

Role of Stakeholders in Applying Policies for Creating Regenerative Cities Indonesia's Study Case

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Abstract

Cities now face the immense challenge of becoming truly regenerative. This involves not only being resource-efficient and low-carbon-emitting but also actively enhancing, rather than degrading, the ecosystem services they depend on beyond their boundaries. However, the decentralization process, though aimed at empowering local governments, has sometimes led to fragmented and uncoordinated urban planning, complicating efforts to implement regenerative city strategies. Metropolitan areas in Indonesia, particularly the Jakarta Metropolitan Area, grapple with significant challenges due to complex institutional structures and governance issues. This study will identify the key stakeholders and clarify their roles and responsibilities within the Jakarta Metropolitan Area, the largest in Indonesia. Current regulations are known to lack substantive integration of regenerative city concepts into roles and mechanisms. Establishing a new working group focused on regenerative cities and raising stakeholder awareness of this concept are critical steps. The author aims to contribute to the growing knowledge on regenerative cities and offer practical insights for policymakers, urban planners, and stakeholders engaged in urban development in Indonesia.

Keywords

Regenerative Cities Policies, Metropolitan Area, Indonesia, Jakarta

1. Introduction

1.1. Background Research

The current challenge in developing modern cities extends beyond merely creating sustainable cities to creating truly regenerative ones. This involves ensuring that cities not only become resource-efficient and low carbon-emitting but also actively enhance rather than degrade the ecosystem services they rely on from outside their boundaries. The concept of regenerative cities takes a step further by addressing the relationship between urban areas and their hinterlands, as well as with distant territories that provide essential resources like water, food, and other vital materials. It emphasizes the need to rejuvenate the landscapes that cities depend on, incorporating measures to enhance their capacity to absorb carbon emissions.

In contrast, local egocentrism caused by decentralization has brought negative consequences for institutions of governance in extended metropolitan regions in Indonesia. The decentralization process, while intended to empower local governments, has sometimes led to fragmented and uncoordinated urban planning efforts. This fragmentation complicates the implementation of comprehensive and integrated strategies necessary for developing regenerative cities. Metropolitan areas in Indonesia, such

as the Jakarta Metropolitan Area (JMA), face significant challenges due to these complex institutional structures and governance issues.

To implement the concept of regenerative cities effectively, it is crucial to identify and engage a wide range of stakeholders. Each has a unique role in contributing to and supporting the transition towards regenerative urban development. This study will focus on identifying these stakeholders and clarifying their roles and responsibilities in the context of the JMA, the largest metropolitan area in Indonesia.

In the first part, the paper will explain JMA as the case study and the policies of regenerative cities concept. Research objectives and methodologies will also explained in the first part. The second part will explain the project result by breaking one objective into one sub-part. To conclude, author will explain the critical review, proposed future studies, and broader project impact.

1.2. Introduction to Case Study

Jakarta, formerly the capital city of Indonesia, is the core city of the largest metropolitan area in the country, known as Jakarta Metropolitan Area (JMA). As the city with the largest population and the most significant economic activity in Indonesia, Jakarta is also part of the National Strategic Area (*Kawasan Strategis Nasional*), which includes other cities and regions such as Bogor, Depok, Tangerang, Bekasi, Puncak and Cianjur (collectively referred to as Jabodetabek-Punjur). Over the years, Jakarta has faced various challenges related to socio-economic, environmental, and other development issues.

In 2020, the Indonesian government officially released Presidential Regulation No. 60 of 2020 to address urban planning in the Jabodetabek-Punjur Metropolitan Area. The regulation also emphasizes the role of the Urban Planning Coordinating Team (*Tim Koordinasi Penataan Ruang*) as highlighted in Ministry of Agrarian Affairs and Spatial Planning Regulation No. 22 of 2020.

