Data Collection Survey on East Kalimantan Province including New Capital City for Regional and Urban Development Support

Final Report

February 2025

Japan International Cooperation Agency (JICA)

Pacific Consultants Co., Ltd. (PCKK)

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Summary

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CHAPTER1 Introduction

1.1 Background and Objectives

"Engineering Survey for New Capital City Development in Indonesia" (June 2022 - June 2023) by JICA revealed the importance of wide-area collaboration based on the concept of "*Tri-City Development*" – a collaborative development between the New Capital; Balikpapan City, the economic city of East Kalimantan Province; and Samarinda City, the provincial capital. However, the study also raised concerns that consideration on consistency and synergy with the development plans of surrounding cities have been insufficient, pointing out the lack of environmental consideration; constancy between construction implementation and planning; and consistency with development plans of surrounding cities.

The following study, "Data Collection Survey on East Kalimantan Province including New Capital City for Regional and Urban Development Support", analyzes and organizes regional development issues in East Kalimantan Province including the New Capital to provide input for the development plan that is expected to be formulated by the provincial government in the future. Furthermore, the study collected and analyzed information on regional development and regional cooperation in the target areas (the planned New Capital, Samarinda City and Balikpapan City) as well as examined future cooperation proposals and attracting investment related to the New Capital for the realization of a future Tri-City.

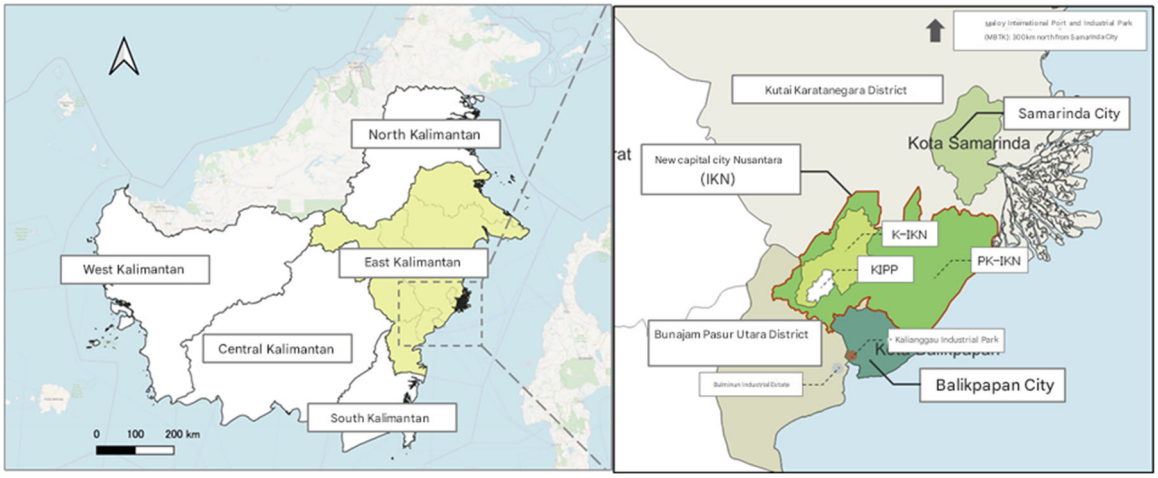
1.2 Survey Period

May 2023 - February 2025 (21 months in total)

1.3 Survey Area

The surveyed locations are listed below.

- East Kalimantan Province, Republic of Indonesia
- Planned New Capital (IKN), Balikpapan City, Samarinda City



Source: Prepared by JICA Study Team

Figure 1-1 Survey Area

1.4 Counterparts and Stakeholders

The counterpart for this study was BAPPENAS. As stakeholders in the study, discussions were held with OIKN; PUPR; and other ministries and related municipalities (East Kalimantan Province, Balikpapan City, and Samarinda City).

CHAPTER2 Review of Existing Studies, Master Plans for the Province of East Kalimantan Province, Balikpapan City, and Samarinda City, and Identification of Status and Issues

Regarding the review of existing studies, the study team analyzed the policy and master plan of the New Capital, as well as the long-term development plans, middle-term development plans, and spatial plans of each region.

A list of related planning documents by each region is provided below.

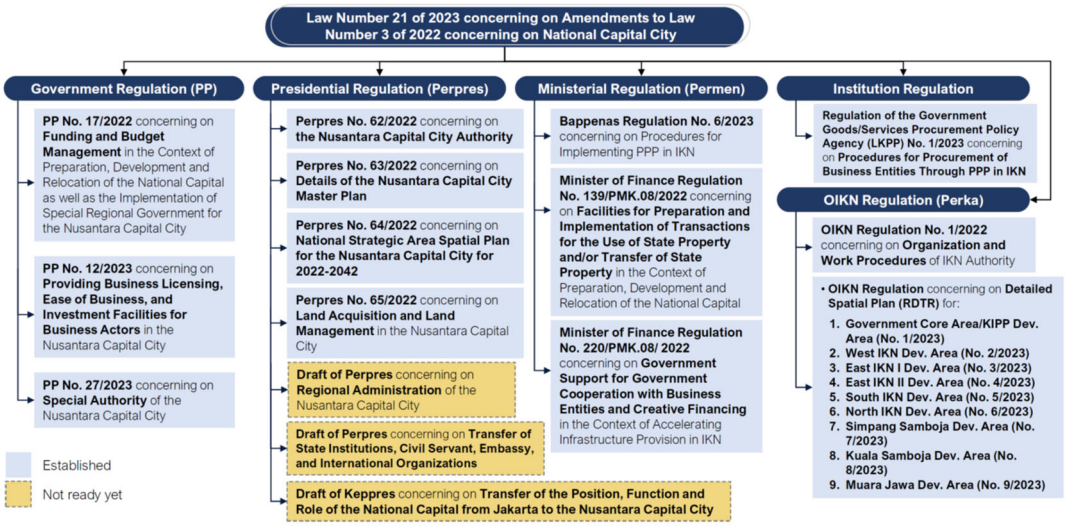
Table 2-1 Organization of related materials by region

Area	Indonesia	East Kalimantan Province	Balikpapan City	Samarinda City	IKN(Ibu Kota Negara)	Others
Classificaion	National	Province	Kota	Kota	IKN	Kutai Kartanegara, PPU
Long-term Dvevelopment Plan	National Long-term Development Plan (RPJPN) (2005-2025)	Regional Long-term Development Plan of Esat Kalimantan Prvnce 2008 (2005-2025)	Regional Long-term Development Plan of Balikpapan city 2013 (2005-2025)	Regional Long-term Development Plan of Samarinda city 2013 (2005-2025)		Regional Long-term Development Plan of Kutai Kartanegara Regency 2012 (2005-2025)
	National Long-term Development Plan (RPJPN) (2025-2045)	Draft of Regional Long-Term Development Plan of East Kalimantan Province 2024 (2025-2045)	Draft of Regional Long-Term Development Plan of Balikpapan city 2024 (2025-2045)	Draft of Regional Long-Term Development Plan of Samarinda city 2024 (2025-2045)		Regional Long-term Development Plan of PPU Regency 2010 (2005-2025)
Mid-term Development Plan	National Mid-term Development Plan (RPJMN) (2020-2024)	Med-Term Development Plan of East Kalimantan Province 2023 (2024-2026)	Regional Med-term Development Plan of Balikpapan city 2021 (2021-2026)	Regional Med-term Development Plan of Samarinda city 2015 (2022-2042)		Regional Mid-term Development Plan of Kutai Kartanegara Regency 2019 (2018-2023)
						Regional Mid-term Development Plan of Kutai Kartanegara Regency 2021 (2021-2026)
						Regional Med-term Development Plan of PPU Regency 2019 (2018-2023)
Spatial Plan	National Spatial Plan (RTRWN) (2017)	Regional Spacial Plan (RTRW) (2016-2036)	Regional Spacial Plan of Balikpapan city (RTRW) 2012 (2012-2032)	Regional Spacial Plan of Samarinda city (RTRW) 2014 (2014-2034)	Detailed Spatial Plan	Regional Spatial Plan of Kutai Kartanegara Regency 2014 (2012-2033)
		Regional Spacial Plan (RTRW) (2023-2042)		Draft Regional Spatial Plan of Samarinda City 2023 (2022-2042)		Regional Spatial Plan of Kutai Kartanegara Regency 2023 (2022-2041)
						Regional Spatial Plan of PPU Regency 2013 (2013-2033)
Others		East Kalimantan Province Regional Transportation Regulation 2012	Revision of Drainage Masterplan Balikpapan City of 2022	Samarinda Regional Disaster Management Plan 2021 (2022-2026)	Masterplan Final Report Preparation of a Master Plan and Strategy for the Development of the National Capital 2020 (BAPPENAS)	
		East Kalimantan Province Regional Energy Plan 2019		Masterplan for the Development and Arrangement of Prioritized Cities: Samarinda City 2024		
		Preparation of Regional Domestic Wastewater Treatment System Master Plan 2021			Planning for the National Capital City 2021 (PUPR)	
		Tourism Development Master Plan of East Kalimantan Province 2022 (2022-2037)			Integrated IKN Development Implementation Information Guidelines 2022 (OIKN)	
		East Kalimantan Economic Transformation Masterplan 2024			Blueprint of the Nusantara Smart City 2023 (OIKN)	

Source: Prepared by JICA Study Team

2.1 Review of policies and master plan related to the development of the New Capital City

Laws and regulations related to the development of the new capital are based on the Law of the Republic of Indonesia No.3/2022 Concerning the State Capital which took effect in 2022. They are sequentially enforced in the system shown in the figure below. Three presidential decrees are under consideration for the actual relocation of the capital.



Source: data provided by BAPPENAS, December 2024

Figure 2-1 System of various regulations for new capital city development

The documents and plans for the master plan of IKN are as follows.

Table 2-2 List of relevant plans at national level

Publisher	Year	Name of material	Summary
BAPPENAS	2020	Masterplan Final Report Preparation of a Master Plan and Strategy for the Development of the National Capital (National Capital Masterplan / MP IKN)	A regional planning level MP for KP-IKN and K-IKN, which presents the development vision and policies, results of studies and analyses based on natural conditions, and development plans for infrastructure development.
BAPPENAS	2020	Strategic Environmental Assessment (KHLS) for IKN Masterplan	A MP presenting land use and infrastructure plans for KIPP, including IKN's regional plans, studies and analyses based on natural conditions within KIPP, KIPP's urban design, design guidelines for urban development, landscape and architecture, and concept plans for each district within KIPP.
BAPPENAS	2024 **Ongoing**	East Kalimantan Economic Transformation Master Plan	East Kalimantan Province is the third location being considered, following Riau Islands and Bali, for the purpose of realizing Indonesia's Long-Term Development Vision 2045. As a driving force for economic transformation, the policy is to achieve economic transformation through the involvement of the entire society, to achieve a productive economy, to promote scientific and technological innovation, and to maintain natural resource endowments and environmental endowments. (The contents are discussed below in Chapter 7.)
OIKN	2022	Integrated IKN Development Implementation Information Guidelines 2022	Detailed spatial plan of IKN's central core area.
OIKN	2023	Blueprint of the Nusantara Smart City	A document covering the concept, framework, and potential implementation of technologies for the Nusantara Smart City.

Source: Prepared by the JICA Study team

2.1.1 Masterplan Final Report Preparation of a Master Plan and Strategy for the Development of the National Capital (National Capital Masterplan / MP IKN)

National Capital Masterplan/MP IKN is a master plan for the new capital of Indonesia published by BAPPENAS in 2020, covering the current status and development plans in various areas of the new capital, Nusantara. “2045 Indonesia Vision”, “Sustainable Development Goals”, “the vision of the President of Indonesia”, and “the National Middle-Term Development Plan” as policy directions, the new capital Nusantara is stated to bring a vision of a “world-class city for all” with development and services focused on people, place, and planet. It also states that the Key Performance Indicators (KPIs) to demonstrate IKN's progress and performance in the planning, development, implementation, and operational phases are organized into eight detailed KPIs: harmony with nature; unity in diversity; connected, active, and easy access; net zero emissions; circulation and resilience; safety and accessibility, convenience and efficiency through technology, and economic opportunity for all.

MP IKN focuses on the interactions between cities with master planning for a strong and resilient region and defines the concept of “city as a system” where it envisions to connect the various aspects of urban life. The plan consists of 13 elements: economic, social, land consolidation, environment, disaster risk assessment, mobility, energy, water, waste, ICT, defense and security, spatial management, and smart cities. The economic development strategy establishes the concept of an “IKN Economic Super Hub” whereby IKN is expected to become a super hub that will enhance economic activity and development in East Kalimantan and two other cities (Balikpapan City and Samarinda City). The economic strategy was visioned to be “locally integrated, globally connected, and universally inspired” which tries to construct connections within the Tri-City ecosystem within the East Kalimantan Province; IKN, Balikpapan City, and Samarinda City.

The direction of space utilization in IKN and the five development phases with a planning period of five years from 2020 to 2045 are discussed chronologically considering population growth and development planning accordingly for each phase.

2.1.2 Strategic Environmental Assessment (KHLS) for IKN Masterplan

Strategic Environmental Assessment (KLHS) for IKN Masterplan was developed by PUPR in 2021 based on BAPPENAS’s “Strategic Environmental Assessment for the 2020 New Capital City Masterplan (Kajian Lingkungan Hidup Strategis/KLHS)”. The purpose of this document is to study the impacts of the relocation of the capital on natural resources and the environment, and to make recommendations for improving policies, plans, and programs related to the relocation of the capital for sustainable and environmentally friendly development.

It summarizes the negative impacts of capital relocation on the environment and natural resources; recommendations for improvements in capital relocation to make development sustainable and eco-friendly; and recommendations for integration into the IKN master plan. It also summarizes the 6 substances of the KLHS (carrying and supporting environmental capacity for development; forecast on environmental impact and risks; ecosystem service performance; natural resource utilization efficiency; adaptation capacity and vulnerability to

climate change; and resiliency level and potential of biodiversity).

In addition, for the Capital Relocation Plan, 11 strategic and sustainable development issues are organized (water resource potential, energy supply to support IKN, potential disasters that should be anticipated in the IKN region, environmental management, impacts of mining sites, dynamics of social and culture, forest degradation and threat to biodiversity, food security, infrastructure, spatial utilization, and regional development).

Based on the above, the policies, plans, and programs of the IKN Master Plan are analyzed for potential environmental damage with respect to the 6 elements of the KLHS.

2.1.3 Integrated IKN Development Implementation Information Guidelines 2022

The Integrated IKN Development Implementation Information Guidelines 2022 are prescribed by the Circular Letter of Head of OIKN No.1/2022 as information guidelines for the preparation and implementation planning of integrated IKN development across ministries. These are referred to as One Map, One Plan, One Policy (1MPP) because it covers a summary of wholistic technical policies regarding IKN (one policy), packages it into an integrated planning of main plan, spatial plan, and regional plan (one planning), and is based on one base map (one map). The document consists of 3 books that provide information regarding preparation plan and development implementation of IKN: the Implementation Guidelines, the Investment Guidelines, and the Pocket Book.

2.1.4 Blueprint of the Nusantara Smart City

The Blueprint of the Nusantara Smart City is a document that provides an overall and general overview of the vision of Nusantara Smart City 2045, focusing on the aspects of an innovative, sustainable, and technology-based city. This document was developed by OIKN in 2023 and organizes the rationale and analysis of the relevant aspects of the planning and visioning of the Nusantara Smart City.

The development goal of Nusantara Smart City is stated to be the creation of an innovative, sustainable, technology-based city, and the concept is organized with KPIs and a description of the Smart City principles. The Nusantara Smart City Principles consist of four main principles: (1) optimum, (2) integrated, (3) inclusive and transparent, and (4) circular and sustainable, with 24 KPIs for progress on performance indicators. The report also summarizes innovative solutions and technologies that could be implemented in Nusantara Smart City.

2.2 Review of relevant national, state, and neighborhood policies and plans

In order to understand the development trends in IKN and East Kalimantan, related plans are organized in the country and surrounding areas (including Kutai Kartanegara Regency and PPU Regency, which cede part of their lands to IKN). The objective was not only to understand national policies and visions, but also to understand the position of IKN and East Kalimantan Province's development and to grasp the direction of East Kalimantan Province's development from a bird's eye view.

2.2.1 National Policy and Vision

The vision of the National Long-Term Development Plan 2025-2045 is “Golden Indonesia 2045: A Unified, Sovereign, Progressive, and Sustainable Republic of Indonesia” based on the eternal vision and mission to realize “an independent, unified, sovereign, just, and prosperous nation”.

To realize this vision, 8 missions and 17 development goals and directions have been established, including social, economic, governance, and other transformations, socio-cultural and ecological resilience, equal and even regional development, quality and environmentally friendly infrastructure, and sustainable development.

On the other hand, 14 development challenges are listed, including low productivity, weakness in the field of research, innovation, technology, and science, limited domestic integration, degraded quality of human resource, and inequality between Java Island and other islands. The report also highlights key aspects of Indonesia's basic capital as high population, rich natural resources, socio-cultural capital, and maritime power. However, it is also emphasized that the country faces challenges with respect to climate change and environmental resilience, such as rising overall temperatures and deceasing environmental (water, air, land, and sea) quality and capacity.

The vision of the National Middle-Term Development Plan 2020-2024 is “To realize advanced Indonesia that is sovereign, independent, and has personality based on mutual cooperation” with 7 development agendas, including strengthening economic resiliency for quality and just growth, regional development to reduce inequality and ensure equity.

The National Spatial Plan 2017 states that the plan will achieve 9 objectives including safe, comfortable, productive, and sustainable national spatial areas, as well as harmony between natural and built environment.

2.2.2 Kutai Kartanegara Regency Policy and Vision

The Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025 serves as a reference document for setting the vision, mission, and programs of the Regional Middle-Term Development Plan. Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026 has as its vision “realize a prosperous and joyous Kutai Kartanegara community”. To realize the vision, the plan describes five missions, including improving improvement of noble, superior, and cultured human resources development, strengthening the agricultural, tourism, and creative economic-based economic development; and improvement the quality of basic infrastructure service and inter-regional connectivity. Eight strategies and 16 targets have been set to achieve the mission.

As the current situation in Kutai Kartanegara Regency, the performance of the minimum service standards (covers education, health, public works, spatial management, public housing, settlement areas, safety, public protection, and social aspects) and the 17 goals of the SDGs was evaluated, and in the future, the integration of minimum service standards, SDGs, strategic plans, and action plans is considered important. In addition, 8 strategic issues have been identified that should be urgently addressed, including improved equalization of human resource quality, development of sustainable economy, and the construction of IKN.

The stated objective of the Kutai Kartanegara Regency Regional Spatial Plan 2022-2041 is to realize a reliable partner region of IKN and equitable development that is integrated throughout region, based on the flagship area by developing industrial sector, agriculture, fisheries, tourism, trade, and environmentally sound services.

2.2.3 PPU Regency Policy and Vision

The purpose of the PPU Regency Regional Long-Term Development Plan 2005-2025 is to ensure the integration and sustainability of Long-Term developments which consistent with the characteristics, vision, mission, and direction of the region.

Four strategic issues that should be urgently addressed include potential of the region (human and natural resources), sociocultural and quality of life, and natural resources (agricultural sector, fishing sector, mining and quarrying sector, industrial and trade sector, tourism sector, etc.).

The vision of development is “to realize Penajam Paser Utara Regency with good moral, independent, healthy, and prosperous based on the people’s economy.” The seven missions to achieve this include “to realize sustainable agriculture, plantation, livestock and fisheries to create jobs to support economic growth” and “to create an advanced and sustainable people's economy as an integral part of agribusiness and agro-industrial development.”

PPU Regency Regional Middle-Term Development Plan 2018-2023 lists the industrial potential of the PPU Regency in the mining, forestry, agriculture, and plantation sectors, and 8 locations, including the Bluminung Industrial Area, as economic strategic areas. The plan describes wide range of development issues by sector (e.g., inadequate transportation infrastructure, such as many unpaved sections of roads, and water and sewage infrastructure, including the use of water resources).

The vision of the middle-term development plan is “Realization of Advanced, Modern and Religious PPU”, and sets out 11 missions relating to economic growth, infrastructure development, and improvement of the living environment.

The objective of the PPU Province Regional Spatial Plan 2013-2033 is “to realize a regency as the center of agribusiness and agro-industry based on the people’s economy, as well as the development of mining potential by paying attention to sustainable development aspects”.

2.3 Sectoral Review of Plans for East Kalimantan Province, Balikpapan City, and Samarinda City

The following 8 sectors in the East Kalimantan Province, Balikpapan City, and Samarinda City plans were reviewed as well as their respective descriptions.

1. Connectivity (Transportation, ICT)
2. Climate Change Measures (Zero Emissions, Disaster Prevention)
3. Environmental Management, Waste Treatment, Waste Management
4. Industrial Development and Investment Promotion
5. Power & Energy
6. Urban Management
7. Living Environment

8. Diversity

2.3.1 East Kalimantan Province Review

An overview of each sector in East Kalimantan Province is provided below.

Table 2-3 Sectoral Review in East Kalimantan Province

Sector	East Kalimantan Province
Connectivity	• Regarding roads, the toll roads between Balikpapan Airport and IKN government base and between IKN's VIP airport and IKN government base are mentioned. On the other hand, the Samarinda-IKN link is not mentioned. • Regarding railroads, the section between Samarinda City - Balikpapan City - New Capital Development Area - PPU Regency - through Paser Regency to the border with South Kalimantan Province is considered to be the section of intercity railroad to be developed. For the area surrounding IKN, a route between Samarinda and Balikpapan City and from Sambodia to KIPP is also shown. • Regarding public transportation, the direction is to study an integrated urban public transportation system based on population projections. • Regarding ports, they are classified into important ports, hub ports, feeder ports, public terminals, special terminals, and fishing ports, and are organized into the relevant facilities. It is indicated that priority will be given to the development of ports that support the formation of an economic base for the three cities of IKN, Balikpapan City, and Samarinda City, including Semayang Port and Samarinda Port. • Regarding airports, plans are under consideration to expand the base airports, Sepinggan Airport and APT Pranoto Airport. In addition, the VVIP airport associated with the IKN development is being considered for use by general passenger plane in the future.
Climate Change Measures (Zero Emissions, Disaster Prevention)	• In Balikpapan City, Samarinda City, and Bontang City, management related to flood disasters is a priority, and long-term strategies to reduce disaster risk and damage include “efforts to improve soil infiltration capacity. • The main source of greenhouse gas emissions in East Kalimantan Province is the burning of coal and other fuels for power generation and logging for plantations. Actions to mitigate these emissions include “improving the efficiency of energy use. Long-term strategies for forest management that include “controlling land use change and preserving forest areas that need to be protected” are also stated.
Environmental Management, Waste Treatment, Waste Management	• Through the exploitation of potential natural resources (deforestation, illegal mining, unregulated fishing), environmental destruction and pollution are increasing in both urban and rural areas. In addition, the quality of forests has been greatly degraded due to overexploitation of forests. It is feared that environmental degradation will accelerate in the future as population growth and economic development increase the demand for new land and the exploitation of natural resources. • To quantify the state of environmental pollution, Indonesia's own index of environmental quality (IKLH) has been adopted. The urban areas of Balikpapan City, Bontang City, and Samarinda City are rated low. In particular, Samarinda City shows the lowest ratings for all indicators, and makes environmental protection a major issue. In addition, environmental degradation is a relatively serious problem in the PPU Regency and Kutai Kartanegara Regency, which directly in contact with IKN, especially in terms of water quality, land quality, and seawater quality. Considering the future development of IKN and the resulting population growth and industrial development in the various regions, further improvement efforts are considered necessary. • Waste and hazardous waste management itself is recognized as an important urban problem to be addressed, and waste management is one of the causes of other urban problems, such as urban slum areas and urban flooding. Waste management issues are addressed in “Social, Cultural, and Ecological Resilience,” which includes a 100% waste management and recycling goal and reforms to integrated waste management.

Sector	East Kalimantan Province
Industrial Development and Investment Promotion	• The issues and challenges related to sectoral industrial development and the balance of industrial development among regions are summarized, as well as the goals and plans for industrial development. • Regarding the impact of the New Capital City development on industrial development, the division of roles and policies with IKN's 6 economic clusters (Renewable and Renewable Energy Manufacturing, Integrated Pharmaceuticals, Sustainable Agriculture, Eco-Medical Tourism, Advanced Chemistry, and Low Carbon Energy sectors) are largely aligned. In order "to realize advanced, equitable, and sustainable development toward a thriving East Kalimantan community," the priorities are set that economic transformation is to be achieved through a strong and sustainable local economy.
Power & Energy	• As of 2021, the electrification rate in East Kalimantan Province is 91.98%. The challenge is that not all communities have access to electricity infrastructure, because some of the electrified areas have only solar-generated electricity and do not have 24-hour access. The electricity demand in East Kalimantan Province is mainly met by power plants in East Kalimantan Province and South Kalimantan Province. • The energy policy is defined as "The energy transition is a pathway to transform the global energy sector from a fossil fuel-based to a zero-carbon one". It also targets a ratio of new and renewable energies in the energy mix to be at least 23% by 2025 and 31% by 2050. • The development of solar-based energy is recognized as excellent, and the potential for power generation from renewable energy sources such as hydropower, wind, bioenergy, geothermal, ocean wave power, and mining sites is enormous. However, the problem is the lack of appropriate infrastructure support, such as high introduction costs and inadequate functioning of the subsidy system. • The policy of the IKN development is to increase the electrification rate by improving the power distribution network and utilizing renewable energy sources, and to increase power generation facilities using renewable energy sources. The policy for IKN development cooperation is to build the necessary power plants and smart grids throughout Kalimantan and to construct hydrogen gas production plants outside the IKN area.
Urban Management	• Regarding development issues, the issues such as inadequate basic services in secondary education, special needs education, etc. and unequal distribution of basic infrastructure services have been pointed out based on the evaluation of the achievement level of the regional middle-term development plans and other factors. • The goals of the program are to achieve competitive human resources, quality economic growth, environmental quality, and bureaucratic reform.
Living Environment	• Regarding housing, urban areas cited challenges such as slums, limited urban facilities and infrastructure, and uninhabitable housing. And rural areas are challenged by relatively slow development, especially in inland areas, border areas, and islands. • Regarding water supply, the situation is that the national target has not been reached. The challenge to achieve the target is to ensure the quantity and reliability of raw water sources, and as an effort to equalize access to potentially available raw water sources. It is also necessary to establish a cross-municipal and regional drinking water supply system (SPAM), which is to be achieved through cooperation among the government, state, and local governments. In addition, aging water supply facilities have become a problem, and facility renewal is also required. • Although there is a plan for water demand forecasting, the impact of IKN and other factors are not properly reflected in terms of population growth and proper allocation of raw water. • Regarding sewage, the sewage pipe network is small and includes septic tanks, etc., and inappropriate treatment such as open defecation remains. • Regarding drainage, the accumulation of garbage in drainage channels has obstructed the passage of water and caused flooding and other damage.
Diversity	• The diversity aspect is reflected in the mission to be "sovereign in the development of a morally upright and competitive workforce, especially women, youth, and persons with disabilities." • The goals and development directions are based on the mission of social transformation to achieve a superior and prosperous society and socio-cultural and ecological resilience based on local wisdom.

Source: Prepared by the JICA Study team

2.3.2 Balikpapan City Review

An overview of each sector in Balikpapan City is provided below.

Table 2-4 Sectoral Review in Balikpapan City

Sector	Balikpapan City
Connectivity	• Regarding roads, there is a problem of land expropriation within the Balikpapan urban area. • Regarding railroads, as of 2022, three routes around IKN by MOT are under consideration: 1) Semayang Station - Karangjoang Station (within Balikpapan city center), 2) Karangjoang Station - KIPP (northern route via Samboja Station), and 3) KIPP - Karangjoang Station (The KIPP-Sepinggan Airport section is scheduled to be in service in 2030. • Regarding the ports, the current status of Balikpapan City and its surrounding ports, future demand forecasts by port terminal, and development plans are described. In particular, phased expansion and improvement plans (e.g. expansion and improvement of wharves, warehouses and container yards) have been presented for Semayang and Kaltim Kariangau ports until 2039. • Regarding public transportation, the number of public transportation users is declining, and the low ridership of public transportation is cited as an issue. Other issues include the lack of a clear timetable and other factors that make it less convenient, the setting of appropriate fares, and the expansion of operations to newly developed areas. It is proposed that an integrated urban transit system, including a mass transit system, be developed. • Regarding airports, Sepinggan Airport in Balikpapan City is the largest airport and base airport in East Kalimantan Province. MOT is considering expansion plans for Sepinggan Airport, including runway expansion and increased facility capacity.
Climate Change Measures (Zero Emissions, Disaster Prevention)	• Balikpapan City is considered a disaster-prone area, with a particularly high risk of fires, floods, landslides, and droughts. In particular, regarding flooding, the hazard is expected to worsen in the future due to the decrease in green areas caused by unregulated development and the reduction in drainage capacity caused by heavy rainfall. • The mission to reduce disaster risk and damage includes developing flood control infrastructure in the Mahakam River watershed, promoting drainage system development in East Balikpapan, and improving drainage capacity throughout Balikpapan City. • Long-term strategies to reduce greenhouse gas emissions include the promotion of the use of solar and wind power as environmentally friendly renewable energy resources in government agencies and other organizations.
Environmental Management, Waste Treatment, Waste Management	• Issues related to aspects of environmental management and waste management include sustainable and inclusive economic development, environmental management and disaster resilience, integrated infrastructure and urban utilities management, and smart, livable cities. • Adequate environmental management and disaster resilience are the main focal points in the direction of achieving the Sustainable Development Goals. • The problem of urban waste dumping has the potential to increase damage from disasters such as typhoons and torrential rains, which are expected to become more frequent and severe due to climate change in the future, so it is important to address this issue. • One of the problems in waste management is the lack of public awareness and interest in waste segregation and management. It has been noted that waste segregation and disposal at the source has not produced the expected results, and management of the estimated 8,000 tons of waste remains inadequate, especially in coastal and riverine communities.
Industrial Development and Investment Promotion	• The region is positioned as a hub for oil and gas refineries and has a MICE function. In 2021, the processing industry, including the oil refining industry, accounted for 56.7% of GRDP production by sector, followed by construction at 12.9%, logistics at 6.7%, information at 3.9%, and finance at 3.2%. • As a partner of IKN, Balikpapan City will promote the strengthening of the role of the New Capital City's super hub as the center of economic activities in the three cities as an “industrial and service hub”. Balikpapan City will serve as the center of future economic clustering and new economic development in eastern Indonesia, including East Kalimantan Province. • It aims to be a service, commercial, and industrial city with respect to industry. Local development goals call for growing land, sea, and air transportation infrastructure in various modes to develop manufacturing, commerce, services, tourism, education, and local culture. • For IKN, the policy and industrial development collaboration with IKN is based on the migration of state employees, officials, and family members by the PUPR from 2021 to 2024.
Power & Energy	• As issues related to electric power and energy, it is stated that the use of renewable energy sources such as wind, solar, and biogas is not being promoted, and that the country continues to be heavily dependent on non-renewable natural resources such as oil and natural gas. However, there is no description of action plans, etc.

Sector	Balikpapan City
Urban Management	• The existing plan of Balikpapan City is consistent with the contents of the East Kalimantan Province Regional Middle-Term Development Plan and East Kalimantan Province Regional Spatial Plan. From the current foundation of consistency with the national and provincial plans, further study of practical solutions to the city's unique and pressing issues is expected to be conducted in the future.
Living Environment	• Regarding housing, since there is a marked concentration of housing in urban areas, efforts to systematically improve housing through the construction of public employee housing and other allocations continue to be implemented. Regarding slums, measures are being taken through the placement and relocation of rental apartments, and efforts to improve urban infrastructure are continuing. • Regarding water supply, there are issues such as high dependence on groundwater due to shortage of raw water and high-water loss due to aging piping, and optimization of raw water source (Sepaku Semoi dam, etc.) with IKN is also under study. • Regarding sewage, there is little pipe network, and independent treatment is conducted, including septic tanks. Regarding drainage, drainage channels are being constructed to deal with flooding, and the accumulation of garbage and sediment.
Diversity	• The development of a competitive and prosperous human resource, religious harmony, and cultural enrichment, and an inclusive and gender-equal society with quality families are the goals of the long-term development plan.

Source: Prepared by the JICA Study team

2.3.3 Samarinda City Review

An overview of each sector in Samarinda City is provided below.

Table 2-5 Sectoral Review in Samarinda City

Sector	Samarinda City
Connectivity	• Regarding roads, the development and improvement projects of ring roads that surround urban areas has been focused. • Regarding railroads, a trans-Kalimantan railroad route is proposed from the border with Kutai Kartanegara Regency via APT Pranoto Airport, around the city center north of the Mahakam River from north to west, across the Mahakam River, through the Palaran District to the south. Samarinda City is conducting the feasibility study of constructing an elevated Skytrain from APT Pranoto Airport to the city center in order to mitigate traffic congestion and avoid flood damage. • Regarding the port, the MOT is considering a plan to expand and improve the port in the Palaran area as a multifunctional terminal, enhancing passenger vessel functions in addition to cargo and container functions. MOT is also considering updating the Samarinda Port Master Plan. The draft Samarinda City Regional Long-Ter, Development Plan (2025-2045) indicates a policy to promote the development of the Port of Samarinda as a major port that supports the formation of an economic hub for the three cities. • Regarding public transportation, the policy is to promote the development of an integrated urban transportation system that includes mass transit. • Regarding airports, APT Pranoto Airport is one of the hub airports in East Kalimantan Province that opened in 2018, and the plan is to promote its expansion and development in order to strengthen inter-regional connectivity.
Climate Change Measures (Zero Emissions, Disaster Prevention)	• Disasters such as floods, landslides, and droughts occur frequently, and the hazard indexes for floods and extreme weather events are particularly high. However, the city tends to be less prone to disasters than Balikpapan City and other cities in the region. The causes of flooding in Samarinda City include reduced water retention capacity due to prolonged rainfall and soil erosion, and reduced channel flow capacity due to illegal dumping of waste materials. • In Samarinda City, greenhouse gas emissions from the energy, transportation, and agriculture sectors are considered dominant. Strategies to reduce greenhouse gas emissions include the development of renewable energy sources, such as solar power, hydroelectric power, and bioenergy.

Sector	Samarinda City
Environmental Management, Waste Treatment, Waste Management	• Regarding water quality, there is a significant deterioration of water quality in all rivers. In terms of river pollution sources, the largest source of pollution in the Mahakam River in Samarinda City is household waste (55%), followed by fishing activities (16%), livestock (13%), and industry (9%). Waste is also a cause of clogging of waterways due to dumping into waterways and rivers, and also contributes to the spread of damage caused by flooding. • The increase in waste is attributed to Samarinda City's growing population and presumably the waste is not being properly disposed of (incinerated or disposed of into the environment). There are waste disposal facilities and 5 landfills under the jurisdiction of the city, which are listed as Bukit Pinang Landfill, Palaran Landfill, Sambutan Landfill, Samarinda Utara Subdivision Landfill, and Loa Janan Ilirm Subdivision Landfill. The sanitary landfill method is used only three: Sambutan Landfill, Samarinda Utara Sub-district Landfill, and Loa Janan Ilirm Sub-District Landfill.
Industrial Development and Investment Promotion	• Samarinda City's reliance on mining is beginning to shift to construction and commerce, further strengthening its character as a service and commercial city. It is also believed that it is time to recognize the potential of the tourism sector to provide very high added value and to slowly switch the region's dependence on non-renewable fossil fuels to sustainable tourism. • It is concerned that the share of manufacturing in Samarinda City has continued to decline in recent years. It attributes this decline to declining demand for several commodities that used to be core industries (metals, machinery, engineering, and electronics industries and forestry resources). Future challenges include identifying and producing superior products in the manufacturing sector that are in high demand in the community. • Development priorities are identified as infrastructure development, access to and quality of education, access to quality of health services, economic empowerment of local communities, and good governance, while industrial development is targeted with an emphasis on local communities. • It is clearly positioned as a partner of IKN and envisages cooperation with IKN in terms of economy, industry, logistics, employment, environmental protection, tourism, energy, agriculture and food and natural resource management. Administrative functions are also planned to be relocated to areas closer to IKN, and more than 70,000 hectares of residential, commercial, industrial, and other sites are envisioned as sites for complementary functions of the New Capital City.
Power & Energy	• Strategic issues include improving the resilience of infrastructure in the event of disasters and the sustainable supply of electrical energy in cities. It also states that the goal is to transform the current mining, oil, and gas sectors in order to achieve a low-carbon and sustainable energy sector. However, no specific action plans for this were mentioned.
Urban Management	• 15 development issues have been identified, including rapid population growth due to IKN development (Samarinda City as an IKN buffer city). • The mission includes the creation of a religious, superior, and culturally rich urban society. • The plan is consistent with the East Kalimantan Province Regional Middle-Term Development Plan and East Kalimantan Province Spatial Plan. From the current foundation of consistency with the national and provincial plans, further study of practical solutions to the city's specific and pressing issues is expected in the future.
Living Environment	• Regarding housing, slum areas are generally caused by increased trade and service activities around the riverbanks, resulting in a variety of problems that make life unpleasant, including health problems, fire hazards, and land issues. Slum improvement programs continue to be promoted through both the city of Samarinda City, the state government, and the central government. The implemented slum management programs are still being maintained, as the measures have shown significant results. • Regarding water supply, the development directions include “sustainable use of water resources” and “urban drainage system development” and “provision of clean water to households. According to Samarinda City, the water supply from the Mahakam River is adequate, but water pollution is an issue. • Regarding sewage, there is no pipe network in place, and the treatment includes septic tanks. Regarding drainage, as in Balikpapan City and other areas, there are many cases of flooding, and it is necessary to develop a community-based flood early warning system (EWS) integrated with disaster resilience and climate programs, and to raise public awareness so that people do not dump garbage directly into the river.
Diversity	• The diversity aspect is highlighted in the mission “Social Transformation to Create a Competitive Human Resource”.

Source: Prepared by the JICA Study team

CHAPTER3 Collecting and Analyzing Information on Legal Framework and Finances of Relevant Ministries and Agencies in the Study Area

3.1 Laws on Capital Relocation and Existing Laws Related to the New Capital's Surrounding Area

3.1.1 Review of Related Laws

The laws related to capital relocation and existing legal framework related to surrounding area of the New Capital City were reviewed. The followings show the outline of related laws and regulations.

Table 3-1 List of relevant legal systems of IKN

No.	Related laws and Regulations	Year	summary
1	Law No. 3/2022 concerning National Capital City	2022	Law regulating the formation of the capital of Nusantara, the specialization, location, and scope of the region, as well as the master plan.
2	Law No. 21/2023 concerning amendment to Law No. 3/2022 /	2023	This law stipulates the amendment of several provisions and/or explanations in Law No.3/2022 concerning the State Capital. The amendments regulated in this law include the expansion of land and sea areas, the authority of OIKN, spatial planning of IKN, funding, and budget management.
3	Government Regulation No. 12/ 2023 concerning Business Licenses, Ease of Doing Business, and Investment Facilities for Business Actors in the National Capital City	2023	Government regulation aims to provide certainty and opportunity to business actors for accelerating the development of IKN.
4	Government Regulation No. 17/2022 concerning Funding and Budget Management in the Framework of Preparation, Development and Relocation of the National Capital and the administration of the special regional government of the capital of Nusantara	2022	Government regulation describing the sources of funding and financial plans for the preparation, development, relocation, and the operation of IKN.
5	Presidential Regulation No. 31/2023 on the Acceleration of the Development and Operation of a Very Very Important Person Airport to Support the Capital City of Nusantara	2023	Regulations describing the development of aviation infrastructure and the acceleration of the construction and operation of VVIP Airport to support the connectivity of IKN.
6	Presidential Regulation No. 62/2022 concerning Nusantara Capital Authority	2022	Presidential Regulation stipulating the establishment of OIKN which is a ministry-level agency responsible for the preparation, development, and relocation of the capital.
7	Presidential Regulation No. 63/2022 concerning the details of the master plan of the Capital City of Nusantara	2022	Presidential Regulation that would be guidelines for all stakeholders in establishing policies to support the preparation, development, and relocation of the capital, preparing work plans, financing plans, and management of IKN.
8	Presidential Regulation No. 64/ 2022 concerning the national strategic plan for the capital of Nusantara for 2022-2042	2022	Presidential Regulation related to spatial planning for IKN Strategic Areas.
9	Presidential Regulation No. 65/2022 concerning land acquisition and land management in the Capital City of Nusantara	2022	Presidential Regulation describing methods of land acquisition and management of lands in IKN.
10	Regulation of the Head of the Nusantara Capital Authority No. 12/2023 concerning Procedures for Land Administration in the Nusantara Capital	2023	This regulation is designed to govern land administration in IKN, encompassing land acquisition, transfer of land rights, and land management including the associated sanctions.
11	Law No. 17/2007 concerning National Long-Term Development Plan 2005-2025	2007	The law stipulates National Long-Term Development Plan 2005-2025 that would be guidelines to realize national ideals and goals.

No.	Related laws and Regulations	Year	summary
12	Government Regulation No. 13/2017 concerning Amendments to Government Regulation No. 13/2008 concerning National Spatial Plan	2017	This regulation stipulates the National Spatial Plan, which contains policy directions and strategies for spatial development at the national level. It includes spatial planning and structural planning, determination of national strategic areas, guidelines for the use of space, and development strategies.
13	Presidential Regulation No. 18/2020 concerning the National Medium-Term Development Plan 2020-2024	2020	This Presidential Regulation stipulates the National Medium-Term Development Plan (RPJMN) for the five-year period 2020-2024. It includes a national development strategy, general policies, strategic priority projects, inter-ministerial and inter-agency programs, regional development directions, and development priorities, as well as a macroeconomic framework that includes financial policy directions, including the regulatory framework and financing framework.
14	Presidential Regulation No. 3/2012 concerning Kalimantan Island Spatial Plan	2012	Presidential regulation related to the Kalimantan Island Spatial Plan which serves as an operational tool for RTRWN as well as a tool for coordinating and synchronizing development programs in Kalimantan Island. It includes spatial planning objectives, policies, strategies, spatial structure plans, spatial land use plans, spatial use strategies and directions, development management guidelines, coordination and supervision, and community participation for the development of the entire island of Kalimantan.
15	Regional Regulation of East Kalimantan Province No.1/2023 concerning East Kalimantan Province Regional Spatial Plan 2023-2042	2023	This regulation stipulates East Kalimantan Province Regional Spatial Plan. It includes objectives of the plan, policies, provincial spatial planning strategy, spatial structure plan, spatial pattern plan, strategic area, spatial use strategy, and development management guidelines.
16	Regional Regulation of East Kalimantan Province No. 15/2008 concerning East Kalimantan Province Regional Long-Term Development Plan 2005-2025	2008	Provincial regulation that stipulates East Kalimantan Province Regional Long-Term Development Plan 2005-2025. It outlines the province's vision, mission, and strategic development directions for the next 20 years. It will serve as a foundational guideline for the formulation of East Kalimantan Regional Medium-Term Development Plan, which operates on a five-year planning cycle.
17	Regional Regulation of East Kalimantan Province No. 8/2021 concerning the Amendments to Regional Regulation of East Kalimantan Province No. 2/2019 concerning the East Kalimantan Province Regional Medium-Term Development Plan 2019-2023	2021	As for East Kalimantan Province Regional Medium-Term Development Plan 2019-2023, this regulation stipulates amendment of the plan because of changes of policies and economic priorities due to COVID 19.
18	Presidential Regulation No. 25/2024 concerning the Task Force for Accelerating Investment in the Nusantara Capital City	2024	This Presidential Regulation establishes the Task Force for accelerating investment in the Nusantara Capital City. The Task Force is established to speed up the preparation, construction, relocation, and development of Nusantara as both the center of governance and a hub for Indonesia-centric economic growth. It is designed to meet the needs of business actors by simplifying the process for obtaining business licenses, facilitating ease of doing business, and offering investment facilities that span various sectors and authorities.
19	Government Regulation No. 29/2024 concerning Amendments to Government Regulation No. 12/2023 concerning the Granting of Business Licenses, Ease of Government Regulation No. 29/2024 concerning Amendments to Government Regulation No. 12/2023 concerning the Granting of Business Licenses, Ease of Doing Business, and Investment Facilities	2024	This Regulation introduces several changes on Government Regulation No.12/2023. The main points of changes include special regional taxes and levies in the capital, procedures for establishing business environment, expanding regulations on the foreign labor, providing incentives for businesses that satisfy conditions, and setting criteria for land use in terms of evaluation, rights, obligations, prohibitions, and transition within IKN.

No.	Related laws and Regulations	Year	summary
	for Business Actors in the Nusantara Capital City		

Source: Prepared by JICA Study Team

3.1.2 Analysis of Challenges on Regulations related Capital Relocation and Surrounding Areas

Consistency and issues between the Capital Relocation Law and related laws and regulations in the surrounding areas are summarized from the perspectives of regional development policies, regional development plans and regional spatial plans, and land acquisition and land management.

As for the analysis of issues related to the development policy of the region, there are some areas where the development policy of the surrounding area in the legal system regarding the relocation of the capital city is not consistent and aligned with the development policy of the surrounding municipality. It is considered a challenge to coordinate planning, development policies, and efforts while ensuring consistency among OIKN and related local administrative agencies, etc. The OIKN and the local governments should coordinate their planning, development policies, and efforts.

In analyzing issues related to regional development plans and regional spatial plans, it was observed that existing development plans do not adequately reflect the contents of the New Capital City Development Plan, and they are not consistent in some respects.

In analyzing issues related to land acquisition and land management, it is important to consider the laws and regulations related to land acquisition and land management within the New Capital Region, in conjunction with OIKN's role as a local government. In addition, land acquisition should still consider the land rights of communities and indigenous peoples.

3.2 Review of Data on Environmental and Social Considerations

Based on IKN Strategic Environmental Assessment document (Kajian Lingkungan Hidup Strategis/KLHS), the environmental and social challenges that can be identified are as follows.

3.2.1 Issues of Forest Degradation and Threats to Biodiversity

The tropical forests of Kalimantan contain several types of ecosystems, with the lowland rainforests being the richest in terms of plant species diversity.

The development of Samarinda City and Balikpapan City, coupled with the numerous mining concessions in the area since the early 2000s and the opening of access to the forest area, has put the area under increasing pressure due to population occupation. The main threats to the various types of lowland rainforest ecosystems within the IKN boundaries include forest fires, illegal logging, land occupation by both communities and companies for small-scale agriculture and palm oil plantations, and mining concessions.

The diversity of ecosystems in and around the IKN region is challenged by the fact that the distribution of plants, wildlife, and other species are scattered but not interconnected. Ideally, areas of high biodiversity value should be interconnected to ensure the sustainability of both plant and wildlife genetic resources, and this connectivity can maintain ecological interactions, increase the potential for ecosystem services, and establish high quality natural resource management.

3.2.2 Vulnerable Groups and Social Inclusion Issues

East Kalimantan Province is home to a variety of vulnerable groups that face unique social, economic, and environmental challenges. One of the main challenges related to vulnerable groups and social inclusion issues is the improvement of the Gender Development Index and the Gender Empowerment Index.

