovation and product development, as well as improving service quality. This collaboration also serves to create new jobs, which is crucial in reducing unemployment. As businesses grow and investment flows in, the need for labor increases, opening up opportunities for people to find better employment. This has a direct impact on improving the quality of life, as individuals and families can enjoy more stable incomes and better access to basic services such as education and healthcare. This collaboration not only drives economic growth but also builds a strong foundation for sustainable development in all three cities.

2. Human Resource Development

Through education and training programs, sister city collaboration contributes to the development of quality human resources. Student and lecturer exchanges, as well as skills training, help communities gain knowledge and skills.

aradiplomacy Model in the Implementation of the Sister City Agreement between Jayapura, Vanimo, and Wewak, Papua New Guinea

Coordination Between the City Governments of Jayapura, Vanimo, and Wewak

1. Establishment of a Cooperation Forum

The first step in coordination between the three city governments is the establishment of a formal cooperation forum. This forum can consist of representatives from the government, the private sector, and civil society. The purpose of this forum is to discuss common issues, formulate action plans, and evaluate the progress of the collaboration. Regular meetings in this forum will help maintain effective communication.

2. Signing of the MoU

The three city governments can sign a Memorandum of Understanding (MoU) as the legal basis for their collaboration. This MoU will cover various areas, such as trade, tourism, education, and the environment. With this formal agreement, each party will commit to implementing the agreed-upon programs.

3. Resource and Knowledge Exchange

Coordination can also be achieved through resource and knowledge exchange programs. For example, the government can organize training programs for civil servants from each city to learn from each other's policies and best practices. Furthermore, cultural

exchanges, seminars, and workshops can strengthen intercity ties and increase understanding of each other's needs.

4. Use of Information Technology

The use of information technology is also crucial for coordination between the three cities. By using digital communication platforms, the government can share information quickly and efficiently. This includes updates on ongoing activities, data collection, and analysis of issues. Technology makes long-distance communication easier and more effective.

5. Evaluation and Feedback

Finally, it is important to conduct regular evaluations of the collaboration. The governments of the three cities should hold meetings to discuss the results of implemented programs, evaluate successes, and identify areas for improvement. Feedback from local communities should also be taken into account to ensure that this collaboration meets their needs.

With these steps, it is hoped that coordination between the Jayapura, Vanimmo, and Wewak City governments will be more effective, sustainable, and beneficial to their respective communities.

How to Collaborate Between the City Governments of Jayapura, Vanimmo, and Wewak

1. Establishing Common Goals

The first step in collaboration is establishing common goals. The governments of the three cities should hold discussions to identify priority areas, such as economic development, tourism, education, and the environment. With clear goals, all parties can work toward the same goal.

2. Establishing a Working Team

Forming a working team consisting of representatives from each city government is crucial. This team will be responsible for designing, implementing, and monitoring collaborative programs. Each team member can bring perspectives and knowledge of local conditions, resulting in more relevant solutions.

3. Implementing Exchange Programs

Holding exchange programs between the cities is an effective way to strengthen collaboration. For example, holding official intergovernmental visits to learn from best practices, or holding cultural festivals involving communities from the three cities. These exchanges can enhance mutual understanding and cooperation at the community level.

4. Collaborating on Joint Projects

The governments of the three cities can develop mutually beneficial joint projects. For example, projects for sustainable natural resource management or infrastructure development that supports inter-city connectivity should be designed with the involvement of all stakeholders and consideration of local needs.

5. Strengthening Communication Networks

Developing strong communication networks between city governments is crucial. This can be achieved through the use of information technology, such as online communication platforms, to facilitate information sharing and regular updates on ongoing activities. Regular meetings, both physical and virtual, can also help strengthen

inter-governmental relations.

6. Reporting and Evaluation

Every implemented program or project must be accompanied by a clear report on progress and results achieved. Periodic evaluations are necessary to assess the effectiveness of the collaboration and make decisions necessary for future improvements. Community feedback should also be considered in the evaluation process.

By implementing these steps, collaboration between the Jayapura, Vanimo, and Wewak City governments can be effective, sustainable, and beneficial.

CONCLUSIONS

The implementation of sister city relationships between Jayapura City, Vanimo City, and Wewak City as a model of *paradiplomacy* demonstrates significant potential for enhancing cross-border cooperation focused on social and economic development. Through this collaboration, the three cities can share resources, experiences, and knowledge, resulting in more relevant and sustainable initiatives. Local community involvement in program planning and implementation strengthens the sense of ownership and commitment, and enhances social cohesion among residents. Despite challenges such as limited resources and differing policies, this *paradiplomacy* approach offers an opportunity to create mutually beneficial synergies. Overall, the *paradiplomacy* model implemented in this sister city collaboration can serve as an example for other cities in their efforts to achieve inclusive and sustainable development goals and strengthen inter-community ties at the regional level.

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