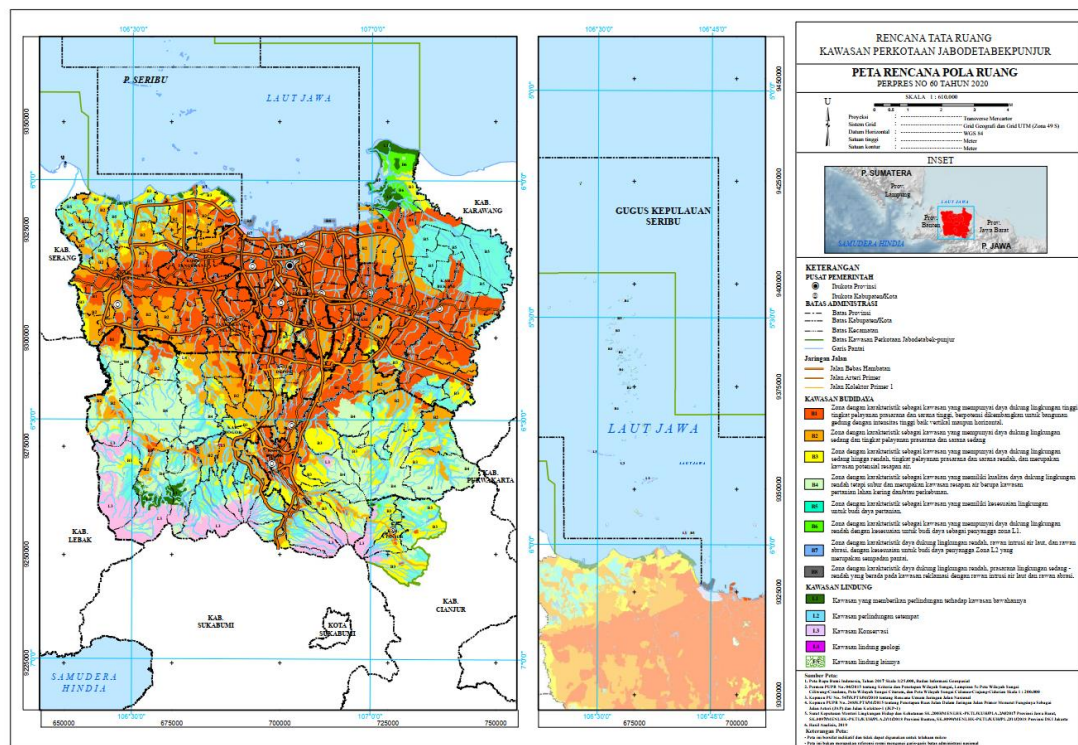


Figure 1. Jakarta Metropolitan Area's Spatial Map. Source: Presidential Regulation No. 60 of 2020

Presidential Regulation No. 60 of 2020 designates the JMA as a National Strategic Area from the perspective of economic interest, comprising both the Core Urban Area and the Surrounding Urban Area that together form the Metropolitan Area. This regulation, which serves as the JMA Urban Area Spatial Plan, functions as a tool for operationalizing the National Spatial Plan and coordinating the implementation of development in the JMA. It provides a comprehensive guideline for various aspects of development and spatial management, including the preparation of development plans, the utilization and control of space, and the promotion of integration, interconnectedness, and balanced development across Regency/City regions, ensuring harmony between sectors. Additionally, it guides the determination of locations and functions of space for investment and offers direction for spatial planning at both the provincial and regency/city levels. Furthermore, the regulation addresses the management of the JMA by focusing on the integration of its development plans with surrounding areas. It underscores the importance of aligning development with the region's environmental carrying capacity while ensuring the control of pollution and environmental damage.

The overarching goal of spatial planning in the JMA is to establish it as an Urban Area that serves as a hub for economic activities on an international, national, and regional scale, with integration across different areas, based on environmental sustainability and cohesive area management. To support this governance framework, the government issued Ministry of Agrarian Affairs and Spatial Planning Regulation No. 22 of 2020, which emphasizes the role of the Urban Planning Coordinating Team (Tim Koordinasi Penataan Ruang). In the effort to implement the JMA's spatial plan as a National Strategic Area, the coordination of institutions is carried out by the Minister, relevant ministers and heads of institutions, Governors, and Regents/Mayors, according to their respective authorities, with support from the Coordination Team established for this purpose.

1.3. Regenerative Cities Policies

A truly regenerative concept is to ensuring that cities not only become resource-efficient and low-carbon, but also actively improve rather than degrade the ecosystem services they rely on from areas beyond their borders. While various technical and management solutions for this goal already exist, progress in implementation has been slow and insufficient.

The idea of regenerative cities goes even further by addressing the connections between cities and their surrounding regions, as well as the more distant areas that supply essential resources like water, food, and timber. It's necessary to restore and enrich the landscapes on which cities depend, including enhancing their ability to absorb carbon emissions. Building a restorative relationship between cities, their local surroundings, and the wider world requires leveraging new opportunities in finance, technology, policy, and business practices.

The concept is particularly important in the context of metropolitan areas, as it emphasizes the interconnectedness between different regions, making it highly relevant to the main idea of the paper. By adopting regenerative cities as a core principle for urban development, the approach becomes compelling, as it opens up significant opportunities to enhance both local social and economic well-being.

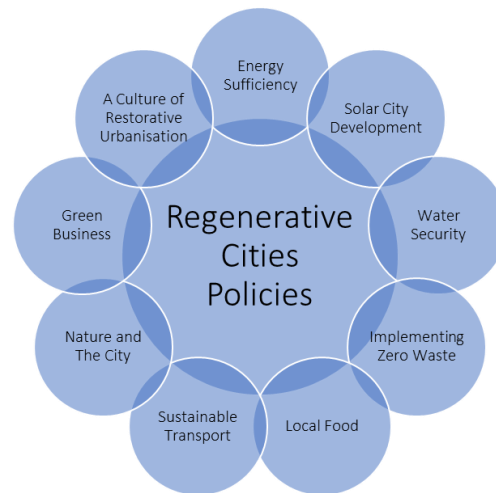


Figure 2. Regenerative Cities Policies. Source: Girardet, 2010

As seen in the frame, several key policies support the implementation of the regenerative cities concept, focusing on sustainability across different sectors. First, energy sufficiency is addressed through the adoption of the 2000 Watt Society concept, promoting resource-efficient building practices via modified building codes. In 'solar city' development, a national policy mandate prioritizes feed-in legislation for renewable energy systems, allowing electricity sales at advantageous rates, while supporting renewable energy as a new manufacturing industry and enabling policies for energy development in urban hinterlands. Water security policies aim to balance urban, agricultural, and commercial water uses, promoting water efficiency, rainwater collection, and recycling wastewater.