To address these challenges, the East Kalimantan Provincial Government has shown a strong commitment to improve women's empowerment through community-based programs. One notable initiative targets Female Heads of Households, aiming to enhance their role in the economy and increase their financial independence. Empowering women in entrepreneurship not only improves their family's well-being but also contributes to broader community development and regional economic growth. The program emphasized equal access to business opportunities and resources to drive significant change. This approach does not only contribute to women's economic advancement but also fosters positive shifts in social dynamics, enhances family well-being, and promotes gender equality and sustainable economic development.

3.2.3 Social and Cultural Dynamics Matter

The majority of the indigenous/native communities in the IKN region are the Kutai, Paser, and generally the Dayak. The Paser, in particular, reside mainly in the western part of IKN or around the core region, especially in the PPU Regency, and practice slash-and-burn agriculture. However, cultural assimilation from the migrant communities transformed their agricultural practices into more sedentary patterns.

One of the issues related to social and cultural dynamics is the aspect of land ownership. Officially registered and have strong legitimacy are primarily those with land certificates. The other two categories of land ownership may have legitimacy within their respective jurisdictions. However, they are not comprehensively and systematically documented in a fully integrated database.

Based on the percentage of land ownership in the IKN region derived from the IP4T (Inventory of Land Ownership, Tenure, Use, and Utilization) data as cited in the KLHS IKN document, it can be seen that only 31% of the land is owned by individuals or communities with land certificates. On the other hand, 66% of land parcels are managed or used by individuals or communities without documented ownership. The remaining approximately 3% is either owned or unowned or unused by legal entities or governments.

3.2.4 Mining Hole Management Issues

The following are strategic issues that cut across sectors and stakeholders.

1. There are many mining holes abandoned by those responsible, leading to environmental destruction such as abandoned land, irregular landscape conditions, loss of biodiversity and soil fertility.
2. dentification of active and inactive mining holes has not been completed.
3. Acidic groundwater treatment of former mining sites and dealing with the associated hazards.
4. The need to establish reclamation targets in line with the zoning of the IKN area.
5. Mining pits threaten the safety of the surrounding community.
6. The former mining site could be used for water storage, aquaculture, water

recreation/tourism, water sports, floating agriculture, and flood control.

7. Efforts have been made by mining companies to use former mine sites as part of preparations for mine closure and to provide benefits to the communities surrounding the mines.

CHAPTER4 Impact and Rippled Effects on Surrounding Areas by New Capital City Development and Confirmation of Consistencies in Current Development Plans

4.1 Impact and Rippled Effects on Surrounding Areas by New Capital City Development

The relocation of the capital and the development of the new capital are expected to have various impacts on the surrounding areas, and it is important to consider how to develop the wider region, including the cities surrounding the new capital, based on these impacts. This section presents the results of a review of the impacts and spillover effects of the implementation of the new capital project on the cities of East Kalimantan Province, Balikpapan City, and Samarinda City, based on relevant existing plans, surveys, and data.

Table 4-1 Summary of Impacts and Rippled Effects Expected from the Implementation of the New Metropolis Project

Sector	Summary of Impacts and Rippled Effects Expected from the Implementation of the New Capital Project
Connectivity	➢Increased traffic volume, modal shift to railway, and other factors are expected, as well as increased demand for regional public transportation and other services. ➢Increased demand for construction materials, logistics, and other services is expected to lead to an increase in ports, airports, and heavy vehicle traffic.
Climate Change Measures (Zero Emissions, Disaster Prevention)	➢The frequency and trends of river flooding and stormwater drainage risks expected to change with new development. ➢Net Zero Carbon Emission and 100% renewable energy use policies are expected to spread to surrounding cities.
Environmental Management, Waste Treatment, Waste Management	➢Increased waste generation in response to rapid population growth in each city and declining useful life of solid waste management infrastructure are expected. ➢It is envisioned that the introduction of intermediate treatment facilities in the New Capital City will be shared with neighboring cities.
Industrial Development and Investment Promotion	➢The relocation of capital city functions is expected to create various industrial needs related to government agencies, secure high-level human resources to support industries, and increase demand for lifestyle-related industries. ➢At the beginning of the planning process, there will be a need to supplement urban functions in the surrounding cities.
Power & Energy	➢It is expected that the power generation projects planned in the vicinity of the New Capital will promote the use of renewable energy, reduce GHG emissions, and contribute to achieving the target ratio of electricity generated from renewable energy sources.
Urban Management	➢Comprehensive urban management improvements and implementation of challenges to cope with population growth and increased economic activity are required. ➢In order to ensure the competitiveness of local human resources in administrative and economic activities in the New Capital, there is a need to raise the level of educational access and standards, and to expand higher education institutions that foster expertise in appropriate fields.
Living Environment	➢Basic infrastructure (water supply, drainage, sewage, etc.) to accommodate New Capital City Development and population growth is expected to be inadequate.
Diversity	➢Population mobility is expected to increase, social, economic, and cultural conditions will change, and differences in perceptions and other factors that tend to lead to social (public) conflict will increase.

Source: Prepared by JICA Study Team

4.2 Confirmation of Consistencies in New Capital City Development Plan and Current Development Plans for the Surrounding Areas

Consistency in the current plan was confirmed by sector.

Table 4-2 Confirmation of consistency in the current plan

Sector	Summary of consistency checks in the current plan
Connectivity	➢ In Samarinda City and Balikpapan City, road traffic and logistics demand and public transportation plans do not fully reflect the impact and coordination of IKN development.
Climate Change Measures (Zero Emissions, Disaster Prevention)	➢ It is necessary to optimize river flood control and stormwater drainage measures that reflect the topographical and land use conditions of the watershed considering new development in IKN. ➢ The collection and provision of information in integrated information control centers needs to be harmonized with surrounding cities.
Environmental Management, Waste Treatment, Waste Management	➢ Because differences have emerged not only in Samarinda City and Balikpapan City, but also in Kutai Kartanegara Regency and PPU Regency regarding the analysis and target setting by a unified indicator, it is necessary to compare and contrast each region side by side. ➢ Regarding waste, there is concern that the impact of IKN is not fully reflected in the respective plans due to the characteristics of each local governments having responsibility for disposal.
Industrial Development and Investment Promotion	➢ Regional Long-Term Development Plan (Draft 2024) for East Kalimantan Province, Balikpapan City and Samarinda City also provides direction in line with IKN's industrial development intentions but does not provide specific measures.
Power & Energy	➢ In the existing power transmission system, North Kalimantan Province and East Kalimantan Province are not interconnected, and the power generated by Kayan Hydroelectric Project cannot be consumed in East Kalimantan Province, including the New Capital City. ➢ The plan has not been developed based on the latest population projections and needs to reflect this.
Urban Management	➢ Since up-to-date population projections are not shared among the cities, the base conditions for urban management are not shared.
Living Environment	➢ Infrastructure plans have not been presented to address the latest population projections. ➢ No unified plan has been presented for water supply and other issues that affect different regions.
Diversity	➢ While there are no inconsistencies between national and regional policies, development outcomes in each state/region and the implementation of these policies/regulations are not all optimally implemented in each region.

Source: Prepared by JICA Study Team

CHAPTER5 Trends in Government Agencies, International Organizations, and Private Companies in Each Country

5.1 Trends in Government Agencies and International Organizations

The following is a summary of major activities of local and international organizations/donors after 2022.

Table 5-1 Summary of major activities of the Government Agencies of Each Country and International Organizations

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
Japan	2023/05/20 Prime Minister Fumio Kishida held a summit meeting with H.E. Joko Widodo, the President of the Republic of Indonesia, who was visiting Japan to attend the G7 Hiroshima Summit [General Cooperation]	General cooperation	○
	2023/05/22 Signing of Memorandum of Understanding to Promote Development of New Capital City (JBIC) [Investment Promotion].	Business Opportunity Creation, Business Promotion	△
	2023/05/21 OIKN signed on the Memorandum of Cooperation (JICA) [General Cooperation]	Urban Development	△
	2023/12/16 Prime Minister Fumio Kishida held a summit meeting with President Joko Widodo, who was visiting Japan to attend the Special Summit on the 50th Anniversary of Japan-ASEAN Friendship and Cooperation. The two countries confirmed cooperation in the areas of strengthening transport and transportation connectivity, maritime and remote islands development, development of new capital “Nusantara”, support for legal system development, information and communication, agriculture, science and technology, health, strengthening economic partnership, Indonesia's accession to the OECD, support for start-up companies, KADIN, energy transition, environment, waste management, disaster prevention, security and defense, terrorism, international crime control, enhancement of human resource development, youth exchange, sports exchange, tourism, and networking for the next generation [General Cooperation].	General Cooperation	○
China	2023/09/08 Investment Support for Strengthening Economic and Political Relations [Investment Promotion]. 2023/09/11 Minister of PUPR requested investment from China in water resources projects at the Water Resources Conference in Beijing [Investment Promotion].	E-commerce, enterprise support, industrial cooperation, agriculture, fisheries, science and technology	△
	2023/10/17 President Joko Widodo asked Prime Minister Li Qiang to help accelerate the realization of investment from China to IKN. [Investment Promotion]. President Joko Widodo expressed his expectations for IKN development funding at the One Belt, One Road Initiative (BRI) high-level meeting in Beijing, China; in addition to the development of IKN, he expects China to help with energy transformation and industrial downstream.	Investment Promotion, General Cooperation	△
	2024/01/18 China plans to build an automated rail transit system (ART) in the Nusantara Capital District (IKN); each train will consist of three cars, operate at a speed of 40 km/h and a maximum speed of 70 km/h, and carry up to 307 passengers. Manufactured by China Railway Rolling Stock Corporation (CRRC). [Technical Assistance] 2024/04/03 Importing Chinese automated trains for IKN [Technical Assistance]	Infrastructure	◎

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	2024/06/14 The Directorate General of Railways of the Ministry of Transport (DJKA) presented IKN's urban rail projects at the 17th Shanghai International Intercity and Metropolis Expo “Rail+Metro China 2024” in Shanghai, China. The New Capital City project includes the Sepingan-IKN airport rail link, and an urban rail system designed to integrate the New Capital City with surrounding cities such as Balikpapan and enhance regional connectivity. The Sepinggan-IKN Airport Rail Link is expected to serve 5.2 million passengers annually by 2030. [Technical Assistance]		
	2024/11/09 New President Prabowo Subianto and Chinese President Xi Jinping attended a state ceremony at the Great Hall of the People in Beijing on November 9, 2024, and signed intergovernmental agreements on the export of fresh coconuts, sustainable fishing, the blue economy, mineral resources, green minerals, water resources, funding for nutritious meals for schoolchildren, and maritime security.	Blue Economy, others	△
Hong Kong	2023/07/25 Hong Kong's Executive Secretary made a courtesy call on President Joko Widodo and Introduced Hong Kong's eight centers (finance, trade, shipping, aviation, intellectual property trade, legal and dispute resolution, arts and culture, and innovation) and 14-year plan as a reference for Nusantara [General Cooperation].	Finance, trade, shipping, aviation, intellectual property transactions, legal and dispute resolution, arts and culture, innovation	△
Korea	2023/06/23 Signing of Memorandum of Understanding (MOU) for cooperation in the development of the fourth phase of Jakarta Mass Rapid Transit (MRT) system [Infrastructure Finance]. 2022/07/28 New Capital Project Cooperation Agreement [Technical Assistance].	Infrastructure, e-government, System Construction	△
	2023/07/21 Technical Assistance for Water Supply System Construction [Technical Assistance].	Water Supply	◎
	2023/08/24 Investment will be considered after Presidential Election [Investment Promotion]. 2023/09/08 Agreement of IKN Smart City Cooperation [Technical Assistance].	Investment Promotion ICT, human resource development, EV	△
	2023/11/27 Delegation of Korea International Cooperation Agency (KOICA) meets with OIKN Director General [Investment Promotion]	Infrastructure, Urban Development	
	2024/01/12 South Korea is among the top five countries in terms of the number of potential foreign investors expressing interest in investing in IKN. [Investment Promotion]	Investment Promotion	
	2024/05/20 Coordinating Minister of Economy Ailuranga Hartalto made a working visit to Korea and met with LG CNS CEO Shinyun Hyun in Seoul, Korea to discuss IKN development and data center projects. [Investment Promotion]	ICT	
	2024/05/20 PUPR Minister requests acceleration of water supply project (Net Zero Water Supply Infrastructure Project) for IKN in Korea [Technical Assistance].	Infrastructure	
	2024/06/23 Balikpapan OIKN Office to host a delegation from the National Agency for Urban Construction Administration of Korea (NAACC) to visit and discuss cooperation opportunities on IKN development and management [Investment Promotion]	Infrastructure, Urban Development	
	2024/08/07 Cooperation with South Korea in the construction of a submerged tunnel PUPR has announced that the KN undersea toll road or submerged tunnel (part of IKN Access Toll Road Segment 4A and 4B) will be constructed in	Infrastructure	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	cooperation with South Korea. [Technical support]		
	2024/11/12 As part of the Smart Air Mobility Initiative at IKN, OIKN is working with the Korea Aerospace Research Institute (KARI) and Hyundai Motor Company (HMC) to commercialize flying taxis or sky taxis by 2029. [Technical Support] [Progress] The Sepaku Water Treatment Plant (IPA) is under construction to begin operation in June 2024, with a progress rate of 28.8%. The first phase will have a treatment capacity of 300 liters/second, which will be taken from the Speak River intake. Two reservoirs with a capacity of 6,000 m3 will be constructed and a 20 km long pipeline network will be developed from the water treatment plant to KIPP- IKN. The total construction cost is Rp328.18 billion. https://www.rri.co.id/nasional/522652/instalasi-pengolahan-air-sepaku-semoi-di-ikn-beroperasi-juni-2024	Infrastructure	
Singapore	2023/05/31 Over 130 government and business delegates pay official visit to IKN [General Cooperation].	Energy, Transportation, Logistics, Real Estate, Finance	△
	2024/04/29 29 Singaporean companies have expressed willingness to invest in IKN development; Indonesia looks to Singapore for support in building solar power plants in IKN. [Investment Promotion]	Energy	
	2024/11/06 Indonesia and Singapore discussed cooperation in the fields of defense, economic cooperation, low-carbon technology, food security, and human resource development, as well as efforts to increase Singapore's investment in Indonesia in the fields of renewable energy, downstream industry, food security, digital and semiconductor, health, and IKN. [General Cooperation]	Others	
Malaysia	2023/08/08 Rail connection concept from Malaysian side to Indonesian side [General Cooperation]. 2023/06 President Joko Widodo discusses closer cooperation with Malaysian Prime Minister Anwar Ibrahim to address outstanding bilateral issues (e.g., Sulawesi Sea maritime boundary and palm oil embargo) [General Cooperation].	Railroad Border, Palm oil	△
	2024/03/24 OIKN revealed that three Malaysian investors are ready to work on housing development (IJM, Maxim and PPP scheme utilization) and education sector development (Limkok Wing University) in the IKN development. [Investment Promotion]	Housing, Education	◎
	2024/04/03 The Malaysian government is not aware of a proposal by Brunei Utama (Brunei) to develop a high-speed rail network connecting IKN, Sabah, Sarawak, and Brunei. [Technical Assistance].	Infrastructure	
	2024/05/01 Embassy of the Republic of Indonesia in Malaysia invited about 50 Malaysian entrepreneurs and investors to IKN. Four of them, Citadel Group, Ranhill SAJ Sdn Bhd, Samaiden Sdn Bhd, and Seven Seasons Preservation Sdn Bhd, submitted new LOI (25 companies from Malaysia have already submitted LOI) [Investment Promotion]	Investment Promotion	
	2024/08/13 Borneo Economic Forum: A strategic driving force to support economic growth in Kalimantan and IKN [Investment Promotion]	Investment Promotion	
Thailand	2023/08/28 Indonesian Products Exhibition and Investment Business Forum in Bangkok [Investment Promotion]	Investment Promotion	
Kazakhstan	2023/07/03 Nusantara and Astana Sign Sister City Memorandum of Understanding [General Cooperation]. 2023/07/06 IKN guides Kazakhstani business owners to IKN [Investment Promotion].	Economy, Energy, Transportation, Urban	△ △

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	2023/09/08 Interest in Green Forest [General cooperation].	Management, Culture Construction, finance Green City	
Turkey	2023/07/15 Turkey proposes bilateral cooperation in the field of construction in Nusantara [Technical Assistance].	Construction	
Qatar	2023/08/20 Encouraging Qatari Companies to Invest in Nusantara (Resort) [Investment Promotion].	Resort Development	
UAE	2023/05/22 Signing of cooperation agreement for waste management project [Infrastructure Finance].	Waste Management	△
	2024/05/21 Masdar, a renewable energy company in the UAE, receives a letter to promote renewable energy investment in IKN. [Investment Promotion]	Renewable Energy	△
	2024/07/16President Joko Widodo's visit to the UAE was aimed at securing investment for the new capital. [Investment Promotion] 2024/07/18 During President Joko Widodo's visit, Indonesia and the UAE signed eight memorandums of understanding on bilateral cooperation.	Investment Promotion	△
UK	2023/01/19 Education and Health Sector Development [Technical Assistance] 2023/09/25 British request to extend subsidies provided by the UK for sustainable transport systems to multiple Indonesian cities to other cities such as Nusantara [Infrastructure Finance]. [Progress] OIKN and the Tony Blair Institute for Global Change Research (TBI) signed an agreement to provide support for the construction of a research and development center at IKN.	Education, Health, Environment Traffic	○
	2024/02/14 The British government is interested in supporting IKN as a carbon neutral city. [Technical support]	Carbon Neutral	
	2024/09 (Based on the meeting with OIKN) According to OIKN, OIKN with support from UK government (GCIP: Green Cities and Infrastructure Programme) will develop an integrated transport master plan including the Tri-City area (IKN, Balikpapan, Samarinda City), PPU, Kutai Kartanegara, and so on from August 2024 to September 2025. In the transport master plan, existing related development plans, the passenger and freight-related trips will be considered. The road, railway, public transport, integration of land use planning, and TOD are expected to be included.	Transport Master Planning, Connectivity	○
Finland	2022/11/24 Smart City and Wastewater Management Development Cooperation Agreement [Technical Assistance and Infrastructure Financing].	ICT, Wastewater Management	△
	2023/09/03 OIKN is cooperating with the Smart City Innovation Cluster (SCIC) in Finland to make IKN a smart city (MOU concluded) [technical support]	Smart City	△
	2024/01/29 Memorandum of Understanding on Smart City Cooperation between OIKN and the Ministry of Employment and the Economy (MEAE) [Technical Assistance]	Smart City, Energy, DX	△
France	2023/06/13 Official Visit of Delegation of French Government Officials and Businessmen [General Cooperation].	Energy, etc.	△
	2023/09/10 President Joko Widodo praises French investment in strategic sectors in Indonesia [Investment Promotion]	Investment Promotion	
Denmark	2023/05/23Danish 4 Companies Support Indonesian Companies for Ammonia Production by Small Modular Reactor in Bontang [Investment Promotion].	Ammonia Production	△
	2024/05/08 Denmark and Dubai are considering investing IKN Nusantara [Investment Promotion]	Investment Promotion	
The Netherlands	2024/07/19 Netherlands to increase investment in the development of sustainable water management systems (the Netherlands is providing financial support for water management through ADB). Other investment potential in	Water Resource Management,	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	research and education in sustainable development and ecosystem management, and agriculture. [Technical Assistance]	Education, Ecosystem Management, Agriculture	
	2024/04/30 Deputy Minister for Foreign Affairs and Economic Relations Michiel Sweers attended the 23rd Mixed Economic Committee with the Indonesian government and discussed the progress and challenges of cooperation in the fields of renewable energy, water management, agriculture, waste management and the circular economy, sustainable transport, and health. He emphasized the importance of concluding CEPA negotiations and Indonesia's accession to the OECD. [Technical Assistance]	Renewable Energy, Water Management, Agriculture, etc.	
United States of America	2025-2029 Forest City Planning Support (USAID) [Technical Assistance]. USAID's Community Driven Urban Sustainability Program (PLUS) will support the preparation of a forest urban planning report that includes green space management, zoning of urban growth areas, and optimization of ecosystem services, and the report will include the impact of IKN development on surrounding areas. Other support will include assistance in preparing recommendations for the National Medium-Term Development Plan for 2025-2029, study tours to the United States for Indonesian government officials (environmental management, sustainable finance, governance practices, etc.), provision of workshops and e-learning for Indonesian government officials, collaboration with indigenous peoples and local communities, etc. The program will also provide support for public-private partnerships in IKN. The possibility of financing public-private partnerships in IKN will also be discussed. Technical advice and reporting on the development of Nusantara as a forested city is planned under the Program for Local and Urban Sustainability (PLUS), which is being implemented starting in 2022. From 2019, Indonesia's Economic Growth Support Activity (EGSA) is being implemented, which includes support for the formulation of the Economic Transformation Masterplan, technical assistance for the relocation of the New Capital City EGSA is supporting the formulation of the Economic Transformation Masterplan, technical assistance for the relocation of the new capital, and the formulation of the financial frame for the National Long-Term Development Plan (until end of October 2024). 2024/10/02 (Information obtained at a meeting with USAID) According to USAID, USAID's support for IKN development will end in October 2024, the same as the technical cooperation support for EKETMP, and there is no successor project planned after that (due to funding issues). It appears that support in the technical cooperation field (capacity building, support for universities and other research institutions, etc.) is being considered by a separate organization from USAID. For USAID, the development of East Kalimantan, including the development of IKN, has become a lower priority. Furthermore, USAID headquarters is skeptical about the progress of OIKN activities, environmental targets, and population growth targets. USAID is keeping a close eye on OIKN's activities as it formulates a new five-year plan (2025/26~).	Urban Development Plan, Green Space Management, Governance, PPP	◎
	2024/07/09 PPU Designated as Facilitating Site for USAID SELARAS Program to Accelerate Waste Management in Indonesia [Technical Assistance]	Waste Management	△
	2024/03/08 USTDA provides a 4 Million USD grant to fund a study of a transmission line connecting Indonesia and Malaysia as part of its support for IKN development. [Technical Assistance] 2024/03/07 USTDA grants 39 billion rupiah for technical assistance to develop detailed IKN development design, technical specifications, procurement documents, and capacity building strategies to support	Energy Infrastructure, HRD	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	development of IKN smart city priority infrastructure [Technical Assistance]		
	2023/11/19 Four U.S. technology companies (Cisco, Autodesk, Microsoft, Esri) and IKN authorities cooperate in the development of Nusantara Capital [Investment Promotion, Technical Assistance]	ICT	△
	2023/11/19 OIKN and Stanford University Sustainable Research Cooperation [Technical Assistance] 2024/06/12 OIKN and Honeywell agree to work together to apply smart city concepts to IKN development [Investment Promotion, Technical Assistance] 2024/06/13 OIKN and Motorola Solutions sign a Memorandum of Understanding (MoU) to develop IKN as a safe city (environmentally friendly, resilient, sustainable, and inclusive smart city). [Investment Promotion, Technical Assistance] [Progress] USTDA will fund a U.S. trade mission focused on the development of IKN to promote U.S. exports in the areas of high-quality, sustainable infrastructure and innovative smart city solutions. There are also plans to fund training of Indonesian officials involved in the procurement of IKN, including tenders.	R&D Urban Development Plan, ICT Urban Development Plan, ICT	△
Australia	2022/11/08 Carbon Neutralization Support Study (in cooperation with ADB) [Technical Assistance].	Carbon Neutral	○
	2023/07/04 President Joko Widodo listed EV battery manufacturing, optimizing the Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA), green technology such as carbon sequestration, and IKN cooperation as priorities in the Indonesia-Australia partnership. [Investment Promotion and Technical Assistance] [Progress] Continued discussions on cooperation with Australia on campus construction, water resources management, and agriculture (agribusiness and smart farming).	EV, Green Technologies, etc.	
Multiple Countries	17 countries have investment intentions as of 2023/05/07 [General Cooperation]. 2022/06/13 LOI: 106 Indonesian countries, 85 foreign countries (Japan 26, Malaysia 22, Malaysia 16, China 5, USA 9, France 4, UK 3 Korea 2, UAE 2, Philippines, Luxembourg, Thailand, Germany, Spain, Canada, Brunei Darussalam 1 each) [General cooperation] 2023/05/23 More than 220 companies issued LOI [General Cooperation].	General Cooperation	△
WB	2023/09 Sustainable Landscape Management Program (SLMP) [Technical Assistance].	Land management, rural landscape, forest resource management, financing, coordination	◎
	2014-2022 Sustainable Ocean Program (ISOP) [Technical Assistance]	Marine resource management, poverty reduction	◎
	2024/5/17 Support for the development of a Master Transportation Plan (Urban Mobility Plan) for Balikpapan City to be implemented [Progress] Although there is no direct support or other information on IKN by the WB, the Government of Indonesia has agreed with the World Bank's Forest Carbon Partnership Facility (FCPF) in November 2022 under the Payment Agreement for Reduction of Greenhouse Gas Emissions from Forest Conservation in East Kalimantan Province (REDD+) that it will receive Rp. 1.6 trillion.	Traffic	△
ADB	2023/05/04 Signing of Memorandum of Understanding for Cooperation in	Urban	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	Carbon Neutral Forest Urban Development [General Cooperation]	planning and development, financing	
	2023/05/04 Nusantara Development Cooperation Memorandum of Understanding Signed [Technical Assistance].	Knowledge sharing, R&D	△
	2023/05/26 PPP Expert Hiring Support [Technical Assistance]	PPP	△
	2023/12/03 Support the development of IKN's Net Zero Strategy (focus areas for achieving IKN Net Zero Cities: forestry and other land use; energy decarbonization; environmentally friendly production processes, product applications, design, and materials; waste management/circular economy; agriculture), Australia's Department of Foreign Affairs and International Trade provides financial support. [Technical Assistance]	Carbon Neutral	△
	2023/12/15 Grant of 37.22 billion rupiah (2.4 million USD) aimed at supporting the development of IKN as a sustainable city [Technical Assistance]	Urban Development	△
	2024/02/23 ADB and IKN authorities present SDG baseline report at the 11th Asia-Pacific Sustainable Development Forum; development of IKN's voluntary field review baseline for sustainable development goals is supported by the Australian government. [Technical Assistance]	Sustainable Development	
	2024/03/27 IKN Biodiversity Management Master Plan officially released after consultation with East Kalimantan and other provinces, with support from ADB and Australian government The IKN Biodiversity Master Plan is a policy direction to protect the biodiversity of IKN over the period 2024-2029, programs, and targets to protect IKN biodiversity over the period 2024-2029. [Technical Assistance]	Biodiversity	△
	2024/08/01 At the Indonesia Urban Resilience Forum, the ADB-URTF (URTF, provided by the UK Foreign, Commonwealth and Development Office and managed by ADB) through the ADB Urban Resilience Trust Fund (URTF, provided by the UK Foreign, Commonwealth and Development Office and managed by ADB), announced its support for IKN development and various possible future activities to enhance urban resilience in Indonesia. The ADB-URTF is supporting a 2 Million USD technical assistance program targeting IKN. [Technical Assistance] [Progress] At COP28 in Dubai, it was announced that ADB will support the development of a net zero strategy for IKN. The strategy will be used by OIKN as a guide to achieve carbon neutrality by 2045. The main five priority areas are forestry and other land use, energy, production processes and material selection, waste management, and agriculture, with the goal of becoming a net-zero city. Technical assistance funds from the Asian Development Bank (ADB) amounted to 37.22 billion rupiah (2.4 Million USD) as of December 2023. These will mainly be used for land use and spatial planning, conducting environmental and social studies and addressing regulations and protection related to environmental and social considerations, and developing policies and investment frameworks for the New Capital City. 2024/10/02 (Information obtained at a meeting with ADB) In 2024, ADB began supporting the 'Water Sensitive City' initiative, which focuses on water management, and the 'Growing Resilience and Ensuring Equality in Nusantara (GREEN)' initiative, which is related to climate change adaptation. In addition, ADB is also implementing training for OIKN staff, but it is expected that any new support other than this will be considered after the new government is formed and the new president appoints the Head of OIKN. ADB completed its survey to support Bina Karya in February 2024, and prepared recommendations for improvement and a draft system (related to	Urban Development	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	asset management of master developers and infrastructure owned by OIKN, which are lacking in the current law). In addition, it is recognized that there are issues that should be considered after the new director is appointed, such as how to manage private sector projects for Bina Karya.		
United Nations	2023/10/17 13 UN agencies submitted letters of intent to support IKN development	General Cooperation	
UNDP	2022/12/27 Indonesia Accelerator Lab [Technical Assistance] 2023/8/1 Identified priorities for Nusantara on digitization and possible cooperation between IKN agencies [Technical Assistance].	Natural environment, biodiversity, community participation DX, Smart City	○
ESCAP	2023/09/12 Voluntary Local Review (VLR) Support Mechanism [Technical Assistance] ESCAP: United Nations Economic and Social Commission for Asia and the Pacific)	Sustainability, human rights, and public participation	○
	[Progress] Declaration of Intent (DOI) submitted by Ms. Valerie Julien, UN Permanent Coordinator for Indonesia to OIKN Secretary Bambang Susantono at the 6th Spatial Planning Platform (SPP) meeting held in Balikpapan, East Kalimantan, UNDP. Based on the DOI jointly signed by 13 UN agencies including UNDP and ESCAP, the project is expected to be strong in urban planning including Voluntary Local Review (VLR), governance development and policy making, digitization, master plan development, and conducting gap analysis.		
ISDB	2022/12/05 Member Country Partnership Strategy (MCPS) [General Cooperation]	Finance, climate change, women and youth, capacity building	△

5.2 Outline of the Investment Seminar related to the IKN Development

The status of seminars and other events related to the new capital were organized.

5.2.1 IKN Development Related Investment Seminar held in Japan

July 13, 2023 "Business Forum for Japanese Companies on the New Capital "Nusantara"
(organized by JETRO Jakarta Office)

The main points of the seminar

- More than 200 people attended the event in Jakarta, both at the capital city venue and through online participation.
- Mohammed Ali Berawi, OIKN Undersecretary for Green and Digital Transformation, gave a presentation on the IKN development concept (green, resilient, sustainable, inclusive, and smart), schedule (5 phases), and various infrastructure development under the presentation covered various infrastructure development plans, etc.
- In particular, he devoted time to explaining the development of IKN as a smart city, clearly outlining the infrastructure and technology needed.

December 4, 2023 "Indonesia Investment Forum 2023"

The main points of the seminar

- Indonesia, which has set a goal of becoming a developed country by 2045, has upgraded BKPM to the Ministry of Investment in order to grow its economy by leveraging foreign capital and technology in advanced sectors such as decarbonization, DX, and healthcare.
- Indonesia is one of the most important investment destinations for Japan in terms of economic growth, consumer market, and economic security in light of the global situation. The purpose of the conference is to provide Japanese companies that are developing business in various fields such as manufacturing, tourism, services, and start-ups with the latest information on the Indonesian economy and investment environment, and to discuss them.

October 3, 2024 "Indonesia Investment Forum 2024" "Promoting Sustainable Economic Reforms through Investment in the New Capital Nusantara (IKN)"

The main points of the seminar

- The Prabowo administration's policy directions include: separation of the tax department from the Ministry of Finance, raising the ceiling on the budget deficit, targeting 8% annual economic growth, increasing direct investment, continuing President Joko Widodo's major infrastructure policies (including IKN development), supporting downstream sectors of industry (e.g., nickel), launching a green fund from profits from the sale of carbon credits, and providing free school lunches financed by reduced fuel subsidies. The publicly disclosed plans include the launch of a green fund with the proceeds from the sale of carbon credits, and free school lunches financed by a reduction in fuel subsidies.
- BKPM has 81 pre-FS projects in place. Of these, 12 are in support of IKN development (areas: agriculture, industrial development, real estate/industrial parks, infrastructure development, tourism).

5.2.2 Seminars and Other Events related to the New Capital City held in Other Countries

The following is a summary of seminars and other events held in various countries regarding IKN development.

Table 5-2 IKN Development Related Seminars

Date	Organizer	Country /Region	Seminar name	Speaker	Main contents
2024/06/25	FIABCI (The International Real Estate Federation)-Thai	Thailand	Experience: Nusantara, the New National Capital City of Indonesia2	Mr. Rusmin Lawin (President, FIABCI Asia Pacific) Mr. Saribua Siahaan (FIABCI Asia Pacific)	IKN Development Overview
2023/7/13	Centre for Liveable Cities (CLC)	Singapore	Knowledge Sharing Session3	Hugh Lim (Executive Director of CLC) Fong Chun Wah (Senior Advisor of the Housing and Development Board) Han Yong Hoe (Executive Director of the Urban Redevelopment Authority) Toh Wee Khiang, Director at the Energy Market Authority (EMA).	Knowledge sharing for sustainable cities, new town development, development management, energy conversion, etc.
2023/9/25	Embassy of Indonesia in Hungary	Hungary	Seminar on Investment Opportunities in IKN	H.E. Mr. A.H. Dimas Wahab (Ambassador Extraordinary and Plenipotentiary of Indonesia to Hungary) Mr. Achmad Jaka Santos Adiwijaya (Secretary of IKN Authority) Mr. Muhammad Naufal Aminuddin (Director of Financing) Mr. Agus Gunawan (Director of Green Transformation)	IKN Development Overview Business matching to promote investment.
2024/8/12	UNIDO, Ministry of Foreign Affairs of Indonesia	World	Bridge for Cities Workshop4	Ambassador Tri Tharyat (Director General for Multilateral Cooperation at the Ministry of Foreign Affairs) Mr. Jie Zhao (Chief of the Regional Coordination Bureau for Asia-Pacific at UNIDO) Ms. Gita Sabharwal (UN Resident Coordinator in Indonesia)	(i) economic growth and productivity. (ii) environmentally friendly development. (iii) innovative financing.
2024/06/27	Embassy of Indonesia in Denmark, Confederation of Danish Industry	Denmark	Indonesia Investment Forum (IIF) 2024 “Sustainable Investment in Indonesia: The Danish Way”5	Bank Indonesia Vice President Judah Agung, and about 12 other speakers from both countries, including representatives from Bank Indonesia, OIKN, Ministry of Investment, East Kalimantan Provincial Government, and Balikpapan City Government	Promote investment in ocean, renewable energy, digitalization, health, circular economy
2024/05/02	Embassy of Indonesia in Malaysia	Malaysia	IKN Investment Mission6	Approximately 50 Malaysian investors (including Malaysia - Indonesia Business Council (MIBC), Sunway Construction, Kenanga Investment Bank, etc.)	IKN site visit, etc.
2024/3/27	Embassy of Indonesia in Singapore, BKPM Singapore, etc.	Singapore	Indonesia - Singapore Business Forum 2024 (ISBF)7	Drajad Hari Wibowo (INDEF Economist) Muhammad Lutfi (Former Minister of Trade) Jimmy Koh (Managing Director, Network Partnership and Strategic Marketing, Group Foreign Direct Investment Advisory of UOB) Philips Vermonte (Senior Fellow of CSIS) Bambang Susantono (OIKN Secretary), etc.	Economic Conditions and Policy Direction in the Era of the New Administration Investment Opportunities Under New Leadership

Source: Compiled by survey team from various sources.

5.2.3 Others

The following is a summary of the main points from the other public hearings conducted.

September 15, 2023, Public Hearing on Proposed Amendments to the New Capital Relocation Act

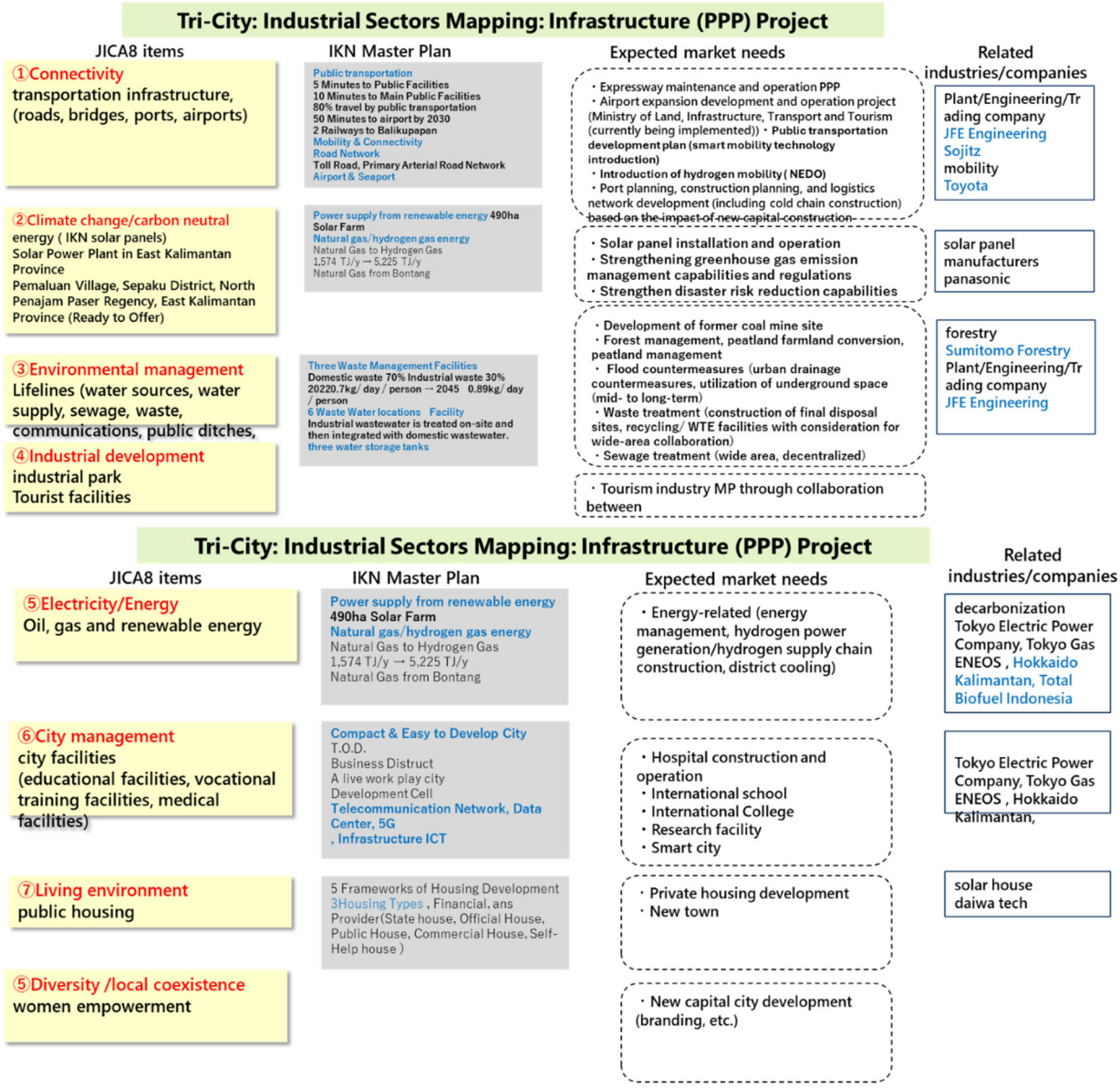
The main points of the public hearing as below;

- The development of the New Capital City is inseparable from the goals and ideals of independence set forth in the preamble of the 1945 Constitution and from Indonesia Vision 2045 (sustainable economic development, equitable development, strengthening national resilience, and good governance).
- IKN's development strategy has a central function in realizing Indonesia's vision for the future, both as a national icon and to realize a secure, modern, sustainable, and resilient national capital.
- It is being implemented to provide for the relocation of the capital and the strengthening of OIKN's role in the preparation and implementation of government activities in the new capital, and to communicate a number of things related to the main changes in the revised law, so that everything can move forward more quickly, and the community can also gradually develop and feel more equitable.
- The Capital Relocation Law contains 8 principles and 24 KPIs for IKN, along with several derivatives, including details of the Master Plan.
- Spatial planning is important in relation to the environment, and since it is the tool to control environmental destruction and pollution, development cannot be in harmony with nature if spatial planning is being “played around” with. Without good spatial planning, the environment cannot be properly protected.

5.3 Industrial Development envisioned for the New Capital City and East Kalimantan in the Future

Based on the industrial policies of the GRDP and related municipalities in Balikpapan City and Samarinda City, East Kalimantan Province, the following sectors were identified as potential investment areas for Japanese companies: resources and energy, agriculture, forestry, and food, chemical and pharmaceutical, manufacturing, information and communication, education, and tourism. The 6 industries and 2 related sectors identified in the IKN Master Plan were also analyzed in terms of markets, players, value chains, etc., and the potential and challenges for industrial development in Tri-City were identified.

The 8 sectors under consideration by JICA were also assumed to be eligible for investment based on the above information.



Source: survey team based on Presidential Decree No. 63/2022 Annex VI.

Figure 5-1 Infrastructure for investment in IKN on the 8 items considered by JICA

5.4 Private Investment Trends in the New Capital City Development

5.4.1 Status of LOI Submission

The status of LOI submissions as of June 28, 2023, is summarized by sector, with 256 letters of intent (LOI) submitted from 19 foreign countries/regions including Japan and from Japan. The largest number of LOIs by sector was 55 for “Other Infrastructure,” 35 for “Goods and Services,” 29 for “Energy,” and 25 for “Technology.

Subsequently, according to reports as of November 5, 2024, the total number of LOIs submitted has doubled in about 18 months to about 500. Most recently, about half of the LOIs were from investors, with investor interest shifting to areas outside of KIPP.

5.4.2 Private Sector Investment Trends

All of the private investments in IKN development to date have been made by Indonesian companies, mostly those located in the KIPP area. All of these projects were reportedly requested to enter the area or submitted LOI during local visits and meetings with President Joko Widodo and others in 2022 to early 2023, and it can be said that the government-led priority projects have reached the start of construction.

5.4.3 Trends in Japanese Companies

On May 21, 2023, on the occasion of the G7 Hiroshima Summit, five Memoranda of Understanding (MOUs) and 24 Letters of Intent (LOI s) were signed and submitted to Mr. Bambang, Director General of the New Capital City Authority, at a ceremony attended by President Joko, key Indonesian cabinet ministers, Japanese government and economic officials. In his address, President Joko reiterated his expectations for high quality investment by Japanese companies (one additional LOI was later added, bringing the total to 25).

According to the results of interviews with Japanese-affiliated companies, the most common problems they are having as companies are “difficulties in entering public works projects,” “demands to switch from product sales to manufacturing,” “understanding the legally binding nature of the LOI,” and “regulations on the use of domestic materials locally.

According to BKPM's Japan office, “One of the conditions for business activities in the country is that domestic materials must be used, and this is one of the hurdles. In addition, “We can manufacture in Indonesia, but the problem is the sales channel. For this reason, we strongly promote the involvement of general trading companies. It is difficult for SMEs to develop sales channels. The following are some of the opinions expressed.

The requests to the Japanese and Indonesian governments include “promotion of each company's products and services as the Japanese government,” “uncertainty about IKN's realistic planned population frame,” and “sharing the contents of the UR MOU.

5.4.4 Possible industrial developments and trends in interest of Japanese, local, and foreign companies

Considering the current and projected socio-economic and industrial status in the Tri-City, the policies of the national and local governments, and the investment situation and outlook for

domestic and foreign companies, this study organizes sectoral industrial development issues and trends in corporate interest.

Table 5-3 Anticipated Industrial Development and Trends in Interests of Japanese, Local/Foreign Firms

Sector	Industrial Development Challenges	Interest of Japanese Companies	Interest of local and foreign companies
Tri-City urban service facilities and housing	Development of housing and urban services for approximately 480,000 people in 2024 and 1.28 million people in 2029.	Residential development, commercial development, and medical services.	Two hospitals are under construction. Seven residential PPP projects are in preparation at BKPM.
Tri-City Infrastructure Development	In a timely manner, 80% of the maintenance will be privately funded and 20% will be publicly funded.	Toll roads, airports, AGT PPPs related to transportation such as. PPPs related to the environment, such as waste disposal and castle water systems.	BKPM is preparing a toll road PPP project. Trans-Borneo Railway Initiative. VVIP Airport scheduled to open in September. Balikpapan City Airport Survey by MLIT ART test operation of self-driving buses in China.
6 Economic sectors and 2 related sectors			
1. Renewable Energy Devices (solar power, EVs, etc.)	Maturity of the EV two-wheeler market. Manufacturing conditions, including procurement and labor.	Manufacturer of EV motorcycles and batteries and charging station business.	Plan to build an EV battery plant at the Kalimantan Industrial Park in Bulungan, East Kalimantan.
	Government support measures for solar power generation and removal of restrictions on foreign investment.	Solar panel manufacturing and solar power generation business. Transmission Grid Business. Solar housing development.	IKN Mega Solar PPP by BKPM.
2. Integrated Medicine	Incentives for pharmaceutical companies to enter the market, such as the establishment of a national research institute. Supply of researchers and other human resources. Securing conditions for pharmaceutical establishments. Relaxation of foreign investment restrictions.	Pharmaceutical business. Investment in pharmaceutical research institutions. Participation in medical tourism.	According to BioFarma, a significant number of hospitals were needed for the pharmaceutical industry to expand.
3. Sustainable Agriculture	Securing fertile farmland. Securing experienced workers. Improvement of agricultural distribution.	Agriculture, plant processing, and other production businesses. Agricultural technical guidance. A project to improve the distribution of agricultural products.	JICA has experience in improving agriculture in Indonesia. MKH Oil Palm in Samarinda City and others as local palm oil farms.
4. Ecotourism, Medical Tourism	Early development of tourism resources in IKN. Development of tourism infrastructure such as lodging and transportation. Internationalization of airports.	Developing sightseeing tours from Japan. Local tourism route development. Expansion into the lodging and restaurant industry.	IKN Tourism Action Plan, Tourism Resources in East Kalimantan Province has a research report. Three local hotels and four mixed-use facilities are under construction.
5. Advanced Chemistry (Petrochemistry and oleo chemistry)	Incentives for chemical companies to enter the market, such as the establishment of research institutes. Develops and manufactures functional chemical products.	Petrochemical products (ethylene, ammonia, urea) chemical fertilizer	Hyundai supports the redevelopment of the Pertamina refinery, and a Danish company supports the production of ammonia and nitrogen fertilizer. Sojitz is producing methanol with Bontang.
	Development and production of downstream oil and fat products	Manufacture of household goods	Apical of Balikpapan City, an oil and fat manufacturer, is a good example.
6. Low carbon fuel energy (plant fuel, coal gasification, CCS/CCUS)	Introduction of coal gasification technology. Business FS Study. Supply chain probability.	Deployment of coal gasification technology. Blue hydrogen from combined CCS/CCUS. Ammonia production.	Air Products and Chemicals of the U.S. plans to produce methanol in Bengalong (East Kutai), East Kalimantan Province.
	Government CCS policies and support	CCS/CCUS business	Three projects are underway in East

	measures. Business SF Verification.	development in gas fields.	Kalimantan Province, with participation from Pertamina, bp, Chubu Electric Power Co.
7. Smart Cities and Digital Centers	The specifics of Industry 4.0 have yet to be determined. Individual projects such as transportation, disaster prevention, and data centers are in progress.	Manufacture of electronic equipment Data Sensor automated forklift truck	Supported by Telkom Indonesia, Siemens, LG, Huawei, Honeywell, and Hyundai. Supported by the U.S. and Finland.
8. Education in the 21st century	Vocational training needs as a Tri-City. Uncertain IKN population trends.	International University and Japanese branch schools. Educational Auxiliary.	Stanford attraction activities. Nine private schools under construction.