Zero waste initiatives encourage enterprises to process organic waste into soil-enhancing materials, make nutrient capture central to waste management, and create new green businesses around cost-effective waste reprocessing. The local food policy supports peri-urban agriculture, community-supported farming, and the use of composted bio-waste for urban farming. Sustainable transport policies include the creation of pedestrian zones, a dedicated cycle network, improved public transport, and the promotion of electric vehicles and car-sharing systems. Nature conservation efforts focus on tree planting for biodiversity, carbon sequestration, and the restoration of forests and wetlands. Green business growth is driven by government procurement, resource-efficient business practices, the creation of green business incubators, and an emphasis on environmental resilience. Overall, these policies foster a culture of restorative urbanization, using global networks, local expertise, education, media reporting, and public involvement to promote eco-restoration and ensure the development of regenerative cities.

1.4. Research Objectives

Building on the background previously discussed, this research aims to achieve two key objectives.

1. Identify the key stakeholders involved in metropolitan urban development in Indonesia, using JMA as a case study
2. Analyze the roles of these stakeholders in fostering the creation of regenerative cities

1.5. Research and Data Collection Methods

To achieve the research objectives, a combination of literature review and document analysis will be employed for data collection, followed by qualitative analysis techniques, specifically content analysis and stakeholder analysis, to generate the findings. The literature review, conducted as a systematic examination of existing academic literature, policy papers, and reports, will provide a theoretical foundation and help identify key themes and gaps in the current research landscape. Document analysis

will focus on examining relevant policy documents and government reports to uncover references to stakeholder roles, interactions, and their impacts on urban development. This comprehensive approach will ensure a thorough understanding of both the theoretical and practical dimensions of the topic.

2. Project Result

2.1. Objective One: Identify The Key Stakeholders Involved in Metropolitan Urban Planning in Indonesia

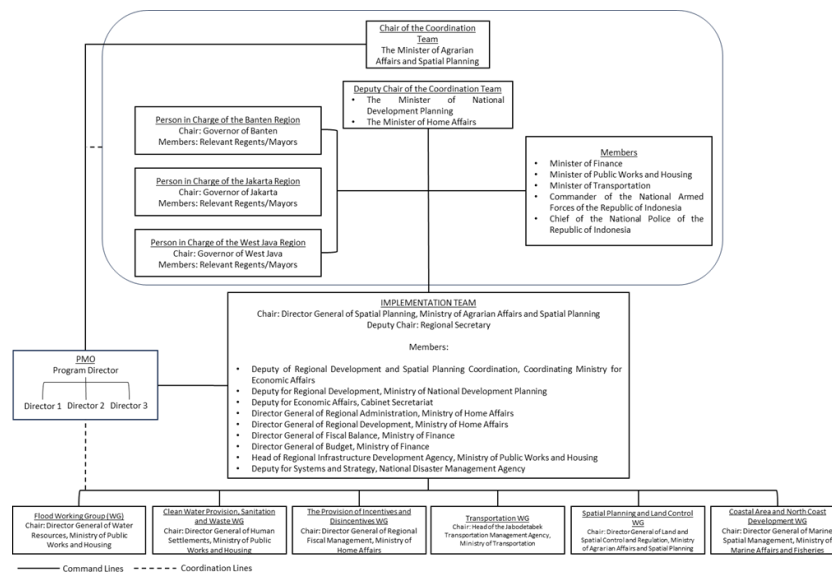


Figure 3. Composition of The Spatial Planning Coordination Team. Source: Ministry Regulation of Agrarian Affairs and Spatial Planning No. 22/2020, Translated by Author

To address the first objective, Ministry Regulation No. 22 of 2020 has been analyzed to categorize the stakeholders involved in metropolitan urban planning and development in the Jabodetabek Metropolitan Area (JMA) into four groups: the Coordination Team, the Implementation Team, the Project Management Officer, and the Working Groups. The coordination team is led by Minister of Agrarian Affairs and Spatial Planning, with Minister of National Development Planning and Minister of Home Affairs serving as deputy chairs. This team includes representatives from every level of government, encompassing both Central and Local Government. The Central Government comprises nine ministries and institutions focusing on finance, public works and housing, transportation, and national security. While the Local Government is represented by the three provincial-level governments. These provinces mirrored by the Person in Charge of each administrative area, led by the Governor of Banten, Governor of Jakarta, and Governor of West Java, with nine regent/city-level relevant Regents/Mayors as the members.