Source: JICA survey team

5.5 Outline of the PPP System for Projects in New Capital City and its Issues

5.5.1 Outline of General PPP System and its Issues

The following 22 sectors of infrastructure development are covered under the PPP program. Each Minister, Secretary, Governor, etc. can establish PPP projects for infrastructures other than those mentioned above by submitting an application for a PPP project to the minister of BAPPENAS.

Table 5-4 Conventional PPP-related Legislation Applicable Sectors/Projects

Group	Infrastructure areas where PPP schemes can be applied	Main contents
Social Infrastructure	Infrastructure related to education and R&D facilities	Learning tools, research facilities, business incubators, learning centers, etc.
	Sports, arts, and culture-related infrastructure	Stadiums, cultural heritage sites, museums, etc.
	Infrastructure related to prison facilities	Compulsory facilities, detention centers, correctional hospitals, etc.
	Health and Medical Infrastructure	Hospitals, medical equipment, community health centers, public health centers, etc.
	Tourism Infrastructure	Tourist information centers, nature reserves, national parks, agritourism, etc.
	Local Infrastructure	Special business zones, science and technology innovation zones, residential areas, etc.
Urban Infrastructure	Waste and hazardous waste management system infrastructure	Separation, collection, transportation, final disposal, recycling facilities, etc.
	Centralized wastewater management system infrastructure	Final disposal facilities, sewage systems, various treatment units, etc.
	Regional wastewater management system infrastructure	Final disposal sites, sewage systems, various treatment units, etc.
	public housing	Low-income housing, etc.
	Water Resources and Irrigation Infrastructure	Reservoirs/ dams, irrigation networks, etc.
	Potable water supply infrastructure	Water purification and distribution facilities
	Urban Facilities Related Infrastructure	Commercial facilities, etc.
	Industrial Ecosystem Related Infrastructure	Industrial parks, human resource development facilities, etc.
Connectivity	Traffic Infrastructure	Introduction, operation, and management of infrastructure such as airports, ports, railroads, automobile testing stations, marine transportation, fishing ports, etc.
	Energy conservation-related infrastructure	Street lighting, energy efficiency
	Information and Communication Infrastructure	Communication networks, cable electronic systems, etc.
	Power Infrastructure	Power generation, transformer facilities, substations, power distribution

	Road infrastructure	Arterial roads, local roads, toll roads, safety, and security infrastructure, etc.
	Oil, gas and renewable energy related infrastructure	Transportation, power transmission and distribution, energy storage, etc.
	Electric Vehicle Related Infrastructure	Charging facilities, etc.
Others	Infrastructure related to government facilities	Government facilities, etc.

Source: National Development Planning Agency Regulation No. 7 of 2023

5.5.2 Differences and characteristics between the legal system related to PPP in the New Capital City and conventional law

The contents of the Government Regulation No.17/2022, which outlines the PPP scheme applicable to the IKN development, and the Regulation of BAPPENAS No.6/2022, which summarizes the details of the New Capital City PPP-related legal system, are summarized below.

Table 5-5 Comparison of New Capital City PPP-related legal systems and conventional PPP-related legal systems, and main differences

	New Capital City PPP-related Legislation	Conventional PPP-related legislation
GCA/RJPK (government-side contracting organization)	Minister/Head of Government Agency/Director of State Enterprise/Director of OIKN/Head of OIKN-own Enterprise (delegation can be made to Head of Higher Education Institution and Head of Public Broadcasting Organization)	Minister/Head of government agency/Director of state-owned enterprise/Head of local government/Head of local government capital public enterprise (delegation to head of institution of higher education and head of public broadcasting organization possible)
Applicable Fields/Projects	Infrastructure projects as defined by Presidential Decree No.63/2022 (see next table)	22 sectors in 3 groups: connectivity, social infrastructure, and urban infrastructure (see table below)
Implementation procedure (SOLICITED)	(1) Planning (project identification): Approx. 1 month Preparation (Pre-FS): about 2-5 months (iii) Transactions (pre-qualification, public notice, bidding, contracting, financing): approx. 6-13 months (iv) Contract performance (construction, provision of services, asset transfer) The entire project takes approximately 9-19 months to start.	(1) Planning (project identification, preliminary investigation): 1-4 months approx. Preparation (market sounding, pre-FS): approx. 5-8 months (iii) Transactions (pre-qualification, public notice, bidding, contracting, funding): approx. 3-11 months for non-funding, 12 months for funding (iv) Contract performance (construction and provision of services) The entire project will take approximately 21-35 months to start.
Implementation procedure (Unsolicited)	Proposal (1) (Letter of Intent submitted, reviewed by GCA) (2) Preparation (Letter from GCA to the proposer, submission of FS results and related documents & review by GCA, approval letter): approx. 3-6 months (including (1)) (iii) Transactions (pre-qualification, public notice, bidding, contracting, financing): approx. 3-13 months (iv) Contract performance (construction, provision of services, asset transfer) The entire project will take approximately 6-19 months to start.	(1) Preparation (Letter of Intent and submission of relevant documents + review by GCA, FS results and submission of relevant documents + review by GCA, issuance of approval letter): approx. 1.5 months (not including FS implementation period) (iii) Transactions (pre-qualification, public notice, bidding, contracting, funding): approx. 3-11 months for non-funding, 12 months for funding (iv) Contract performance (construction, provision of services, asset transfer) Overall, it takes about 16.5-24.5 months to start operations.
Main Features	(1) Simplified implementation procedures (no need to submit pre-FS results for IKN-related Unsolicited projects) (2) Standby Financing (3) Advisory on the process from procurement to contract signing for GCA (4) Introduction of new procurement methods (Swiss Challenge Method*, combination of pre-qualification screening and bidding, conditional negotiated contracts) (5) Earn revenue from user payments and availability payments, or a combination of these and other forms of revenue (other forms of revenue: commercial development inside and outside the facility, etc.)	

Source: Prepared by the survey team

Table 5-6 Infrastructure covered and main contents in the New Capital City PPP related legislation

Target Infrastructure	Main contents
Public Facilities	Hospital facilities, medical facilities, health-related research facilities, health service capabilities, public facilities such as religious institutions and libraries, health and medical-related research facilities and universities in accordance with international standards
Community Development	Smart Village Communities, Housing Development
Power Supply	Roof-top solar, large-scale solar, energy storage, gas-insulated substations Transformer stations and substations, distribution substations, power grid, undergrounding of transmission lines, above-ground power grid, floating solar
Gas supply	City Gas Network
Waste Management	Sanitary landfill facilities, composting facilities, recycling facilities (material recycling, thermal recycling), waste transportation systems, waste recovery systems
Hazardous Waste Management	Hazardous waste treatment facilities, hazardous waste landfill facilities, medical waste treatment facilities, recovery systems
Wastewater Treatment	Wastewater treatment facilities, drainage pipes
Potable Water Supply	Potable water purification facilities, dam and reservoir maintenance and management, potable water distribution pipe network
Drainage and Flood Control	Drainage infrastructure, flood control, sediment control
Traffic	Public transportation facilities, intermodal development, TOD, airport access (Balikpapan City-KIPP), public transportation with electric buses
Road	Major arterial roads, local roads, toll roads
Storage of Water	Management and multi-purpose use of reservoirs and reservoirs, use of rainwater in buildings
Agriculture & Food	Urban agriculture
Industrial Park	Development of Kaliangau Industrial Park, Buluminung and Maloy, external connectivity, infrastructure development and preservation
Government Buildings	Development of offices and staff housing for various ministries and agencies

Source: JICA Study Team from materials prepared by BAPPENAS based on Presidential Decree No.63/2022

CHAPTER6 Recommendations on Tri-City Development Concept

Based on the previous sections, Tri-City Development Concept was compiled and proposed to the Indonesian government (BAPPENAS, OIKN, regional governments). The Tri-City development vision and four strategic pillars were proposed as a draft Tri-City development concept. In addition, draft ideas on implementation structure and specific initiatives in collaboration with the three cities to promote Tri-City development were illustrated, while discussing and coordinating with the Indonesian government.

6.1 Relationship between Tri-City development concept and related plans

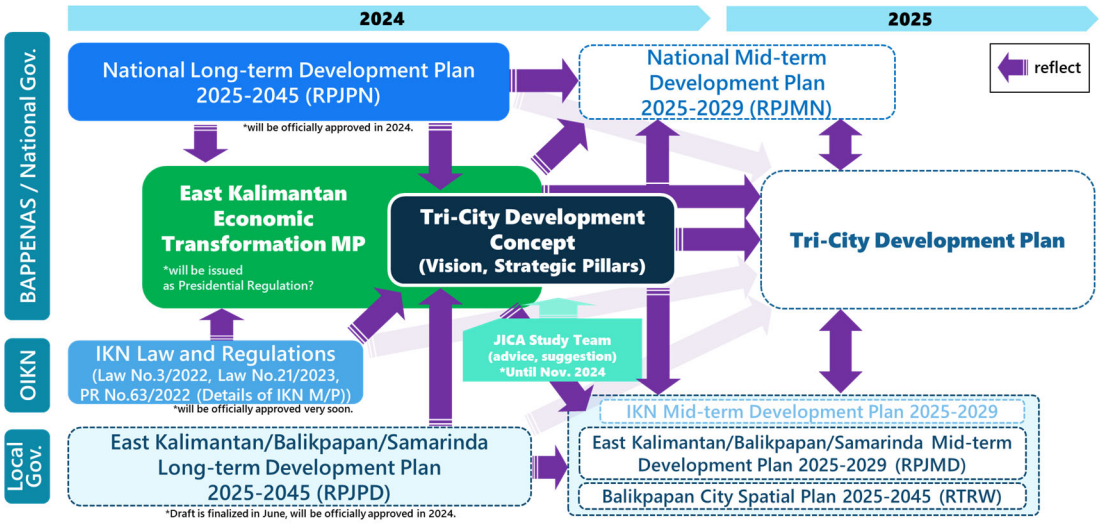
The relationship between the Tri-City development concept and related plans is as follows.

Tri-City Development Concept: Vision and strategic pillars of Tri-City development that will guide the future development of the three cities.

Tri-City Development Vision: An ideal future vision for Tri-City to aspire to in the future.

Strategic Pillar: A basic and strategic future development direction for Tri-City to aim for through various measures and activities.

It is expected that the content of each advice and recommendation will be reflected in the Tri-City Development Plan to be considered by the Indonesian government, as well as in the regional middle-term development plans of related agencies, regional spatial plans, and the East Kalimantan Economic Transformation Master Plan. The Tri-City Development Plan is also expected to be a comprehensive development plan for long-term development through coordination and cooperation with the three cities and surrounding areas, and to indicate development policies, strategies, action plans and priority projects.

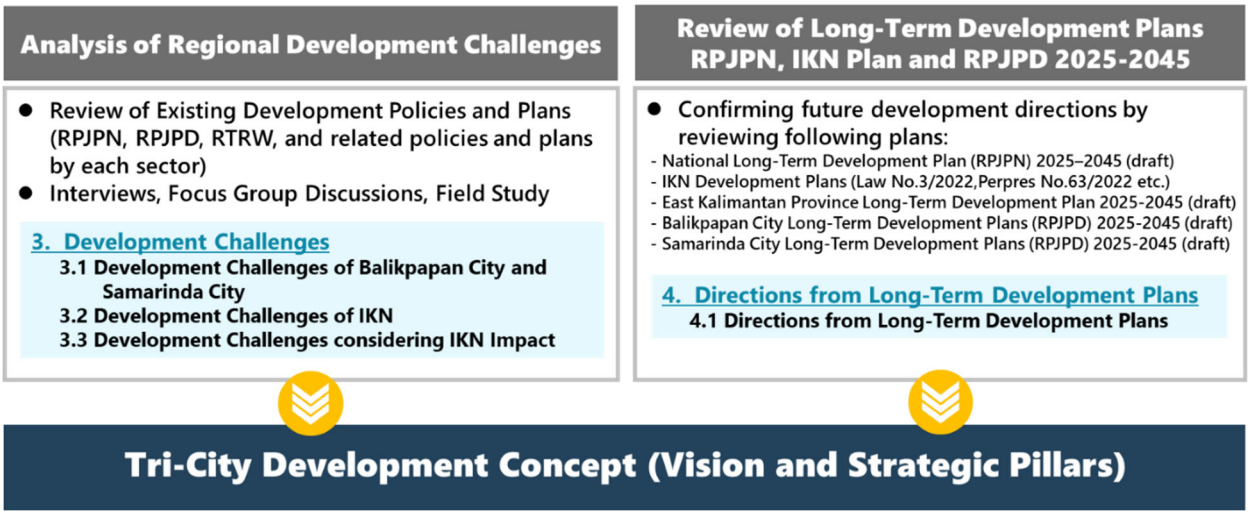


Source: Prepared by JICA research team

Figure 6-1 Relationship between Tri-City development concept and related plans

6.2 Study Procedure of Tri-City Development

the Tri-City Development Concept was considered based on the analysis of development challenges through the review of relevant policy and planning documents, field surveys, meetings and discussions with stakeholders, and directions from the Long-Term Development Plans for IKN, national, East Kalimantan Province, Balikpapan City, and Samarinda City.



Source: Prepared by JICA research team

Figure 6-2 Study Flow of Tri-City Development Concept

6.3 Development Challenges considering IKN Development

In order to cover all areas related to regional development and to ensure consistency and clarity of the study, based on other urban development planning cases (e.g., the Master Plan for the Development of the Sydney Metropolitan Area in collaboration with three cities) and discussions with the Indonesian government, a study was conducted based on four sectors (economy, urban living, environment/resilience, and connectivity).

Based on the challenges that Balikpapan City and Samarinda City will face even without considering the impact of the new capital development, and the development challenges from the perspective of regional development of the new capital, the development challenges of Balikpapan City and Samarinda City based on the phased development plan of the new capital development and its impact, by sector and time horizon (short-term: 2024-2029, Medium-term: 2030-2034, Long-term: 2035-2045).

Table 6-1 Development Challenges of Balikpapan City considering IKN Development

Sector	Short-Term 2024-2029	Medium-Term 2030-2034	Long-Term 2035-2045
Economy	• Strength local major industries • Development of Kariangau Industrial Park • Enhance food security with local cooperation • HR development for new industries	• From resource-oriented industries to high value-added industries (new industries) • Down-streaming of petrochemical and oleochemical industries • Increase human resource productivity • Enhance of green investment ecosystem	• Establish the cooperation structure with IKN economic superhub • Establish sustainable inclusive economy • Enhance major local products • Attract competitive tourism contents • R&D for value added industries
Urban Life	• Manage rapid urbanization, increase QOL • Develop road, public transport,	• Rapid urban growth management • Expand road and public transport system, water, drainage, and	• Rapid urban growth management • Expand road, public transport, water, drainage, and wastewater

	water, drainage, and wastewater infrastructure with smart technologies • Informal housing measures • Develop social facilities and services • Expansion of landfill site • Inclusion of diversity, coexistence of traditions, culture, and rural areas	wastewater infrastructure with smart technologies • Informal housing measures • Improve social facilities and services • Promote 3R, improvement of sanitation • Promote inclusive development	infrastructure with smart technologies • Improving social facilities and services • Maximize the waste management sustainability • Promote inclusive development
Environment and Resilience	• Preserve natural environment and bio-diversity, and forest management • Develop climate change/flood/disaster risk reduction(DRR) strategy and measures • Peatland and ex-mining site management	• Preserve natural environment and bio-diversity, forest management • Promote and investing climate change and disaster/flood risk reduction measures • Peatland and ex-mining site management	• Preserving natural environment and bio-diversity, forest management • Promote and invest climate change and disaster/flood risk reduction measures • Peatland and ex-mining site management
Connectivity	• Develop/expand road and public transport network, Sepinggan airport, ports, and regional water infrastructure • Promote renewable energy	• Expand road, public transport, Sepinggan airport, and logistics infrastructures • Expand regional water facilities and system • Expand energy supply and promoting energy transition	• Expand road, public transport, and logistics infrastructures • Expand regional water facilities and system • Expand energy supply and promoting energy transition

Source: Prepared by JICA research team

Table 6-2 Development Challenges of Samarinda City considering IKN Development

Sector	Short-term 2024-2029	Medium-term 2030-2034	Long-term 2035-2045
Economy	• Development of Palaran Industry area • Breaking away from dependence on coal industry • Abandoned coal mine reclamation • HR development for new industries	• Transformation to the green economy • Value added production and value chain enhancement • Low-carbon energy development (Biofuel, Coal gasification) • Eco-tourism development	• Establish the cooperation structure with IKN economic superhub • New economic sectors with innovation • Revitalization of MSME • Sustainable high technology industrial area
Urban life	• Development of Palaran area • Manage rapid urbanization, increase QOL • Develop road, public transport, drainage, and wastewater infra. with smart system • Informal housing measures • Developing social facilities and services • Inclusion of diversity, coexistence of traditions, culture, and rural areas • Improve waste management capacity	• Rapid urban growth management • Expand road and public transport system, water, drainage, and wastewater infrastructure with smart technologies • Informal housing measures • Improve social facilities and services • Promote 3R, improvement of sanitation • Promote inclusive development	• Rapid urban growth management • Expand road, public transport, water, drainage, and wastewater infrastructure with smart technologies • Improving social facilities and services • Maximize the waste management sustainability • Promote inclusive development
Environment & Resilience	• Preserve natural environment and biodiversity, and forest management • Develop climate change/flood/disaster risk reduction (DRR) strategy and measures • Peatland and ex-mining site management	• Preserve natural environment and biodiversity, forest management • Promote and investing climate change and disaster risk reduction measures • Peatland and ex-mining site management	• Preserving natural environment and biodiversity, forest management • Promote and invest climate change and disaster/flood risk reduction measures • Peatland and ex-mining site management
Connectivity	• Develop/expand road and public transport network, APT Pranoto airport, ports, and regional water infrastructure • Promote renewable energy	• Expand road, public transport, APT Pranoto airport, and logistics infrastructures • Expand energy supply and promoting energy transition	• Expand road, public transport, and logistics infrastructures • Expand energy supply and promoting energy transition

Source: Prepared by JICA research team

Along with the development challenges in each city, the wide-regional development challenges related to Tri-City development were extracted as shown in the table below. The wide-area challenges are considered to have limitations for each city's stand-alone approach and require strategic regional collaborative efforts such as Tri-City development.

Table 6-3 Wide-Regional Development Challenges regarding Tri-City Development

Sector	Wide-Regional Development Challenges related to Tri-City Development
Economy	• Regional and strategic industrial development toward formation of Economic Superhub • Planning and developing industrial hubs/centers and form industrial clusters. • Promotion of measures to improve investment environment and attract investment in order to promote industrial development in region. • Establishment of value chain and logistics network to support industrial development • Development of regional critical infrastructure over a wide area (ports and airports, roads, water supply, electricity, etc.) • Promotion of wide-area tourism strategies and development utilizing regional resources • Development of a sustainable green economy and blue economy through interregional collaboration, taking into consideration conservation and utilization of local resources (promotion of sustainable agriculture and fisheries that make maximum use of local resources) • Promotion of sustainable, value-added industrial development, including the energy industry and advanced chemical and pharmaceutical industries • Regional collaboration for human resource development and securing highly skilled human resources (education, schools, R&D, etc.) • Regional collaboration of knowledge, know-how, etc. for strategic development of key industries • Development of local industries, including inter-urban and suburban areas and communities, and improvement and creation of employment opportunities and economic environment
Urban life	• Study of urban development and growth management plans (strategic development area development plans, land use plans/regional spatial plans, etc.) from the perspective of IKN development plans and wide-area, strategic regional development • Promote supplying housing and developing housing environment and social service facilities to meet diverse needs and demands of immigrants and low-income people etc. • Regional collaboration to promote smart city programs for developing comfortable urban environment. • Promotion of wide-area collaboration and initiatives to improve basic infrastructure such as roads, waste disposal, water supply and drainage facilities, etc. within each city and to solve urban issues (sharing of know-how and technology, consolidation and strategic placement of facilities, and coordination of social services to increase efficiency and improve services). • Improving community living conditions in suburban and inter-urban areas • Promoting inclusive urban and regional development • Regional collaboration for preservation, inheritance and promotion of traditional society and culture
Environment & Resilience	• Promote regional collaboration to conserve natural environment and biodiversity, including marine resources and valuable endemic species. • Promote regional collaboration on forest management and conservation. • Promote regional collaborative efforts to utilize ex-coal mining sites and peatlands. • Formation of resilient local communities that can correspond to natural disasters such as climate change and floods, and promotion of efforts through regional collaboration (e.g., flood countermeasures in wide-area river basins, interregional disaster prevention cooperation, etc.)
Connectivity	• Necessity of formulating a wide-area transportation master plan in light of the impacts of IKN development (fostering a common understanding of future population and transportation demand, promoting strategic transportation strategies and transportation infrastructure improvement projects, including a wide-area transportation system) • Necessity of a regional logistics development master plan in light of IKN development (common recognition of future industrial development and logistics demand, and consideration of strategic layout and development plans for logistics hubs (ports, airports, industrial development areas, and so on) as a broad region, etc.) • Strengthening airport base functions for inter-regional exchanges (expansion and improvement of existing airports, etc.) • Study and development of wide-area arterial road network plan. • Study and development of wide-area water supply network plan for wide-area water resource utilization in the Mahakam River Basin, etc. • Promote regional collaborative efforts to promote renewable energy

Source: Prepared by JICA research team

6.4 Related Planning Vision and Development Directions

For reference in the study of the Tri-City Development Concept, visions and development directions of IKN Development Plan, National Long-Term Development Plan 2025-2045 (draft), East Kalimantan Province Regional Long-Term Development Plan 2025-2045 (draft), and Balikpapan City and Samarinda City Regional Long-Term Development Plans 2025-2045 (draft) were summarized as shown in the following table. The Tri-City Development Concept was discussed with reference to these directions and keywords.

Table 6-4 Vision and Development Directions in IKN Development Plan and Related Regional Long-Term Development Plans

Plan	Vision	Development Direction (Mission etc.)	Other Key Words
IKN Development Plan (Law No.3/2022 about National Capital City, Presidential Regulation No.63/ 2022 etc.)	"World City for ALL" • National identity symbol • World's sustainable city • New economic engine for Indonesia	Foundation of Development • National Identity, Smart, Green, Magnificent, and Sustainable, Modern, Effective and Efficient Governance, Driver of Economic Equality • Basic Development Principles • Forest City, Sponge City, Smart City	Economic superhub, livable, innovation, resilience, diversity connectivity, accessible, low carbon emission, biodiversity
Law No.59/2024 about National Long-Term Development Plan 2025-2045	Golden Indonesia 2045: a Unified, Sovereign, Advanced, and Sustainable Republic of Indonesia	8 Missions 1. Social transformation, 2. Economic transformation (innovation, inclusivity, green economy), 3. Governance transformation, 4. Supremacy of law, stability, and leadership, 5. Socio-cultural and ecology resilience, 6. Equitable and fair regional development, 7. Quality and environmentally friendly infrastructures, 8. Sustainable Development	Direction of Nusantara Economic Super Hub Inclusive and sustainable economic development, development of infrastructure (improve connectivity), governance, socio-cultural and ecological resilience
East Kalimantan Province Regional Long-Term Development Plan 2025-2045(draft)	Prosperous East Kalimantan 2045: Archipelago's Economic Superhub; Advanced, Equitable, and Sustainable East Kalimantan	8 Missions 1. Social transformation, 2. Economic transformation, 3. Governance transformation, 4. Strong security, substantial democracy, and economic stability, 5. Socio-cultural and ecological resilience based on local wisdom, 6. Fair and equitable development, 7. Quality and environmentally friendly facilities and infrastructure, 8. Development synergy and sustainability	Inclusive, equitable distribution, collaboration, innovation, smart technology, diversity, biodiversity
Balikpapan City Regional Long-Term Development Plan 2025-2045(draft)	Comfortable Balikpapan for All 2045: Advanced and Sustainable Industry and Services Hub with the Spirit of Madinatul Iman	8 Missions 1. Social transformation, 2. Economic transformation by creative and inclusive economy, 3. Governance transformation, 4. Urban conduciveness and substantial democracy, 5. Socio-cultural and ecological resilient environment, 6. Modern, integrated, and equitable urban development, 7. Integrated and environmentally friendly facilities and infrastructure, 8. Harmonious development	Economic superhub, no one left behind, innovative, balanced dev., diversity, biodiversity.
Samarinda City Regional Long-Term Development Plan 2025-2045(draft)	Samarinda City as the center of an advanced and sustainable trade and service-based civilization	5 Missions 1. Social transformation, 2. Economic transformation based on regional leading sectors, 3. Good governance, 4. Healthy and good environment, 5. Strengthening the capacity of strategical and basic infrastructures	Green economy, developed along with IKN's development, Collaboration, Enhancing investment, Sustainable environment, balance between urban development and environmental preservation

Source: Prepared by JICA research team

6.5 Tri-City Development Concept (Draft)

Based on these development challenges and directions, the draft vision for Tri-City development is proposed as **"Establishing a Greater Tri-City Development Ecosystem – Livable, Equitable, Resilient, and Sustainable Tri-City Development Ecosystem"**. In addition, the following four strategic pillars were proposed as concepts to support the vision.

Strategic Pillar 1: Create Green and Blue Economy, Sustainable, Innovative and Creative, Industrial Cluster

- Combine and increase existing strengths and new opportunities in Tri-City and surrounding regencies.

Strategic Pillar 2: Provide Livable and Inclusive Urban Services through Green, Cultured, and Sustainable Development

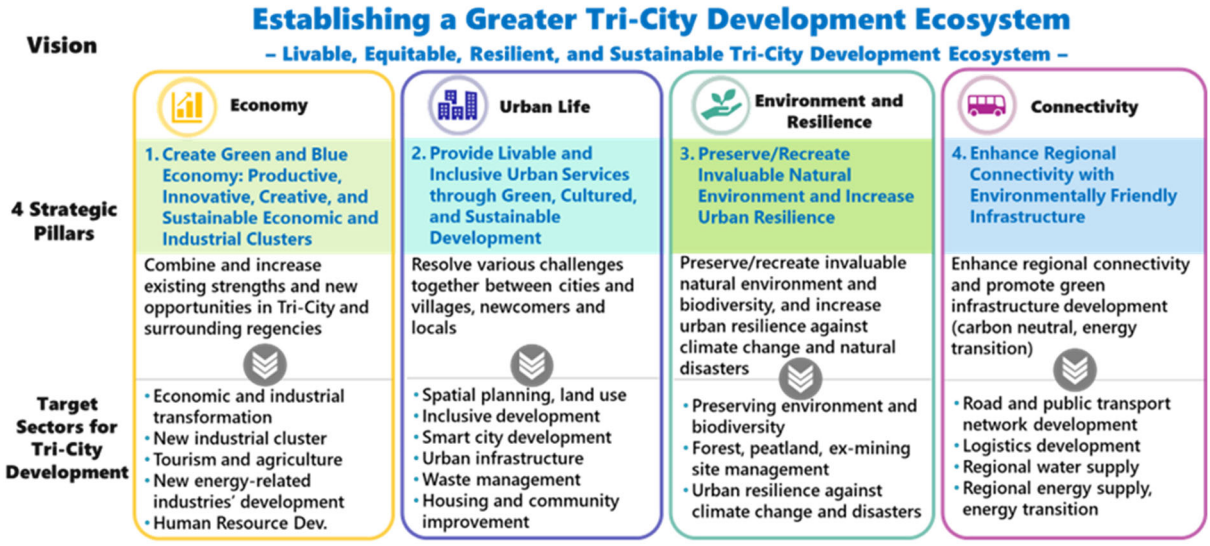
- Resolve various challenges together between cities and villages, newcomers and locals.

Strategic Pillar 3: Preserve/Recreate Invaluable Natural Environment and Increase Urban Resilience

- Preserve/recreate invaluable natural environment and biodiversity and increase urban resilience against climate change and natural disasters.

Strategic Pillar 4: Enhance Regional Connectivity with Environmentally Friendly Infrastructure

- Enhance regional connectivity and promote green infrastructure development (carbon neutral, energy transition)



Source: Prepared by JICA research team

Figure 6-3 Tri-City Development Concept: draft vision and four strategic pillars

6.6 Direction of Tri-City Development (image)

6.6.1 Direction of Collaboration and Role Sharing among Three Cities

It will not be easy for the new capital alone to adequately provide a wide range of urban functions and social services, such as housing supply and living environment, cultural and leisure facilities, lodging and MICE functions, education, and medical care, etc., to residents and visitors on a long-term basis. Therefore, it will be important that the development of the New Capital City is promoted in strategic coordination with Balikpapan City and Samarinda City to form an integrated hub area as a Tri-City and grow in a mutually complementary manner. Since Balikpapan City and Samarinda City respectively have their own airports and ports, they are expected to play the role of gateway for the area surrounding the New Capital City. As Balikpapan City has industrial areas and Samarinda City has an administrative hub, strategic distribution and development of urban functions and improvement of living and economic environment for the residents within the Tri-City area are expected by enhancing those existing urban resources and characteristics and considering the synergistic effects of the development of IKN. In terms of human resource development, education, and research and development, the three cities are expected to play complementary roles.

In Tri-City, IKN is expected to take a leadership role and strengthen coordination between the central government and Tri-City collaboration projects. It would be crucial to promote the development of IKN in an integrated manner, including details of the socio-economic aspects and land use not only within IKN area but also in the surrounding areas such as Balikpapan City and Samarinda City, in order to strengthen the functions of the New Capital City. By collaborating with Balikpapan City and Samarinda City and clarifying their respective roles and responsibilities, three cities will be able to envision their future in light of the New Capital City development and promote effective development projects. It is also expected that the three cities will be able to cooperate and collaborate to provide better solutions to the urban issues that each city faces, such as transportation functions, water supply systems, and waste management systems.

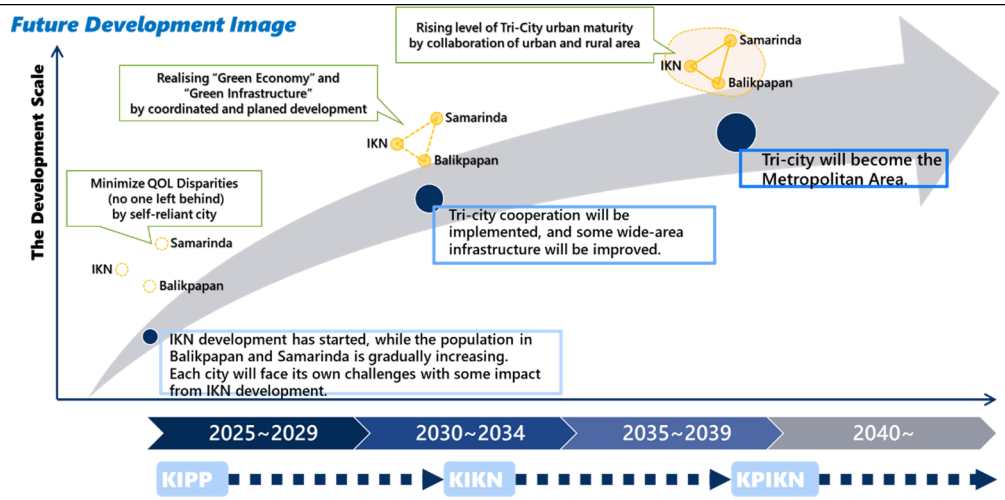
6.6.2 Direction of Tri-City Development (image)

Regarding the roadmap image for promoting collaboration among the three cities, the cities can be organically linked to form an aerial metropolitan area were organized by promoting efforts in the three cities.

Short-term: Phase in each city will become self-reliant and solve issues in each city with the goal of correcting the QOL gap and creating a city where no one is left behind

Mid-term: Phase in strengthening inter-city collaboration through the development of green infrastructure that physically connects the three cities and the formation of a green economy.

Long-term: Phase in forming a mature city that includes both urban and rural areas as an area encompassing the three cities.



Source: Prepared by JICA research team

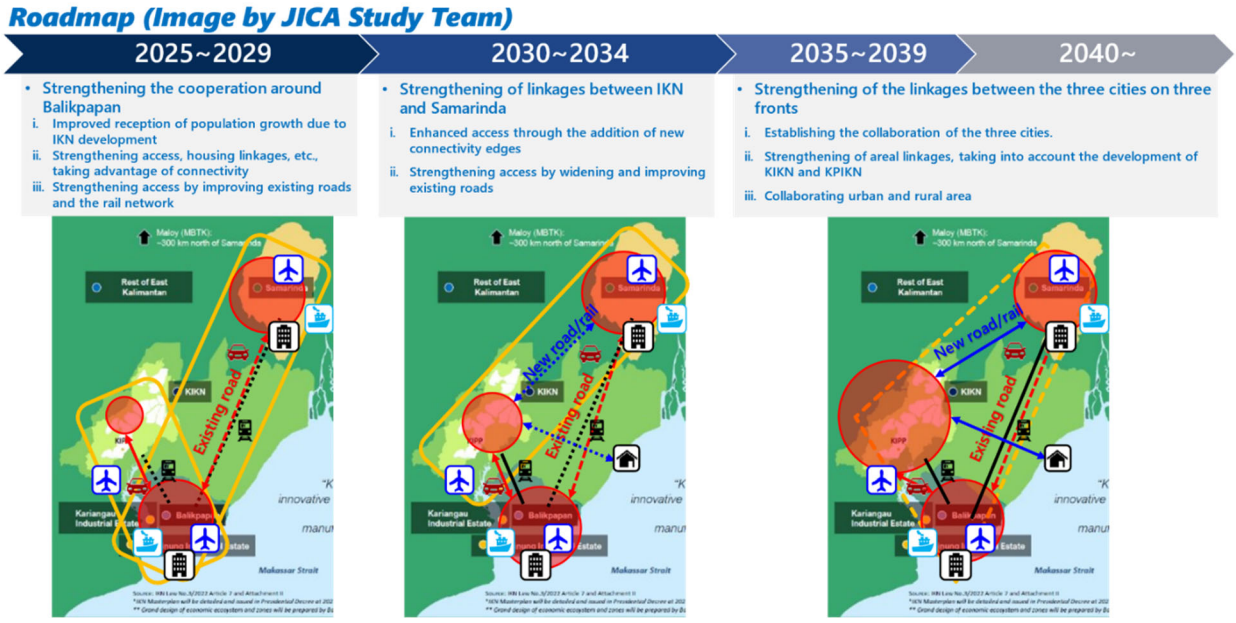
Figure 6-4 Roadmap image of Tri-City development

An image of the phased approach in the three-city cooperation was organized.

Initial development of the New Capital City: to strengthen the function of connecting KIPP and Balikpapan City, which are close to each other in distance, and to promote development to address population growth and infrastructure deficiencies.

Medium-term: To expand the three cities by physically connecting Balikpapan City and Samarinda City by rail, etc., and to strengthen ties between the three cities.

Long-term: Develop IKN's later development and enhance its ability to connect KIPP and Samarinda City to form an area with areal spread.

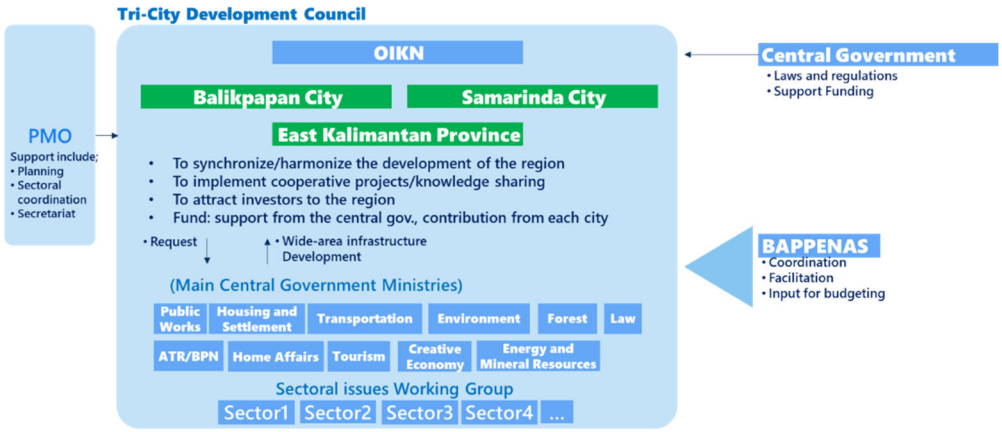


Source: Prepared by JICA research team

Figure 6-5 Image of phased approach to Tri-City development

6.7 Consideration of Implementation Structure (Draft)

In order to realize Tri-City Development, it is necessary to establish an implementation structure that will be responsible for regional administration. The implementation structure here means the establishment of an organization to coordinate planning, allocate budgets, determine priority collaborative projects, and ensure smooth implementation from a comprehensive perspective that is stipulated by law, government regulations, and/or presidential regulation. The implementation structure is expected to be formed mainly by the three cities (OIKN, Balikpapan City, and Samarinda City), however it is considered important to collaborate with government agencies at the national and provincial levels, and to flexibly accept participation by neighboring cities as activities expand. In order to consider the implementation structure, issues from existing regional administrative organizations in Indonesia, as well as case studies from Japan were identified. In addition, the characteristics of each case were compared and proposals for the realization of the Tri-City development. It should be noted that the structure and functions of the OIKN are under consideration and will change in the future.



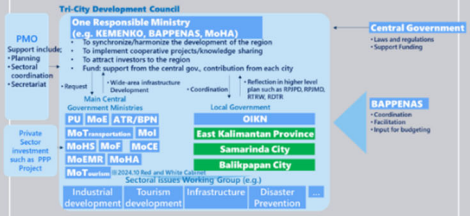
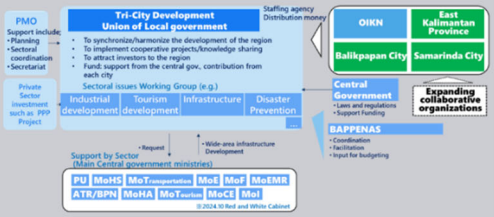
*Ministry name is reflected the reorganization by the new cabinet (October 2024)

Source: Prepared by JICA research team

Figure 6-6 Basic pattern of implementation system

The Ministry of Coordination in Indonesia and the draft implementation system with reference to examples in Japan were compared and discussed in terms of the required legal system and flexibility including the surrounding areas, and the characteristics of each were summarized.

Table 6-5 Comparison of proposed implementation systems

	Option 1：Responsible Ministry	Option 2：Union
Diagram		
Advantage	• Likely to be accepted in Indonesia because of an example of JABODETABEK • It may be easier to obtain subsidies from central government with the ministry leading. • Structure can be established by ministerial regulation.	• As an independent and self-reliant organization, possible to coordinate plans from a neutral standpoints • Flexibility is available to organize implementation structure against sectoral issues depending on the time and scale of projects.
Dis-advantage	✓ Possibility of limited fields for adjustment ✓ Uncertainty for who is responsibility for what.	✓ Ensuring authority for implementations ✓ Decentralized organization that differs from Indonesian government's policy direction ✓ Presidential Decree would be required and may become difficult to change.

Source: Prepared by JICA research team

6.8 Consideration of specific initiatives for Tri-City collaboration (draft)

Based on the study of the concept, a long list (draft) of Tri-City collaborative projects was considered. The long list included different types of collaborative projects (project that should be collaborated for total optimization, projects that should be implemented by establishing a common implementation system, projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, wide-area infrastructure development projects to strengthen connectivity among the three cities). Note that while the drafts were reviewed and proposed in this study, they are just proposals from the JICA Study Team, and the details of more concrete projects need to be considered separately.

Table 6-6 Long List of Tri-City Collaboration Project (draft)

Strategic Pillars	Tri-City Development (tentative name) Collaborative Project
1. Creating a Green and Blue Economy: Sustainable, innovative, and creative industrial clusters • Tourism development • New Industry Cluster Development • Industrial conversion • Development of new energy-related industries	1. Tri-City Tourism Industry Revitalization Support 2. Tri-City New Industry Creation / Human Resource Development Program 3. Project for SME Development 4. Tri-City Integrated Pharmaceutical Industry and Advanced Chemical Industry Development Support Project 5. Tri-City Education Industry Promotion/Cooperative Program Construction Support Project 6. Tri-City Sustainable Agriculture Development Project 7. Energy Transition Promotion Project (CCS/CCUS Facility Development) 8. Tri-City Hydrogen / Natural Gas Utilization Plan Formulation Survey 9. Hydrogen Power Generation and Hydrogen Supply Chain Construction Project 10. Tri-City Low Carbon Fuel Energy Industry Development Support Project 11. Tri-City Sustainable Blue Economy Project
2. Promote development with equal opportunity, diversity, and inclusion • Urban management • Smart city • Waste Management • Urban Infrastructure	1. Tri-City Urban Management Capacity Improvement Project 2. Tri-City Smart City Platform Development Support 3. Tri-City Urban Water Supply Environment Improvement Project 4. Tri-City Urban Drainage Environment Improvement Project 5. Tri-City Urban Sewage Environment Improvement Project 6. Tri-City Road Environment Improvement Project 7. Tri-City Waste Management Capacity Improvement Project through Wide-area Collaboration 8. Tri-City Slum Community Improvement Project 9. Tri-City Social and Culture Inclusion Project
3. Conservation and regeneration of precious natural environment and urban resilience	1. Biodiversity Management Project 2. Forest Management, Ex-Coal Mining Site Redevelopment, and Peatland Management Project 3. Climate Resilient Tri-City Development Project
4. Strengthen regional connectivity through environmentally friendly infrastructure • Enhanced Connectivity • Public transportation, logistics, etc. • Local water supply • Energy supply, energy conversion	**1. Tri-City Transportation Master Plan** 2. Tri-City Comprehensive Logistics Master plan **3. Balikpapan Sepinggan Airport Expansion Development and Operation Project** **4. Balikpapan Sepinggan Airport Expansion Development and Operation Project** **5. Balikpapan-New Capital Connecting Railway Project** 6. Samarinda City-Airport and Samarinda City-IKN Railway/LRT Development Project 7. Samarinda-IKN Second Toll Road Project **8. Balikpapan-IKN Bypass Road Development Project** **9. Regional Water Supply Infrastructure Development Project** 10. New Industrial Port Development Project 11. Regional Power Supply Network Strengthening Project (High-voltage Transmission Line Development between Kayan and IKN) 12. Power Transmission and Distribution Master Plan for 100% Renewable Energy Power Supply in the New Capital 13. Project to Improve Maintenance and Management Capacity in the New Capital Power Transmission and Distribution System 14. Infrastructure Development Support Project in IKN Next Development Area

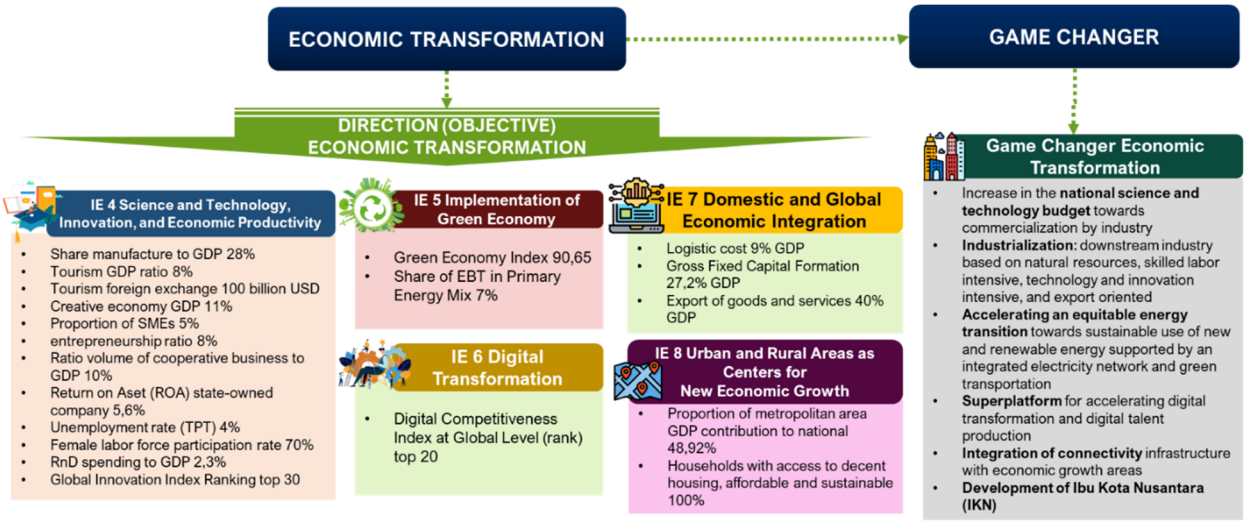
*Bold underlines indicate projects for which related feasibility studies and plans have been initiated and implemented (As of October 2024).

Source: Prepared by JICA research team

CHAPTER7 Recommendations on East Kalimantan Economic Transformation Master Plan

7.1 Outline of the Planning Process for the Master Plan for the Economic Transformation of East Kalimantan Province

The national policy aims to achieve economic transformation through the involvement of the whole society, towards a more productive economy, promotion of scientific and technological innovation, and maintaining the carrying capacity of natural resources and the environment, and the potential of East Kalimantan Province is considered to lie in its abundant natural resources and the economic and technological rippled effects from the relocation of the new capital.



Source: BAPPENAS

Figure 7-1 Drivers of Economic Transformation

7.2 Recommendations for the East Kalimantan Provincial Economic Master Plan

As recommendations for the East Kalimantan Provincial Economic Master Plan, inter-regional industrial linkages and presented case studies of measures taken by various countries for industrial transformation are analyzed.

7.2.1 Interregional Input-Output Analysis

According to analysis, PUPR expenditures related to IKN in East Kalimantan Province are expected to generate economic rippled effects (including direct effects) of approximately 43.9 Trillion IDR nationwide in Indonesia for expenditures of approximately 26.6 Trillion IDR in 2023, and approximately 58.4 Trillion IDR nationwide in Indonesia for expenditures of approximately 35.5 Trillion IDR in 2024 (including direct effect). Not including direct effects in East Kalimantan Province, about 38% of the rippled effects will be generated outside of Java and Bali, of which about 19.5% will be enjoyed in Eastern Indonesia including east parts of Sulawesi and West Nusatunggara.

The approximately 364.8 trillion IDR of IKN-related investment (private and public) in East

Kalimantan Province until 2045 is expected to generate approximately 558.5 trillion IDR of economic rippled effects (including direct effects) throughout Indonesia. In terms of the sectors and scale of expected IKN-related investment, the rippled effect to be enjoyed by Java and Bali will be larger than in other regions, with the rippled effect to Eastern Indonesia in particular accounting for only about 18.0% of the total.

This is due to the fact that a certain amount of investment is made in the electricity and gas, education, and transportation and warehousing sectors, which have little economic linkage with the current industrial structure.

In addition to future efforts to change the industrial structure, it is necessary to promote increased investment in the agriculture, forestry, fisheries, and processing industries, which have larger rippled effects, in the development of IKN.

However, as the results of the analysis which is based on the current industrial structure and supply chain show, approximately 70% of the rippled effect is concentrated in large cities such as Jakarta and Surabaya, and in Java, where there are industrial zones, and the remaining 30% is shared by other regions. Therefore, if the IKN development is carried out with the current industrial structure, while all regions will be able to receive a certain level of economic benefits, the rich regions will become richer, and the contribution to the elimination of economic regional disparities is expected to be limited.

Based on the analysis result, recommendations for the EKETMP were compiled below.

1) EKETMP should promote investment in industries that have a greater rippled effect on areas other than East Kalimantan Province: agriculture, forestry, fisheries, manufacturing, etc.
2) EKETMP should aim to promote a “review of the supply chain” that includes diversification and localization of raw materials and intermediate goods procurement, in cooperation with the state-owned companies that currently drive the industry (such as PT. Pertamina (Persero), the state-owned oil company and its group companies, which have bases in East Kalimantan Province) and major private companies, and to aim for an industrial structure that will have a production-inducing effect throughout Indonesia.

7.2.2 Case Study on Measures for Industrial Transformation

In order to identify the measures that should be taken by the government to shift from a natural energy resource-driven industry to a low-carbon energy and renewable energy transformation industry structure, we examined the past coal industry facilities in Japan, China and Germany and their effects on the coal industry. Recommendations for the energy transformation that Tri-City faces are provided.

Table 7-1 Lessons Learned from Coal Industry Policies in Japan, China, and Germany

Country	Lessons to learn for Industry Transformation	
	New industry	Old Industry
Japan(1960s)	Support oil refinery industrial for priority approval for complex refineries and oil development companies by **the Petroleum Industry Act.**	Rationalized the coal mining companies and supported to close the mines financially, and secured employees' social welfare **by Coal Industry Rationalization Law.**
China	Based on **3060 Double Carbon** support green low carbon energy innovation, production, storage, logistics and control fossil energy consumption by **10 Action Initiatives.**	In 2010s, rationalized the un-efficient coal mines by the notification. In 2010s, reducing coal consumption gradually by **Notification.**
Germany	**Renewable Energy Act 2021** support renewable energy industries providing the better market condition. **National Hydrogen Strategy 2020** provides funds, market establishment, and research.	**Federal Climate Protection Act** supported to close coal mines considering the regional economy and workers reemployment. The government transferred coal regions into the new investment areas with renewable energy.

Source: Prepared by JICA Study Team

CHAPTER8 Recommendations on Balikpapan City's Urban Development

8.1 Issues and Challenges in Balikpapan City's Urban Development

Issues and challenges related to urban development in Balikpapan City were summarized in four areas based on a review of related plans, a field survey, and an exchange of opinions with the local government metropolitan government.

Table 8-1 Issues and challenges related to urban development in Balikpapan City

Main Sector	Contents of Challenges
Industrial Development	• The locally owned industries are limited to small-scale food processing and fisheries, and the full economic benefits of the locally excavated natural resources are not reaching the communities. • The Kariangau Industrial Area has been developed around the private-sector port facilities, with generally poor road access except along the main roads and poor infrastructure. As for logistics, although port and airport facilities have been developed, domestic and international transportation capacity and establishment of cold chain are remaining challenges. • With the partial opening of the New Capital, general tourists have started visiting the region in addition to the existing domestic and international stakeholders of construction projects in the New Capital City. There is an increasing demand for hotel accommodation, transportation, and MICE functions in the tourism industry urgently. • Human resource development is required for new industries such as renewable energy-related manufacturing, pharmaceuticals, and advanced chemicals.
Urban Management	• The current spatial plan arguably assumes the automobile-dependent urban sprawl in all directions of the city suburb. • In order to ensure the improved quality of life in the suburban expansion areas, it is crucial to align infrastructure development with the pace of development and to create public funding sources through appropriate development taxation. • Low density and low occupancy rates in urban centers due to the cultural tendency to favor low-rise housing over high-rises and the spreading horizontally across the undulating hilly terrain.
Environment and Disaster Prevention	• The waste treatment function is approaching the end of its life span. Although landfill mining is reportedly planned to be implemented, there are challenges in terms of funding and difficulties in obtaining permits. • Although cross-regional raw water supply is required, securing the drinking water supply function is an issue based on coordination with the supply to the IKN area. In addition, phased and systematic maintenance, management, and renovation will be required to address water loss due to aging pipelines, etc. • The city's hard infrastructure is vulnerable to both external and internal floods, and there are significant issues with lack of development regulations to restrict building in high-risk areas.
Connectivity	• The priority agenda for the sustainable regional development shall be to integrate urban development and transportation network development through measures such as the development of intra- and inter-city transportation networks (nodes and corridors), to form a multimodal mobility environment, and the promotion of corridor development including walking and cycling, for the sustainable development of the region. • A steady population growth is expected, and further traffic demand are anticipated due to the New Capital development project, raising concerns about worsening traffic congestion. • Current form of public transportation services is woefully insufficient to meet the demand. Strategic development of public transportation networks and systems is required. • Various expansion projects are in planning for Kariangau Port, Semayang Port, and Sepinggan Airport. From the perspective of promoting regional industrial development and optimizing the flows of people and goods, it is necessary to accurately formulate and designate the roles and functions of these ports and airports as per the passenger and logistics demand in light of the New Capital development context.

Source: Prepared by JICA Study Team

8.2 Recommendations and Advises for Urban Development

The contents that should be addressed to address the issues were compiled as advice and recommendations.

Table 8-2 Recommendations on urban development in Balikpapan City

Main Sector	Recommendation
Industrial Development	**1. <u>Transformation of Existing Industries along IKN's Industrial Planning</u>** • Transforming industries such as eco/medical tourism, advanced petrochemicals, low-oxygen energy, etc. **2. <u>New Industries Based on IKN's Industrial Planning</u>** • Considering new industries in line with the industrial plan of the New Capital, such as EV motorcycle and solar panel manufacturing, integrated pharmaceutical industry, sustainable agriculture, etc. **3. <u>Promotion of SME</u>** • Supporting small and medium-sized manufacturing and service industries that can grow together by establishing new industrial value chains from the current food processing and seafood resource processing based on retail sales
Urban Management	**1. <u>Mapping of the Underutilized Real Estates and Redevelopment Strategy</u>** • Promoting the redevelopment of unused land and vacant properties within Balikpapan City to foster healthy economic activities and create residential hubs aims to form a compact city by increasing density in the center and curbing suburban expansion. • Comprehensive measures such as reforming property and inheritance tax systems to promote effective use of real estate, enhancing financial tools like housing loans that individuals can use, and enriching public facilities and services in the city center will stimulate private capital's willingness to invest in real estate. • This will lead to achieving higher density in the center of Balikpapan City.
Environment and Disaster Prevention	**1. <u>Efforts to extend the life of waste treatment facilities.</u>** • In order to extend the life of existing final disposal facilities, not only minimizing waste, but also improving efficiency in all aspects, including financial, technical and human resources, through collaboration with the waste incineration facility at IKN. **2. <u>Challenges to optimize and diversify tap water supply functions.</u>** • Considering the establishment of a cross-regional drinking water supply system to secure and optimize raw water supply. • Considering asset management such as life extension and appropriate reconstruction of existing facilities. **3. <u>Strategy for High-Risk Areas of Flooding and Landslide</u>** • Changing the progression of azimuthal uncontrolled sprawl, update mapping of flood and sediment disaster risk areas as a basis for development regulations, and considering and promoting comprehensive urban disaster prevention measures, including reform of enforcement procedures for development regulations and development plans for disaster prevention infrastructure. • Consider establishing a research institute, public relations and dissemination system that can disseminate local efforts and practical knowledge for the development planning of disaster prevention infrastructure.
Connectivity	**1. <u>Integrated Transport and Urban Development Planning</u>** • Based on an accurate understanding of the impact of the New Capital City development and future traffic demand, a vision of the future city to be aimed for will be drawn up, and an urban development plan and integrated traffic system will be strategically developed. **2. <u>Intra-City Road Network Development</u>** • The city's future urban development, urban structure plans and an integrated road transportation network will be strategically developed to respond to the increase in traffic demand caused by population growth and the development of the New Capital City. **3. <u>Development of Public Transport and Promotion of TOD</u>** • Considering a strategic transportation system to promote TOD in the area surrounding the new station and to create a convenient transportation environment through the development of railroads. **4. <u>Port Capacity Expansion and Strengthening of Logistics Network</u>** • Strategically considering the development of logistics hubs and the establishment of a logistics network from a wide-area perspective, such as Tri-City. **5. <u>Capacity Expansion and Efficient Operation of Sepinggan Airport</u>** • Considering strategic role-sharing and coordination measures with VVIP airport in the New Capital City and APT Pranoto airport in Samarinda City.

Source: Prepared by JICA Study Team

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Abbreviations

Abbreviation	Official Name（Indonesian / English）	English
3R	Reduce, Reuse, Recycle	
5G	5th Generation	
ADB	Asia Development Bank	
ADHB	Angka Dasar Hasil Bruto	Gross Output Base Rate
ADHK	Angka Dasar Hasil Keluaran	Output Output Base Rate
ADP	Aset Daerah Provinsi Nusa Tenggara	Regional Assets of Nusa Tenggara Province
AEC	ASEAN Economic Community	
AHH	Angka Harapan Hidup	Life Expectancy Rate
AIIB	Asian Infrastructure Investment Bank	
AMDAL	Analisis Mengenai Dampak Lingkungan	Environmental Impact Analysis
AP	Availability Payment	
APBD	Anggaran Pendapatan dan Belanja Daerah	Regional Revenue and Expenditure Budget
APBN	Anggaran Pendapatan dan Belanja Negara	State Budget
ASDP	Angkutan Sungai Danau dan Penyeberangan	River, Lake and Ferry Transportation
ASEAN	Association of Southeast Asian Nations	
ASN	Aparatur Sipil Negara	State Civil Apparatus
ATR	Kementerian Agraria dan Tata Ruang	Ministry of Agrarian Affairs and Spatial Planning
ATR/BPN	Kementerian Agraria dan Tata Ruang / Badan Pertanahan Nasional	Ministry of Agrarian Affairs and Spatial Planning / National Land Agency
B3	Bahan Berbahaya dan Beracun	Hazardous and Toxic Materials
BAPPENAS	Kementerian Perencanaan Pembangunan Nasional/Badan Perencanaan Pembangunan Nasional	Ministry of National Development Planning/National Development Planning Agency
BBS	PT. BITA BINA SEMESTA	
BJP	Bukan Jaringan Perpipaan	Not a pipeline network
BKPM	Badan Kordinasi Penanaman Modal	Investment Coordinating Board
BLK	Balai Latihan Kerja	Vocational Training Center
BMN/BMD	BMN：Barang Milik Negara BMD：Barang Milik Daerah	BMN：State Property BMD：Local Property
BNPB	Badan Nasional Penanggulangan Bencana	National Disaster Management Agency
BOD	Biochemical Oxygen Demand	
BPHTB	Bea Perolehan Hak Atas Tanah dan Bangunan	Fees on Acquisition of Land and Building Rights
BPJS	Badan Penyelenggara Jaminan Sosial	Social Security Organizing Agency
BPN	Badan Pertanahan Nasional	National Land Agency
BPPT	Badan Pengkajian dan Penerapan Teknologi	Agency for the Assessment and Application of Technology
BPS	Badan Pusat Statistik	Central Bureau of Statistics
BRT	Bus Rapid Transit	
BUMD	Badan Usaha Milik Daerah	Regionally Owned Enterprises
CAT	Cekungan Air Tanah	Groundwater Basin
CCFG-BRN	CCFG-Risjadson Brunsfield Nusantara	
CMEA	Coordinating Ministry of Economic Affairs	
CMMA	Coordinating Ministry for Maritime and Investment Affairs	
COD	Chemical Oxygen Demand	
CSR	Corporate Social Responsibility	
CWC	Center with Economic Consideration	
DAS	Data Acquisition System	
DDDTLH	Daya Dukung dan Daya Tampung Lingkungan Hidup	Environmental Support and Capacity
DDPI	Dewan Daerah Perubahan Iklim	Regional Council on Climate Change
DELH	Dokumen Evaluasi Lingkungan Hidup	Environmental Evaluation Document
DF/R	Draft Final Report	

Abbreviation	Official Name（Indonesian / English）	English
DO	Dissolved Oxygen	
DOFD	Desentralisasi dan Otonomi Fiskal Daerah	Decentralization and Regional Fiscal Autonomy
DPLH	Dokumen Pengelolaan Lingkungan Hidup	Environmental Management Document
DPP	Destinasi Pariwisata Provinsi	Provincial Tourism Destinations
DPPT	Dokumen Pelaksanaan Pembebasan Tanah	Land Acquisition Implementation Document
EHRA	Environmental Health Risk Assessment	
EIA	Environmental Impact Assessment	
EV	Electric Vehicle	
EWS	Early Warning System	
F/R	Final Report	
FS	Feasibility Study	
G7	Group of Seven	
GCA	Government Contracting Agency	
GESI	Gender Equality and Social Inclusion	
GHG	Green House Gas	
GIS	Geographic Information System	
GRDP	Gross Regional Domestic Product	
HAM	Hak Asasi Manusia	Human Rights
HAT	Hak Atas Tanah	Land Rights
HDI	Human Development Index	
HGB	Hak Guna Bangunan	Building Rights Title
HGU	Hak Guna Usaha	Cultivation Rights
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome	
HLS	Health Literacy Scale	
HPH	Hak Pengusahaan Hutan	Forest Concession Rights
HPL	Hak Pakai Lahan	Land Use Rights
HR	Human Resource	
HTI	Hutan Tanaman Industri	Industrial Forest Plantation
IARKI	Ikatan Ahli Rancang Kota Indonesia	Indonesian Urban Design Association
IC/R	Inception Report	Inception Report
ICT	Information and Communication Technology	
IDG	Indeks Daya Guna Genderx	Gender Usefulness Indexx
IDM	Indeks Desa Membangun	Village Development Index
IDPs	Internally Displaced Persons	
IDR	Indonesian Rupiah	
IIGF	Indonesia Infrastructure Guarantee Fund	
IKA	Indeks Kualitas Air	Water Quality Index
IKAL	Indeks Kualitas Air Laut	Seawater Quality Index
IKL	Indeks Kualitas Lahan	Land Quality Index
IKLH	Indeks Kualitas Lingkungan Hidup	Environmental Quality Index
IKN	Ibu Kota Negara	National Capital
IKU	Indeks Kualitas Udara	Air Quality Index
INA	Indonesia Investment Authority	
IP4T	Inovasi Pelayanan Publik Berbasis Teknologi Informasi dan Komunikasi	Public Service Innovation Based on Information and Communication Technology
IPA	Instalasi Pengolahan Air dan Fasilitas Pengolahan Air	Water Treatment Plant and Water Treatment Facilities
IPAL	Instalasi Pengolahan Air Limbah	Wastewater Treatment Plant
IPALD-T	Instalasi Pengolahan Air Limbah Domestik Terpusat	Centralized Domestic Wastewater Treatment Plant
IPG	Indeks Pembangunan Gender	Gender Development Index
IPLT	Instalasi Pengolahan Lumpur Tinja	Fecal Sludge Treatment Plant
IPM	Indeks Pembangunan Manusia	Human Development Index
IPPF	Indigenous Peoples Planning Framework	

Abbreviation	Official Name（Indonesian / English）	English
IRBI	Indeks Risiko Bencana Indonesia	Indonesia Disaster Risk Index
IT/R	Interim Report	
ITK	Institut Teknologi Kalimantan	Kalimantan Institute of Technology
ITP	Indeks Tingkat Pencemaran	Pollution Level Index
IUCN	International Union for Conservation of Nature	
IUP	Izin Usaha Pertambangan	Mining Business License
JICA	Japan International Cooperation Agency	
JO	Joint Operation	
JP	Jaringan Perpipaan	Piping Network
K-IKN	Kawasan - Ibu Kota Negara	Region - National Capital
K/L	Kementerian dan Lembaga	Ministries and Agencies
KADIN	Kamar Dagang Dan Undustri	Chamber of Commerce and Industry
KBEP	Kawasan Bernilai Ekologi dan Potensial	Ecological and Potential Value Areas
KDHTK	Kawasan Dukungan Hutan Tanaman Kelapa	Coconut Plantation Forest Support Area
KEN	KOMITE Energi Nasional	National Energy Committee
KI	Kawasan Industri	Industrial Estate
KIL	Komunikasi Interaksi Lingkungan	Communication Environmental Interaction
KIN	Kebijakan Industri Nasional	National Industrial Policy
KIPI	PT Kalimantan Industrial Park Indonesia	
KIPP	Kawasan Inti Pusat Pemerintahan	Government Center Core Area
KKT	Kawasan Kepabeanan Terpadu	Integrated Customs Area
KLHS	Kajian Lingkungan Hidup Strategis	Strategic Environmental Assessment
KP-IKN	Kawasan Pengembangan Ibu Kota Nusantara	Nusantara Capital City Development Area
KP2B	Kawasan Pertanian Pangan Berkelanjutan	Coal Mining Contract of Work
KPBU	Kerjasama Pemerintah dan Badan Usaha	Government and Enterprise Cooperation
KPDBU	Kredit Program Dana Bergulir Usaha	Business Revolving Fund Program Credit
KPI	Kawasan Pusat Industri	Industrial Center Area
KPI	Key Performance Indicator	
KPPIP	Komite Percepatan Penyediaan Infrastruktur Prioritas	Committee for the Acceleration of Priority Infrastructure Delivery
KPPP	Kawasan Pariwisata Prioritas Provinsi	Provincial Priority Tourism Areas
KRB	Kawasan Rawan Bencana	Disaster Prone Areas
KSK	Kawasan Strategis Kota	City Strategic Area
KSM	Kelompok Swadaya Masyarakat	Self-help Group
KSN	Kawasan Strategis Nasional	National Strategic Area
KSP	Kawasan Strategis Provinsi	Provincial Strategic Area
KSPP	Kawasan Strategis Pariwisata Provinsi	Provincial Tourism Strategic Area
KSSP	Kawasan Sentra Produksi Pangan	Food Production Center Area
LEAP	Low Emissions Analysis Platform	
LIPI	Lembaga Ilmu Pengetahuan Indonesia	Indonesian Institute of Sciences
LKPP	Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah	Government Procurement Policy Agency
LOI	Letter of Intent	
LPE	Laju Pertumbuhan Ekonomi	Economic Growth Rate
LPG	Liquefied Petroleum Gas	
LPPD	Laporan Penyelenggaraan Pemerintahan Daerah	Local Government Implementation Report
MHA	Masyarakat Hukum Adat	Land Acquisition Implementation Document
MICE	Meetings, Incentives, Conferences, Exhibitions	
MOF	Ministry of Finance	
MOHA	Ministry of Home Affairs	
MOT	Ministry of Transportation	
MOU	Memorandum of Understanding	
MP	Master Plan	

Abbreviation	Official Name（Indonesian / English）	English
MPLS	Multi-Protocol Label Switching	
MSMEs	Micro, Small and Medium Enterprises	
MSS	Minimum Service Standards	
NDA	Non-Disclosure Agreement	
NDC	Nationally Determined Contribution	
NGO	Non-governmental Organization	
NKRI	Negara kesatuan Republik Indonesia	The unitary state of the Republic of Indonesia
NKT	Nilai Konservasi Tertinggi	Highest Conservation Value
NRW	Non-Revenue Water	
NTFP	Non-Timber Forest Products	
OI	Organisasi Internasional	International Organization
OIKN	Otorita Ibu Kota Nusantara	Archipelago Capital Authority
OPD	Organisasi Perangkat Daerah	Regional Device Organization
OSS	Online Single Submission	
PAD	Pendapatan Asli Daerah	Local Revenue
PAUD	Pendidikan Anak Usia Dini	Early Childhood Education
PBPU	Program Bantuan Pembiayaan Perumahan Umum	Public Housing Financing Assistance Program
PDAMs	Perusahaan Daerah Air Minum	Regional Drinking Water Company
PDF	Program Dana Bergulir	Revolving Fund Program
PDRB	Realisasi Definitif Regional Bruto	Gross Regional Definitive Realization
PDU	Pusat Daur Ulang	Recycling Center
PERUSDA	Perusahaan Daerah	Regional Business Company
PGA	Peak Ground Acceleration	
PJPK	Penanggung Jawab Proyek Kerja Sama	Person in Charge of Cooperation Project
PKN	Pusat Kegiatan Nasional	National Activity Center
PKP2B	Perjanjian Karya Pengusahaan Pertambangan Batubara	Coal Mining Concession Work Agreement
PKW	Pusat Kegiatan Wilayah	Regional Activity Center
PKWp	Pusat Kegiatan Wilayah yang diusulkan Provinsi	Provincial proposed Regional Activity Center
PL	Pelayanan Lingkungan	Environmental Services
PLN	Perusahaan Listrik Negara	State Electricity Company
PLTS	Pembangkit Listrik Tenaga Surya	Solar Power Plant
PMA	Penanaman Modal Asing	Foreign Investment
PMDN	Penanaman Modal Dalam Negeri	Domestic Investment
PMK	Peraturan Menteri Keuangan	Minister of Finance Regulation
PMKS	Perlindungan Masyarakat Kota Susah	Hard City Community Protection
PMMA	Penanaman Modal Melalui Penanaman Modal Asing	Investment through Foreign Investment
PNA	Perwakilan Negara Asing	Foreign Country Representative
PP	Peraturan President	Government Regulation
PPK	Pusat Pelayanan Kawasan	Village Service Center
PPKS	Penerima Pangan Keluarga Sejahtera	Family Welfare Food Recipients
PPKM	Pemberlakuan Pembatasan Kegiatan Masyarakat	Enforcement of Restrictions on Community Activities
PPLH	Pusat Penelitian Lingkungan Hidup	Environmental Research Center
PPP	Public Private Partnership	Public Private Partnership
PPU	Penajam Paser Utara	Penajam Paser Utara
PSU	Public Service Unit	
PT	Perseroan Terbatas	Limited Company
PU	Pekerjaan Umum	Public Works
PUG	Pengarusutamaan gender	Gender mainstreaming
PUPR	Kementerian Pekerjaan Umum dan Perumahan Rakyat	Ministry of Public Works and Housing
PWCS	Pneumatic Waste Conveyance System	

Abbreviation	Official Name（Indonesian / English）	English
RAD GRK	Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca	
RDMP	Refinery Development Master Plan	
RDTR	Rencana Detail Tata Ruang	Detailed Spatial Plan
RIL-C	Reduce Impact Logging–Carbon	
RIPIN	Rencana Induk Pengembangan Industri Nasional	National Industrial Development Master Plan
RISPALD	Rencana induk Sistem Pengolahan Air Limbah Domestik	Domestic Wastewater Treatment System master plan
RISPAM	Rencana Induk Sistem Penyediaan Air Minum	Water Supply System Master Plan
RKPD	Rencana Kerja Pemerintah Daerah	Local Government Work Plan
RLS	Rata-rata Lama Sekolah	Average Years of Schooling
RPJM	Rencana Pembangunan Jangka Menengah	Medium Term Development Plan
RPJMD	Rencana Pembangunan Jangka Menengah Daerah	Regional Medium Term Development Plan
RPJMN	Rencana Pembangunan Jangka Menengah Nasional	National Medium-Term Development Plan
RPJPD	Rencana Pembangunan Jangka Panjang Daerah	Regional Long-Term Development Plan
RPJPN	Rencana Pembangunan Jangka Panjang Nasional	National Long-Term Development Plan
RPJWP	Rencana Pembangunan Jangka Waktu Panjang	Long-term Development Plan
RPTKA	Rencana Pengunaan Tenaga Kerja Asing	Plan for the Employment of Foreign Workers
RSUD	Rumah Sakit Umum Daerah	Regional General Hospital
RT	Rukun Tetangga	Neighborhood
RTH	Ruang Terbuka Hijau	Green Open Space
RTLH	Rumah Tidak Layak Huni	Uninhabitable House
RTR	Rencana Tata Ruang	Spatial Plan
RTRW	Rencana Tata Ruang Wilayah	Regional Spatial Plan
RTRWN	Rencana Tata Ruang Wilayah Nasional	National Spatial Plan
RUED	Rencana Umum Energi Daerah	Regional General Energy Plan
RUEN	Rencana Umum Energi Nasional	National General Energy Plan
Renja PD	Rencana Kerja Pemerintah Daerah	Local Government Work Plan
Renstra-PD	Rencana Strategis Pemerintah Daerah	Local Government Strategic Plan
Renstra-SKPD	Satuan Kerja Perangkat Daerah	Regional Work Unit
SAIDI	System Average Interruption Duration Index	
SAIFI	System Average Interruption Frequency Index	
SARA	Suku, Agama, Ras, Antar-Golongan	Tribe, Religion, Race, Inter-Group
SBSN	Surat Berharga Syariah Negara	State Sharia Securities
SD	Sekolah Dasar	Elementary School
SDA	Sumber Daya Alam	Natural Resources
SDGs	Sustainable Development Goals	
SDI	Satu Data Indonesia	Indonesia Data System
SDM	Sumber Daya Manusia	Human Resources
SEA	Strategic Environmental Assessment	
SEZ	Special Economic Zone	
SIKM	Sistem Informasi Keuangan Mikro	Microfinance Information System
SKB	Sekolah Keterampilan Belajar	School Learning Skills
SKM	Sungai Karan Mums	Karan River Mums
SMP	Sekolah Menengah Pertama	Junior High School
SOE	State-Owned Enterprises	
SPA	Stasiun Pengumpulan dan Pengangkutan	Waste Collection and Transportation Station

Abbreviation	Official Name（Indonesian / English）	English
	Sampah	
SPAL	Sistem Pengolahan Air Limbah	Wastewater Treatment System
SPALD	Sistem Pengeloaan Air Limbah Domestik	Domestic Wastewater Management System
SPALD-S	Sistem Pengeloaan Air Limbah Domestik Setempat	Local Domestic Wastewater Management System
SPALD-T	Sistem Pengeloaan Air Limbah Domestik Terpusat	Centralized Domestic Wastewater Management System
SPAM	Sistem Penyediaan Air Minum	Water Supply System
SPBE	Sistem Pemerintahan Berbasis Elektronik	Electronic-based Government System
SPM	Standar Pelayanan Minimal	Minimum Service Standards
SR	Sambungan Rumah	Home Connection
STP	Sewage Treatment Plant	
SWOT	Strengths, Weaknesses, Opportunities, Threats	
Sub PPK	Sub Pusat Pelayanan Kelurahan	Sub-Village Service Center
TK	Taman Kanak-Kanak	Kindergarten
TKPKD	Tim Koordinasi Pengurangan Kemiskinan Daerah	Regional Poverty Reduction Coordination Team
TNI	Tentara Nasional Indonesia	Indonesian National Army
TOR	Terms of Reference	
TPS	Tempat Pengumpulan Sementara	Temporary Collection Point
TPS3R	Tempat Pengumpulan, Pengolahan, dan Pemilahan Sampah	Waste collection, processing, and sorting stations
TPST	Integrasi IPAL dengan Pengolahan Sampah	Integration of WWTP with Waste Management
TPT	Tempat Pembuangan Terpadu	Integrated Disposal Site
TRAP	Tampung, Resapkan, Alirkan, Pelihara	Contain, Infiltrate, Flow, Maintain
UAE	United Arab Emirates	
UGC	Underground Cable	
UK	United Kingdom of Great Britain and Northern Ireland	
UKL-UPL	Upaya Pengelolaan Lingkungan dan Upaya Pemantauan Lingkungan	Environmental Management Efforts and Environmental Monitoring Efforts
UMK	Upah Minimum Kabupaten/Kota	District/City Minimum Wage
UNFCCC	United Nations Framework Convention on Climate Change	
UR	Urban Renaissance Agency	
URLCC	Ultra-Reliable and Low Latency Communications	
USA	United States of America	
USDA	United States Department of Agriculture	
UUD 1945	Undang Undang Dasar 1945	1945 Constitution
VGF	Viability Gap Funding	
VIP	Very Important Person	
VVIP	Very Very Important Person	
WAN	Wide Area Network	
WB	World Bank	
WIP	Wilayah Inti Pertumbuhan Kaltim	East Kalimantan's Core Growth Region
WP	Wilayah Pemerintahan	Government Area
WS	Wilayah Sungai	River Region
WTP	Water Treatment Plant	
WWTP	Waste Water Treatment Plant	
WtE	Waste to Energy	

CHAPTER1 Introduction

1.1 Study Background

The Capital Relocation Initiative, announced by President Joko Widodo in August 2019 at the National Parliament, is in the first phase – relocation of some government functions to "Government Core Area" by August 2024 – with the Ministry of Public Works and Housing relocating basic infrastructure in the Government Core Area (KIPP). On the other hand, "Engineering Survey for New Capital City Development in Indonesia" conducted by JICA ("JICA's Study") has identified the importance of regional collaboration based on the "Tri-City Development" concept between the New Capital City, Balikpapan City, the economic city of East Kalimantan Province, and Samarinda City, the capital of East Kalimantan Province. JICA's Study, however, suggests that such consistency and synergies with development plans of the surrounding cities and regions have not yet been considered. It also points out the following problems with the Capital Relocation MP (2020): insufficient environmental considerations, discrepancies between construction implementation and planning, and inconsistencies with the development plans.

The New Capital Area is currently planned to be developed with a focus on administrative functions. To complement urban functions of the New Capital City and contribute to the realization of a future Tri-City, it is essential to plan and implement a regional development plan that includes the surrounding cities of the New Capital City. Therefore, it is necessary to estimate and analyze the impact of the New Capital City Development on the surrounding areas from the perspective of regional development in East Kalimantan Province, and to organize and study a plan to achieve synergistic effects in East Kalimantan Province, including the New Capital City. Approximately 200,000 workers from outside of Kalimantan and approximately 60,000 people from government ministries and agencies are expected to move to KIPP for the development of the New Capital City. This will affect Balikpapan City with rapid population increase and resulting impact on transportation functions. In addition, there are concerns about the occurrence of the sprawl phenomenon. The unique topography of Balikpapan City, with its steep ups and downs, is like that of the proposed New Capital City. Therefore, the problems that Balikpapan City faces now and onwards, as well as their solutions, can be applied to the urban development of the New Capital City in the future.

1.2 Purpose of Study

In this study, regional development challenges in East Kalimantan Province including the New Capital City (IKN) and inputs into the East Kalimantan Province Regional Medium-Term Development Plan 2024-2028 are analyzed. In addition, information collection and analysis on regional development and collaboration in the Tri-City (New Capital City (IKN), Samarinda City, and Balikpapan City), proposal for regional development concept on future Tri-City development, proposal for future cooperation on the New Capital City Development through public-private partnerships (PPP), and possibility of attracting investment related to the capital relocation are studied, considering that the New Capital City is going to be fully relocated by 2045. Furthermore, based on the land use plan, urban infrastructure plan, and development plan of Balikpapan City, the project will consider advice and recommendations for the urban development of Balikpapan City to be used as a case study for solving priority issues to be addressed at the city level and developing the New Capital City in order to realize

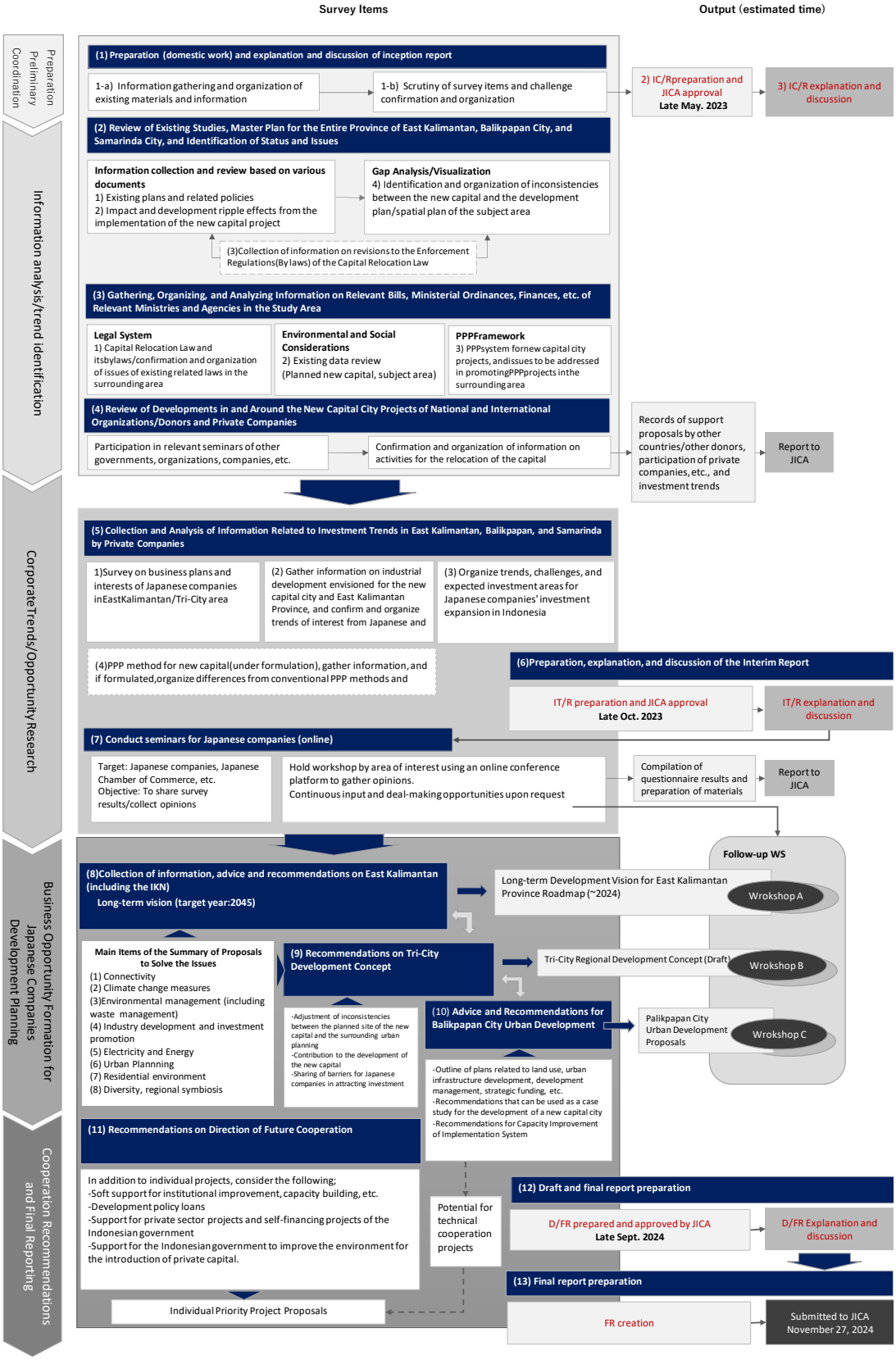
the proposed elements in the Tri-City Concept on a broad scale.

1.3 Study Period

June 2023 - February 2025 (21 months in total)

1.4 Study Flow

The flow for this study is shown in the following diagram.

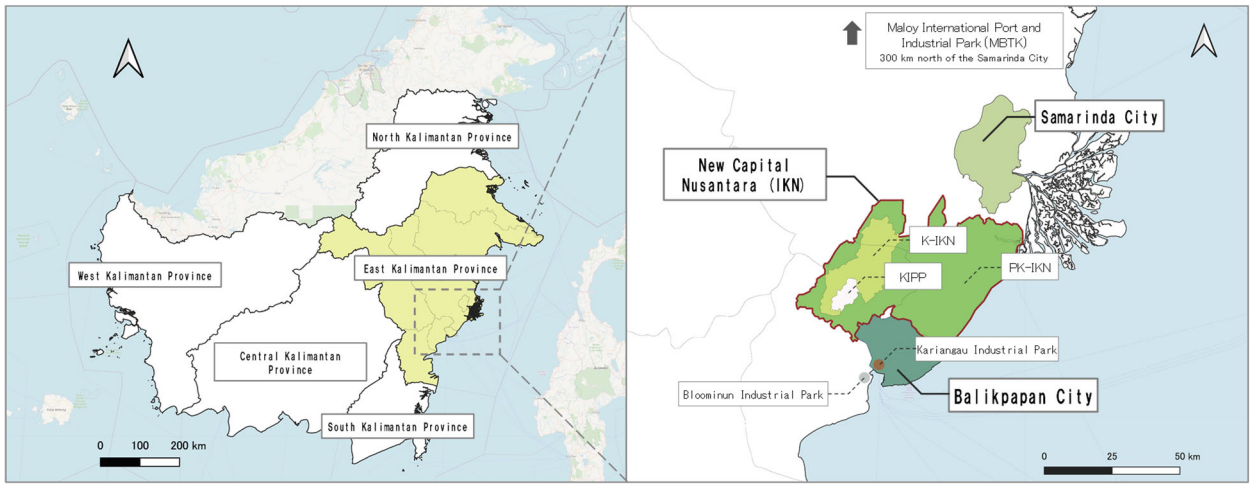


Source: JICA Study Team

Figure 1-1 Study Flow

1.5 Study Area

- East Kalimantan Province, Indonesia
- New Capital City Development Area (IKN), Balikpapan City, Samarinda City



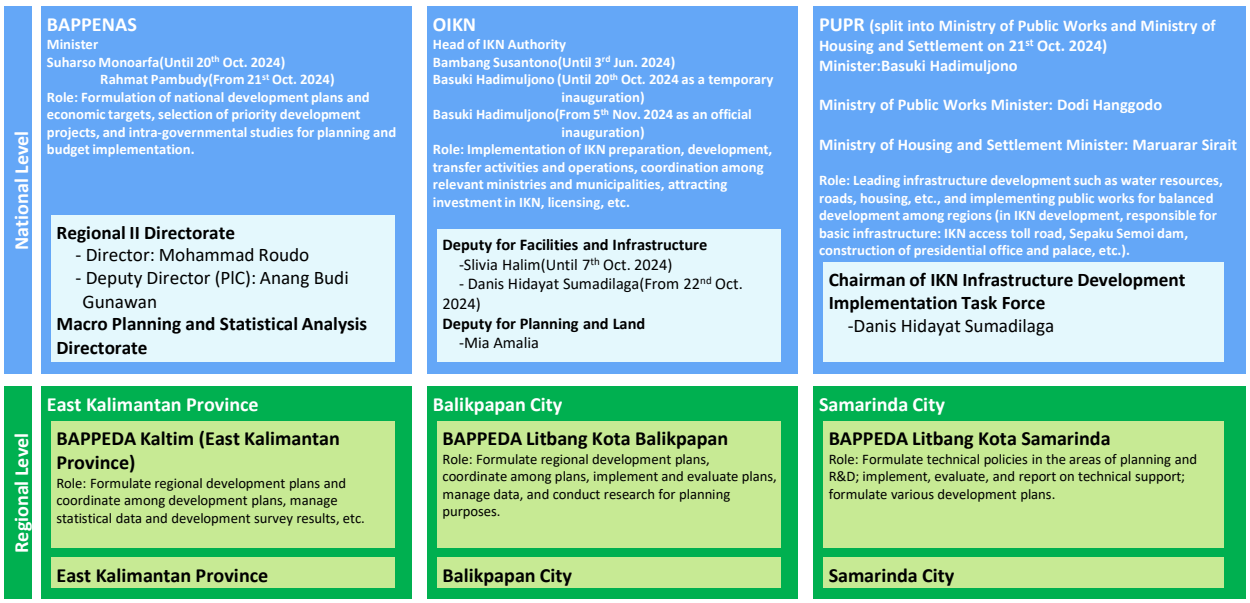
Source: JICA Study Team from Open Street Map

Figure 1-2 Study Area (East Kalimantan Province, IKN, Balikpapan City, and Samarinda City)

1.6 Relevant Organizations in Indonesia

The following list indicates the Indonesian organizations involved in this study, and the following figure shows the basic functions of each organization.

- National level: BAPPENAS (National Development Planning Agency), OIKN (Nusantara New Capital Agency), PUPR (Ministry of Public Works and Housing), etc.
- Regional level: East Kalimantan Provincial Government, Balikpapan City Government, Samarinda City Government, etc.



Source: JICA Study Team

Figure 1-3 Basic Functions of Relevant Organizations

Of the organizations above, BAPPENAS is responsible for setting various macroeconomic targets and formulating national development plans, as well as coordinating among ministries and agencies for their implementation. For the IKN development, BAPPENAS is also in charge of coordination with OIKN and PUPR, which is in charge of basic infrastructure development, and other related ministries and municipalities after the formulation of the master plan of IKN development. BAPPENAS is the Counter Part (C/P) Agency for this study with a view to support the collaboration among OIKN, East Kalimantan Province, Balikpapan City, and Samarinda City.

CHAPTER2 Review of Existing Studies, Master Plans for the Province of East Kalimantan Province, Balikpapan City, and Samarinda City, and Identification of Status and Issues

2.1 Review of Policies and Master Plans for the Development of the New Capital City

2.1.1 Legal System in Indonesia

The legal system in Indonesia is presented in the Law of the Republic Indonesia No.12/2011 regarding the Enactment of Laws and Regulations, including the purpose and overall structure of the law. The following order, as indicated in Article 7.1, is considered as the hierarchy of the Laws and Regulations.

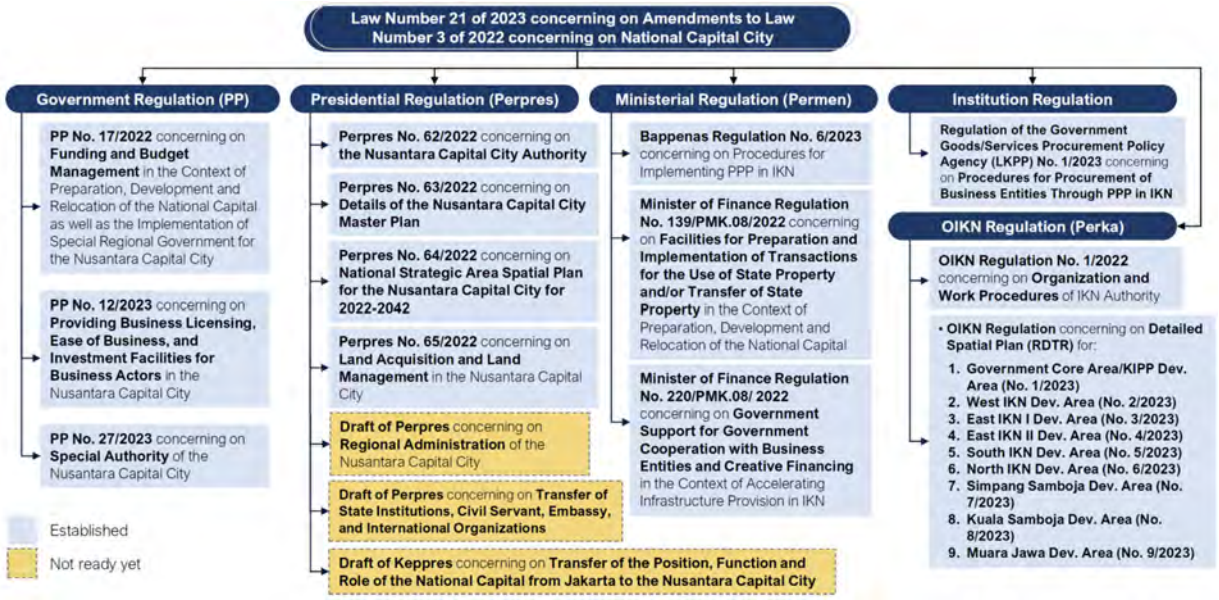
1. Constitution of the Republic of Indonesia (UUD: Undang Undang Dasar) of 1945
2. National Council Resolution
3. Law (UU: Undang Undang)/Administrative Decree (PERPU: Peraturan Pemerintah Pengganti Undang-Undang)
4. Government Regulation (PP: Peraturan Pemerintah)
5. Presidential Regulation (Perpres: Peraturan Presiden)
6. Provincial Regulation (Peraturan Daerah Provinsi)
7. City / Regency Regional Regulation (Peraturan Daerah Kota / Kabupaten)

Article 8.2 states that the rules indicated above are binding, including all those ordered by or established under authority of a higher rule.

In addition, Article 8.1 states that there are also laws and regulations not enumerated above, such as “regulations to be made by the people's councils and people's representative assemblies, provincial representative assemblies, Supreme Court, Constitutional Court, Board of Audit, Judicial Council, Bank Indonesia, ministers, heads of equivalent agencies, institutions and commissions established by law or by the government under the mandate of law, provincial People's Representative Assembly, Governor, Provincial/Municipal People's Representative Assembly, Provincial Mayor, Village Mayor, or equivalent.”

2.1.2 Policy

The laws and regulations related to the development of the New Capital City have been sequentially enforced in accordance with the system shown in the figure below, based on the "Law of the Republic of Indonesia No.3/2022 regarding the National Capital City", which came into effect in 2022. The following chart shows the system of the law. As of December 2024, three Government Regulations (PP), four Presidential Regulations (Perpres), three Ministerial Regulations (Permen), one Institutional Regulation (Permen), and OIKN Regulations regarding the Detailed Spatial Plan and organization of each district in IKN have been enacted. The three Presidential Regulations (Perpres) are now under consideration for the actual relocation of the capital.



Source: BAPPENAS, December 2024

Figure 2-1 System of Various Regulations for the Development of IKN

After the fourth public hearing held on 15 September 2023, amendments to this law were signed and approved by the President on 31 October 2023 as "Law of the Republic of Indonesia No.21 /2023 on Amendments to Law of the Republic of Indonesia No.3/2022 on the National Capital City".

The amendment of the Capital Relocation Law was made with the realization of the preamble of the Republic of Indonesia's Constitution No.45 which states "protection of the Indonesian people and land, promotion of welfare, livelihood and education, and public order based on peace and social justice". The country also considered the achievement of "development through human resource development and science and technology, sustainable economic development, equitable development, and land stabilization" as stated in Indonesia's Vision 2045. It also calls for the New Capital City to become a global city, a national symbol of Indonesia, and to be the center of economic development and a reference for the development of other regions, especially eastern Indonesia, by developing the New Capital City under a high level of governance.

Efforts to accelerate and enhance development in the New Capital City will require extensive infrastructure development and public service delivery. Further economic development is expected through the enhancement of the ecological, environmental, and social quality of the

area.

OIKN and BAPPENAS have identified three objectives of this amendment: first, to make the legal system more agile and effective for OIKN and its various stakeholders; second, to empower OIKN as a local administrative agency to facilitate the implementation of project licensing and investment incentives; and third, to improve the business ecosystem related to the development of the New Capital City to ensure sustainability and maximize investment impact.

The main points of this amendment are as following ten articles, or 38.6% of the total 44 articles, including existing Capital Relocation Act articles and newly added articles, are subject to the amendment.