The implementation team is chaired by the Director General of Spatial Planning, Ministry of Agrarian Affairs and Spatial Planning as the chair with the Regional Secretary as the deputy chair. Its members include officials from various ministries and institutions concerned with economic affairs, national development planning, cabinet secretariat, home affairs, finance, public housing, and national disaster management. Unlike the Coordination Team, which is led by the top leaders of each government institution, the Implementation Team is headed by officials one level below the highest rank, such as director generals and deputies.

The Coordination Team addresses six key issues within the JMA, each managed by specific working group (WG). These groups focus on Flood Management, Clean Water Provision, Sanitation and Waste

Management, Incentives and Disincentives, Transportation, Spatial Planning and Land Control, and Coastal Area and North Coast Development. Each WG is chaired by officials one level below the highest leaders, similar to the structure of the Implementation Team, with director generals and deputies serving as leaders of these working groups.

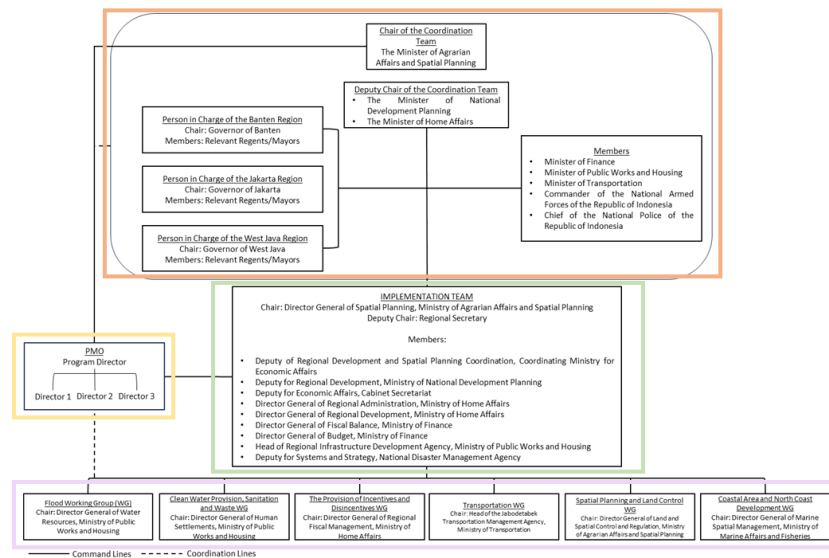


Figure 4. Groups of The Spatial Planning Coordination Team. Source: Ministry Regulation of Agrarian Affairs and Spatial Planning No. 22/2020, Translated by Author

The author defines the Coordination Team, highlighted with an orange box in the visual, as the head of the entire planning and implementation structure. This team plays a central role in overseeing the coordination of metropolitan planning efforts, solving critical issues, and establishing a robust monitoring and evaluation system. As the guiding body, the Coordination Team ensures that the various aspects of urban planning, such as sectoral integration and cross-regional cooperation, function smoothly. Their responsibilities span from developing strategies to ensuring that the broader goals of spatial planning are met efficiently. Additionally, they work to synchronize policies, budgets, and action plans across different governmental levels and institutions to ensure cohesive progress toward urban development goals. Their full set of responsibilities includes the following:

1. Coordinating the implementation of spatial planning across sectors, regions, and stakeholders.
2. Leading the resolution of strategic issues such as flooding, raw water availability, sanitation, waste management, coastal and northern coastline management, transportation, and the relocation of the national capital.
3. Coordinating the creation of action plans and aligning the programs and budgets of relevant ministries, agencies, and local governments.
4. Establishing incentive and disincentive mechanisms for monitoring and ensuring compliance with spatial planning.
5. Overseeing the evaluation of programs and recommending adjustments to resource allocations and budgets.

Meanwhile, the Implementation Team highlighted with a green box, while more technical in its approach, primarily operates at the policy level. It translates the strategies and policies developed by the Coordination

Team into actionable tasks and monitors their effectiveness. Although their focus is on policy, they are also responsible for ensuring that action plans are executed, making them a bridge between strategic planning and practical implementation. Their roles include:

1. Implementing strategies and general policies for spatial planning.
2. Monitoring and evaluating the effectiveness of these strategies, including program and budget alignment.
3. Executing the established action plans.
4. Providing recommendations for resolving key strategic issues.
5. Performing other related tasks to support urban development efforts.
6. Enhancing the capacity of personnel involved in spatial planning and implementation.

The Project Management Officer (PMO) that highlighted with a yellow box, serving as the daily manager of the team, is responsible for overseeing the alignment of programs and budgets with policy directives, ensuring smooth operation and problem-solving on a day-to-day basis. Their tasks include:

1. Ensuring program and budget alignment by identifying and recommending necessary adjustments and consolidating work plans with policy directives.
2. Addressing bottlenecks and resolving problems by tracking work plan fulfillment, assisting in issue identification, supporting problem resolution, and developing Standard Operating Procedures (SOPs).
3. Providing innovative recommendations related to governance, regulations, funding sources, and the use of incentives or disincentives to encourage better policy implementation.

Lastly, the Working Groups (WGs) highlighted with a purple box, are tasked with handling technical aspects of the action plans. They provide the expertise needed to carry out specific initiatives, as well as handle issue resolution at the technical level. Their roles are:

1. Coordinating the implementation of action plans and resolving technical issues.
2. Preparing proposals related to regulations, policies, financing, management, development, technical facilities, and carrying out evaluation and reporting.

Each of these groups plays a vital role in ensuring that the planning, implementation, and evaluation processes for metropolitan urban development in the JMA are conducted efficiently and effectively.

2.2. Objective Two: Analyze The Roles of These Stakeholders In Fostering The Creation of Regenerative Cities

For the second objective, the author successfully combined the stakeholder analysis results from the first objective with the regenerative cities concept outlined in Section 1.3 to define the roles for implementing this concept within JMA's governance system, as detailed in the attachment. The method involved integrating the managerial tasks of each team with the substantive principles of regenerative cities. The results are explained in the Table 1.

Table 1. Roles of Stakeholders in Fostering The Creation of Regenerative Cities

No.	Group	Roles
1.	Coordination team	1. Coordinate the alignment of the regenerative cities concept as a strategic and priority policy in spatial planning for the JMA. 2. Coordinate the resolution of strategic issues related to programs associated with regenerative cities. 3. Coordinate the integration of the regenerative cities concept into action plans. 4. Coordinate the synchronization of programs across relevant entities concerning regenerative cities. 5. Coordinate the evaluation of programs, reallocation of resources, and budget recommendations related to regenerative cities initiatives. 6. Coordinate the formulation and establishment of incentive and disincentive mechanisms for monitoring spatial planning related to regenerative cities programs.
2.	Implementation Team	1. Implement strategies and general policies related to the regenerative cities. 2. Provide recommendations for resolving strategic issues related to the regenerative cities. 3. Develop and execute action plans related to the regenerative cities. 4. Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization. 5. Enhance the capacity of personnel in understanding and applying methods. 6. Implement incentive and disincentive measures.
3.	Project Management Officer	1. Align programs and budgets by identifying and recommending alignment needs, consolidating work plans with policy directives related to regenerative cities. 2. Address bottlenecks by tracking the fulfillment of work plans, inventorying issues, providing support for problem resolution, assisting in study preparation, and developing SOPs related to regenerative cities. 3. Foster innovation by providing recommendations on governance, regulations, funding sources, and incentives and disincentives related to regenerative cities.

Source: Analysis Results, 2024

The involvement of each WG is detailed in the Table 2. The Provision of Incentives and Disincentives WG, along with the Spatial Planning and Land Control WG, show the strongest alignment with the policies outlined in the regenerative cities concept, as they are closely tied to multiple policy areas. In contrast, the Flood Control WG, Transportation WG, and Coastal Area and North Coast Development WG have a weaker connection to the concept, with each supporting only one related policy.

Table 2. Involvement of Working Group Related to Regenerative Cities Policies

Regenerative Cities Concept	Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
Energy Sufficiency						
Solar City Development						
Water Security						
Implementing Zero Waste						
Local Food						
Sustainable Transport						
Nature and The City						
Green Business						
A Culture of Restorative Urbanisation						

Source: Analysis Results, 2024

The roles for each WG is the most technical one, explained in the table 3.

Table 3. Roles of Working Groups

No.	Stakeholders	Working Group (WG)					
	Main Function	Implementation Team's Support Unit					
	Regenerative Cities Concept	Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
1	Energy Sufficiency			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the operationalization of the 2000 Watt Society concept and resource-efficient building.		Coordinate spatial planning control in the implementation of the 2000 Watt Society concept and resource-efficient building within the action plan and resolution of issues at the technical level.	
2	Solar City' Development			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the development of solar city concept.		Coordinate spatial planning control in the implementation of solar city development within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Working Group (WG)					
	Main Function	Implementation Team's Support Unit					
	Regenerative Cities Concept	Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
3	Water Security		Coordinate, evaluate, and report on encouraging water efficiency and rainwater collection in households and businesses within the action plan.	(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs related to water security.		Coordinate spatial planning control in the implementation of programs to secure water within the action plan and resolution of issues at the technical level.	
4	Implementing Zero Waste		Coordinate, evaluate, and report on the implementation of encouraging the zero waste concept within the action plan.	(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs related to zero waste concept.		Coordinate spatial planning control in the implementation of programs to secure water within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Working Group (WG)					
	Main Function	Implementation Team's Support Unit					
	Regenerative Cities Concept	Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
5	Local Food			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs that encourage people to consume local food.		Coordinate spatial planning control in the implementation of programs to encourage people to consume local food within the action plan and resolution of issues at the technical level.	
6	Sustainable Transport			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs that implement sustainable transport.	Coordinate, evaluate, and report on efforts to make pedestrian zones widespread, create a comprehensive network of dedicated cycle lanes, encourage public transport through its attractiveness, frequency, and flexibility, as well as promote new electric and fuel cell vehicle technology, and car-sharing within the action plan.	Coordinate spatial planning control in the implementation of programs related to sustainable transport within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Working Group (WG)					
	Main Function	Implementation Team's Support Unit					
	Regenerative Cities Concept	Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
7	Nature and The City	Coordinate, evaluate, and report on the implementation of encouraging tree planting and encouraging people to help restore forests and wetlands in remote areas within the action plan.		(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs that preserving urban-nature.		Coordinate spatial planning control in the implementation of programs to preserve urban nature within the action plan and resolution of issues at the technical level.	Coordinate, evaluate, and report on the implementation of encouraging tree planting and encouraging people to help restore forests and wetlands in remote areas within the action plan.
8	Green Business			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, in implementing green business concept.		Coordinate spatial planning control in the implementation of programs related to the green business concept within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Working Group (WG)					
	Main Function	Implementation Team's Support Unit					
	Regenerative Cities Concept	Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
9	A Culture of Restorative Urbanisation			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting in developing restorative urbanisation.		Coordinate spatial planning control in the implementation of programs related to developing restorative urbanization within the action plan and resolution of issues at the technical level.	