Table 2-1 Major Revisions

	Point	Changes and Additions
1	Regional Boundary (Change) Article 6 (1) - (3) Appendix 1	The area of the New Capital Area (IKN) was changed as follows Land: 256,142 ha → 252,660 ha Sea area: 68,189 ha → 69,769 ha
2	Spatial arrangement (addition) Article 15 (5) - (11)	Provides for the acquisition, transfer, and organization of land so that land use in IKN region is in line with IKN Spatial Plan. Provides for review of IKN National Strategic Regional Spatial Plan (RTR KSN) and/or IKN Detailed Spatial Plan (RDTR)
3	Land Use Article 15A (addition) 32 (Change) Article 36A (4) (addition) Article 16A (1) - (3) (addition)	After OIKN becomes a special regional government (Pemdasus), ADP (OIKN managed assets) will be converted to BMO (OIKN umbrella organization) assets, allowing OIKN to control investment and land use in IKN. Recognize community landownership status based on local realities. Provide a legal basis for granting land use rights on state-owned land in IKN. Allows for termination of land use rights. All grants of land use rights, including at the time of renewal, shall be based on the valuation criteria at each stage of grant, extension of rights and renewal of rights.
4	Finance & Budget Article 23a (addition) Article 23b (addition) Article 24 A (1) (2) b and Article 2 (1) a (addition) Article 24 (7) (addition) Article 25 (1)-(10) (addition) *Budget-related articles: Article 23, Article 24, Article 25, Article 26, Article 36, Article 42, Paragraph 5, Article 2	To accelerate the implementation of the 4P (Four Processes: Preparation, Development, Transfer, and Governance) activities, the budget and financial management of OIKN will be made available for its own funding in addition to the budget from the national government, while keeping in mind existing regulations. Financial Management a. OIKN, as a ministry-level agency prior to its transition to a special local government, has the status of a budget/goods user. b. After the transition to a special local government, OIKN will have the status of Special Local Government Financial Manager (APBIKN Budget and Goods Manager). The transfer of status (other than financial management) from OIKN's ministry-level agencies to special local governments is regulated by the Presidential Regulation on the Transfer of the Capital (Article 4.2 of the IKN Law). When OIKN assumes financial management of the Special Local Government, the APBN (national budget) allocation, which had previously been through BA126, will be transferred to a direct allocation to IKN. As a provincial-level institution, OIKN can take a stake in a special SOE in which the head of OIKN is a shareholder, and after obtaining special local government status, OIKN can establish an umbrella company and make investments. After transitioning to a special local government, OIKN can raise funds independently through the following channels a. Loans will be obtained from the central government through the Minister of Finance after consideration by Secretary BAPPENAS. b. Loans from other local governments c. Loans from banks and other financial institutions d. Loans from financial institutions other than banks e. Foreign loans through the Minister of Finance
5	Special Approval Article 6 (6) (addition) Article 12 (Amendment)	OIKN has full (but not absolute) authority at the provincial level and over special regional governments. Establish NSPK (Normative Standards Procedures and Criteria) for 4P activities (Preparation, Development, Transfer, and Governance as a Special Local Government).

		OIKN has the authority to grant investment licenses, business incentives, and special facilities as
6	Appointment of high-level leadership positions Article 42 (4) (Addition)	The Head of OIKN may appoint the first high-level cadre from the non-service personnel.
7	Housing Development*. Article 36 B (Addition) *Balanced housing development: Policy requiring housing developers to develop houses or residential areas with a balanced (1:2:3) mix of high-end, middle-class, and simple housing.	Exemptions from laws and regulations in housing development: 1. Housing developers who have not implemented "balanced housing development" outside of IKN will be able to implement suburban housing development within IKN according to the IKN Spatial Plan for a certain period. 2. OIKN defines a form of "balanced housing development". To promote housing development in IKN, The Head of OIKN may propose to the Minister of Public Works and National Housing the specification of a balanced housing conversion fund. Incentives may be offered to business entities that implement balanced housing developments in IKN.
8	Sustainability Assurance Article 24 (3) (Revision)	Ensure that IKN's 3P (Preparation, Development, and Transfer) activities are designated as National Priority Projects for a minimum of 10 years.
9	Monitoring & Review Article 42 (7) (addition)	Supervision, monitoring, and review of the activities of OIKN of the Special Regional Governments will be carried out by the Indonesian House of Representatives (DPR).

Source: Prepared by JICA Study Team based on Public Hearing on September 15, 2023, and other sources.

2.1.3 Master plan

In addition to the regulations mentioned above, the documents pertaining to IKN's master plan are as follows.

Table 2-2 List of Relevant Plans at the National Level

Publisher	Year	Name of Material	Summary
BAPPENAS	2020	Master Plan Final Report: Preparation of the National Capital Master Plan and Development Strategy (National Capital Master Plan / MP IKN)	A regional planning level MP for KP-IKN and K-IKN, which presents the development vision and policies, results of studies and analyses based on natural conditions, and development plans for infrastructure development.
BAPPENAS	2020	Strategic Environmental Assessment (KHLS) for IKN Masterplan	A MP presenting land use and infrastructure plans for KIPP, including IKN's regional plans, studies and analyses based on natural conditions within KIPP, KIPP's urban design, design guidelines for urban development, landscape and architecture, and concept plans for each district within KIPP.
OIKN	2022	Integrated IKN Development Implementation Information Guidelines 2022	Detailed spatial plan of the IKN central core area.
OIKN	2023	Blueprint of the Nusantara Smart City	A document covering the concept, framework, and potential implementation of technologies for the Nusantara Smart City.

Source: Prepared by JICA Study Team

(1) Master Plan Final Report: Preparation of the National Capital Master Plan and Development Strategy (National Capital Master Plan / MP IKN)

Issued in 2020 by BAPPENAS, this document is the masterplan of the new national capital of Indonesia which covers the existing situation and development plan of the New Capital City Nusantara, in various sectors. The structure of the document is shown in the figure below.

Chapter 1: Introduction

1.1 National Capital
1.2 Policy Direction
1.3 Vision: World-Class City for All
1.4 Approaches
1.5 Roles and Responsibilities
Chapter 2: Key Performance Indicators
2.1 Urgency of Work Management Framework
2.2 Implementation Method of Work Management Framework
2.3 Development of Appropriate KPIs
2.4 Development of the Value Approach
2.5 Derivation of KPIs to the Next Level
Chapter 3: Facts and Analysis
3.1 Scope
3.2 Economy
3.3 Social
3.4 Land Consolidation
3.5 Environment
3.6 Disaster Risk Assessment
3.7 Mobility
3.8 Infrastructure – Energy
3.9 Infrastructure – Water
3.10 Infrastructure – Waste
3.11 Infrastructure – Information, Communication, and Technology (ICT)
3.12 Defense and Security
3.13 Spatial Management
3.14 Integrated Analysis
Chapter 4: Conceptual Plans
4.1 Introduction
4.2 Economic Development Strategy: IKN Economic Superhub
4.3 Social
4.4 Land Consolidation
4.5 Environment
4.6 Disaster Risk Assessment
4.7 Mobility
4.8 Infrastructure – Energy
4.9 Infrastructure – Water
4.10 Infrastructure – Waste
4.11 Infrastructure – Information, Communication, and Technology
4.12 Defense and Security
4.13 Smart City
4.14 Spatial Management
Chapter 5: Spatial Plan
5.1 KP-IKN (*Kawasan Pengembangan IKN/* Development Region of IKN)
5.2 K-IKN (*Kawasan IKN/* Region of IKN)
5.3 KIPP (*Kawasan Inti Pusat Pemerintahan/* Central Core Government Area)
Chapter 6: Direction of Spatial Utilization
6.1 Spatial Utilization Direction for KP-IKN
6.2 Spatial Utilization Direction for K-IKN
6.3 Spatial Utilization Direction for KIPP
6.4 Direction of Building and Environmental Planning
Chapter 7: Spatial Utilization Direction
7.1 Phasing
Chapter 8: Implementation Strategies
8.1 General Overview of Roadmap and Development Milestones of IKN
8.2 CAPEX and OPEX Projection
8.3 Initial Financing Strategies
8.4 Important Enabling Factors and Follow-ups
8.5 Risks Management

8.6 Communication Strategy

Source: Masterplan Final Report Preparation of a Master Plan and Strategy for the Development of the National Capital (National Capital Masterplan / MP IKN)

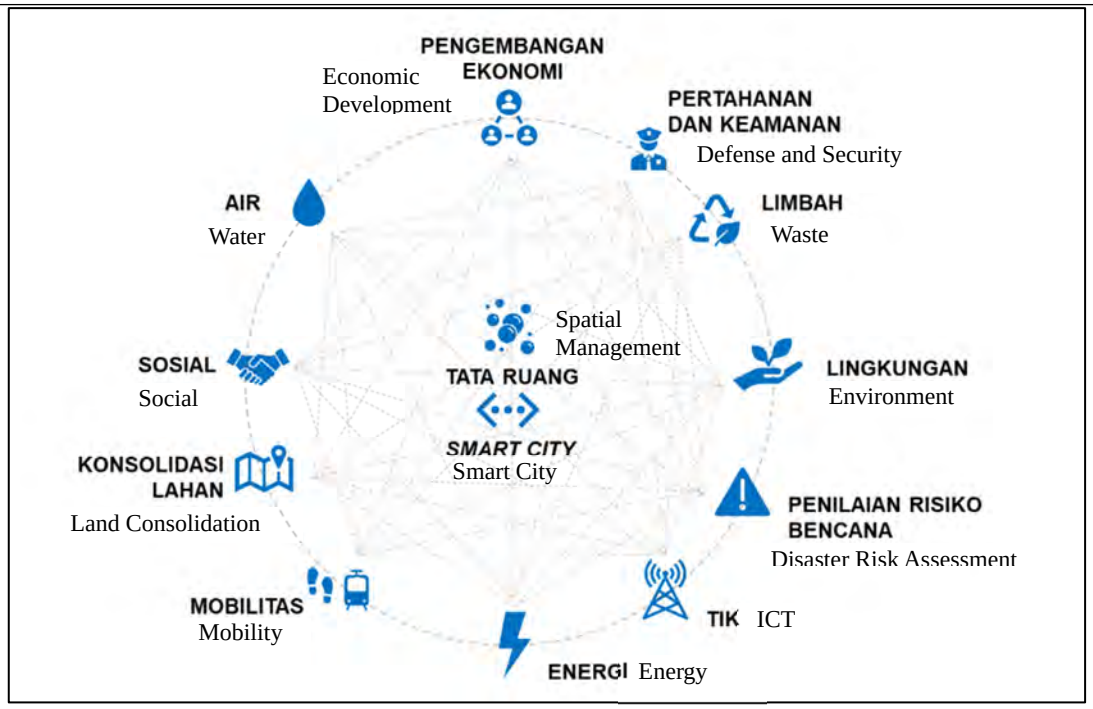
Figure 2-2 Structure of the Master Plan Final Report: Preparation of a Master Plan and Strategy for the Development of the National Capital (National Capital Master Plan / MP IKN)

Chapter 1 serves as an introduction on the Capital City of Indonesia. It covers motivations of the capital relocation including reduction of burdens in Jakarta, establishment of the *"country's own capital"* (as Jakarta is the legacy from Dutch colonization), and shift from Java-centered development orientation to *Indonesia-centered* development orientation. The New Capital City will be developed by considering the following documents for its policy direction; (1) Vision of Indonesia in 2045; (2) Sustainable Development Goals; (3) Vision of the President of Indonesia; and (4) National Middle-Term Development Plan. It was determined that the New Capital City Nusantara shall promote the vision of "World-class city for all" focusing on development and service for the people, place, and planet.

Chapter 2 introduces the utilization of key performance indicators (KPI) to indicate the progress and performance of IKN/ Nusantara from the stage of planning, development, implementation, and operation. From the comprehensive and structured method on deciding the KPI, it was decided that there are 8 main themes of IKN's KPIs; (1) harmony with nature; (2) *Bhinneka Tunggal Ika* (unity in diversity); (3) connected, active, and easy access; (4) net zero emissions; (5) circular and resilience; (6) safe and accessible; (7) convenience and efficiency through technology; and (8) economic opportunity for all. Each of the main KPI is described by 3 detailed KPIs.

Chapter 3 provides information regarding facts and analyses used as bases on developing the IKN Masterplan. Facts are served for 12 aspects (economy, social, land consolidation, environment, disaster risk assessment, mobility, energy, water, waste, ICT, defense and security, and spatial management) in the scope area of IKN development and analyzed on their implication on the masterplan. Further integrated analysis also carried out particularly in developable areas, IKN's development region's SWOT analysis, Tri-City concept, and spatial management programs.

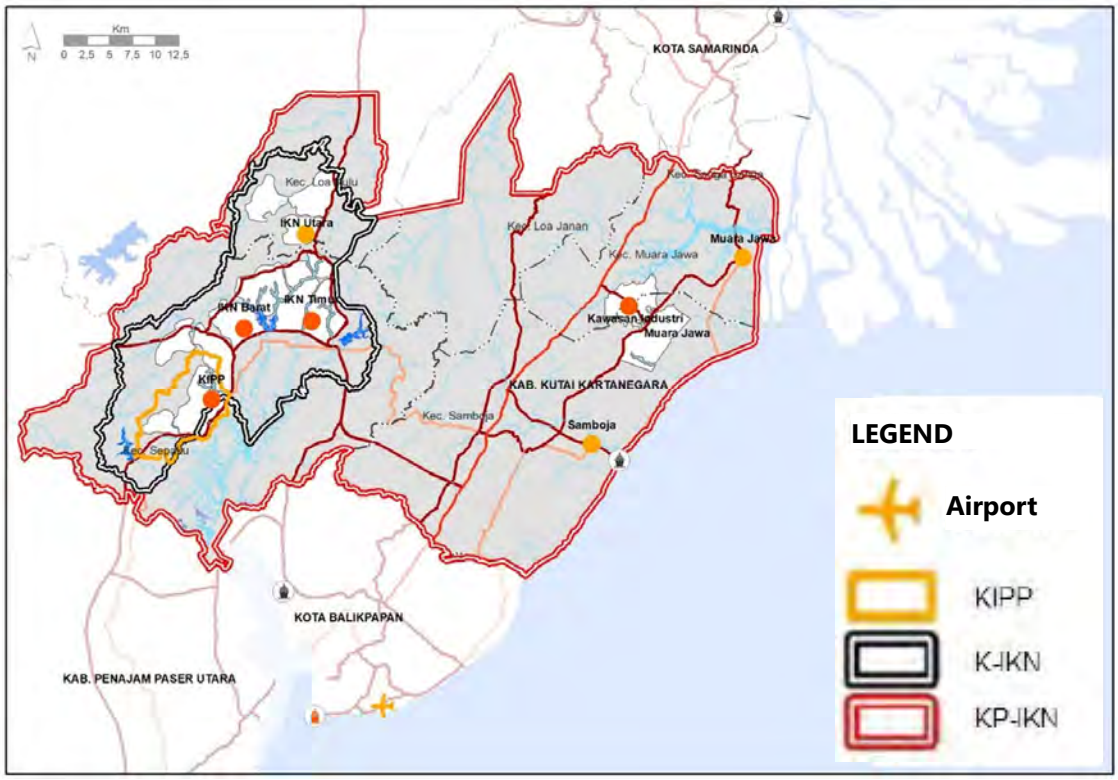
Chapter 4 conceptualizes the plan for IKN by focusing into interaction in cities to produce a strong and resilient masterplan. The plan was conceptualized by referring to the concept of "city as a system that connects various aspects of urban living", which in this plan consist of 13 main conceptual plans in the field of economy, social, land consolidation, environment, disaster risk assessment, mobility, energy, water, waste, ICT, defense and security, spatial management, and smart city. The economic development strategy become one of the main focuses by setting the "IKN economic superhub" as the main concept. In this concept, IKN is expected to become a superhub that strengthens the economic activities and development in East Kalimantan Province and other two cities, Balikpapan City and Samarinda City. The economic strategy was visioned to be "locally integrated, globally connected, and universally inspired" which tries to construct connections within the Tri-City ecosystem within the East Kalimantan Province; IKN, Balikpapan City, and Samarinda City. Each component of IKN conceptual plan was analyzed by identifying challenges, strategies to address challenges, and enabling factors.



Source: Masterplan Final Report Preparation of a Master Plan and Strategy for the Development of the National Capital (National Capital Masterplan / MP IKN)

Figure 2-3 13 Components of IKN Conceptual Plan

Chapter 5 provides information regarding spatial plan of IKN which consists of 3 main regions: KP-IKN (*Kawasan Pengembangan IKN*/ Development Region of IKN), K-IKN *(Kawasan IKN*/ Region of IKN), and KIPP (*Kawasan Inti Pusat Pemerintahan*/ Government Center Core Area). KP-IKN is the region with area of 256,142.72 ha where the major development will take place in IKN. This region will accommodate main activities related to governance, economy, industries, and existing public activities. K-IKN is part of KP-IKN with the total area of 56,180.87 ha and the development is focused for the center of government and economic activities. KIPP is part of K-IKN with total area of 6,558.2 ha and the development will be focused on government office, central city, and settlements. Each of this main region is complemented with respective spatial structure plan, spatial pattern plan, and public facilities provision plan only for KP-IKN.



Source: Masterplan Final Report Preparation of a Master Plan and Strategy for the Development of the National Capital (National Capital Masterplan / MP IKN)

Figure 2-4 Three Main Regions of IKN

Chapter 6 describes the planning direction for each main region of IKN. The planning direction for each region was based on the aspect of mobility, infrastructure, environment, social, spatial plan, and disaster risks. Additionally, details regarding planning direction for building and environment were also provided and classified into 3 classifications; (1) built region; (2) open space typology; and (3) typology of mobility. Each category is provided with mandatory regulation, main recommended regulations, and recommended regulations.

Chapter 7 discusses the direction of spatial utilization in IKN area. It mainly covers the temporal development of IKN based on 5 phases of development whereas each phase consists of 5 years planning starting from 2020 to 2045. Population growth is expected for each phase where as many as 1.85 Million population is projected to populate IKN by 2045. Therefore, the development plan of each phase will also consider the population growth on its planning.

Chapter 8 provides information regarding details on the implementation strategies of the IKN vision and development plans. The development roadmap and milestones of IKN development were set on 5 phases of development as explained on the previous Chapter. Regarding the investment value of IKN, capital investment and operational expenditure were estimated to be 1,784 Trillion IDR and 100.2 Trillion IDR respectively. Securing budget allocation from the National Middle-Term Development Plan 2020-2024 and contributions from private and public-private-partnership were set to be the strategy to finance the initial development. Further, a risk assessment and management analysis were carried out and 5 major risks were able to be identified: technical risks, execution risks, market risks, political risks, and organizational risks. Based on that, issues were then prioritized, and mitigation plans were developed complemented by the communication strategies.

This Masterplan also provides appendices regarding details fact and analysis of IKN, details on the direction of building and environmental planning, and details on risks analysis.

(2) Strategic Environmental Assessment (KHLS) for IKN Masterplan

The Strategic Environmental Assessment (KHLS) for IKN Masterplan refers to the "New Capital City Strategic Environmental Assessment on Master Plan FY 2020" (*Penyusunan Kajian Lingkungan Hidup Strategis untuk Master Plan Ibu Kota Negara Tahun Anggaran 2020*) also known as KLHS published by BAPPENAS in 2020. There are 2 purposes of this document: (1) to assess the impacts of the National Capital City relocation on natural resources and environment, and (2) to give recommendation on how to improve policies, plans, and programs regarding Capital City Relocation towards sustainable and environmentally friendly development. The structure of the document is shown by the figure below.

Chapter 1: Introduction
- 1.1 Background
- 1.2 Objectives
- 1.3 Regulatory Bases
- 1.4 Scope
- 1.5 Structure of the Report

Chapter 2: Characteristic of Studied Location
- 2.1 Delineation of IKN Region
- 2.2 Physical Characteristics of IKN Region
- 2.3 Ecological Characteristics of IKN Region
- 2.4 Demography Characteristics of IKN Region
- 2.5 Economic Situation

Chapter 3: Preparation Process of KLHS
- 3.1 Approach and Framework
- 3.2 Preparation
- 3.3 Identification of Sustainable Development Issues
- 3.4 Identification of Policy, Plan, and Programs and its Impact Analysis
- 3.5 Study of 6 Substance of KLHS
- 3.6 Formulation of Alternative and Recommendation for Policy, Plan, and Programs

Chapter 4: Sustainable Development Issues in the National Capital Relocation
- 4.1 Identification of Sustainable Development Issues
- 4.2 Formulation of the most Strategic Sustainable Development Issues
- 4.3 Determination of Prioritized Sustainable Development Issues

Chapter 5: Baseline of Prioritized Sustainable Development Issues
- 5.1 Water Resources Issues
- 5.2 Forest Degradation and Threat to Biodiversity Issues
- 5.3 Food Security Issues
- 5.4 Energy Issues
- 5.5 Environmental Management Issues
- 5.6 Disaster Risks Issues
- 5.7 Socio-Cultural Dynamic Issues
- 5.8 Infrastructure, Spatial Utilization, and Regional Development Issues
- 5.9 Mining Pit Management Issues
- 5.10 Climate Change Issues

Chapter 6: Identification and Analysis on the Impact Policy, Plan, and Programs
- 6.1 Review of the Master Plan
- 6.2 Analysis of Policy, Plan, and Programs that Significantly Affecting Environment
- 6.3 Analysis of Policy, Plan, and Program that require the Study of 6 Substance of KLHS

Chapter 7: Analysis of KLHS's Substance
- 7.1 Carrying and Supporting Environmental Capacity for Development

7.2 Forecast on Environmental Impact and Risks
7.3 Ecosystem Service Performance
7.4 Natural Resource Utilization Efficiency
7.5 Adaptation Capacity and Vulnerability to Climate Change
7.6 Resiliency Level and Potential of Biodiversity
7.7 Social and Culture
Chapter 8: Formulation of Alternatives; Refinement Recommendation for Policy, Plan, and Programs; and Integration on the Master Plan of IKN
8.1 Formulation of Alternatives and Recommendations
8.2 Integration of KLHS on the Master Plan of IKN

Source: Strategic Environmental Assessment (KHLS) for IKN Masterplan

Figure 2-5 Structure of the Planning for the National Capital City (IKN)

Chapter 1 introduces the background, objectives, regulatory bases, and scope of the Masterplan. Since the formulation of this document was motivated by potential impacts may be caused due to the national capital relocation, this document assessed and provided knowledge regarding the relocation impacts on the environment and natural resources, recommendations on how to improve aspects related to the capital relocation to achieve the sustainable and environmentally friendly development and providing recommendation of integration on the masterplan of IKN.

Chapter 2 provides information regarding the existing conditions and characteristics of regions which covered by the development of IKN. IKN will be developed in an area which cover parts of Kutai Kartanegara Regency and PPU Regency where both are located in the East Kalimantan Province. The existing conditions and characteristics of these regions are described by providing information regarding physical characteristics (climate, rainfall rate, geological, hydrology, land cover, etc.), ecological characteristics (environmental quality index, ecoregion, forest region, and biodiversity), demographical characteristics, economy situations, and socio-cultural characteristics.

Chapter 3 describes the formulation procedure of the KLHS document. The KLHS document was formulated by using the Driven, Pressure, Impact, State, and Response (DPSIR) approach. Plans and programs included in the IKN Masterplan were the driven factors in the process that put pressures by considering the status condition on each sector or aspect. From such analysis, the result of impact analysis will become the base on providing recommendation of KLHS as a respond to refine plans and programs in IKN Masterplan. The main highlight of this Chapter is related to the 6 substances of KLHS; (1) carrying and supporting environmental capacity for development; (2) forecast on environmental impact and risks; (3) ecosystem service performance; (4) natural resource utilization efficiency; (5) adaptation capacity and vulnerability to climate change; (6) resiliency level and potential of biodiversity. Each of this substance is explained further in Chapter 7.

Chapter 4 discusses issues related to the sustainable development in the national capital relocation plan. The issues were identified through a layered method of identification and qualification. Initially, the list of sustainable development issues was identified through public consultation in 2020 resulted in 14 different issues. These issues were then crosschecked with criteria in Government Regulation No.46/2016 article 9 verse 1, resulted in 11 most strategic sustainable development issues. These 11 issues were then crosschecked with criteria set in the Government Regulation No.46/2016 article 9 verse 2 resulted in 9 prioritized sustainable development issues; (1) water resources potential; (2) energy supply to support IKN; (3)

potential disasters that should be anticipated in IKN region; (4) environmental management; (5) impact of mining pits; (6) dynamics of social and culture; (7) forest degradation and threat to biodiversity; (8) food security; (9) infrastructure, spatial utilization, and regional development.

Chapter 5 details the information regarding prioritized sustainable development issues which have been determined in the previous Chapter. In this Chapter, each issue was analyzed related to its existing situation, policy direction, mapping (if available), issues and challenges. Added from the previous 9 prioritized sustainable development issues, the climate change issues also discussed in this Chapter in response to dynamics it causes related to diseases, water availability, and disaster risk.

Chapter 6 identifies and analyzes the impacts of policies, plans, and programs of IKN development in relation to the 9 prioritized sustainable development issues identified from the previous Chapter. The policies, plans, and programs of IKN were then classified into 2 classifications; (1) policies/plans/programs that give impact to environment, and (2) policies/plans/programs that require the assessment of 6 substances of KLHS. According to the classifications which indicators are based on the 9 prioritized sustainable development issues, there are 35 programs that classified into policies/plans/programs which give impact to environment and 27 programs are classified into policies/plans/programs that require the assessment of 6 substances of KLHS.

Chapter 7 analyzes the policies/plans/programs of the IKN Masterplan that potentially will damage environment in respect to 6 substances of KLHS mentioned in Chapter 3. Following is the coverage of each substance for policies/plans/programs in IKN development; (1) carrying and supporting environmental capacity for development, focusing on policies/plans/programs related to water capacity and food capacity; (2) forecast on environmental impact and risks, focusing on policies/plans/programs related to waste generation risk, water quality risk, air quality impact, hazardous waste generation impact, disease vector impact, and disaster consideration; (3) ecosystem service performance aspect, focusing on policies/plans/programs related to water, water flow system, and flood; (4) natural resource utilization efficiency, focusing on policies/plans/programs related to land capacity, land carrying capacity, energy supply to support IKN, and dynamics of land transformation; (5) adaptation capacity and vulnerability to climate change; and (6) resiliency level and potential of biodiversity, focusing on policies/plans/programs related to forest area and biodiversity. Additionally, policies/plans/programs related to transportation infrastructures and spatial planning were analyzed through socio-cultural aspect.

Chapter 8 provides alternatives, recommendations, and integration approach for the IKN Masterplan based on analyses carried out on the previous Chapter. According to the Regulation of Ministry of Environment and Forestry No.69/2017 article 26, the recommendation may be in a form of: (1) revision on objectives and targets; (2) revision on strategies to achieve target; (3) revision/adjustment of dimension, scale, and location towards a more sustainable development approach; (4) revision/adjustment of process, methods, and adaptation on knowledge and technologies that lead to a more sustainable approach of development; (5) delaying, reordering, or revision of implementation priority; (6) directions to preserve or improve ecosystem functions; and (7) direction of environmental impact and risks mitigation. The recommendations to the IKN Masterplan included in policies/plans/programs related to spatial structure (development regions, transportation, and

infrastructures) and spatial pattern (settlement area, IKN development region, industrial region, military airport, and dam). As for the integration, the KLHS plan is integrated into IKN Masterplan through decision-centered model.

(3) Integrated IKN Development Implementation Information Guidelines 2022

The integrated IKN Development Implementation Information Guidelines 2022 is regulated by the Circular Letter of Head of OIKN No.1/2022 (*Surat Edaran Nomor:01/SE/Kepala-Otorita IKN/X/2022*) regarding the Determination of One Map, One Planning, One Policy (1MPP) as the Information Guideline for the Preparation and Implementation Plan for the Development of Inter-Ministries/ Agencies Integrated IKN. The document is referred as One Map, One Planning, One Policy (1MPP) because it covers a summary of wholistic technical policies regarding IKN (one policy), packages it into an integrated planning of main plan, spatial plan, and regional plan (one planning), and is based on one base map (one map). The document consists of 3 books providing information regarding preparation plan and development implementation of IKN. These 3 documents are the implementation guideline, the investment guideline, and the pocketbook of IKN. The structure of the document is shown by the figure below.

Book 1: Pocketbook of IKN
Book 2: Investment Guideline
  2.1 IKN: World-class city for all
  2.2 General overview of investment timeline
  2.3 Investment mechanism
  2.4 Investment sectors in IKN and Prioritized Investment Opportunity 2022-2024
Book 3: Implementation Guideline
  3.1 IKN: World-class city for all
  3.2 Development Implementation Strategies of IKN
  3.3 IKN Development Timeline
  3.4 Implementation Framework

Source: Integrated IKN Development Implementation Information Guidelines 2022

Figure 2-6 Structure of Integrated IKN Development Implementation Information Guidelines 2022

Book 1 of this document is the pocketbook of IKN. The pocketbook of IKN provides a general overview and summary of IKN Masterplan (including zoning of IKN, vision and missions, development indices, population projection, and Tri-City), priority development on phase 1 (2022-2024), the cultural value of transformation in IKN, financing scheme, and potential of investment opportunity in IKN.

Book 2 of this document covers the investment guideline of IKN. In the first section, it provides information regarding the plan of the New Capital City of Indonesia, specifically on vision, missions, principles, KPI, zonation, Tri-City concept, population projection, spatial structure, and spatial pattern plan. The second section describes the timeline of the development which divided into 5 development phases. Each development phase consists of 5 years development period and each phase has its own focus of development; phase 1 (2022-2024) focusing on the initial phase of relocation; phase 2 (2025-2029) focusing on the construction of IKN as a resilient core area; phase 3 (2030-2034) focusing on the progressive development of IKN; phase 4 (2035-2039) focusing on the development of all infrastructures

and Tri-City ecosystem to accelerate Kalimantan Province's development; and phase 5 (2040-2045) focusing on establishing IKN's reputation as the world-class city for all. The third section of the book provides information regarding investment mechanism for IKN. It is stated that the total required investment for the national capital relocation is 466 Trillion IDR, where 20% of share is expected to be secured from the national budget while the rest 80% is expected to be secured from other sources (private investment, state-owned companies, and partnership). This section also provides information regarding financing scheme, potential investment, partnership scheme, business licensing services and investment facilities, and ease of doing business in IKN (e.g., tax incentives, licensing, usage of foreign workers, etc.). The last section of this book provides the information regarding sectors available for investment in development regions of IKN. Sectors which are available for investment including basic infrastructures (e.g., water supply, waste management, etc.), energy, transportation, smart city, education, sustainable agro-industry, integrated pharmaceutical, ecotourism, advanced chemical industries, renewable energy, and low-carbon energy.

The book 3 of this document covers the implementation guideline of IKN development. The first section provides the information regarding the general overview of the IKN Development as provided in the previous book. The second section provides detailed information regarding principles and strategies of developed aspects for IKN, which include: regional development, development of economic and industrial center, development of social aspect and human resource, development of housing and settlements, development of government offices, development of waste and wastewater management infrastructures, development of water resource infrastructures, development of public and social facilities, development of mobility and connectivity, development of energy sector, environmental protection and management, development of ICT infrastructures, land provision and management, security and defense, relocation of government center and government officers, and relocation of foreign countries representatives and international organization. The third section discusses the timeline of development in IKN. Different with the previous book, the development timeline of this report is more detailed as it also covers the information regarding KPIs, component, programs, locations the program will be carried, targets, and financing source for each phase of development period. The last section provides information regarding details of implementation framework. The implementation framework for the IKN Development consists of financing scheme, land provision, interregional partnership, stakeholders' participation, and development management (consists of spatial utilization management, licensing, and environmental and building management). Book 3 also provides appendices showing the base map of IKN development and visualization of urban design development of IKN.

(4) Blueprint of the Nusantara Smart City

The blueprint of the Nusantara Smart City (*Cetak Biru Kota Cerdas Nusantara*) was issued in 2023 by OIKN. It gives the general overview regarding the vision of Nusantara Smart City 2045 by focusing on the aspect of sustainable, innovative, and inclusive city. This document provides the rationale and deep analysis on aspects related to the planning and conceptualization of smart city for Nusantara. The structure of this document is shown by the figure below.

Chapter 1: General overview of IKN
- 1.1 Vision of IKN
- 1.2 Scope of IKN
- 1.3 Development Phase of IKN
- 1.4 Situation and Condition
- 1.5 Development Nusantara Smart City

Chapter 2: Conceptual Framework
- 2.1 Key Performance Index of IKN
- 2.2 Smart City Principle

Chapter 3: Innovative Solution of Nusantara Smart City
- 3.1 Smart Governance
- 3.2 Smart Transportation and Mobility
- 3.3 Smart Living
- 3.4 Smart Natural resource and Energy
- 3.5 Smart Industry and Human Resources
- 3.6 Smart Built Infrastructure and Environment

Chapter 4: Technology for Nusantara Smart City
- 4.1 Main Technologies of Smart City
- 4.2 Supporting Technologies of Smart City

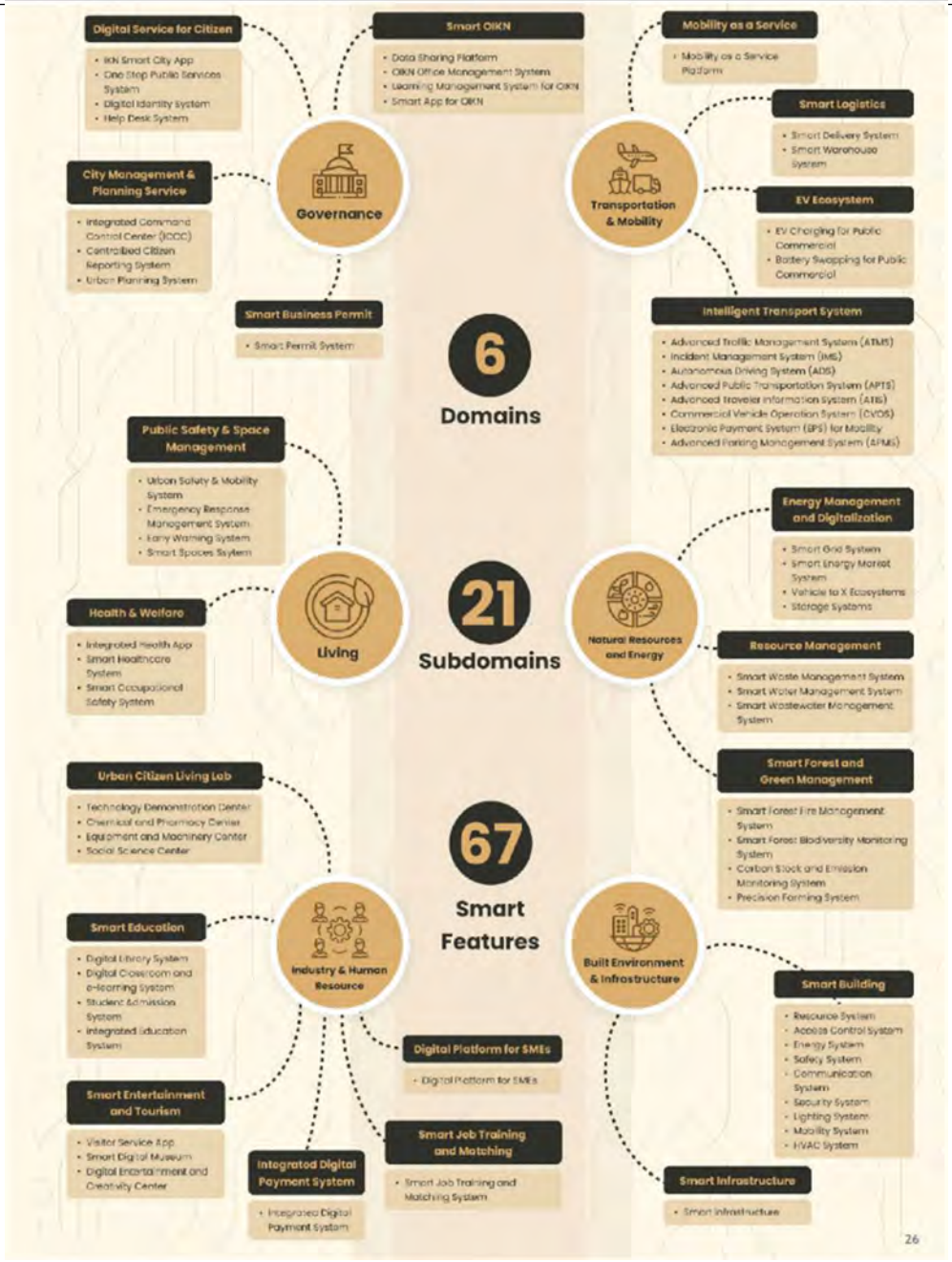
Source: Blueprint of Nusantara Smart City

Figure 2-7 Structure of Blueprint of Nusantara Smart City

Chapter 1 provides the general overview of development plan in IKN. The information includes vision of IKN, scope of IKN, development phases, existing situation and condition (e.g., environment, finance, infrastructure, logistic, social, and culture), and development of Nusantara Smart City. It is stated that the development goal of Nusantara Smart City is to create an innovative, sustainable, and technology-based city. The Nusantara Smart City is design with three layers of implementation which include applications (smart governance, smart transportation and mobility, smart living, smart natural resources and energy, smart industry and human resources, and small built environment and infrastructure) on the first layer, active infrastructures (command center, data center, fiber optic cable network, mobile broadband 5G) on the second layer, and passive infrastructures (physical infrastructures) on the third layer.

Chapter 2 provides information regarding conceptual framework which include explanation regarding KPIs and principle of the smart city. The principle of Nusantara Smart City consists of 4 main principles; (1) optimum; (2) integrated, (3) inclusive and transparent; and (4) circular and sustainable. On the other hand, 24 KPIs were developed to indicate the progression of 8 points of performance.

Chapter 3 discusses the innovative solution of Nusantara Smart City. In the smart city concept, technology implementation is integrated in various aspects of life through a framework of domain, subdomain, and smart feature. For the Nusantara Smart City, the domain is categorized into 6 aspects; (1) smart governance; (2) smart transportation and mobility; (3) smart living; (4) natural resources and energy; (5) smart industry and human resources; and (6) smart built environment and infrastructure. Each of this domain is analyzed in the correlation to the IKN Development, benefits, appropriate solution, and its subdomain.



Source: Blueprint of Nusantara Smart City

Figure 2-8 Framework of Nusantara Smart City

Chapter 4 provides detail information regarding technologies which are potential to be implemented in Nusantara Smart Cities. The technology is divided into two categories: the main technologies and the supporting technologies. The main technologies include the communication network, data center, high performance computing, integrated command and control center (ICCC), cyber security, smart grid, and API gateway. On the other hand, the supporting technologies includes various technology such as Internet of Things (IoT), autonomous driving, unmanned vehicle, artificial intelligence (AI), biometric technology, metaverse, etc. In this Chapter, the definition and concept of each technology is explained complemented with the principal implementation, possible implementation on IKN development, and benefits gained for the implementation of the technology.

2.2 Review of Relevant National, State and Regional Policies and Plans

To understand development trends in IKN and East Kalimantan Province, a sector-by-sector survey of relevant plans in the country, province, and surrounding areas of East Kalimantan Province was conducted. The survey of relevant plans at the national level was conducted not only to understand national policies and visions, but also to understand the position of IKN and East Kalimantan Province's development and to grasp the direction of East Kalimantan Province's development from a broader view. The study here was conducted on the published plans of Kutai Kartanegara Regency and PPU Regency that cede part of their lands to IKN as peripheral areas. East Kalimantan Province, Balikpapan City, and Samarinda City shall be discussed in detail later. Relevant policies and plans are provided in the table below.

Table 2-3 Relevant National, State, and Neighborhood Policies and Plans List

Owner	Year	Title	Summary
Government of Indonesia	2024	National Long-Term Development Plan 2025-2045	A Long-Term development plan of Indonesia for 2025-2045, encompassing vision, mission, strategical issues, New Capital City, sectoral transformation, strategies, and regional potentials of Indonesia.
	2020	National Middle-Term Development Plan 2020-2024	The Middle-term development plan for Indonesia for 2020-2024, which outlines priority measures for the next five years in accordance with the President's administrative policies, while considering the Long-Term development plan.
	2017	National Spatial Plan 2017	National Spatial Planning in Indonesia, which sets guidelines for the planning process to achieve the national land strategy.
Kutai Kartanegara Regency	2012	Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025	Long-term development plan for Kutai Kartanegara Regency, 2005-2025.
	2019	Kutai Kartanegara Regency Regional Middle-Term Development Plan 2018-2023	Middle-term development plan in Kutai Kartanegara Regency, 2018-2023.
	2021	Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026	Updated Middle-term development plan of Kutai Kartanegara Regency, 2021-2026
	2014	Kutai Kartanegara Regency Regional Spatial Plan 2013-2033	Spatial development plan for Kutai Kartanegara Regency, 2013-2033.
	2023	Kutai Kartanegara Regency Regional Spatial Plan 2022-2041	Updated Spatial development plan of Kutai Kartanegara Regency, 2022-2041.
PPU Regency	2010	PPU Regency Regional Long-Term Development Plan 2005-2025	Long-term development plan for PPU Regency for the period 2005-2025.
	2013	PPU Regency Regional Spatial Plan of 2013-2033	Spatial development plan for PPU Regency for the period 2013-2033.

Source: Prepared by JICA Study Team

(1) National Long-Term Development Plan 2025-2045

The National Long-Term Development Plan 2025-2045 is regulated under Law of the Republic of Indonesia No.59/2024 regarding the National Long-Term Development Plan

2025-2045 enacted on the 13th of September 2024. It is the final and the official version of the previous final draft plan which draft only available for view in the Ministry of National Planning and Development (BAPPENAS) website. This document is the main guideline for the development of regional long-term and Middle-term development in Indonesia emphasizing transformation on various aspects. The vision of the National Long-Term Development Plan 2025-2045 is "Golden Indonesia 2045: a Unified, Sovereign, Advanced, and Sustainable Republic of Indonesia" (*Indonesia Emas 2045: Negara Kesatuan Republik Indonesia yang Bersatu, Berdaulat, Maju, dan Berkelanjutan*). Following figure shows the structure of the document.

Chapter 1: Overview of Development in Indonesia
- 1.1 Reflection of development in two decades
- 1.2 Issues and challenges of future development

Chapter 2: Megatrend, Basic Capital, and Climate Change
- 2.1 Megatrend
- 2.2 Basic Capital
- 2.3 Climate Change, Capacity, and Capability

Chapter 3: Golden Indonesia 2045: a Unified, Sovereign, Advanced, and Sustainable Republic of Indonesia
- 3.1 Development Framework
- 3.2 National's Eternal Vision and Mission
- 3.3 Vision of Golden Indonesia 2045
- 3.4 Main Target
- 3.5 Missions
- 3.6 Development Phasing
- 3.7 Twenty (20) Super Priority Transformation Efforts

Chapter 4: Transformation toward Golden Indonesia
- 4.1 Social Transformation
- 4.2 Economic Transformation
- 4.3 Governance Transformation
- 4.4 Law Supremacy, Stability, and Leadership in Indonesia
- 4.5 Socio-Cultural and Ecological Resilience

Chapter 5: Regional Development and Infrastructures toward Golden Indonesia
- 5.1 Regional Issues, Potentials, and Infrastructural Issues
- 5.2 Policy Direction of Regional Development and Infrastructures

Chapter 6: Monitoring the Golden Indonesia: Sustainable Development
- 6.1 Guidelines
- 6.2 Financing the Development

Source: National Long-Term Development Plan 2025-2045

Figure 2-9 Structure of the National Long-Term Development Plan 2025-2045

Chapter 1 provides information regarding the overview of development in Indonesia in the last two decades. It is noted that Indonesia has experienced significant improvements which include the growth of per capita income, decrease in poverty and inequality, improvement on leadership and international influence, improvement on competencies of human resources, and reduction in Green House Gasses (GHG) emission. This Chapter also listed 14 development issues and challenges in the future which include: (1) low productivity; (2) weakening in the field of research, innovation, technology, and science; (3) early deindustrialization; (4) under-developed tourism; (5) unoptimized maritime economic; (6) low contribution by small-medium scale business and cooperation; (7) minimum digital literacy and infrastructure; (8) unsustainable development; (9) limited domestic integration; (10) degraded quality of human resource; (11) unoptimized governance; (12) weak law

enforcement; (13) unoptimized democracy; and (14) inequality between Java Island and other islands.

Chapter 2 discusses aspects related to megatrend, basic capital of Indonesia, and climate change situation. Regarding to megatrend, highlighted items including the development of global demographic; dynamic of global geopolitics and geoeconomic; development of technology; increasing rate of global urbanization, shifting of global trades, shifting of global financial management; middle class growth; increasing competition in natural resource utilization; climate change; and outer space utilization. Considering those items, the document highlighted 4 main aspects which act as basic capital of Indonesia, namely the high population, rich natural resources, socio-cultural capital, and maritime power. However, it is also highlighted that in the relation to climate change, environmental capacity and capability, Indonesia faces challenges in overall temperature increase, decreasing environmental (water, air, land, and sea) quality and capability.

Chapter 3 covers and explains points related to the vision and missions. Indonesia has the eternal vision and mission to realize “an independent, united, sovereign, just, and prosperous nation”, which become the basis and translated into the national long-term development plan 2025-2045 vision, “Golden Indonesia 2045: a Unified, Sovereign, Advanced, and Sustainable Republic of Indonesia”. This vision is expected to be achieved by implementing the established 8 missions/agendas 2045 development, which include (1) social transformation; (2) economic transformation; (3) governance transformation; (4) law supremacy, stability, and leadership of Indonesia; (5) socio-cultural and ecological resilience; (6) equal and even regional development; (7) quality and environmentally friendly infrastructures; and (8) sustainable development.

Chapter 4 details the approach to realize missions set on the previous Chapter. As many as 17 development goals/directions were set to achieve missions. Mission 1, 2, and 3 are the main transformation which detailed by 9 goals, while mission 4 and mission 5 are the bases of the transformation that support and act as the enabler to achieve the previous three missions detailed by 8 goals.

Chapter 5 focuses the discussion on the matter of regional development and infrastructure to achieve the golden Indonesia. It is stated that the golden Indonesia should be reflected by the improvement of wellbeing and equality in all regions of Indonesia. Regional and infrastructural issues were identified to be related with inequal development between Java Island and other islands, low urban productivity due to bad urban design and management, low rural development, lack of interregional integration and connectivity, lack of detailed spatial plan documents, and low disaster management despite of the high disaster risks in many regions. This situation translated into the formulation of development direction in each major island of Indonesia as well as the regional general policy which directed toward spatial management, rural development, energy, basic infrastructures, urbanization, connectivity, information, communication, technology, and decentralization.

Chapter 6 discusses the approach to monitor and ensure the quality and just of the Long-Term development plan. Five main implementation guidelines were developed which focused on the (1) consistency of planning and financing; (2) monitoring and evaluation framework; (3) incentive system; (4) transformation and change mechanism; and (5) public communication. It was also noted that there also should be consistency between the National Long-Term Development Plan with the lower-level development plan, e.g., Regional Long-Term

Development Plan, Regional Middle-Term Development Plan, etc. Regarding the financing for the development, 3 main aspects were set to ensure the quality and just of the development, including (1) improvement of financing capacity in public sectors; (2) improvement of financing capacity non-public sectors; and (3) quality investment management.