Source: Analysis Results, 2024

3. Conclusion

3.1. Critical Review

According to the Ministry of Agrarian Affairs and Spatial Planning Regulation No. 22 of 2020, each working group is required to appoint a chief and a vice chief (Article 9, paragraph 1). However, the regulation does not specify the composition of the members within these working groups. Furthermore, several key derivative provisions mandated by the regulation have yet to be established. These include the working procedures of the implementation team (Article 7, paragraph 4), the organizational structure and standard operating procedures of the Project Management Officer (PMO) (Article 8, paragraph 3), and the organizational structure and standard operating procedures of the working groups (Article 9, paragraph 4). Additionally, Regulation No. 22 of 2020 stipulates that other spatial planning coordination institutions must align their activities with the provisions set forth in this regulation (Article 13). However, clarification is needed regarding the cooperation mechanisms with the Development Cooperation Agency (*Badan Kerja Sama Pembangunan/BKSP*). There is a need to formulate derivative regulations that clearly define coordination mechanisms with existing institutions, including urban planning bodies and other relevant agencies.

While the regulation primarily outlines the roles and mechanisms of key stakeholders, substantive issues such as the concept of regenerative cities have not yet been incorporated into these roles and frameworks. The author has identified the necessity of establishing new working groups specifically focused on renewable energy, in alignment with Policy 1 on energy sufficiency and Policy 2 on solar city development. Additionally, another working group should be created to address agricultural and food-related issues, particularly in relation to Policy 5 on local food. In general, the JMA coordination team needs to enhance its understanding of the regenerative cities concept and integrate these policies into their action plans more concretely.

3.2. Proposed Future Studies

Future studies should focus on evaluating the effectiveness of the Coordination Team's performance in implementing metropolitan planning and development strategies. This evaluation would provide insights into the team's ability to coordinate across multiple levels of government, address key urban challenges, and execute spatial planning goals. Additionally, future research should examine the coordination mechanisms with sectors beyond the government, such as private sector entities, civil society, and non-governmental organizations. Understanding how these external actors interact with government-led efforts will help identify opportunities for improved collaboration and more comprehensive urban governance approaches.

3.2. Broader Project Impact

The author hope that this study will contribute to enhancing stakeholder engagement in the formulation of policies related to regenerative cities. Strengthening stakeholder involvement can result in more effective coordination between public and private institutions, fostering a more cohesive and integrated approach to urban planning and development. Furthermore, the study aims to enrich the growing body of knowledge on regenerative cities, offering practical insights for policymakers, urban planners, and stakeholders involved in urban development in Indonesia. By bridging theoretical concepts with real-world applications, this research could serve as a valuable resource for shaping sustainable urban futures.

4. References

- Firman, T. (2008). In search of a governance institution model for Jakarta Metropolitan Area (JMA) under Indonesia's new decentralisation policy: old problems, new challenges. *Public Administration and Development: The International Journal of Management Research and Practice*, 28(4), 280-290.
- Girardet, H., (2017). *Regenerative cities* (pp. 183-204). Springer International Publishing.
- Hudalah, D., Zulfahmi, F. and Firman, T., (2013). Regional governance in decentralizing Indonesia: Learning from the success of urban-rural cooperation in metropolitan Yogyakarta. *Cleavage, connection and conflict in rural, urban and contemporary Asia*, pp.65-82.

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ATTACHMENT 1.