Compared to the previous final draft of the National Long-Term Development Plan, there are several noticeable and significant changes in the official National Long-Term Development Plan that need to be mentioned. The most significant change exists on Chapter 3 regarding the vision of the Plan where the word "unified" was added into the vision. In the previous draft, the vision was set to be "Golden Indonesia 2045: A sovereign, progressive and sustainable archipelagic state" while on the official regulation the vision was set to be "Golden Indonesia 2045: a Unified, Sovereign, Advanced, and Sustainable Republic of Indonesia". It was explained that the "unified" aspect envisions the strong unity under the Pancasila despite the diverse culture, language, and norms in Indonesia. Another noticeable change in Chapter 3 is related to the indicator of one of the five main targets of the vision, which is Target Number 5 "To reduce the GHG emission intensity towards net zero emission". In the previous draft, Target Number 5 only had 1 indicator which is "GHG emission intensity reduction". However, another indicator was added on the official plan, which is the "environmental quality index", set to be at 76.49 in 2025 and 83.00 in 2045. Other minor changes such as reorder of sentences, reorder of lists, and adding words (e.g., the usage of "monitoring and evaluation" instead of only "monitoring" in Chapter 6) were also noted.

(2) National Middle-Term Development Plan 2020-2024

The National Middle-Term Development Plan 2020-2024, issued by the Indonesian government in 2020, is a document that describes and details the vision and mission of elected president, hence the renewal period is within 5 years rotation following the presidential election. The development plan is regulated under the Presidential Decree No.18/2020 regarding the National Middle-Term Development Plan 2020-2024. On its formulation, the National Middle-Term Development Plan is consistent with the National Long-Term Development Plan 2005-2025, Indonesia Vision 2045, and President's vision which considered to be the main bases. Following figure shows the structure of the National Middle-Term Development Plan 2020-2024.

Chapter 1 National Middle-Term Development Plan 2020-2024
1.1 Direction of National Long-Term Development Plan 2005-2025
1.2 Vision and Missions of President 2020-2024
1.3 Vision of Indonesia 2045
1.4 President's Direction
1.5 Framework of 7 Development Agenda
1.6 Framework of Macro Economic 2020-2024
1.7 Development Constraint
1.8 Basic Concept of National Development
1.9 Mainstreaming the National Middle-Term Development Plan 2020-2024
1.10 Major Project for the National Middle-Term Development Plan 2020-2024
Chapter 2 Strengthening Economic Resiliency for Quality and Just Growth
2.1 Introduction
2.2 Development Achievements 2015-2019
2.3 Environment and Strategical Issues
2.4 Aims, Indicators, and Targets

2.5 Policy Direction and Strategies
Chapter 3 Regional Development to Reduce Inequality and Ensure Equity
3.1 Introduction
3.2 Development Achievements 2015-2019
3.3 Environment and Strategical Issues
3.4 Aims, Indicators, and Targets
3.5 Policy Direction and Strategies
Chapter 4 Improving the Quality and Competency of Human Resources
4.1 Introduction
4.2 Development Achievements 2015-2019
4.3 Environment and Strategical Issues
4.4 Aims, Indicators, and Targets
4.5 Policy Direction and Strategies
Chapter 5 Mental Revolution and Cultural Development
5.1 Introduction
5.2 Development Achievements 2015-2019
5.3 Environment and Strategical Issues
5.4 Aims, Indicators, and Targets
5.5 Policy Direction and Strategies
Chapter 6 Strengthening Infrastructures to Support Economic Development and Basic Services
6.1 Introduction
6.2 Development Achievements 2015-2019
6.3 Environment and Strategical Issues
6.4 Aims, Indicators, and Targets
6.5 Policy Direction and Strategies
Chapter 7 Development of Environment, Disaster Resiliency, and Climate Change
7.1 Introduction
7.2 Development Achievements 2015-2019
7.3 Environment and Strategical Issues
7.4 Aims, Indicators, and Targets
7.5 Policy Direction and Strategies
Chapter 8 Strengthening the Stability of Politic, Law, Defense, and Security and Transformation of Public Services
8.1 Introduction
8.2 Development Achievements 2015-2019
8.3 Environment and Strategical Issues
8.4 Aims, Indicators, and Targets
8.5 Policy Direction and Strategies
Chapter 9 Implementation Guidelines
9.1 Introduction
9.2 Regulatory Framework
9.3 Institutional Framework
9.4 Financial Framework
9.5 Monitoring and Evaluation Framework
Chapter 10 Closing

Source: National Middle-Term Development Plan 2020-2024

Figure 2-10 Structure of the National Middle-Term Development Plan 2020-2024

Chapter 1 discusses the general information regarding the National Middle-Term Development Plan for year 2020-2024. It also covers the vision and missions of elected president in the period. The vision of elected president is "To realize advanced Indonesia that is sovereign, independent, and has personality based on mutual cooperation (*Terwujudnya indonesia maju yang berdaulat, mandiri, dan berkepribadian berlandaskan gotong royong*)". This vision was translated into 7 development agendas; (1) Strengthening Economic

Resiliency for Quality and Just Growth; (2) Regional Development to Reduce Inequality and Ensure Equity; (3) Improving the Quality and Competency of Human resources; (4) Mental Revolution and Cultural Development; (5) Strengthening Infrastructures to Support Economic Development and Basic Services; (6) Development of Environment, Disaster Resiliency, and Climate Change; and (7) Strengthening the Stability of Politic, Law, Defense, and Security and Transformation of Public Services. This Chapter also lists the major project during the established period, which includes the New Capital City project.

Chapter 2 to Chapter 8 discusses and details the 7 development agendas mentioned in Chapter 1 respectively. Each development agenda is detailed by providing explanation on the general overview; achievements of the development in 2015-2019; environmental situation and related strategical issues; established aims, indicators, and targets; and formulated policy direction and strategies. Each of the development agendas were also detailed further in the appendix where specific details such as year of implementation, estimated budget, and implementing institutions were stated.

Chapter 9 discusses the implementation guidelines of the National-Middle Development Plan. In its implementation, the Plan will be supported by 4 main frameworks; (1) regulatory framework which consists of law, presidential decree, and government regulation; (2) institutional framework which consists of function and structure of institutions as well as the inter-institution work mechanism; (3) financial framework which consists of national budget and non-national budget; and (4) monitoring and evaluation framework which consists of implementation of monitoring and evaluation development agendas as well as corrective conducts in its implementation.

(3) National Spatial Plan 2017

The National Spatial Plan 2017 was ratified in the Government Regulation No.13/2017 about "Revision of Government Regulation No.26/2008 about National Spatial Plan". This document revised and updated several items of the previous National Spatial Plan stated in the Government Regulation No.26/2008 about National Spatial Plan. Therefore, in term of document structure, the National Spatial Plan 2017 follows the structure of the National Spatial Plan 2008 as shown in the figure below.

Chapter 1: General Terms
Chapter 2: Objectives, Policies, and Strategies of National Spatial Planning
Chapter 3: National Spatial Structure Plan
Chapter 4: National Spatial Pattern Plan
Chapter 5: Establishment of National Strategic Areas
Chapter 6: Direction of National Spatial Utilization
Chapter 7: Managing Direction of National Spatial Utilization
Chapter 8: Other Provisions
Chapter 9: Transitional Provisions
Chapter 10: Closing

Source: National Spatial Plan 2017

Figure 2-11 Structure of the National Spatial Plan based on the Government Regulation No.26/2008

The amendment of the national spatial plan in Indonesia was motivated by the urgency to address several strategical issues related to national urban system, infrastructure network

system, conservation regions, development regions, national strategic regions, the latest National Middle-Term Development Plan, maritime policies, air space policies, climate change adaptation and mitigation, and integration of national policies. The table below lists the planning maps shown in the National Spatial Plan of Indonesia.

Table 2-4 Planning Diagrams shown in the National Spatial Plan of Indonesia based on the Government Regulation No.26/2008

No.	Graphic Novel	Summary
1	Spatial structure plan map	➢ Integrated map of major residential areas and various infrastructure facility network plans
2	National urban system map (Figure 2-12)	➢ Indicating the distribution of national urban system which consists of center of national activities, center of national strategic activities, and center of regional activities
3	National road network map	➢ Indicating the road network at the national level
4	National electricity generation and transmission map	➢ Indicating the electricity network system and its infrastructures
5	National telecommunication network map	➢ Indicating the distribution of telecommunication network system and its infrastructures
6	Water resource network system map	➢ Indicating the water resources network system which includes dam, river, and national strategic river
7	Spatial pattern map (Figure 2-13)	➢ Land use map showing administrative border, conservation area, and development area.
8	National protected and conserved regions map	➢ Indicating the distribution of protected and conserved regions at the national level
9	National flagship regions map	➢ Indicating the distribution of national flagship regions which consists of flagship region and marine flagship region
10	National strategic regions plan map (Figure 2-14)	➢ Indicating regions that falls under the national strategic region category which based on economy, environment, socio-cultural, natural resources and technology, and national security and defense
11	Sustainable food agriculture region map	➢ Indicating the distribution of regions which allocated for the sustainable food agriculture use

Source: National Spatial Plan 2017

Chapter 1 defines general terms used in the National Spatial Plan. With the revised version in 2017, there is no revisions for the Chapter 1.

Chapter 2 discusses objectives, policies, and strategies of the national spatial plan. This Chapter stated that the objectives of the National Spatial Plan are to achieve following 9 items; (1) a safe, comfortable, productive, and sustainable national spatial area; (2) harmony between natural and built environment; (3) integrated national and regional spatial plan; (4) integrated utilization of land, ocean, and air under the framework of Republic of Indonesia; (5) integration of national and regional spatial utilization management to protect the spatial function and prevent environmental damages due to spatial utilization; (6) sustainable utilization of natural resource to improve public wellbeing; (7) balance and harmony in regional development; (8) balance and harmony in intersectoral activities; and (9) dynamic and integrated national security and defense. Revisions were made specifically on the policy direction of spatial development structure; development, utilization, and management of conservation area; and development strategy for development areas.

Chapter 3 explains the national spatial structure plan which consists of national urban system, national transportation network system, national energy network system, national communication network system, and national water network system. Each section defines infrastructures and components related to the respective system. Revisions by the 2017 version were made in the classification criteria of national urban system, definitions of infrastructures and components related to transportation network system, and definition and classification of national energy network system. Details regarding areas and infrastructures explained in this Chapter are listed in the 2017 revision version's attachment 2 to attachment 9.

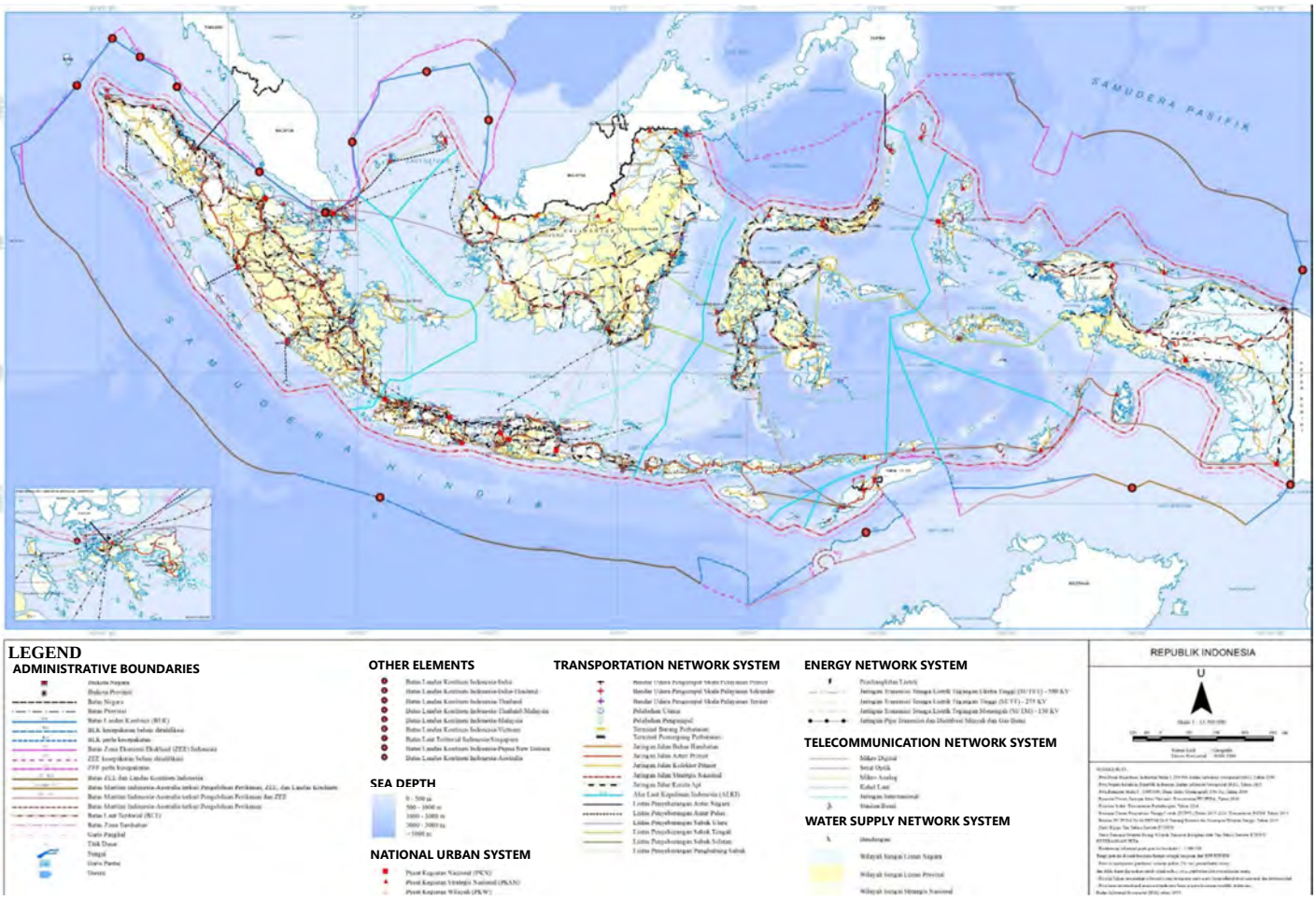
Chapter 4 describes items related to the national spatial pattern plan, which classified into two big groups, the national conservation regions and the national development regions that have national strategic value. Revisions by the National Spatial Plan 2017 were made on the following points: classification of national conservation regions and regions below it; and additional clause in the national development regions, specific for geothermal utilization regions.

Chapter 5 explains the establishment of national strategic areas, which evaluated using criteria of potential significant impacts to economy, national food production, energy, and remote areas development. The list of national strategic areas is provided in attachment 10 of the 2017 version totaling 76 strategic areas in the entire Indonesia.

Chapter 6 provides the information related to the direction of the national spatial utilization. The utilization of national space should refer to the national spatial structure and pattern plan which carried out through the formulation of spatial utilization program and financial estimation. The spatial utilization programs may be funded from national budget, regional budget, private investment, or other funding partnerships.

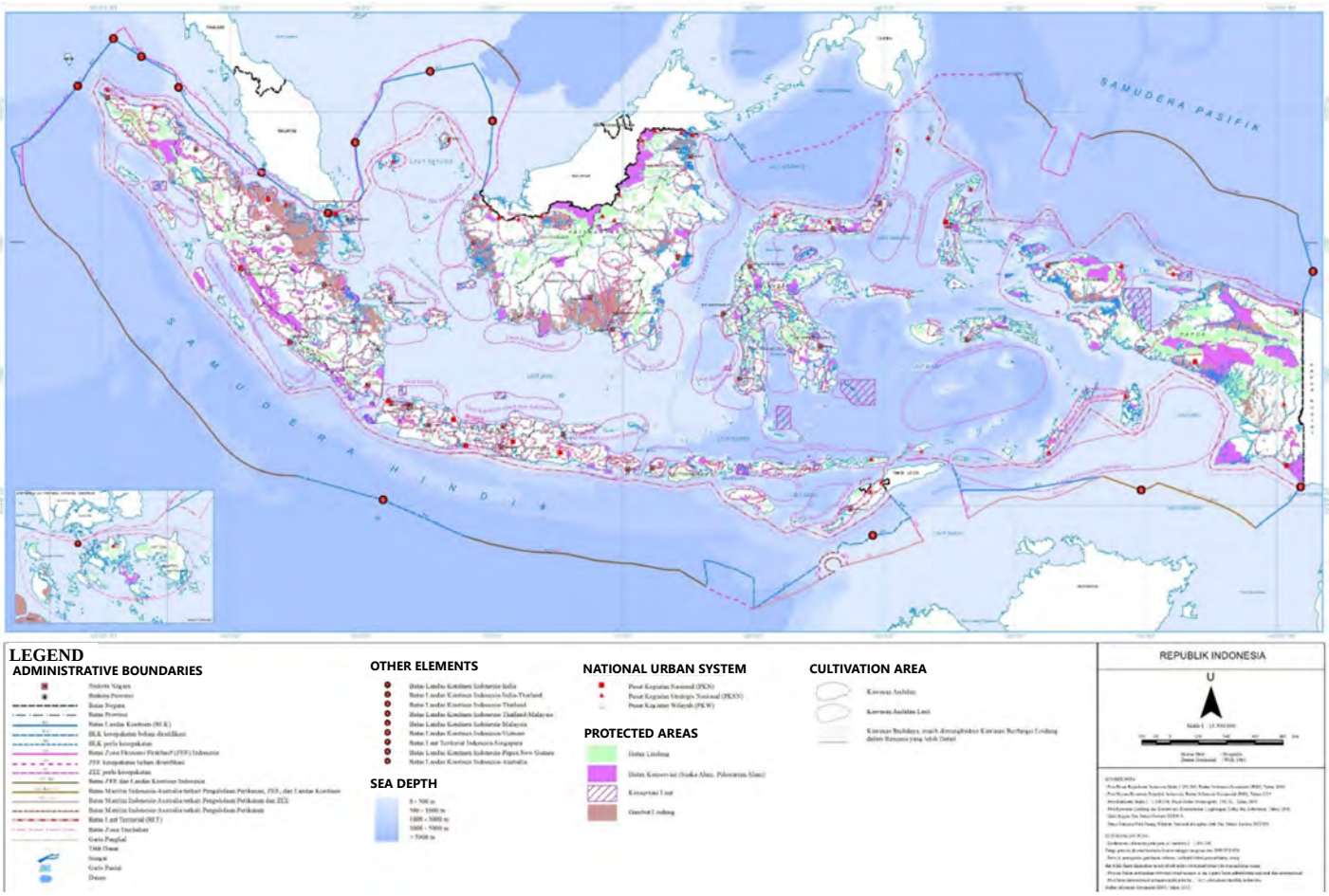
Chapter 7 explains the managing direction of the national spatial utilization, which consists of 4 main directions; (1) direction of national zonation system for national urban system, national transportation network system, national energy network system, national communication network system, national water network system, national conservation areas, and development areas; (2) licensing/ permit direction; (3) incentive and disincentive direction; (4) and penalty direction. Revisions by the National Spatial Plan 2017 were related to the criteria of zonation, additional of zonation system for the geothermal regions, and deletion of one clause related to the licensing by minister.

Chapter 8, Chapter 9, and Chapter 10 which discusses the other provisions, transitional provision, and closing, respectively, are the part that ends and legitimize the document.



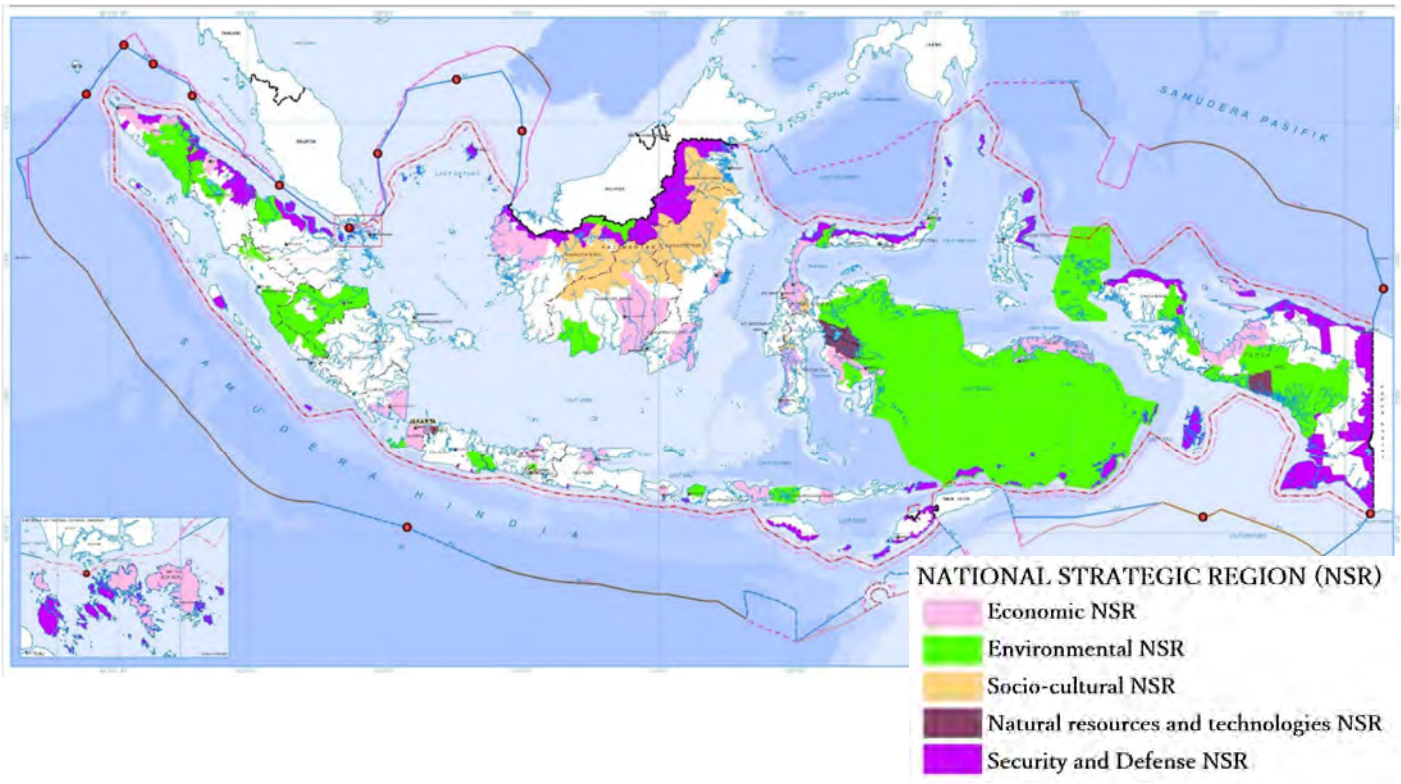
Source: Socialization of National Spatial Plan 2017

Figure 2-12 Indonesia Spatial Structure Plan based on National Spatial Plan 2008-2028



Source: Socialization of National Spatial Plan 2017

Figure 2-13 Indonesia Spatial Pattern Plan based on National Spatial Plan 2008-2028



Source: Socialization of National Spatial Plan 2017

Figure 2-14 National Strategic Region Map based on National Spatial Plan 2008-2028

(4) Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025

The Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025 guides and directs the development of regions in Kutai Kartanegara Regency for the 2005-2025 period. It was regulated under the Regional Regulation of Kutai Kartanegara Regency No.17/2010 regarding Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025. This document also refers to the National Long-Term Development Plan 2005-2025 which is the national guideline for the development. The document is structured as shown by the figure below.

Chapter 1 General Terms Chapter 2 Regional Development Programs Chapter 3 Monitoring and Evaluation Chapter 4 Closing

Source: Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025

Figure 2-15 Structure of Kutai Kartanegara Regency Regional Long-Term Development Plan 2005-2025

Chapter 1 defines terms used in this document, particularly to items related with the stakeholders' definition and the status of the Regional Long-Term Development Plan document. Chapter 2, as it explains the regional development programs, it should be one of the references for the ruling regent in setting the vision, missions, and programs for the regional Middle-term development plan. Chapter 3, in regard to the monitoring and evaluation aspect, explains that regional government should carry the monitoring and evaluation for the Long-Term Development Plan and will further be detailed in the government regulation.

(5) Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

The Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026 is a plan developed by the government of Kutai Kartanegara Regency to guide the development activities within the region which covers the vision, missions, and targets of the elected regent. This document was developed in 2021 during the COVID-19 pandemic making it become one of the important factors in formulating the development plan in this document. The document is regulated under the Regional Regulation of Kutai Kartanegara Regency No.6/2021 regarding Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026. The structure of the Plan is shown by the figure below.

Chapter 1: Introduction 1.1 Background 1.2 Regulatory Bases 1.3 Relationship with other Documents 1.4 Objectives 1.5 Structure of the Report Chapter 2: General Overview of the Region 2.1 General overview 2.2 Achievement of Minimum Service Standard Implementation in Kutai Kartanegara 2.3 Achievement of SDG Indicators Chapter 3: Overview of Regional Financial Situation 3.1 Past Financial Performance 3.2 Policy regarding Past Financial Performance 3.3 Financing Framework Chapter 4: Issues and Strategical Issues Analysis

4.1 Regional Development Issues
4.2 Strategical Issues
Chapter 5: Vision, Mission, and Target
5.1 Vision
5.2 Mission
5.3 Aim and Targets
Chapter 6: Strategies, Policy Directions, and Regional Development Program
6.1 Strategies
6.2 Policy Direction
6.3 Regional Policy
6.4 Regional Development Program
6.5 Strategical Regional Development Project
Chapter 7: Regional Financing Framework and Regional Apparatus Program
7.1 Financing Framework
7.2 Regional Apparatus Program
Chapter 8: Performance of Regional Government Administration
8.1 Establishment of Regional Performance Indicators
8.2 Minimum Service Standard Indicators
8.3 SDGs Indicators
Chapter 9: Closing

Source: Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

Figure 2-16 Structure of Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

Chapter 1 is the introduction part of the Development Plan. It explains the general information regarding the background of the document, related regulations and policies which become the bases of the formulation, the connection between this document and other relevant documents, and objectives of this document. The objective of the Regional Middle-Term Development term of Kutai Kartanegara is to become an official guideline for government, house of representatives, private sectors, and public to carry out the development on yearly basis for the 5 years period in Kutai Kartanegara Regency.

Chapter 2 describes the general overview and situation in Kutai Kartanegara Regency. It includes both existing situation and the evaluation of minimum service standard as well as SDG achievement in Kutai Kartanegara Regency. The existing condition of Kutai Kartanegara Regency is explained through several aspects, including geographical, demographical, public wellbeing, public services, and competitiveness. Evaluating the performance of previous minimum service standards (covers education, health, public works, spatial management, public housing, settlement area, safety, public protection, and social aspects) and 17 goals of SDGs, in the future, the integration between the minimum service standard, SDGs, strategical plan, and action plan is deemed to be critical.

Chapter 3 overviews the financial situation of the Kutai Kartanegara Regency. The financial situation was evaluated by studying the past financial performance (regional budget and regional balance sheet), past financial policies (budget proportion and financing analysis), and financing framework (projection and calculation). From the past financial performance, the average financial capability of Kutai Kartanegara Regency from 2016 from 2020 falls into the "severely lacking" level, which is the lowest category according to the classification by Ministry of Home Affairs. This situation also complemented with the fluctuated regional budget situation and allocation.

Chapter 4 lists up issues and strategical issues in Kutai Kartanegara Regency. By referring to

issues in global scale, national scale, regional scale, and surrounding cities, following strategical issues were identified to be urgently addressed by the Middle-term development plan of Indonesia 2021-2026: (1) implementation of wholistic bureaucracy reformation; (2) improved equalization of human resource quality; (3) acceleration of handling and overcoming COVID-19 and recovery from its impact; (4) development of sustainable economy; (5) construction of IKN; (6) equal distribution of basic infrastructures; (7) transformation and acceleration of village and sub-district development; and (8) spatial and water resource management.

Chapter 5 covers contents related to vision, missions, and targets. In this Regional Middle-Term Development Plan of Kutai Kartanegara Regency 2021-2026, the vision is set to "realize a prosperous and joyous Kutai Kartanegara community". To achieve this vision, 5 missions were formulated: (1) establishing a clean, effective, efficient, and serving bureaucracy; (2) improvement of noble, superior, and cultured human resources development; (3) strengthening the agricultural, tourism, and creative economic-based economic development; (4) improvement the quality of basic infrastructure service and inter-regional connectivity; and (5) improvement of environmentally friendly natural resource utilization. These missions were then detailed in Chapter 6 by presenting the strategies, policy direction, and the regional development programs resulting in 8 strategies and 16 targets. Further, the established strategies and targets were detailed into financial aspect by identifying the real financing capacity of Kutai Kartanegara Regency in the planning period (2021-2026) which is 789 Billion IDR per year in average.

Chapter 8 sets the indices to monitor and evaluate the implementation and performance of the regional government. Evaluated performances including the regional performance (157 indices), minimum standard service (49 indices), and SDGs performance (170 indices).

(6) Kutai Kartanegara Regency Regional Spatial Plan 2013-2033

The Kutai Kartanegara Regency Regional Spatial Plan was developed by the government of Kutai Kartanegara Regency and regulated under the Regional Regulation of Kutai Kartanegara Regency No.9/2013 regarding the Regional Spatial Plan of Kutai Kartanegara Regency 2013-2033. The structure of the document is as shown by the figure below.

Chapter 1: General Terms
Chapter 2: Spatial Management Objective, Policy, and Strategy
Chapter 3: Spatial Structure Plan
Chapter 4: Spatial Pattern Plan
Chapter 5: Establishment of Strategic Region
Chapter 6: Direction of Spatial Utilization
Chapter 7: Provisions for Spatial Utilization Control
Chapter 8: Penalty Provision
Chapter 9: Institution
Chapter 10: Right, Obligation, and Role of the Community
Chapter 11: Other Provisions
Chapter 12: Transitional Provisions
Chapter 13: Closing

Source: Kutai Kartanegara Regency Regional Spatial Plan 2013-2033

Figure 2-17 Structure of Kutai Kartanegara Regency Regional Spatial Plan of 2013-2033

Chapter 2, which describes the objective, policies, and strategies of the spatial plan, stated that the objective of spatial planning is to realize Kutai Kartanegara as the center of growth and flagship region by managing the potential of mining and oil & gas as well as to develop leading sector of agriculture and tourism to achieve the developed, independent, and prosperous society of Kutai Kartanegara.

Chapter 3 describes the spatial structure plan of Kutai Kartanegara Regency. The spatial structure of Kutai Kartanegara Regency consists of activity center system (e.g., urban and rural system) and regional infrastructure network system (e.g., transportation, energy, communication, water resource, and environmental infrastructures). Following that, Chapter 4 describes the spatial pattern plan of Kutai Kartanegara Regency which consists of conservation region (e.g., nature reserves, disaster prone, and geological conservation area) and development region (e.g., productive forest, agriculture, mining, industrial, tourism, settlement, etc.). Both Chapters also list areas, infrastructures, and facilities that fall into each category of spatial structure and spatial pattern.

Chapter 7 explains the management provisions of the spatial utilization in Kutai Kartanegara Regency. The management provisions including mechanism related to zonation policy, licensing and permit policy, incentive and disincentive policy, and penalty policy.

(7) Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

The Kutai Kartanegara Regency Regional Spatial Plan 2022-2041 is the updated version of the previous spatial plan. This spatial plan is regulated under the Ministerial Regulation of Ministry of Agrarian and Spatial Planning/ Head of the National Land Agency No.5/2023 regarding the Kutai Kartanegara Regency Regional Spatial Plan. The structure of the Plan is shown by the figure below.

Chapter 1: General Terms
Chapter 2: Scope
Chapter 3: Spatial Management Objective, Policy, and Strategy
Chapter 4: Regency's Spatial Structure Plan
Chapter 5: Spatial Pattern Plan
Chapter 6: Regency's Strategic Region
Chapter 7: Regency's Direction of Spatial Utilization
Chapter 8: Regency's Provisions for Spatial Utilization Control
Chapter 9: Right, Obligation, and Role of the Community
Chapter 10: Institution
Chapter 11: Other Provisions

Source: Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

Figure 2-18 Structure of Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

The table below lists the planning maps shown in the Kutai Kartanegara Regency Regional Spatial Plan 2022-2041.

Table 2-5 Planning Diagrams shown in the Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

No.	Graphic Novel	Summary
1	Administrative boundary map	➢ Indicating boundaries of administrative sub-district in Kutai Kartanegara Regency
2	Spatial structure plan map (Figure 2-19)	➢ Integrated map of major residential areas, transportation facility network, various infrastructure facility network plans, etc
3	Spatial pattern map (Figure 2-20)	➢ Land use map showing administrative border, conservation area, and development area.
4	Water resources network system spatial structure plan map	➢ Indicating water resources infrastructures including flood management building, water resources building, and primary and secondary irrigation channel
5	Aviation operation safety area plan map	➢ Indicating areas which classified for aviation operation safety
6	Sustainable food agriculture area plan map	➢ Indicating areas which utilized for food agriculture
7	Disaster prone region plan map	➢ Indicating areas that prone to disasters, including erosion, wildfire, and landslide
8	Riparian zone plan map	➢ Indicating riparian zone for related body of water (e.g., beach, lake, dam, and river)
9	Minerals and coal mining region plan map	➢ Indicating areas utilized for minerals and coal mining
10	Strategic regions plan map (Figure 2-21)	➢ Indicating regions that falls under the strategic region category (e.g., environmental function, economic function, and socio-cultural function)
11	Mining and energy region plan map	➢ Indicating regions planned for mining, oil and gas related activities

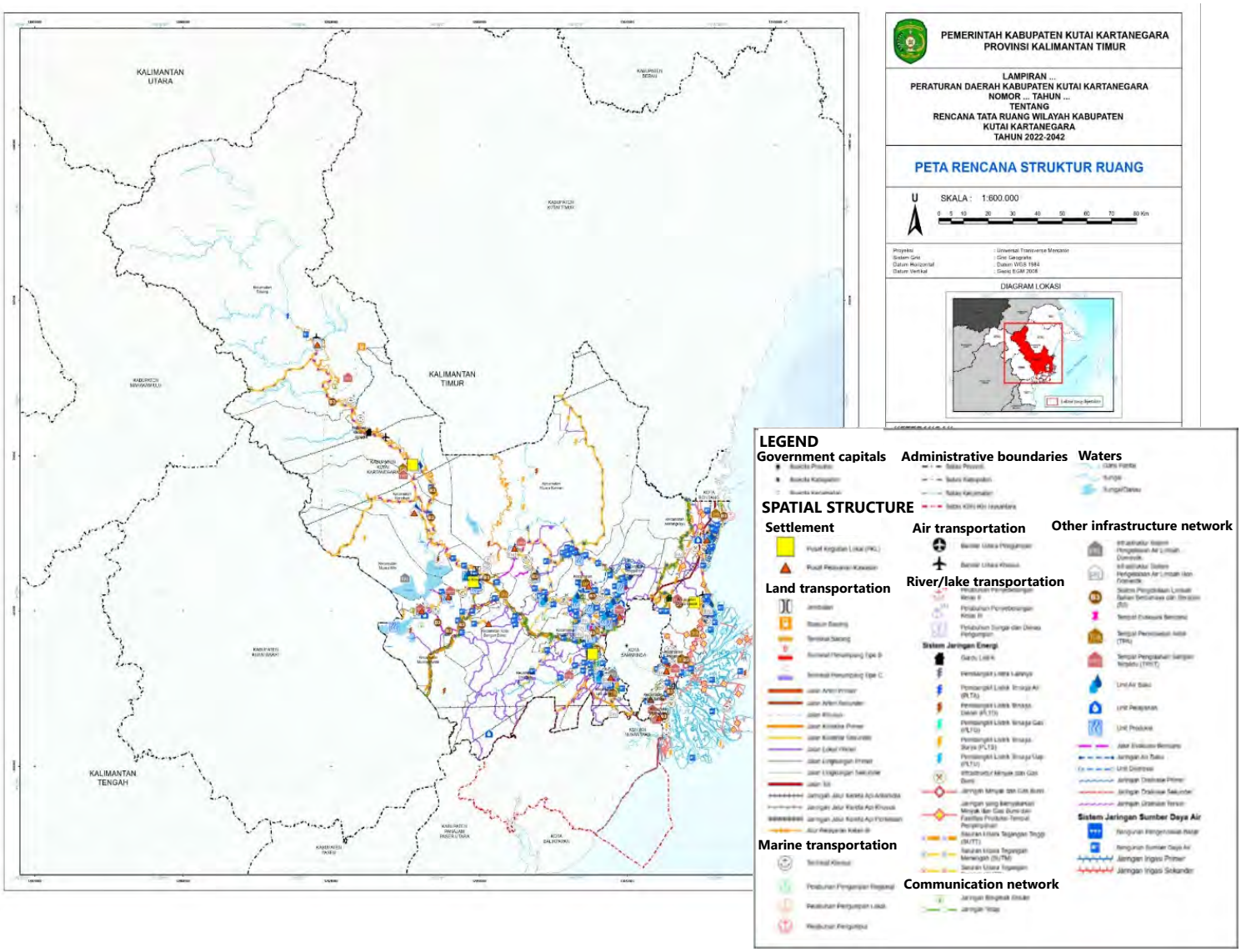
Source: Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

Chapter 3 describes the objective, policies, and strategy for the spatial plan. It is stated that the objective of the spatial planning is to realize a reliable partner region of IKN and equitable development that is integrated throughout region, based on the flagship area by developing industrial sector, agriculture, fisheries, tourism, trade, and environmentally sound services. The spatial management policies including the development and optimization of urban system, infrastructure system, Kutai Kartanegara Regency position as a flagship region, mining, oil & gas, agriculture, tourism, fisheries, conservation areas, cultivation and natural resource-rich areas, industrial area, and areas for security and defense. Strategies for each target are provided as well in this Chapter.

Chapter 4 describes the spatial structure plan of Kutai Kartanegara Regency. In this version, the spatial structure of Kutai Kartanegara Regency consists of settlement area system, transportation network system, energy network system, communication network system, water network system, and other infrastructures network system. Following that, Chapter 5 describes the spatial pattern plan of Kutai Kartanegara Regency which consists of conservation region (e.g., body of water, forest area, conservation area, and mangrove ecosystem) and development region (e.g., productive forest, agriculture, fisheries, mining and energy, industrial, tourism, security and defense, and transportation). Both Chapters also list areas, infrastructures, and facilities that fall into each category of spatial structure and spatial pattern.

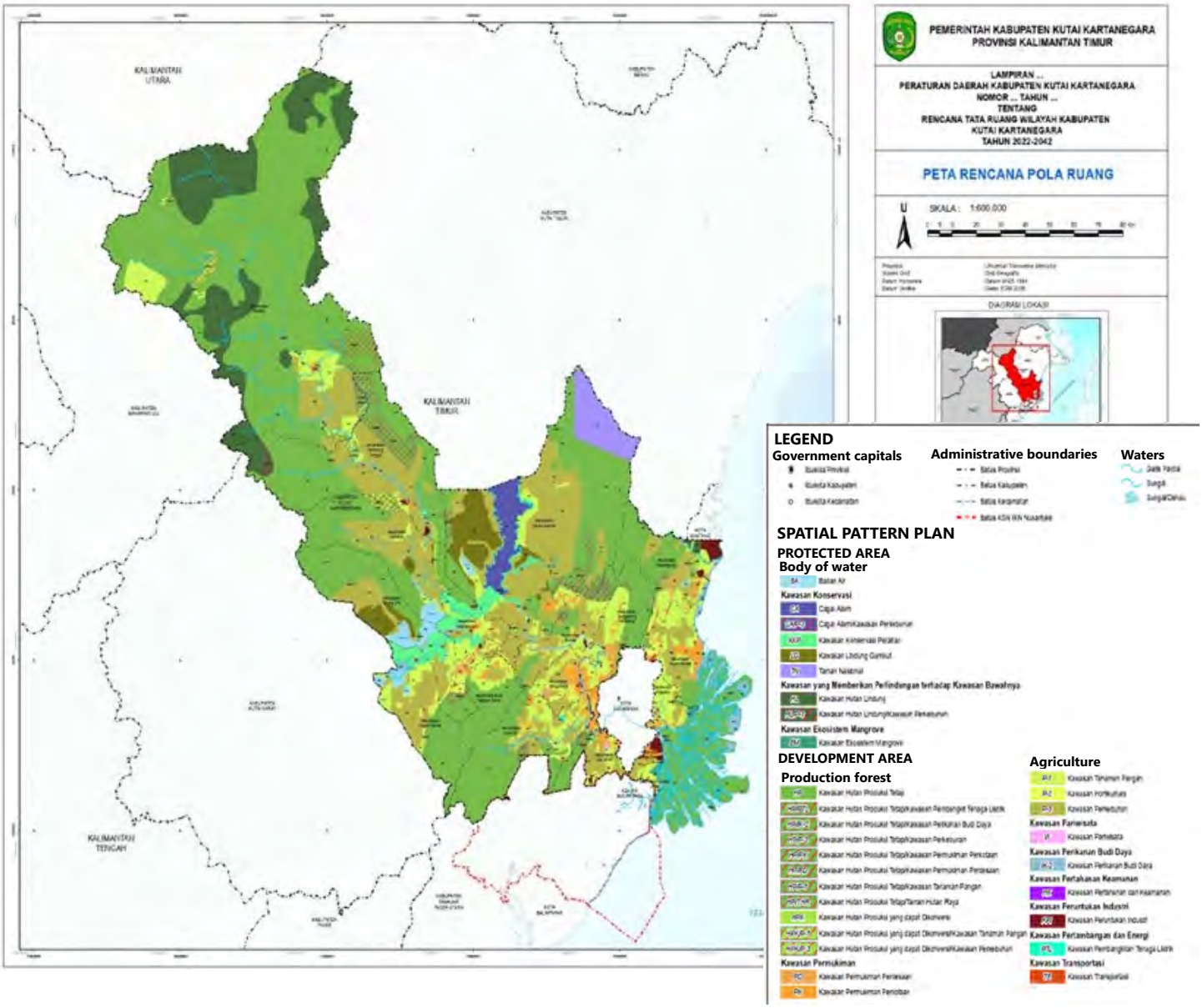
Chapter 7 explains the management provisions of the spatial utilization in Kutai Kartanegara

Regency. The management provisions including mechanism related to zonation policy, licensing and permit policy, incentive and disincentive policy, and penalty policy.



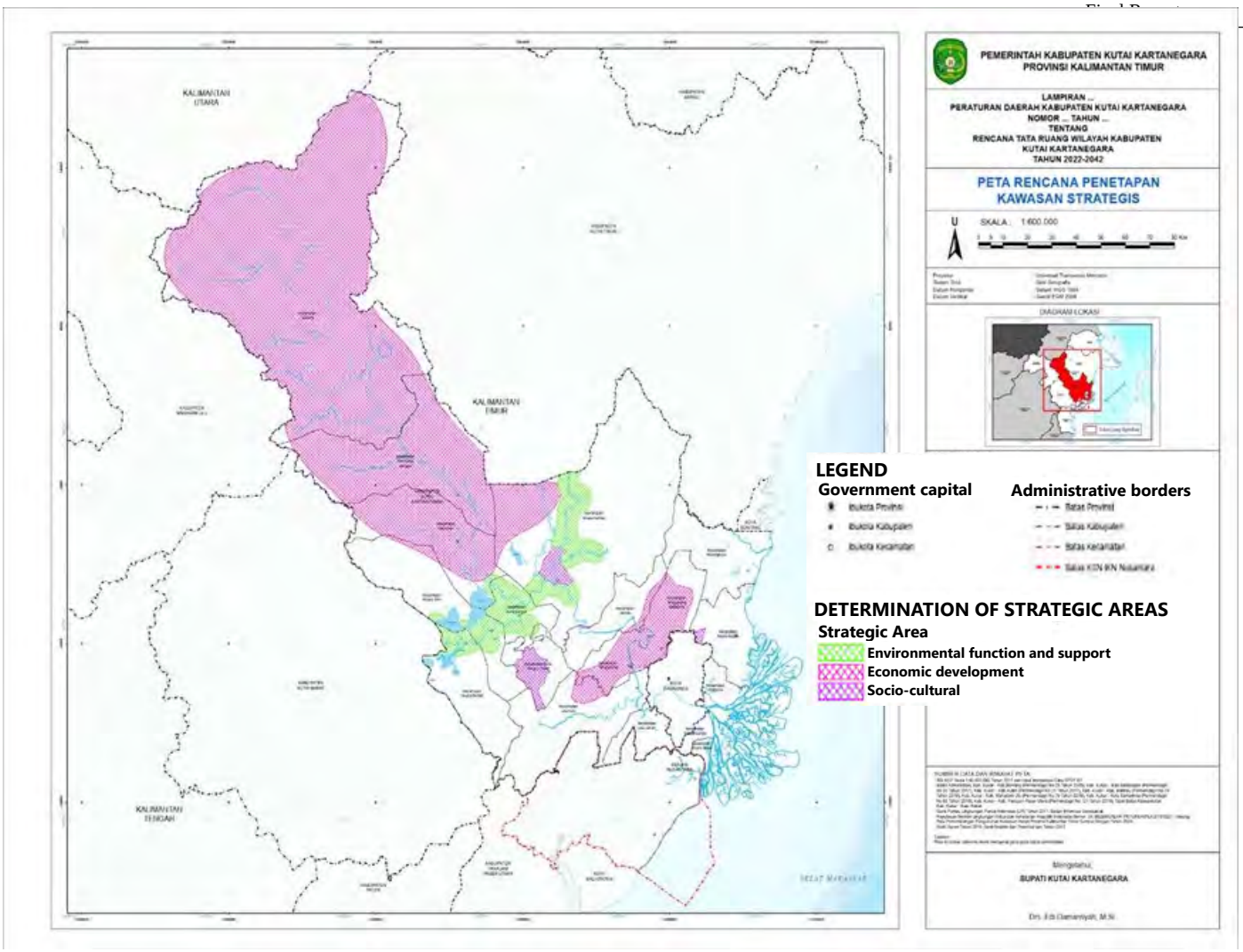
Source: Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

Figure 2-19 Kutai Kartanegara Regency Spatial Structure Plan 2022-2041



Source: Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

Figure 2-20 Kutai Kartanegara Regency Spatial Pattern Plan 2022-2041



Source: Kutai Kartanegara Regency Regional Spatial Plan 2022-2041

Figure 2-21 Kutai Kartanegara Regency Strategic Region Plan 2022-2041

(8) PPU Regency Regional Long-Term Development Plan 2005-2025

The PPU Regency Regional Long-Term Development Plan document is the document issued in 2010 by the PPU Regency that guide the development in regions of the Regency for 20 years period (2005-2025). This document also acts as one of the bases on developing the regional Middle-term development plant. The plan is regulated in the Regional Regulation of PPU Regency No.1/2012. The structure of the document is shown by the figure below.