Complete Analysis Result

No.	Stakeholders	Coordination Team	Implementation Team	Project Management Officer	Working Group (WG)					
	Main Function	Decision Makers	Technical Direction	Daily Operations Manager	Implementation Team's Support Unit					
	Regenerative Cities Concept				Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
1	Energy Sufficiency	(1) Coordinate the alignment of the regenerative cities concept as a strategic and priority policy in spatial planning for the Jabodetabekpunjur metropolitan area. (2) Coordinate the resolution of strategic issues related to programs associated with regenerative cities. (3) Coordinate the integration of the regenerative cities concept into action plans. (4) Coordinate the synchronization of programs across relevant entities concerning regenerative cities. (5) Coordinate the evaluation of programs, reallocation of resources, and budget recommendations related to regenerative cities initiatives. (6) Coordinate the formulation and establishment of incentive and disincentive mechanisms for monitoring spatial planning related to regenerative cities programs.	(1) Implement strategies and general policies related to the operationalization of the 2000 Watt Society concept and Resource-Efficient Building. (2) Provide recommendations for resolving strategic issues in the operationalization of the 2000 Watt Society concept and Resource-Efficient Building. (3) Develop and execute action plans for the operationalization of the 2000 Watt Society concept and Resource-Efficient Building. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in the operationalization of the 2000 Watt Society concept and Resource-Efficient Building. (5) Enhance the capacity of personnel in understanding and applying methods for the operationalization of the 2000 Watt Society concept and Resource-Efficient Building. (6) Implement incentive and disincentive measures in the operationalization of the 2000 Watt Society concept and Resource-Efficient Building.	(1) Align programs and budgets by identifying and recommending alignment needs, consolidating work plans with policy directives related to regenerative cities. (2) Address bottlenecks by tracking the fulfillment of work plans, inventorying issues, providing support for problem resolution, assisting in study preparation, and developing SOPs related to regenerative cities. (3) Foster innovation by providing recommendations on governance, regulations, funding sources, and incentives and disincentives related to regenerative cities.			(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the operationalization of the 2000 Watt Society concept and resource-efficient building.		Coordinate spatial planning control in the implementation of the 2000 Watt Society concept and resource-efficient building within the action plan and resolution of issues at the technical level.	
2	Solar City' Development		(1) Implement strategies and general policies related to the development of solar cities. (2) Provide recommendations for resolving strategic issues in the development of solar cities. (3) Develop and implement action plans for the "feed-in-legislation" method at the metropolitan level, including action plans to allow producers (such as homeowners, businesses, or community groups) to sell the electricity they generate from renewable sources (like solar panels, wind turbines, or hydroelectric systems) back to the grid. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in the development of solar cities.. (5) Enhance the capacity of personnel in understanding and applying methods for development of solar cities. (6) Implement incentive and disincentive measures to the development of solar cities.				(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the development of solar city concept.		Coordinate spatial planning control in the implementation of solar city development within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Coordination Team	Implementation Team	Project Management Officer	Working Group (WG)					
	Main Function	Decision Makers	Technical Direction	Daily Operations Manager	Implementation Team's Support Unit					
	Regenerative Cities Concept				Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
3	Water Security		(1) Implement strategies and general policies for balancing urban, agricultural, and commercial uses of water. (2) Provide recommendations for resolving strategic issues related to securing water resources. (3) Develop and implement action plans to encourage water efficiency and rainwater collection in households and businesses. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in order to secure water resources. (5) Enhance the capacity of personnel in understanding and implementing initiatives to secure water resources. (6) Implement incentive and disincentive measures related to programs in order to securing water resources.			Coordinate, evaluate, and report on encouraging water efficiency and rainwater collection in households and businesses within the action plan.	(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs related to water security.		Coordinate spatial planning control in the implementation of programs to secure water within the action plan and resolution of issues at the technical level.	
4	Implementing Zero Waste		(1) Implement strategies and general policies for achieving zero waste by establishing cost-effective reprocessing of all technical wastes and creating new green businesses and jobs. (2) Provide recommendations for resolving strategic issues related to achieving zero waste. (3) Develop and implement action plans to encourage new enterprises for processing organic waste into soil-enhancing materials, and to make sewage reprocessing and nutrient capture central to waste management. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in order to achieve zero waste. (5) Enhance the capacity of personnel in understanding and implementing the zero waste concept. (6) Implement incentive and disincentive measures related to programs aimed at achieving zero waste			Coordinate, evaluate, and report on the implementation of encouraging the zero waste concept within the action plan.	(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs related to zero waste concept.		Coordinate spatial planning control in the implementation of programs to secure water within the action plan and resolution of issues at the technical level.	