Chapter 1. Introduction
- 1.1 Background
- 1.2 Objectives
- 1.3 Regulatory bases
- 1.4 Connection with other Planning Documents
- 1.5 Structure of Document

Chapter 2. General Overview of the Region
- 2.1 General overview
- 2.2 Population and Public Wellbeing
- 2.3 Population Projection
- 2.4 Infrastructure Condition in PPU Regency
- 2.5 Spatial Planning System of PPU Regency
- 2.6 Economic Overview of PPU Regency 2000-2009

2.7 Sectoral Potential of PPU Regency
2.8 Direction of Infrastructure Development in PPU Regency
Chapter 3. Analysis of Strategical Issues
3.1 Potentials of Region
3.2 Politic, Security, and Governance
3.3 Sociocultural and Quality of Life Condition
3.4 Natural Resources
Chapter 4. Vision and Missions
4.1 Vision of Regional Development
4.2 Missions of Regional Development
Chapter 5. Policy Direction
5.1 Policy Direction of the Development
5.2 Phasing of the Long-Term Development Plan
Chapter 6. Implementation Guideline
Chapter 7. Closing

Source: PPU Regency Regional Long-Term Development Plan 2005-2025

Figure 2-22 Structure of PPU Regency Regional Long-Term Development Plan 2005-2025

Chapter 1 introduces the status and purpose of the document. The document was established with the aim to give direction and stand as one of the regulatory bases for the 20 years development in the Regency. The focus of the document is to ensure the integration and sustainability of Long-Term developments which consistent with the characteristics, vision, mission, and direction of the region.

Chapter 2 describes the existing condition of the PPU Regency. The coverage of the explanation includes the physical features of the region, population statistics, and infrastructures (transportation, clean water, electricity, communication line, education, health, trade, and services), and the direction of infrastructural development. Further, this Chapter also highlights the general overview of spatial structure plan, economic overview, and potential sectors to be developed in the region, which include the field of agriculture, farm, fisheries, mining, trade, industries, and tourism.

Chapter 3 analyses the strategical issues which urgently needed to be addressed in the 20 years of development period. Strategical issues were established by considering 4 major aspects in which each of aspect is detailed by several components. Those 4 aspects and their components are (1) potential of the region (human resource and natural resources); (2) politic, security, and governance; (3) sociocultural and quality of life; (4) natural resources (climate resources, agriculture sector, fisheries sector, plantation and farm sector, mining and quarrying sector, industrial and trade sector, and tourism sector). Each of this aspect was analyzed by identifying the situation of the input elements, opportunity projection, threat projection, issues projection, success projection, and expected output.

Chapter 4 provides the information regarding vision and missions of the development plan for the 20 years period of planning, derived from the identified strategical issues. The development was envisioned to realize PPU Regency with good moral, independent, healthy, and prosperous based on the people's economy. This vision is expected to be achieved by fulfilling the 8 established missions; (1) realizing the revitalization of sustainable agriculture, plantations, livestock, and fisheries to create jobs and support economic growth; (2) improving the infrastructures to support public's economic productivity; (3) realizing a good, disciplined, clean, authoritative, professional, responsible, efficient and effective governance that can provide excellent quality of public services; (4) realizing agribusiness through development of cultivation subsystems and downstream subsystems to increase regional

excellence and competitiveness and create a basis for agroindustry development based on the competitiveness and excellence of agriculture, plantations, livestock and fisheries; (5) creating an advanced and sustainable people's economy as an integral part of agribusiness and agro-industry development; (6) environmentally friendly-based potential regional development; (7) realizing the advanced and morally good human resources of PPU Regency.

Chapter 5 details the policy direction to achieve the previously established missions. Each mission was detailed by several points of policy directions, totaling 61 directions for all 8 missions. This Chapter also defines the phasing of the Long-Term development plan. The 20 years development plan is divided into 4 phases in which each phase has its own target as follows; (1) phase 1 (2005-2010) focused on establishing the agribusiness framework; (2) phase 2 (2010-2015) focused on the stabilization of the agribusiness framework; (3) phase 3 (2015-2020) focused on the establishment of agro-industry development framework; (4) phase 4 (2020-2025) focused on the stabilization of agribusiness and agro-industry.

(9) PPU Regency Regional Middle-Term Development Plan 2018-2023

The structure of PPU Regency Regional Middle-Term Development Plan 2018-2023 is shown in the figure below. In Chapter 2, it is noted that the area of residential areas in land use increased from 2,808 ha in 2012 to 3,190 ha in 2016. Similarly, industrial areas show a trend of increasing from 290 ha to 5,019 ha. Mining, forestry, agriculture and plantation sectors have been listed as having industrial potential in PPU Regency. Eight economic strategic areas have been identified, including the Bluminung industrial area, where 12 companies have invested and five have applied for business licenses at the time of publishing this Middle-term Development Plan. Chapter 4 describes a wide range of development issues by sector, including, for example, inadequate transport infrastructure, such as many unpaved sections of road, and water and sewage infrastructure, including the use of water resources; the problem of insufficient land for development, including institutional aspects; insufficient supply of housing for low-income groups; inappropriate settlement area management and development control, management of disaster risk areas, investment climate analysis and inadequate investment promotion measures.

Chapter 5 expands the vision of the Middle-Term Development Plan, “Realization of Advanced, Modern and Religious PPU”, and sets out 11 missions relating to economic growth, infrastructure development and improved living conditions to realize the vision. In Chapter 6, strategies, policies, and development programs are outlined for each mission. Chapter 7 follows by presenting five-year budget allocation plans by sector and development program, and Chapter 8 sets mission-specific KPIs and targets for each year.

Chapter 1: Introduction
Chapter 2: Overview of Regional Conditions
Chapter 3: Regional Financial Management and Funding Framework
Chapter 4: Regional Strategic Issues and Problems
Chapter 5: Vision, Mission, Goals and Objectives
Chapter 6: Strategy, Policy Direction and Regional Development
Chapter 7: Development Funding Framework and Regional Development Program
Chapter 8: Performance of Local Government Administration
Chapter 9: Closing

Source: PPU Regency Regional Middle-Term Development Plan 2018-2023

Figure 2-23 Structure of PPU Regency Regional Middle-Term Development Plan 2018-2023

(10) PPU Regency Regional Spatial Plan 2013-2033

The PPU Regency Regional Spatial Plan was issued in 2013 and is regulated under the Regional Regulation of PPU Regency No.3/2014 regarding the PPU Regency Regional Spatial Plan 2013-2033. This plan discloses the spatial management and land use plan in PPU Regency, particularly showing the spatial structure plan, spatial pattern plan, and strategical regions plan. The structure of the document is shown by the figure below.

Chapter 1: General Terms
Chapter 2: Objective, Policies, and Strategies of Spatial Management of the Regency
Chapter 3: Spatial Structure Plan
Chapter 4: Spatial Pattern Plan
Chapter 5: Establishment of Strategical Region
Chapter 6: Direction of Spatial Utilization
Chapter 7: Management Guideline for the Spatial Utilization
Chapter 8: Institution
Chapter 9: Rights, Obligation, and Role of Community in Spatial Management
Chapter 10: Other Provisions
Chapter 11: Transitional Provisions
Chapter 12: Closing

Source: PPU Regency Regional Spatial Plan 2013-2033

Figure 2-24 Structure of PPU Regency Regional Spatial Plan 2013-2033

The table below lists the planning maps shown in the Regional Spatial Plan of PPU Regency 2013-2033.

Table 2-6 Planning Diagrams shown in the PPU Regency Regional Spatial Plan 2013-2033

No.	Graphic Novel	Summary
1	Spatial structure plan map (Figure 2-25)	➢ Integrated map of major residential areas and various infrastructure facility network plans
2	Spatial pattern map (Figure 2-26)	➢ Land use map showing administrative border, conservation area, and development area.
3	Strategic regions plan map (Figure 2-27)	➢ Indicating regions that falls under the strategic region category (e.g., national flagship area, provincial strategic area, regency strategic area)

Source: PPU Regency Regional Spatial Plan 2013-2033

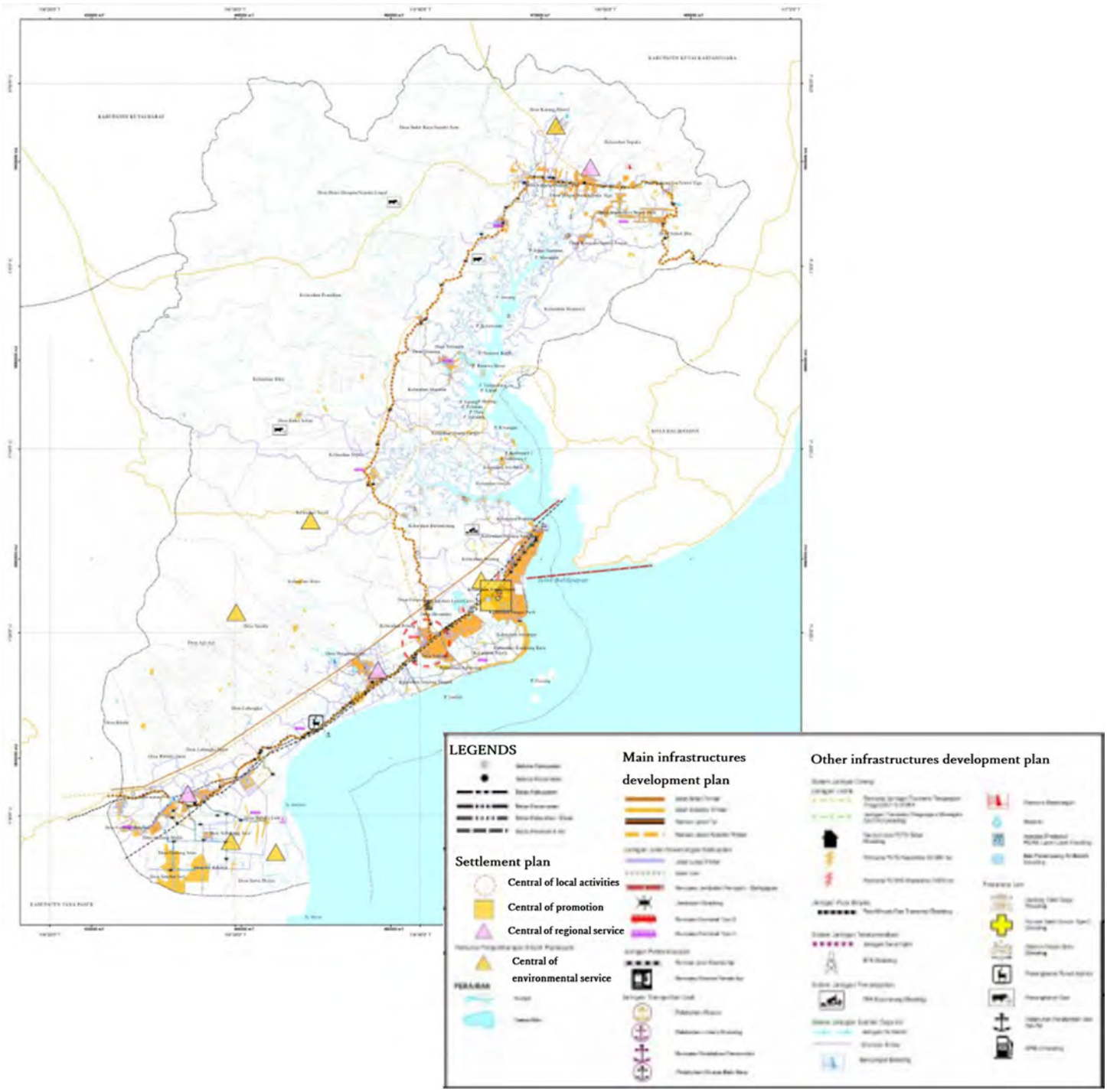
Chapter 2 includes the information regarding objective, policies, and strategies for the spatial management in PPU Regency. Covering 4 subdistricts, the objective of spatial management in PPU Regency is to realize a regency as the center of agribusiness and agro-industry based

on the people's economy, as well as the development of mining potential by paying attention to sustainable development aspects. To realize the spatial management objective, following spatial management policies are established; (1) development of agribusiness areas based on local potentials; (2) development of competitive and potential local industries and agro-industries that are environmentally sound; (3) development of fisheries by considering ecological aspects; (4) development of mining potential based on the balance of ecological and socio-cultural aspect; (5) development of risk management for disaster prone areas; (6) development of regional and environmental infrastructure; (7) strict control on conservation areas based on sustainable developments; (8) improvement of regional function for national security and defense. Strategies for each policy are also provided.

Chapter 3 discusses the spatial structure plan of PPU Regency. The spatial structure in PPU Regency includes the Plan of settlement systems and infrastructure network systems. The settlement systems plan consists of the urban development plan subsystem and rural development plan subsystem. As for the infrastructure network system, it covers various regional infrastructures subsystem, including transportation network, energy network, communication network, water resource network, and environmental management.

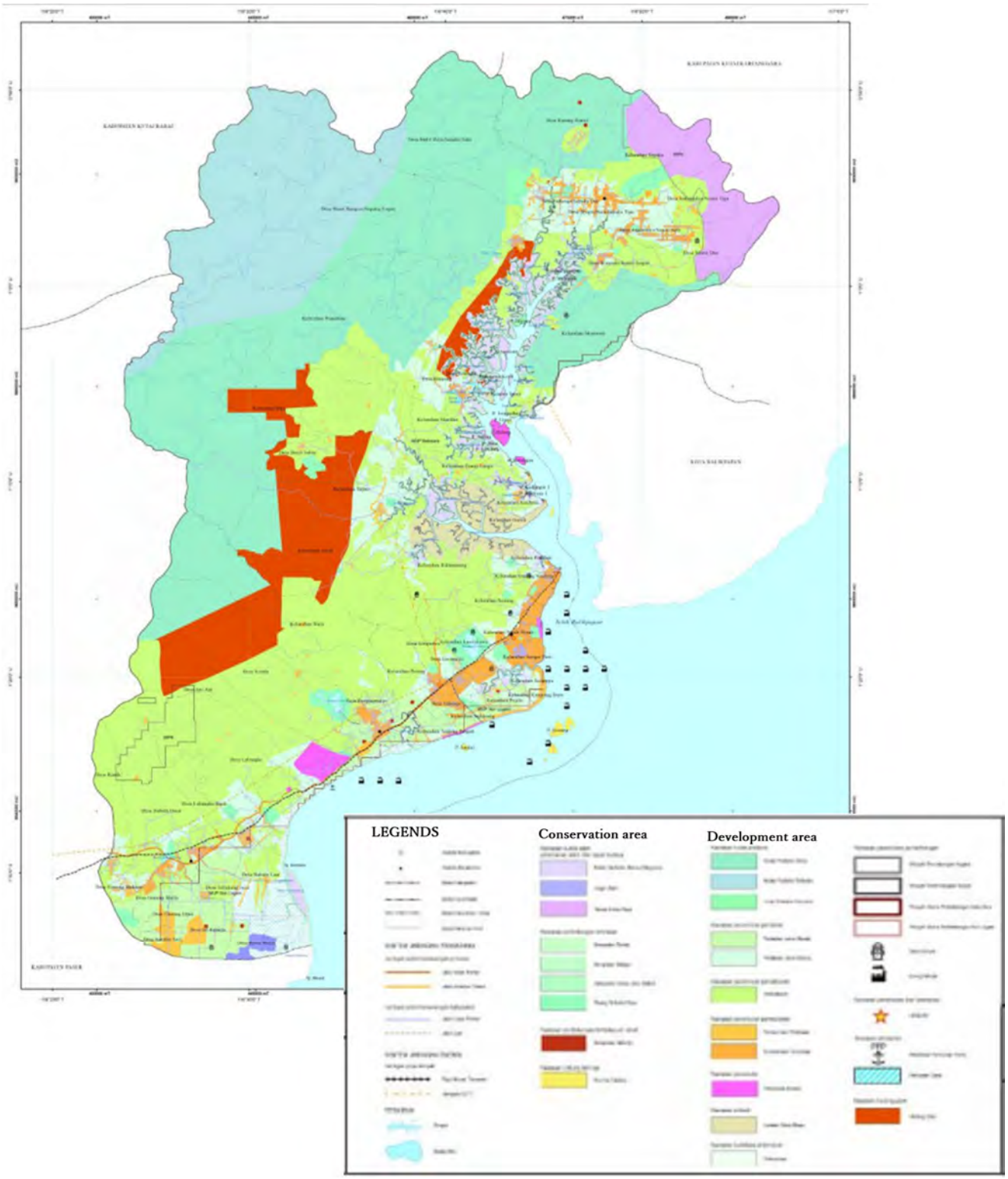
Chapter 4 describes the spatial pattern plan for PPU Regency which covers the conservation areas and development areas. Conservation areas is broken down into 3 different categories; (1) local conservation areas; (2) nature reserves, nature conservation, and cultural heritage areas; and (3) disaster prone areas. As for the development areas, it is broken down into production forest area, agriculture area, fisheries area, mining area, industrial area, tourism area, settlement area, and area for other utilizations. The lists of specific location for each category are provided in the document.

Chapter 5 explains the areas which classified into strategical areas in PPU Regency. The strategic areas are classified into 3 categories; (1) national flagship area which is Bontang City, Samarinda City, Tenggarong, Balikpapan City, and Penajam (BOSAMTEBAJAM); (2) provincial strategic areas (Balikpapan City Bay which covers Sepaku, Penajam, and Balikpapan City); and (3) strategic areas in regencies (total of 15 areas).



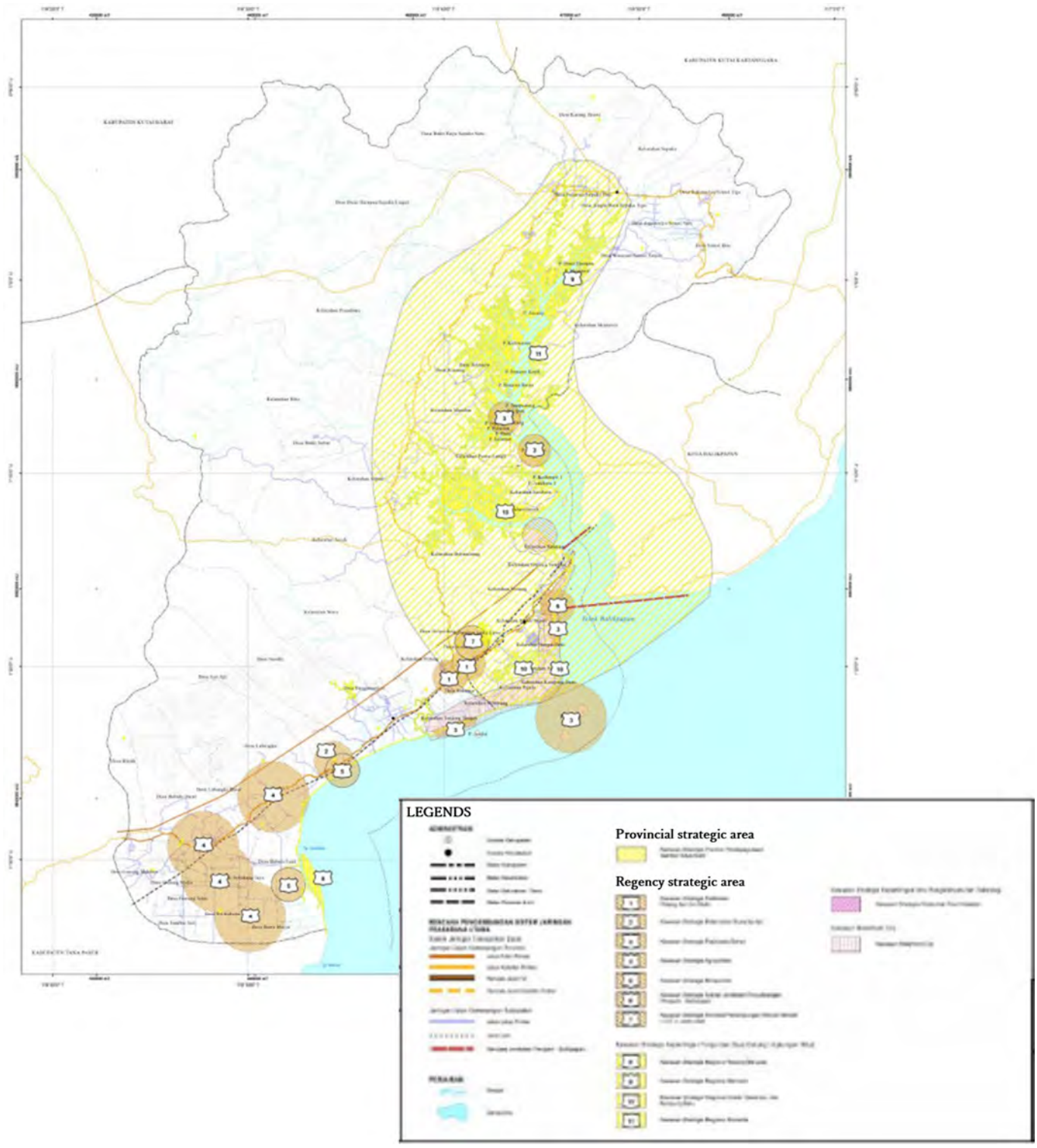
Source: PPU Regency Regional Spatial Plan 2013-2033

Figure 2-25 PPU Regency Spatial Structure Plan 2013-2033



Source: PPU Regency Regional Spatial Plan 2013-2033

Figure 2-26 PPU Regency Spatial Pattern Plan 2013-2033



Source: PPU Regency Regional Spatial Plan 2013-2033

Figure 2-27 PPU Regency Strategic Areas Plan 2013-2033

2.3 Overview of Existing Plans and Related Policies in East Kalimantan Province

To understand where the development of the New Capital City stands, a sector-by-sector survey of relevant plans in East Kalimantan Province, where the New Capital City is located, have been conducted. The table below summarizes the Plans and policies reviewed.

Table 2-7 Review of Relevant Policies and Plans in East Kalimantan Province

Year	Title	Summary	Related Field
2008	East Kalimantan Province Regional Long-Term Development Plan 2005-2025	The Regional Long-Term Development Plan serves as a guide to determine the direction and priorities of development to be implemented in phases in East Kalimantan Province. The Middle-Term Development Plan is a detailed set of policies based on the Long-Term Development Plan.	✓ Connectivity ✓ Climate change measures ✓ Environment and waste management ✓ Industrial development and investment promotion ✓ Power & energy ✓ Urban management ✓ Living environment ✓ Diversity
2024	Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045	The draft of Long-Term Development plan as a guide for regions in East Kalimantan Province which consists of vision, missions, strategical issues, and targets.	✓ Connectivity ✓ Climate change measures ✓ Environment and waste management ✓ Industrial development and investment promotion ✓ Power & energy ✓ Urban management ✓ Living environment ✓ Diversity
2023	East Kalimantan Province Regional Middle-Term Development Plan 2024-2026	The Regional Middle-Term Development Plan guides the East Kalimantan Province Provincial Government in formulating its operational and strategic plans and sets KPIs for its goals.	✓ Connectivity ✓ Climate change measures ✓ Environment and waste management ✓ Industrial development and investment promotion ✓ Power & energy ✓ Urban management ✓ Living environment ✓ Diversity
2023	East Kalimantan Province Regional Spatial Plan 2023-2042	The Spatial Plan for East Kalimantan Province aims to develop safe, comfortable, and sustainable spaces to create centers for green industry, agriculture, marine and fishing, mining and IKN development.	✓ Connectivity ✓ Environment and waste management ✓ Industrial development and investment promotion ✓ Power & energy ✓ Urban management ✓ Living environment
2012	East Kalimantan Province Regional Transportation Regulation	Policies for the development of a regional transportation system, such as the direction of transportation system development in East Kalimantan Province and traffic demand forecasts. These refer to the National Transportation System (SISTRANAS).	✓ Connectivity ✓ Industrial development and investment promotion ✓ Power & energy
2019	East Kalimantan Province Regional Energy Plan 2019	The East Kalimantan Province Regional Energy Comprehensive Plan is the regional government's policy on energy management planning at the regional level.	✓ Climate change measures ✓ Industrial Development and Investment Promotion ✓ Power & Energy

			✓ Urban management ✓ Living environment
2021	Preparation of East Kalimantan Province Regional Domestic Wastewater Treatment System Master Plan	The master plan for regional domestic wastewater treatment system is one of the goals of the National Middle-Term Development Plan, a set of objectives and development strategies to provide sustainable sanitation services.	✓ Connectivity ✓ Environment and waste management ✓ Industrial development and investment promotion ✓ Power & energy ✓ Urban management ✓ Living environment
2024	East Kalimantan Province Economic Transformation Master Plan	Plan on national economic reforms and policies in East Kalimantan Province towards 2045, being prepared by BAPPENAS for publication in December 2024.	✓ Industrial development and investment promotion

Source: Compiled by JICA Study Team from various sources.

(1) East Kalimantan Province Regional Long-Term Development Plan 2005-2025

The East Kalimantan Province Regional Long-Term Regional Development Plan 2005-2025 was developed in 2008 for the period 2005-2025 as a plan to provide a Long-Term development direction for East Kalimantan Province. It was regulated under the Regional Regulation of East Kalimantan Province No.15/2008 regarding the East Kalimantan Province Regional Long-Term Development Plan 2005-2025. As shown in the table of contents below, the Plan consists of a vision and goals, strategies and policy directions for their realization, a Long-Term development scenario, and a development plan by stages.

Chapter 1. Introduction
- A. Definition
- B. Purpose and Objectives
- C. Legal Basis
- D. Relationship of RPJPD with Other Planning Documents
- E. Summary

Chapter 2. General Conditions
- A. Overview
- B. Current Conditions, Future Forecasts and Strategic Issues

Chapter 3. Vision, Mission, and Goals of Long-Term Regional Development
- A. Vision and Mission
- B. Regional Long-Term Development Goals and Objectives

Chapter 4. Regional Long-Term Development Strategy and Policy Direction

Chapter 5. Scenarios and Stages of Long-Term Regional Development
- A. Regional Long-Term Development Scenario
- B. Stages of Regional Long-Term Development

Chapter6.Closing

Source: East Kalimantan Province Regional Long-Term Development Plan 2005-2025

Figure 2-28 Structure of the East Kalimantan Province Regional Long-Term Development Plan 2005-2025

Chapter 3 of this plan presents the long-term regional development vision and the development goals and missions to achieve it. The long-term development vision for East Kalimantan Province is “Realization of A Just and Prosperous Society in Sustainable Development” has been set forth. The development mission to realize this vision is stated as: 1) Developing an autonomous and highly skilled human resource; 2) Achieving a reliable

economic structure with community participation; 3) Providing adequate basic livelihood services to community residents; 4) Promoting participatory government and legislation; and 5) Achieving a regional development approach that harmonizes the economy and ecology. For each of these missions, four to eight policies have been established.

In Chapter 4, various strategies for the long-term development of the region are organized by sector classification based on each of the missions, with the aim of achieving them. For Mission 1), strategies are set out by sector for population, education, research and development, health care, employment, women and children, youth and sports, religion, social welfare, and community empowerment and village management. For Mission 2), sectoral strategies are set for local economy, agriculture and fruit growing, forest management, livestock, fisheries, local investment, industry, trade, small and medium enterprises and associations, tourism, and mining and oil and gas. For mission 3), strategies are briefly described for transportation, irrigation, and electricity and energy. Mission 4) is organized on politics and public administration, national cohesion and community protection, law, and communications and information. Mission 5) lists strategies by sector: spatial planning and border areas, housing and settlements, migration, and environment.

Chapter 5 outlines the long-term development scenarios and organizes priority measures for each five-year period. The long-term development scenario describes development directions by regency and city for spatial planning. The economic development scenarios include production targets by industry for each of the five years up to 2025. The main industries are listed as food crop agriculture, plantation, livestock, and fisheries, and the development of industrial parks where these processing industries are located, human resource development, and infrastructure development to support industrial development are also mentioned. In the latter half of Chapter 5, the five-year policies are presented descriptively from the perspectives of human resource development, regional economic development, basic infrastructure, politics and governance, spatial planning, and the environment.

This plan has been in development for quite some time and does not include a diagram showing priority areas or business locations, nor does it include much information on specific business plans. Although the Plan clarifies the history of regional and industrial development, as a plan that shows the future vision and direction of the region, it needs to be reviewed in light of changes in socioeconomic conditions and IKN development. Although the Plan clarifies the history of regional and industrial development, as a plan that shows the future vision and direction of the region, it needs to be reviewed considering changes in socioeconomic conditions and IKN development.

(2) Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

The previous East Kalimantan Province Regional Long-Term Regional Development Plan was developed in 2008 for the period 2005-2025 as a plan to provide a long-term development direction for East Kalimantan Province. Accommodating the establishment of the New Capital City of Indonesia, the Plan was updated in May 2024 into the East Kalimantan Province Regional Long-Term Regional Development Plan 2025-2045. As shown in the table of contents below, the Plan consists of a vision and goals, strategies and policy directions for their realization, a long-term development scenario, and a development plan by stages.

Chapter 1. Introduction
- 1.1 Background
- 1.2 Legal Bases
- 1.3 Objectives
- 1.4 Relationship of RPJPD with Other Planning Documents
- 1.5 Summary

Chapter 2. General Conditions
- 2.1 Geographical and Demographical Aspect
- 2.2 Community Welfare Aspect
- 2.3 Local Competitiveness Aspect
- 2.4 Public Services Aspect
- 2.5 Result Evaluation of RPJPD 2005-2025
- 2.6 Demographical Trend and Needs on Public Services and Infrastructures
- 2.7 Development of Regional Growth Center

Chapter 3. Problems and Strategical Issues
- 3.1 Regional Development Issues
- 3.2 Review of Strategic Environmental Assessment (KLHS) Aspect of RPJPD
- 3.3 Regional Strategical Issues

Chapter 4. Vision and Mission of East Kalimantan Province

Chapter 5. Policy Direction and Main Targets
- 5.1 Policy Direction for Regional Development in East Kalimantan Province 2025-2045
- 5.2 High Priority Transformative Efforts
- 5.3 Main Targets for Regional Development in East Kalimantan Province 2025-2045

Chapter6.Closing

Source: Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

Figure 2-29 Structure of the Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

Chapter 1 of this plan presents the introduction part which explain parts about background, legal bases, objectives, relationship of RPJPD with other planning documents, and the review of each Chapter. The formulation of this document was motivated by urgency to the previous RPJPD which is to be expired in 2025.

Chapter 2 presents the general overview of the East Kalimantan Province which includes the geographical aspect, demographical aspect, community welfare aspect, regional competitiveness aspect, and public services aspect. This Chapter also includes 3 other important points; 1) the result evaluation of the RPJPD 2005-2025 which presented in a percentage as a comparison between targets and achievements for each indicator in 5 periods complemented with recommendations; 2) demographical trend which considers the establishment of the New Capital City and projection of the needs on infrastructures and services (e.g., housing, clean water, electricity, waste management, health facility, and educational facility); and 3) development of regional growth center.

Chapter 3 discusses problems and strategical issues that cover following area; 1) regional development issues which consist of human resource quality gap, slow transformation from non-recoverable natural resources, unequal infrastructure and unintegrated connectivity, high interregional gaps, unoptimized governance and bureaucracy, and deterioration of environmental quality; 2) Strategic Environmental Assessment (KLHS) which set recommendation on policy directions to address strategical issues; and 3) strategical issues themselves that identified at the international level, national level, and regional level, where IKN was identified in the national level strategical issue.

Chapter 4 presents the vision and missions of East Kalimantan Province on the period of 2025-

2045 considering situations and issues discussed in previous Chapters. The vision for East Kalimantan Province is “Prosperous East Kalimantan Province 2045: Enabler of an Advanced, Equitable, and Sustainable Nusantara Economic Superhub”. To realize this vision, following 8 missions were established; 1) social transformation to realize an excellent and prosperous society; 2) economic transformation by optimizing the role as IKN’s economic superhub; 3) governance transformation to realize the collaborative, professional, and integrated government; 4) realizing the resilient regional security, substantial democracy, and regional economic stability; 5) realizing the local wisdom-based socio-eco-cultural resiliency; 6) realizing equitable and just regional development; 7) realizing quality and environmental friendly infrastructures; and 8) realizing the synergic and sustainable development.

Chapter 5 discusses policy direction and main target derived from vision and missions in previous Chapter. 25 super-priority transformation efforts are set to be achieved within 4 phases of (5 years interval from 2025 to 2045) and classified into 5 main transformation efforts; 1) social transformation; 2) economic transformation; 3) governance transformation; 4) resilient regional security, substantial democracy, and regional macroeconomic stability; and 5) socio-eco-cultural resiliency. To achieve those main target, 17 policy directions and 45 indicators were set.

Despite being still in draft form, this plan is the latest document that shows the development direction of East Kalimantan Province which considers the establishment of IKN. Different with its predecessor (RPJPD 2005-2025), the current plan puts more focus on how East Kalimantan Province can contribute on the IKN Development which expressed on its vision.

(3) East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

The East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 is a plan developed by the East Kalimantan Province Provincial Government in 2023 covering the period 2024-2026 which provides direction for the provincial governor and government policies, work plans and respective development plans and strategies in East Kalimantan Province. The development plan is regulated under the Regional Regulation of East Kalimantan Province No.16/2023. It is organized in Chapters as shown in the figure below, covering the region's financial situation, problems and strategic issues, goals and development objectives, strategies, policy direction and priority programs, budget financing framework, and governance of regional development, etc. As development objectives up to 2026, the Plan sets a Human Development Index (HDI) of 78.92, economic growth rate of 4.5-5.3%, and other numerical targets for each indicator such as poverty rate, Gini coefficient, environmental quality factor, unemployment rate, gender coefficient, and infrastructure service factors. The development plan is to be managed and evaluated by the Regional Development Planning Department of East Kalimantan Province.

Chapter 1. Introduction
- 1.1 Background
- 1.2 Legal Basis for Preparation
- 1.3 Relationship between Regional Development Plan Documents and Other Development Planning Documents
- 1.4 Purpose and Objectives
- 1.5 Writing Systematics

Chapter 2. Overview of Regional Condition
- 2.1 Geography and Demographic Aspects
- 2.2 Aspects of Community Welfare
- 2.3 General Service Aspects
- 2.4 Aspects of Regional Competitiveness
- 2.5 Achievement of RPJMD Performance Indicators 2019-2023

Chapter 3. Regional Financial Overview
- 3.1 Past Performance
- 3.2 Past Financial Management Policy
- 3.3 Funding Framework

Chapter 4. Problems and Strategic Issues
- 4.1 Regional Development Issues
- 4.2 Strategic Issues

Chapter 5. Goals and Objectives

Chapter 6. Strategy, Policy Direction and Priority Programs
- 6.1 Development Strategy and Policy Direction
- 6.2 Direction of Regional Development
- 6.3 Priority Development Program

Chapter 7. Development Funding Framework and Regional Structure Program
- 7.1 Development Funding Framework
- 7.2 Regional Structure Programs

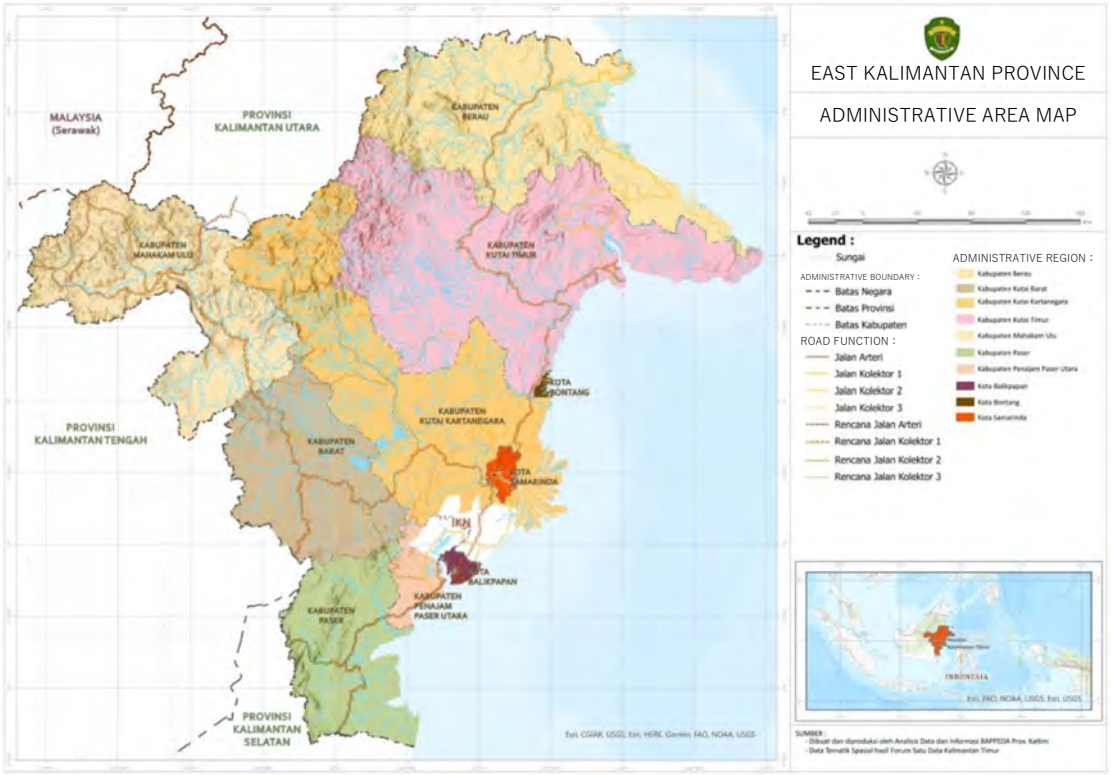
Chapter 8. Performance of Local Government Administration
- 8.1 Key Performance Indicators
- 8.Performance Indicators of Local Government Administration

Chapter 9. Closing

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-30 Structure of the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

East Kalimantan Province consists of seven regencies (Kabupaten) and three cities (Kota), as shown in the figure below. Chapter 2 also mentions areas with high disaster risk, such as the flood risk map of East Kalimantan Province (see figure below) and forest fire risk map.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-31 Administrative districts of East Kalimantan Province

The development issues in Chapter 4 are categorized and enumerated by sector, including education, health, public works and spatial planning, public housing and residential areas, disaster prevention, social development, labor, women's empowerment, transportation, environmental community, investment environment, youth and sports, fisheries, tourism, food, agriculture, forestry, trade, industry, and coordination among government organizations. For example, for public works and spatial planning, the Development Plan briefly describes inadequate connectivity within the province, insufficient and underdeveloped road network capacity, and inadequate hydropower development, and for spatial planning, responses to changing development policy trends.

International strategic issues include reducing greenhouse gas emissions and addressing climate change, economic development since the expansion of COVID-19 infection, energy transition, and responding to the food crisis and changing global circumstances. National strategic issues mentioned include promoting development based on the National Middle-Term Development Plan, promoting the New Capital City Development (8 Development Guidelines), contributing to the Sustainable Development Goals (SDGs), holding local elections, accelerating poverty reduction, promoting healthy development of children, improving the administrative system, and promoting blue economy.

Among these, regarding the promotion of the development of the New Capital City, it is mentioned that East Kalimantan Province will be an economic superhub that will be linked to and supported by IKN. To this end, the document cites the need for: a) infrastructure development to improve accessibility between IKN and the surrounding areas, b) human resource development for economic linkage, c) enhancement of welfare aspects to support low-income people, etc., and d) support for the ecosystem for the development of IKN.

In Chapter 5, Goals and Objectives of Regional Development, the slogan for 2024-2026 is "Building Kaltim for Nusantara (Membangun Kaltim Untuk Nusantara)" in order to develop the region as a partner region in strong cooperation with IKN Development, while also taking into account the East Kalimantan Province Regional Long-Term Development Plan 2005-2025 and the National Strategy. As an important role in the development of East Kalimantan Province, it emphasizes the importance of supporting the development of IKN as a world city and strengthening inter-regional cooperation. It then lays out four major goals which are to: a) secure and develop competitive human resources, b) achieve quality economic growth, c) improve the environment, and d) improve the administrative system, and 11 strategic objectives. Strategies and directions for realizing the goals are organized in Chapter 6 from various perspectives.

In Chapter 6, the spatial development direction of the regional development is based on the "East Kalimantan Province Regional Spatial Plan 2023-2042," and while showing a diagram of the Plan, it indicates that emphasis is placed on the development of the regional infrastructure network, environmental conservation, disaster prevention and mitigation, and other aspects. In addition, as a development direction to make IKN a world-class city, the Plan includes: promoting regional development that supports IKN to become a sustainable and national symbolic city; strengthening connectivity between IKN and other regions in the province; developing integrated intercity, logistics hub, train station, port, airport, and road networks; promoting green industry, agriculture, and the promotion of green industries, agriculture, fisheries, and mining, among others, are mentioned. The strategy also states that the region will promote the development of railway networks, river and ferry transportation networks, oil and gas energy networks, electricity and communication networks, infrastructure development related to marine resources, waste management systems, forest conservation, and the preservation of cultural heritage and local resources. The strategy includes the development of energy networks, power and communication networks, infrastructure development for marine resources, waste management systems, forest conservation, and the preservation of cultural heritage and regional resources. Industrial development is also mentioned in a multifaceted manner, utilizing existing industries and resources, and developing them in a manner that balances with the environment. From the perspective of disaster prevention, the document also mentions the development of evacuation routes and evacuation sites in the event of a disaster, and the fostering of community awareness. In Chapter 6, following the direction of development for the state, the direction of development and priority measures for each regency and city are organized.

Chapter 6, Section 6.2.2 lists the key points, albeit briefly, for each of the eight sectors regarding the direction of East Kalimantan Province's development considering IKN's development. For example, regarding logistics and connectivity, the document mentions the network between IKN and both Balikpapan City and Samarinda City, as well as the development and strengthening of the logistics hub network considering the IKN Development. On the other hand, no specific programs or projects are presented in Section 6.3, which lists 55 priority development programs in a tabular format based on four major goals and 11 strategic objectives, along with budgets for 2024, 2025, and 2026 for each program. On the other hand, the organization of measures is difficult to see their relationship to the direction of provincial development based on the IKN Development. For example, the connectivity enhancement is described as a road traffic and transportation implementation program, but specific measures are not indicated.

(4) East Kalimantan Province Regional Spatial Plan 2023-2042

The East Kalimantan Province Regional Spatial Plan 2023-2042 is a plan developed by the East Kalimantan Province Provincial Government to promote integrated and balanced development among regions and sectors in the province. The plan is a new plan developed after reviewing and revising the previous plan covering 2016-2036, and contains regulatory provisions on land use, etc., along with spatial planning diagrams, etc., in the document. It is regulated under the Regional Regulation of East Kalimantan Province No.1/2023. The structure of this plan is shown in the figure below.

Chapter 1. General Provisions
Chapter 2. Scope
Chapter 3. Objectives, Policies and Strategies of Spatial Planning
Chapter 4. Regional Spatial Structure Plan
Chapter 5. Regional Spatial Pattern Plan
Chapter 6. Provincial Strategic Area
Chapter 7. Regional Space Utilization Direction
Chapter 8. Regional Space Utilization Control Direction
Chapter 9. Institutionalization
Chapter 10. Rights, Obligations and Role of the Community
Chapter 11. Investigation
Chapter 12. Penal Provisions
Chapter 13. Miscellaneous Provisions
Chapter 14. Transitional Provisions
Chapter 15. Closing

Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-32 Structure of the East Kalimantan Province Regional Spatial Plan 2023-2042

The table below lists the planning maps shown in the East Kalimantan Province Regional Spatial Plan 2023-2042.

Table 2-8 Planning Diagrams shown in the East Kalimantan Province Regional Spatial Plan 2023-2042

No.	Graphic Novel (esp. One Created Between the 12th and 19th Centuries)	Summary
1	Area Cover Map	➢ Map of Administrative Districts in East Kalimantan Province
2	Spatial Structure Plan Map (Figure 2-33)	➢ Integrated map of major residential areas, transportation facility network, various infrastructure facility network plans, etc.
3	Settlement Center System Map	➢ Location map of major residential areas
4	Transportation Network System	➢ Plan of transportation facilities and networks including roads, railways, ports and river ports, airports, etc.
5	Energy Network System	➢ Energy network diagram (electricity/oil/gas)
6	Telecommunication Network System	➢ Communication Infrastructure Network Diagram
7	Water Resource Network System	➢ Water Resources Management and Flood Management Facility Network Map
8	Other Infrastructure Network System	➢ Other infrastructure network diagrams (water and wastewater facility networks, waste treatment

		facilities)
9	Spatial Pattern Plan Map (Figure 2-34)	➢ Land Use Plan Map of Conservation Areas and Developed Areas
10	Strategic Area Map (Figure 2-35)	➢ Location map of strategic areas related to environment, economic growth, and socio-cultural
11	Marine Space Utilization Sustainability Map	➢ Map of planned marine environmental protection areas near the coast

Source: East Kalimantan Province Regional Spatial Plan 2023-2042

In Chapter 3, the objective of this spatial plan is to develop and create a safe, comfortable, and sustainable space for green industry, agriculture, fisheries, and mining and IKN development. In addition, the policy directions related to spatial planning include the development of settlements and the development of each industrial system, development as a world city for all IKN people, development of a regional infrastructure network, conservation of protected areas, conservation of protected areas on land and offshore, competitive industrial development, agricultural land and fisheries based on the principles of sustainable development of industrial and mining lands, disaster risk reduction, and strengthening of national defense and security are indicated. In addition, spatial planning strategies are organized under policies.

Strategies for IKN development include spatial planning to support IKN development and the development of a connectivity network between IKN and regions within the province. The direction presented here is also consistent with the spatial planning direction in the East Kalimantan Province Provincial Middle-Term Development Plan 2024-2026 mentioned above.