Role of Stakeholders in Applying Policies for
Creating Regenerative Cities: Indonesia's Study Case

No.	Stakeholders	Coordination Team	Implementation Team	Project Management Officer	Working Group (WG)					
	Main Function	Decision Makers	Technical Direction	Daily Operations Manager	Implementation Team's Support Unit					
	Regenerative Cities Concept				Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
5	Local Food		(1) Implement strategies and general policies to encourage people to consume local food. (2) Provide recommendations for resolving strategic issues related to the local food consumption concept. (3) Develop and implement action plans to promote local peri-urban food production for local markets, support agriculture and farmers' markets, and ensure the use of composted city-derived bio-waste for urban farming. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in efforts related to the local food consumption concept. (5) Enhance the capacity of personnel in understanding and implementing the local food consumption concept. (6) Implement incentive and disincentive measures related to programs that encourage people to consume local food.				(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs that encourage people to consume local food.		Coordinate spatial planning control in the implementation of programs to encourage people to consume local food within the action plan and resolution of issues at the technical level.	
6	Sustainable Transport		(1) Implement strategies and general policies to support the implementation of sustainable transport policies by focusing on pedestrian zones, public transport, and zero-emissions vehicle policies. (2) Provide recommendations for resolving strategic issues related to the implementation of sustainable transport in metropolitan areas. (3) Develop and implement action plans to expand pedestrian zones, create a comprehensive network of dedicated cycle lanes, enhance public transport through improved attractiveness, frequency, and flexibility, promote new electric and fuel cell vehicle technologies, and support car-sharing initiatives. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in supporting the implementation of sustainable transport. (5) Enhance the capacity of personnel in understanding and implementing sustainable transport initiatives. (6) Implement incentive and disincentive measures related to the implementation of sustainable transport.				(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs that implement sustainable transport.	Coordinate, evaluate, and report on efforts to make pedestrian zones widespread, create a comprehensive network of dedicated cycle lanes, encourage public transport through its attractiveness, frequency, and flexibility, as well as promote new electric and fuel cell vehicle technology, and car-sharing within the action plan.	Coordinate spatial planning control in the implementation of programs related to sustainable transport within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Coordination Team	Implementation Team	Project Management Officer	Working Group (WG)					
	Main Function	Decision Makers	Technical Direction	Daily Operations Manager	Implementation Team's Support Unit					
	Regenerative Cities Concept				Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
7	Nature and The City		(1) Implement strategies and general policies to preserve urban-nature initiatives by focusing on biodiversity, soil erosion control, carbon sequestration, and the development of related initiatives. (2) Provide recommendations for resolving strategic issues related to efforts to preserve urban-nature environments. (3) Develop and implement action plans to encourage tree planting and to motivate people to assist in restoring forests and wetlands in remote areas. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in preserving urban-nature environments. (5) Enhance the capacity of personnel in understanding and implementing initiatives to preserve urban-nature environments. (6) Implement incentive and disincentive measures related to the preservation of urban-nature environments.		Coordinate, evaluate, and report on the implementation of encouraging tree planting and encouraging people to help restore forests and wetlands in remote areas within the action plan.		(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, for the programs that preserving urban-nature.		Coordinate spatial planning control in the implementation of programs to preserve urban nature within the action plan and resolution of issues at the technical level.	Coordinate, evaluate, and report on the implementation of encouraging tree planting and encouraging people to help restore forests and wetlands in remote areas within the action plan.
8	Green Business		(1) Implement strategies and general policies for the green business concept in both the public and private sectors. (2) Provide recommendations for resolving strategic issues related to improving green business methods. (3) Develop and implement action plans for government green procurement, resource efficiency, green business incubators, and enhancing environmental resiliency for new businesses and job creation. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in the operationalization of the green business concept. (5) Enhance the capacity of personnel in understanding and implementing initiatives of the green business concept. (6) Implement incentive and disincentive measures related to the green business concept.				(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting, in implementing green business concept.		Coordinate spatial planning control in the implementation of programs related to the green business concept within the action plan and resolution of issues at the technical level.	

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No.	Stakeholders	Coordination Team	Implementation Team	Project Management Officer	Working Group (WG)					
	Main Function	Decision Makers	Technical Direction	Daily Operations Manager	Implementation Team's Support Unit					
	Regenerative Cities Concept				Flood Control WG	Clean Water Provision, Sanitation and Waste WG	The Provision of Incentives and Disincentives WG	Transportation WG	Spatial Planning and Land Control WG	Coastal Area and North Coast Development WG
9	A Culture of Restorative Urbanisation		(1) Implement strategies and general policies for developing restorative urbanization across all aspects. (2) Provide recommendations for resolving strategic issues related to the development of restorative urbanization. (3) Develop and implement action plans to utilize global and local experts in integrating this concept into education systems, media, and community engagement for restorative urbanization through meetings, events, news, and practices. (4) Monitor and evaluate program alignment and budgeting, as well as the effectiveness of budget utilization in programs related to restorative urbanization. (5) Enhance the capacity of personnel in understanding and implementing the restorative urbanization concept. (6) Implement incentive and disincentive measures related to the development of restorative urbanization.				(1) Coordinate the implementation of incentives and disincentives in action plans and the resolution of issues at the technical level. (2) Prepare proposals related to incentives and disincentives, as well as evaluations and reporting in developing restorative urbanisation.		Coordinate spatial planning control in the implementation of programs related to developing restorative urbanization within the action plan and resolution of issues at the technical level.	

Source: Analysis Result, 2024