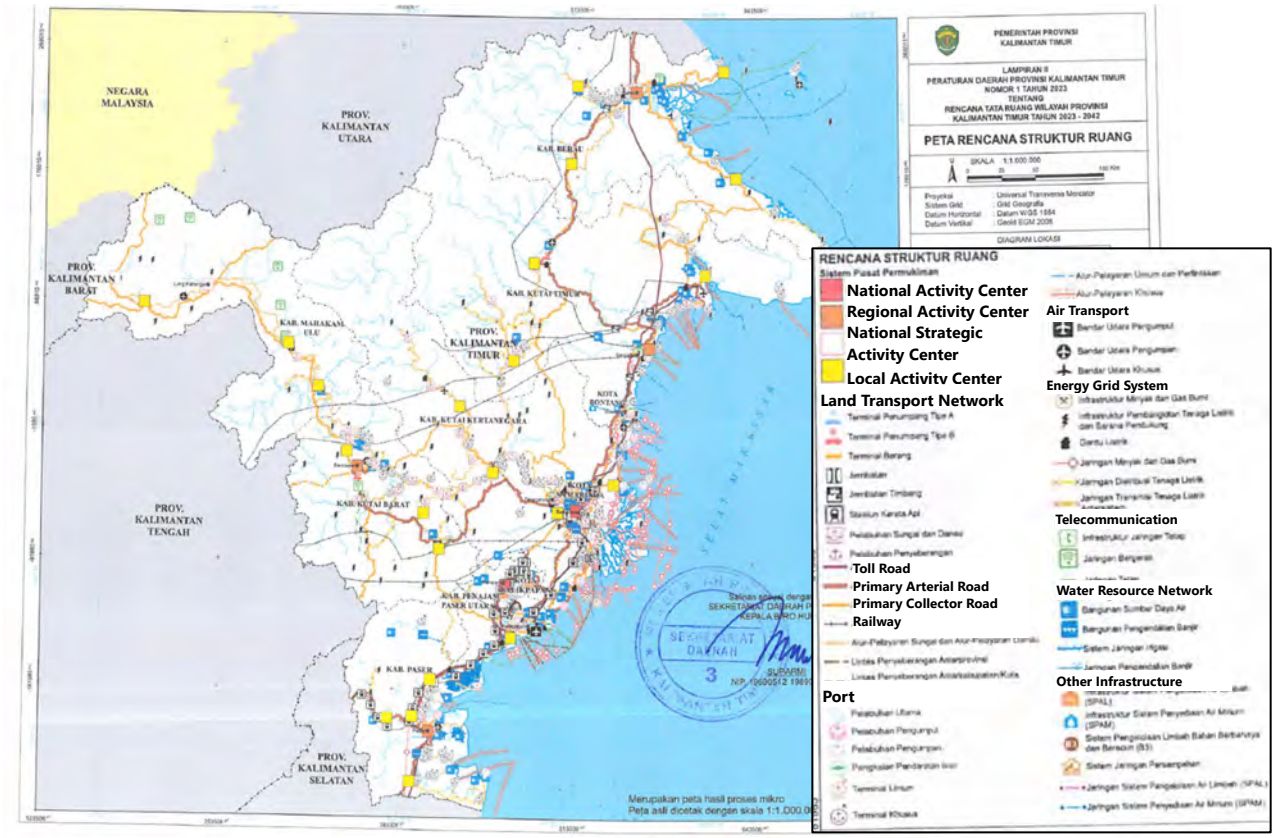
Chapter 4 states that the regional spatial structure plan consists of plans for a) residential areas, b) transportation network, c) energy network, d) communication network, e) water resources network, and f) other infrastructure networks, and describes the components of each plan. For example, for the roads in the transportation network, the corresponding routes are shown for each of the arterial roads, collector roads, and toll roads. In addition, transportation terminal locations are also shown. The railway network is described as consisting of railway stations and a network of rail lines, and the names of the stations are also listed. For each of the other plans, the names and other details of each element shown in the spatial plan are also listed in the Plan.

In Chapter 5, as spatial pattern planning, the Spatial Plan further classifies conservation areas and development areas into categories and uses and organizes the outline and area for each use. regions, and defense security regions. The names of the individual regions that fall under the classified areas are then organized, and the directions for conservation and development are briefly presented. For example, Balikpapan City, Samarinda City, Sanga-Sanga, and Muara Jawa are listed as economic growth areas in the National Strategic Region, while Bontang City Industrial Region (Bontang City, Kutai-Katenegara Province), Maloy Industrial Region (Kutai Timur Regency), and Kariangau Industrial Area (Balikpapan City) and Buluminung Industrial Area (PPU Province), Samarinda City Distribution Service Area, Agricultural Base Area, etc., and their development directions are described.

Chapter 7 of the Regional Spatial Plan organizes the location, budget, financial resources, implementing agencies, and implementation period for the programs to be promoted in each region over the middle-term of five years, and a list of programs is attached as an appendix.

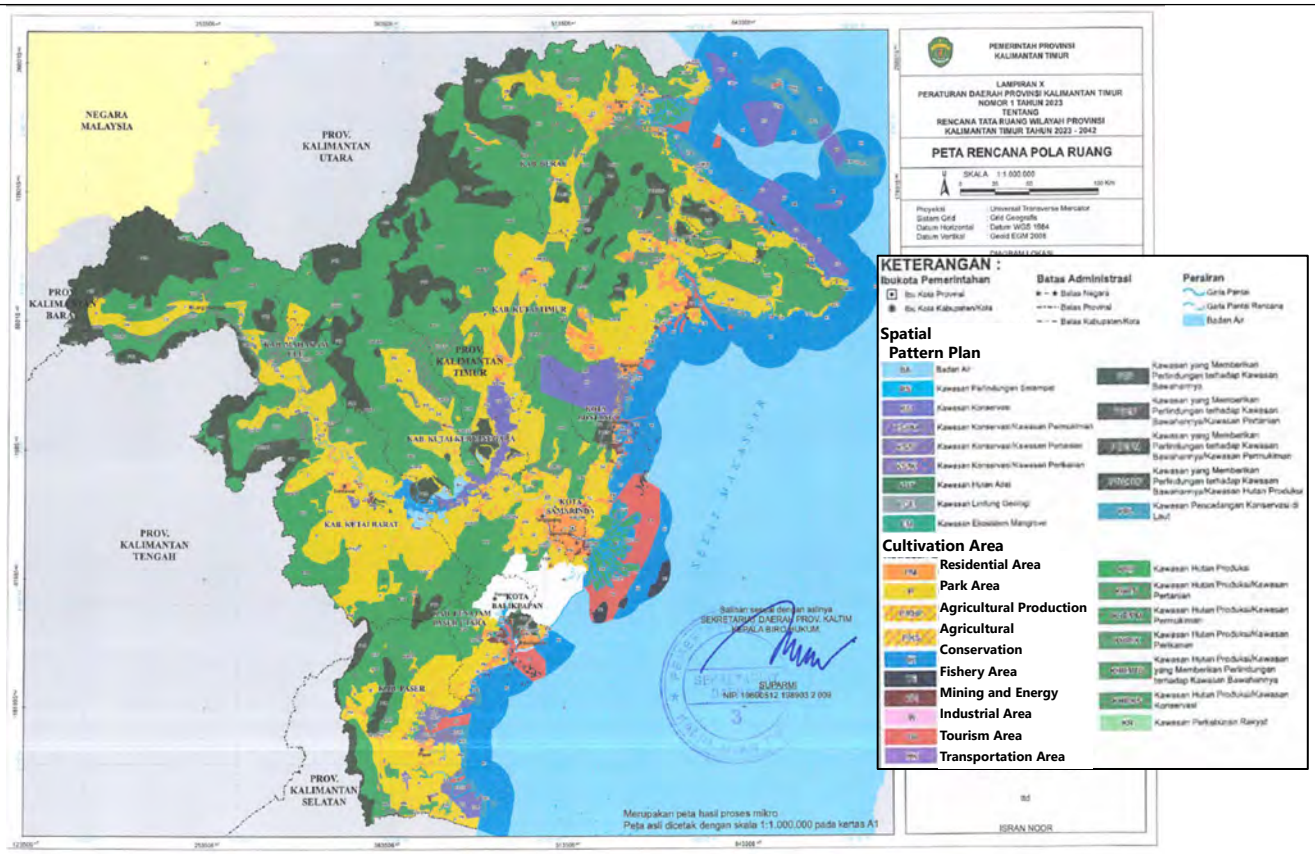
In addition, policies, and points to note regarding zoning, development, and regulatory content for each land use stipulated in the Regional Spatial Plan are presented. Chapter 9 and subsequent Chapters contain explanations regarding implementation, investigation, evaluation monitoring, and penalties for matters stipulated in the Spatial Plan.

In relation to the IKN Development, the development objectives and strategies are described in the preceding section, and the major facilities that have already been shown in the IKN Development Plan are included in each infrastructure facility plan (ports, airports, dams, roads, railway facilities, etc.). On the other hand, there are few descriptions of the impact and effects of the IKN Development on the regions in East Kalimantan Province, and the Plan does not yet fully reflect the measures and infrastructure plans necessary in the province to promote economic development in coordination with the IKN Development.



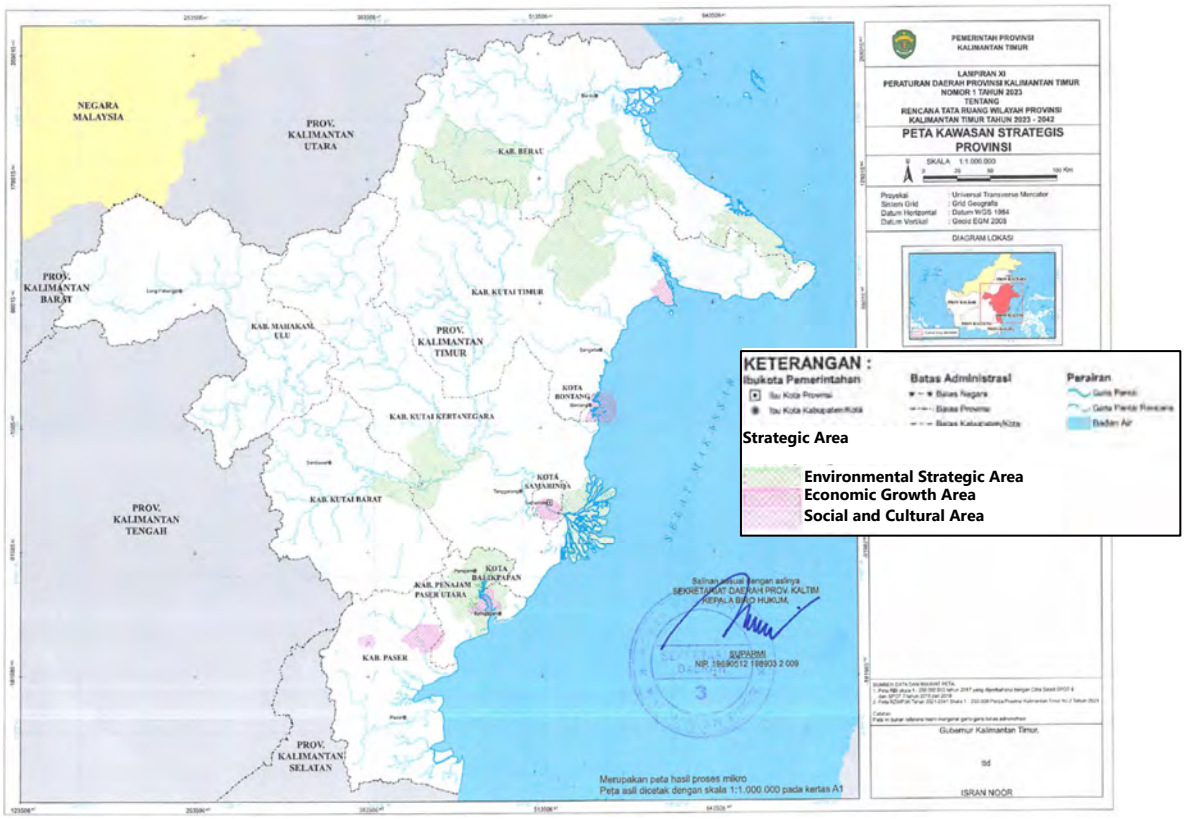
Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-33 Spatial Structure Plan 2023-2042 for East Kalimantan Province



Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-34 Spatial Pattern Plan for East Kalimantan Province 2023-2042



Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-35 Regional Strategic Plan 2023-2042 for East Kalimantan Province

(5) East Kalimantan Province Regional Transport Regulation 2012

In 2012, the East Kalimantan Province Provincial Government set forth in this regulation the direction for the development of East Kalimantan Province's transportation system, based on the National Transportation System Plan (SISTRANAS) and regional realities. It was regulated under the Regional Regulation of East Kalimantan Province No.13/2012. The vision of transportation development in East Kalimantan Province is to create a “growing, equitable, and integrated regional transportation network. The mission is to develop a regional transportation service network and a regional transportation infrastructure network. The transportation policy directions include a) increasing the use of public transportation, b) improving logistics and transportation services, c) strengthening the road network, d) utilizing the river network and ferry traffic (ASDP), e) developing marine transportation, f) partial conversion from road to rail transportation, and g) improving air transportation.

The strategies include the development of networks and infrastructure in each transportation sector, the development of railway stations and hub facilities, and the expansion of transportation capacity. Regarding the programs related to transportation development, the document states that the transportation system of Kalimantan Island based on the National Transportation System Plan, transportation development programs at the national and regional levels, and transportation development programs at the provincial and regional levels are shown in figures and tables in the Appendix. It then lists the transportation development programs for each transportation sector at the provincial level. However, the program, on the other hand, does not mention specific project names, and only indicates policies such as “construction of Toll-Road,” “increase in port capacity,” and “construction of railways between bases and for mining and plantations”.

(6) East Kalimantan Province Regional Energy Plan 2019

The East Kalimantan Province Provincial Energy Plan 2019 was developed in 2019 with the target year of 2019-2050 as a plan to provide long-term direction for energy development and utilization in East Kalimantan Province. It was regulated under the Regional Regulation of East Kalimantan Province No.8/2019 regarding the East Kalimantan Province Regional Energy Plan. The table of contents structure is shown in the figure below, which sets the vision and goals, and provides direction for strategies and measures to achieve them.

Chapter 1 Introduction
1.1 Background
1.2 Laws and Regulations
1.3 Coordination with other regional plans
1.4 Glossary
Chapter 2: Current Status and Future Prospects of Local Energy
2.1 National Energy Issues and Challenges
2.2 Current status of energy in the region
2.3 Future projections
Chapter 3: Vision, Mission, and Goals for Community Energy
3.1 Vision
3.2 Mission
3.3 Objectives
3.4 Indicators for achieving goals
Chapter 4: Regional Energy Management Policies and Strategies
4.1 Policies and Strategies
4.2 Related Organizations
4.3 related plans
Chapter 5 Conclusion

Source: East Kalimantan Province Regional Energy Plan 2019

Figure 2-36 Structure of the East Kalimantan Province Regional Energy Plan 2019

Chapter 2 of this plan presents the status, challenges, and future projections for energy management in the nation and East Kalimantan Province. The following issues are identified as challenges for the nation as a whole

- Some areas have fuel, LPG, and electricity shortages due to incomplete infrastructure development for sharing gas and power between islands.
- While the country's own oil production is declining, oil consumption is increasing, leading to an increased dependence on imported fuels.
- Insufficient subsidies and other systems for the introduction of renewable energy are not price-competitive and hinder the spread of renewable energy.
- While the potential for renewable energy sources such as geothermal, hydro, bio, solar, and wind is considered high, renewable energy accounted for only 5% of electricity generation as of 2015.
- Energy use efficiency is low due to insufficient dissemination of systems to promote the use of high-efficiency equipment.

In the face of these challenges, greenhouse gas emissions in East Kalimantan Province are projected to increase year by year to approximately 37,774 Thousand tons in 2050, more than double the projected emissions in 2020.

Chapter 3 presents a long-term vision for the East Kalimantan Province and the goals and missions to achieve it. The long-term energy vision for East Kalimantan Province is “to achieve low emission, sustainable energy security and independence for the welfare of society. The missions to achieve these goals are: (1) to ensure equal and quality energy access, (2) to realize independent energy use by utilizing local potentials, (3) to provide energy at fair and reasonable prices, (4) to promote the use of renewable energy and energy conservation efforts, and (5) to realize environmentally friendly energy management.

In Chapter 4, six policies are organized based on each mission.

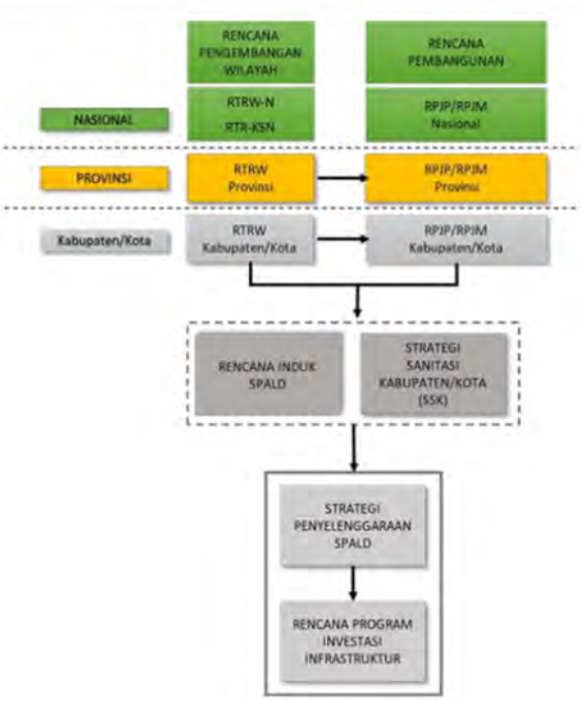
- Improve reliability of the energy supply system: develop electricity infrastructure throughout the region, including rural areas, and expand fuel and natural gas sales and supply networks
- Expand use of renewable energies: Promote feasibility studies to expand use of renewable energies such as solar, waste, biogas, wind, biomass, and small and hydraulic power.
- Energy conservation and diversification of energy use: promote initiatives such as the development of energy conservation policies, the introduction of energy management systems, and the use of electric vehicles.
- Environmental Protection: Promote efforts to prevent environmental pollution and combat climate change
- Energy price optimization: Establishment of a pricing system that promotes the setting of appropriate energy prices and the use of renewable energy sources.
- Human Resource Development: Promote human resource development through capacity building related to energy management.

For these policies, relevant institutions and related plans and policies are listed.

In this plan, there is little reference to specific business plans, etc. While it clarifies the current status and issues, etc. of energy management in the nation and region, as a plan that shows the future vision and direction of the region, it is necessary to review the Plan in light of changes in socioeconomic conditions and IKN development, before proceeding with the specifics of the projects.

(7) Preparation of East Kalimantan Province Regional Domestic Wastewater Treatment System Master Plan 2021

Domestic Wastewater Treatment System Master Plan (RISPALD: Rencana induk Sistem Pengolahan Air Limbah Domestik) is a comprehensive master plan of drainage facilities and infrastructure in East Kalimantan Province for the short-term (2022-2023), Middle-Term (2024-2028) and long-term (2029-2041). It establishes direction, development strategies, and priorities for domestic wastewater infrastructure and facility development in East Kalimantan Province for the next 20 years. The planning process is positioned based on development plans and spatial plans at the national, provincial, and municipal levels.



Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan 2021

Figure 2-37 Positioning of the Master Plan

Chapter 1 states that the objectives of the Master Plan to provide a direction and policy framework for domestic wastewater management to be implemented by the responsible departments of the Regencies/Cities and East Kalimantan Province. It is also stated to be a source of information for stakeholders and community management in sewerage in East Kalimantan Province.

The phases to be implemented are categorized as follows: A: Introduction and Preparation Phase; B: Preparation of Domestic Wastewater Treatment Master Plan Document; C: Strategic Policy Formulation and Decision Phase; D: Planning and Implementation Phase; and E: Preparation of Funding Proposal for Regional SPALD implementation in East Kalimantan Province.

The referenced standards clarify the roles and authorities to be assumed by the local government in addition to laws, decrees, and ministerial ordinances. It also states that the Domestic Wastewater Treatment System Master Plan must be developed in an integrated manner with the Drinking Water Supply System (SPAM: Sistem Penyediaan Air Minum).

Chapter 2 states that the concepts and criteria for master planning include: planning period, master plan evaluation, planning standards, minimum service standards, master planning studies, sewerage sector planning and integration with other sectors, and the contribution of SPAL (Sistem Pengolahan Air Limbah) to the climate change program.

Within the framework of the master plan, it also summarizes the types of basic sewerage services and their description, targets for achieving service standards by region, and the types and number of existing sewerage management systems and the number of beneficiaries. Other information includes achievement targets for sanitation maintenance, access rates to potable water, demographics, and consistency with other plans and contributions to climate change programs.

SPALD-S (Sistem Pengeloaan Air Limbah Domestik Setempat) is a domestic wastewater management that ranges from individual sanitary facilities such as septic tanks and cesspools to fecal sludge treatment facilities.

SPALD-T (Sistem Pengeloaan Air Limbah Domestik Terpusat) is a centralized sewerage management system that uses pipes to discharge wastewater from residences and other buildings and consolidate it into a centralized domestic wastewater treatment plant (IPALD-T: Instalasi Pengolahan Air Limbah Domestik Terpusat).

Table 2-9 Number of SPALs and beneficiaries

No.	Kabupaten/Kota	Ketersediaan Infrastruktur (IPAL, Septicktank Komunal)	Jumlah Infrastruktur	Jumlah KK Pelayanan
7.	Mahakam Ulu	IPAL Komunal	5	300
		Sub Total G	**5**	**300**
8.	Samarinda	IPAL Komunal	17	2.165
		IPLT Kota	1	1.250
		Sub Total H	**18**	**3.415**
9.	Balikpapan	IPAL Komunal	26	7.897
		IPLT Kota	1	1.000
		Septicktank Komunal	1	156
		Sub Total I	**28**	**9.053**
10.	Bontang	IPLT Kota	1	750
		IPAL Komunal	7	2.875
		Sub Total J	**8**	**3.625**
Ketersediaan Infrastruktur di Kalimantan Timur		Septicktank Komunal	12	431
		IPAL Komunal	104	22.662
		IPAL Kawasan	1	200
		IPLT Kota	8	5.650
		SPALD-S Komunal	2	2.020
		TOTAL	**127**	**30.988**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan 2021

In Chapter 3, the potential service areas are analyzed through an approach to sewerage issues and regional issues in determining the selected areas. As a result of the analysis, six districts, including Samarinda City and Balikpapan City, are listed as potential areas to be served by the Domestic wastewater Treatment System Master Plan for East Kalimantan Province.

Chapter 4 summarizes the status data (planning area boundaries and demographics), physical conditions of the planning area, socioeconomic conditions of culture and public health, current data on drinking water and sewerage systems, and environmental quality conditions in the RISPALD planning area in East Kalimantan Province.

Chapter 5 provides an analysis of the existing drainage plan, including the problems of the extracted system, the sewerage management policies and strategies of the relevant ministries, the strategic plan of the relevant provincial, and municipal business and technical agencies (Renstra-SKPD: Satuan Kerja Perangkat Daerah), East Kalimantan Province Regional Spatial Plan, Environmental Health Risk Assessment (EHRA) study, and determination of strategic issues.

Chapter 6 summarizes the development direction, including the policy on sewerage infrastructure development (including vision/mission and strategic goals and objectives), the state's sewerage management policy, determination of priority zones, evaluation results, and direction for the development of regional SPALDs.

Chapter 7 summarizes the technical aspects of the development plan, including the service development plan for each period and the regional IPAL service plan.

Chapter 8 summarizes the investment plan, which covers financing and investment in sewerage facilities and infrastructure, including investment and maintenance costs for IPLT on-site systems and for city-scale off-site systems.

Chapter 9 summarizes the institutionalization of SPALD as a SPALD institution, including regulatory analysis, policies on SPALD implementation, interregional cooperation on domestic wastewater development and management, and government investment in SPALD and BMN/BMD management.

Chapter 10 summarizes program indications, including infrastructure, institutional, regulatory, economic, funding programs, education and the role of the community, funding indications and a schedule of activity phase plans.

(8) East Kalimantan Province Economic Transformation Master Plan

1) Background of the Economic Transformation Master Plan

Indonesia's National Long-Term Development Plan 2025-2045 is calling for reforms on three sectors toward 2045: society, governance, and economy. The economic transformation further notes that the development of IKN, as well as scientific and technological innovation, industrialization, accelerated transition to renewable energy, creation of digital platforms, and establishment of connectivity in the economic zone are all contributing factors to the transformation. To realize these long-term visions, BAPPENAS is currently developing East Kalimantan Province Economic Transformation Master Plan (here after East Kalimantan Province ETMP) and examining the shift from a *resource-based* economy to a *productivity-led* economy as well as the policies for East Kalimantan Province.

2) ETMP already formulated by BAPPENAS: Bali, Riau

The National Long-Term Development Plan 2025-2045 defines several priority areas and BAPPENAS has also formulated ETMPs for Riau Island Province and Bali Province, respectively. The economic reforms in Riau Island Province, Bali Province, and East Kalimantan Province are to contribute to Indonesia's economic reforms toward 2045 in an integrated manner as shown in the figure below.



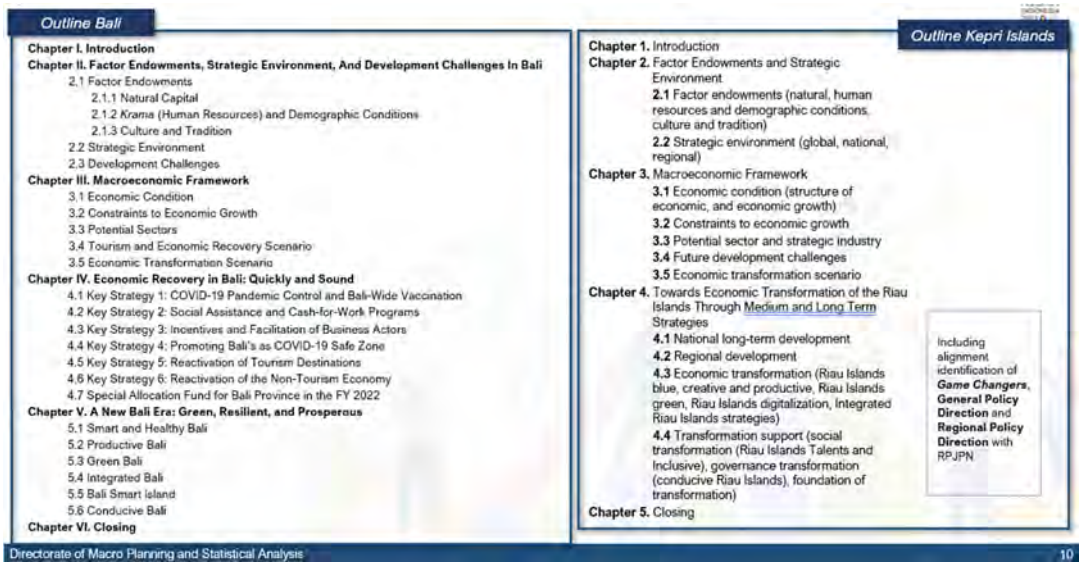
Source: BAPPENAS (2024)

Figure 2-38 The Three Economic Transformation Master Plans

The following strategies were analyzed in the ETMP for Bali Province and Riau Island Province:

On Riau Island Province, in addition to long-term development as a country and as a region, social reforms such as creative and productive transformation, digitalization, and integrated reforms of the islands and the governance that supports them are touched upon.

In Bali Province, COVID-19 pandemic preparedness, social support and cash transfers, facilitation and incentivization of the business sector, revitalization of tourism, and revitalization of the non-tourism economy are all mentioned, with the aim of transforming the region into a smart, human- and environmentally- friendly, and productive area through integrated solutions.



Source: BAPPENAS (2024)

Figure 2-39 Table of Contents Structure of ETMP in Riau Island Province (right) and Bali Province (left)

3) ETMP in East Kalimantan Province and Beyond

On the other hand, IKN is positioned to be developed as an Economic Super Hub. Additionally, the New Capital City Nusantara, Balikpapan City, and Samarinda City are designated as

priority areas in Kalimantan. The East Kalimantan Province ETMP states that “qualitative growth” should be achieved in East Kalimantan Province as one of the strategies for economic transformation “becoming a high-income country,” which is one of the pillars of Indonesia's long-term development vision for 2045. To become a high-income country by 2045, Indonesia must break through the 6% annual economic growth rate which is vital to escape the middle-income trap in which the country has remained as a middle-income country for 30 years (1993-2022).

To realize this 6% annual economic growth rate, the economic transformation will require a shift from a *resource-based* economy to a *productivity-led* economy in addition to the momentum of the demographic dividend. For this shift (economic transformation) to occur, it is necessary to focus on total factor productivity (TFP), or qualitative growth factors other than the increase in quantitative factors of production such as capital and labor that generate economic growth (GDP growth) (i.e., technological progress and increased efficiency of production).

Through a meeting between JICA, BAPPENAS and the JICA Study Team held in January 2024, it has been clarified that these economic reforms will eventually be integrated into a presidential decree, and that BAPPENAS is considering that East Kalimantan Province, with its abundance of natural resources, is being considered as an attractive enough population center for downstream development. Other findings include the fact that East Kalimantan Province is currently very dependent on raw material-based industries and that it is important to aim at a Quick Win, urgently develop infrastructure, as well as educate workers on how to promote changes in the industrial structure. In addition to create such new industries, it has been stated that it is important to make IKN an economic super hub and to coordinate for a Tri-City partnership.

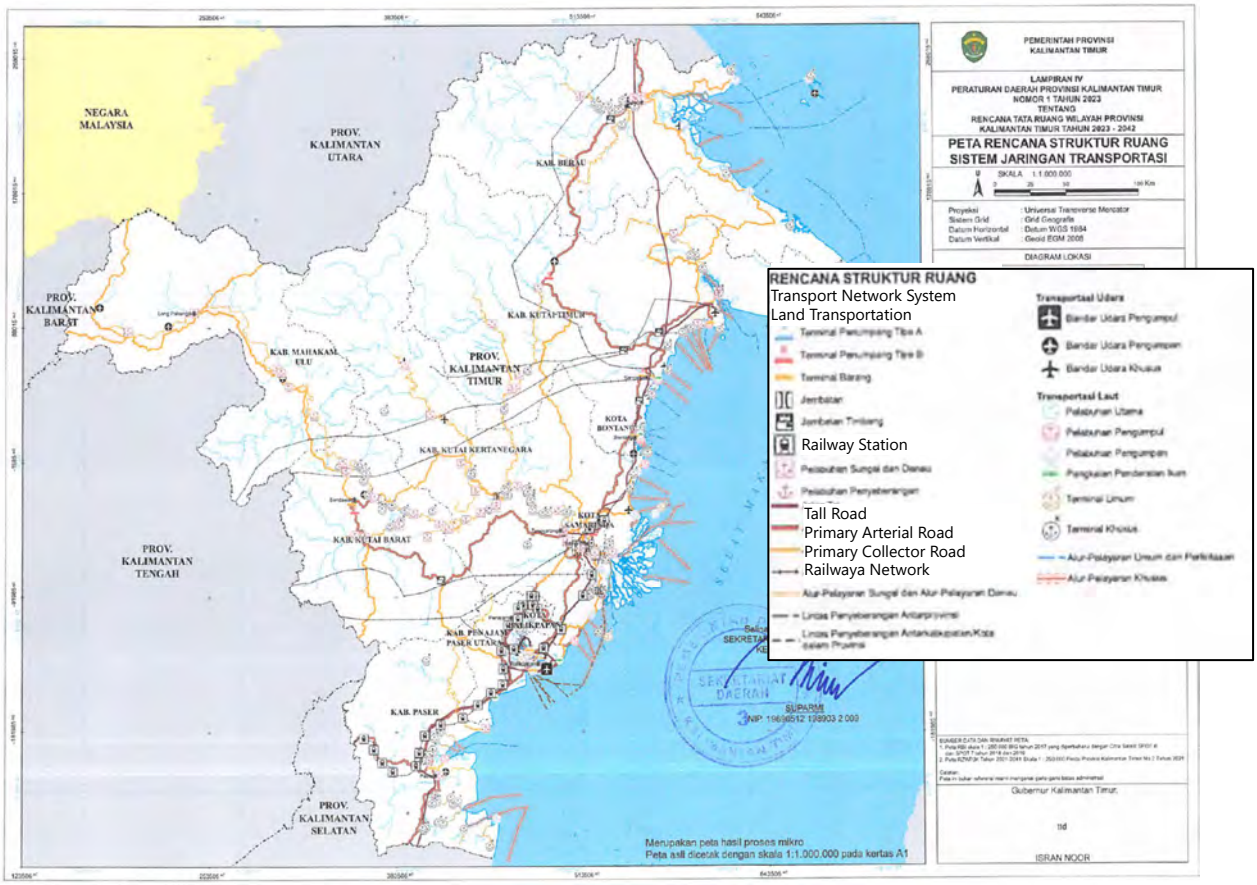
In the formulation of the East Kalimantan Province ETMP, some of the expectations are to facilitate investors' investment decisions by defining the necessary infrastructure and defining policies for each area (e.g., tourism and healthcare) and to promote economic reforms in conjunction with other long-term plans.

2.4 Sectoral Review of Plans and Policies in East Kalimantan Province

The result of the sectoral review on related plans and policies for East Kalimantan Province is shown as follows. The eight sectors for the review are connectivity, climate change, environmental management, industrial development and investment promotion, electricity and energy, urban management, living environment and diversity.

2.4.1 Connectivity (Transportation, ICT)

The following section summarizes status of existing plans and related measures related to the transportation network (road, public transportation, river transportation, rail, marine transportation, and air) at the East Kalimantan Province level based on the results of field surveys and the contents of measures mainly in the recently formulated the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 and East Kalimantan Province Regional Spatial Plan 2023-2042. The figure below shows the planned transportation network system shown in the East Kalimantan Province Regional Spatial Plan 2023-2042.



Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-40 East Kalimantan Province Transportation Network System Plan

In addition, according to the information from OIKN in September 2024, a regional transportation master plan targeting IKN, Balikpapan City, Samarinda City, PPU Regency, Kutai Kartanegara Regency and so on is going to be studied and formulated with the support of Green Cities and Infrastructure Program (GCIP) from UK government. The study period is planned from August 2024 until September 2025, and it would be extended if needed. This transport master plan will be prepared considering not only the trips by residents but also trips on logistics and referring existing urban and regional development plans and transport plans. The transport planning including road, railway, public transport, integration of land use planning, and TOD will be implemented.

(1) Road

The East Kalimantan Province Regional Spatial Plan 2023-2042 shows a route from North Kalimantan Province through East Kalimantan Province to South Kalimantan Province as a Toll-Road. In East Kalimantan Province, the route is supposed to go through Bontang City, Samarinda City, Balikpapan City, and PPU Regency. Currently, however, only the section between Balikpapan City and Samarinda City is maintained and in service, and it is cut off before the Mahakam River in Samarinda City. Twelve other sections are also indicated with toll road section names. In relation to IKN, the toll roads between Sepinggan Airport and the IKN Governmental Area and between IKN's VVIP Airport and the IKN Governmental Area are also mentioned. On the other hand, no mention is made of the Samarinda City-IKN section.

Under the program, PUPR and MOT are designated as the implementing agencies for the development of toll roads in both segments, and the plan is to promote them from time to time until 2042.

The access road from Samboja to IKN is positioned as an arterial road. An auxiliary arterial road (Collector Road) from the west side of Samarinda City directly to IKN is also planned, however it seems to be undeveloped.

(2) Railway

Passenger railways operating within East Kalimantan Province are not currently in place. In the East Kalimantan Province Regional Spatial Plan 2023-2042, the sections between Samarinda City, Balikpapan City, New Capital Development Area, PPU Regency, through Paser Regency to the border with South Kalimantan Province are the sections to be developed by intercity rail. Regarding the surrounding area of IKN, the sections between Samarinda City and Balikpapan City, and Samboja and KIPP are indicated in the Plan.

According to MOT, in FY2023, MOT conducted a feasibility study (F/S) for the development of an intercity rail line between Balikpapan City and IKN, including the establishment of the route. On the other hand, the impact of the IKN Development has not been fully considered and will continue to be considered in the basic design after 2024.



Source: National Railway Master Plan 2030, MOT, 2020 *Green: lines to be developed by 2030, Blue: future plan, Orange: coal lines

Figure 2-41 East Kalimantan Province Provincial Railway Network Plan 2030

(3) Ports & Logistics

In the East Kalimantan Province Regional Spatial Plan 2023-2042, port facilities are classified into main port, collecting port, feeder port, public terminal, special terminal, and fishing port, and the applicable facilities are organized. The main port is only Semayang Port in Balikpapan City. Ten collecting ports are also listed, including Samarinda City Port and Kuala Sambo Port in IKN. Seventeen feeder ports are listed, including Kampung Banu Port in Balikpapan City,

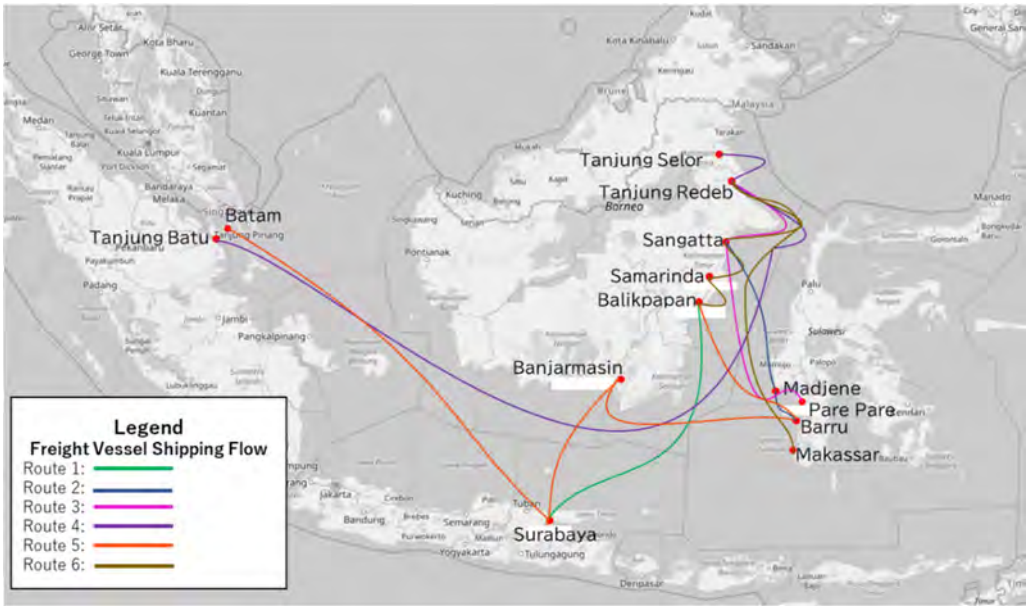
Meridan Port, Dondang Port, Muara Jawa Port, and Senipah Port in IKN. In addition, public terminals include Kariangau Public Terminal in Balikpapan City and STS Muara Jawa Public Terminal in IKN.

The Balikpapan City Harbor Master Plan 2023 (MOT) outlines the socio-economic trends and port-related infrastructure in East Kalimantan Province, and the table below shows the status of cargo and passenger shipping routes in the province.

Table 2-10 Status of Cargo and Passenger Vessel Routes in East Kalimantan Province

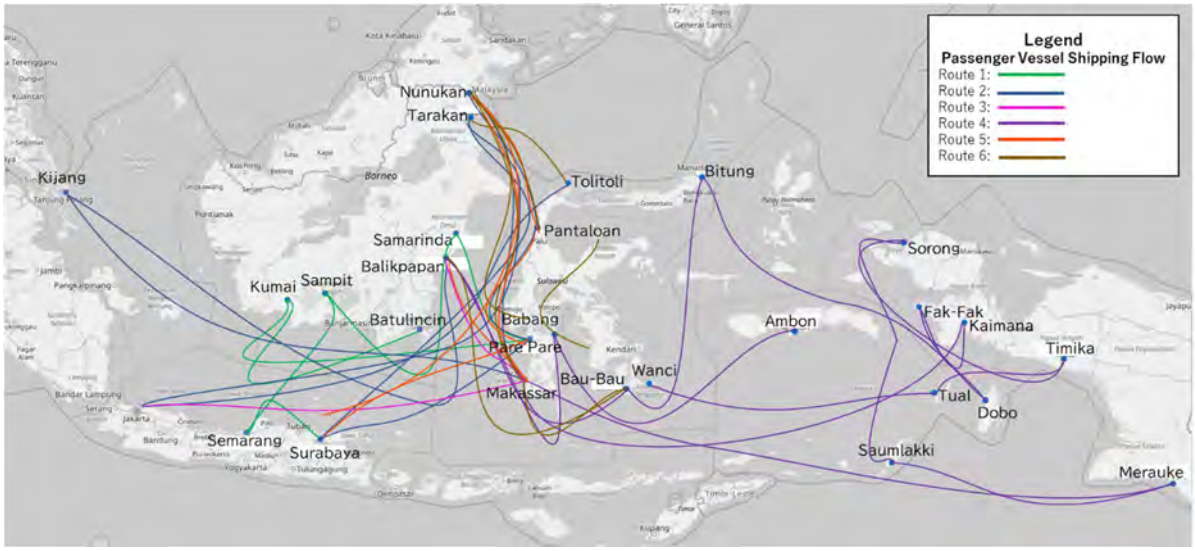
No.	Tracks
Freight Vessel Shipping Flow	
1.	**Balikpapan - Surabaya (East Java)**
2.	Sangatta - Barru and Majene (South Sulawesi)
3.	Tanjung Redeb -Sangatta - Pare-pare (South Sulawesi)
4.	Tanjung Selor (North Kalimantan Province)-Tanjung Redeb-Tanjung Batu
5.	**Balikpapan - Kota Baru and Banjarmasin (South Kalimantan) -Surabaya (East Java)-Batam (Riau Islands)**
6.	**Balikpapan - Samarinda - Sangatta - Tanjung Redeb- Makassar (South Sulawesi)**
Passenger Vessel Shipping Flow	
1.	Batulicin - Kumai - Pare-pare - Samarinda - Sampit - Semarang -Surabaya
2.	**Balikpapan - Kijang - Makassar - Nunukan - Pantoloan - Pare-pare -Surabaya - Tarakan - Tanjung Priok - Tolitoli**
3.	**Balikpapan - Makassar - Tanjung Priok**
4.	**Ambon - Babang - Balikpapan - Bau-Bau - Bitung - Dobo - Fak-Fak -Kaimana - Makassar - Merauke - Saumlaki - Sorong - Timika - Tual -Wanci**
5.	**Balikpapan - Makassar - Nunukan - Pantoloan - Pare-Pare - Surabaya -Tarakan**
6.	**Balikpapan - Bau-Bau - Makassar - Nunukan - Pantoloan - Pare-Pare -Tarakan - Tolitoli**

Source: Balikpapan City Harbor Master Plan 2023 *The yellow hatch indicates the route via Balikpapan City.



Source：JICA Study Team (based on Balikpapan City Harbor Master Plan 2023)

Figure 2-42 Freight Vessel Shipping Flow of East Kalimantan Province



Source：JICA Study Team (based on Balikpapan City Harbor Master Plan 2023)

Figure 2-43 Passenger Vessel Shipping Flow of East Kalimantan Province

According to MOT, Semayang Port, which is operated by PT Pelindo, is expected to play an important role as a port supporting IKN development, especially from the passenger ship perspective, and Kariangau Terminal Port from the logistics perspective. In addition, MOT conducted a feasibility study on the development of marine port facilities to support IKN development in 2022. The study proposed two sites for the construction of a port logistics center, one at Lango Beach Village and the other at Pemaluan Village West Side. The development of port facilities for tourism is also under consideration. The master plans for port development at Kuala Samboja Port and Samarinda City Port are also under consideration.

Regarding Kuala Samboja port, the port development masterplan was formulated by MOT in 2023 (Kuala Samboja Harbor Master Pan, MOT, 2023). In this plan, the future demand analysis was conducted based on the transition trends of population and GRDP from 2014 to 2019, and the expansion plans for short term (2021-2026), mid-term (2021-2031), and long-term (2021-2041) were proposed. On the other hand, the impacts of the New Capital Development were not reflected on the demand analysis and the development plan. As for the Samarinda City port, while the development plan was formulated in 2012-2013, it is planned to be updated.

The Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045 indicates that the port development which support Tri-City economic hub including Semayang port and Samarinda City port has high priority.

(4) Public Transportation

Public transportation planning, such as bus routes, is rarely mentioned in the East Kalimantan Province Regional Middle-Term Development Plan and Long-Term Development Plan, and Regional Spatial Plan. The Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045 shows a direction to plan an integrated urban mass transit transportation based on the population forecast.

(5) Airport

The East Kalimantan Province Regional Spatial Plan 2023-2042 identifies three categories of airports in the province: Collector Airports, Feeder Airports, and Special Airports, as shown in the table below.

MOT is considering expansion plans for its collector airports, Sepinggan Airport in Balikpapan City, and APT Pranoto Airport in Samarinda City. Over the next 20 years, the Sepinggan Airport is expected to have a capacity of 20 Million passengers per year and a 3,250 meter runway, while the Samarinda City airport will have a capacity of 8 Million passengers per year and a 3,000 meter runway.

Table 2-11 Positioning of Airports in East Kalimantan Province

No.	Airport Type	Airport (Rail) Name	Location
1	Collector Airport	Sepinggan Airport (Sultan Aji Muhammad Sulaiman Airport)	Balikpapan City
2	Collector Airport	APT Pranoto Airport (Aji Pangeran Tumenggung Pranoto Airport)	Samarinda City
3	Collector Airport	Kalimarau Airport	Berau Regency
4	Feeder Airports	Maratua Airport	Berau Regency
5	Feeder Airports	Melak/Melalan Airport	Kutai Barat Regency
6	Feeder Airports	Muara Wahau/Uyang Lahai/Miau Baru Airport	Kutai Timur Regency
7	Feeder Airports	Datah Dawai Airport	Mahakam Ulu Regency
8	Feeder Airports	Paser/Tana Paser Airport	Paser Regency
9	Feeder Airports	Ujoh Bilang Airport	Mahakam Ulu Regency
10	Feeder Airports	Long Apari Airport	Mahakam Ulu Regency
11	Feeder Airports	Bontang City Airport	Bongtang City
12	Special Airport	Pujangan Airport/Muara Badak Airport	Kutai Kertanegara Regency
13	Special Airport	Tanjung Santan Airport	Kutai Kertanegara Regency
14	Special Airport	Kembang Janggut Airport	Kutai Kertanegara Regency
15	Special Airport	Tabang Airport	Kutai Kertanegara Regency
16	Special Airport	Sangkima Airport	Kutai Timur Regency
17	Special Airport	KPC Tanjung Bara Airport	Kutai Timur Regency
18	Special Airport	Indexim Coalindo Airport	Kutai Timur Regency
19	Special Airport	Bontang City LNG Airport	Bontang City
20	Special Airport	Mangkajang Airport	Berau Regency
21	Special Airport	VVIP Airport	PPU Regency

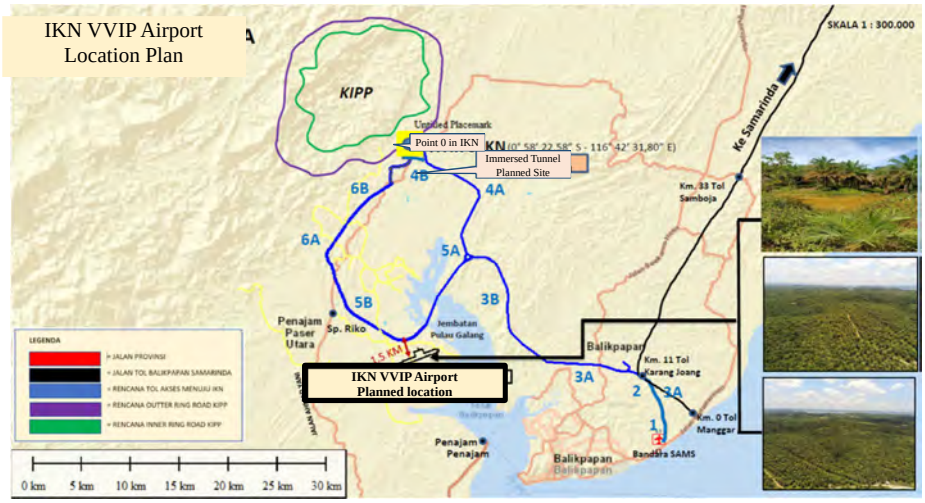
Source: East Kalimantan Province Regional Spatial Plan 2023-2042



Source：JICA Study Team (based on East Kalimantan Province Regional Spatial Plan 2023-2042)

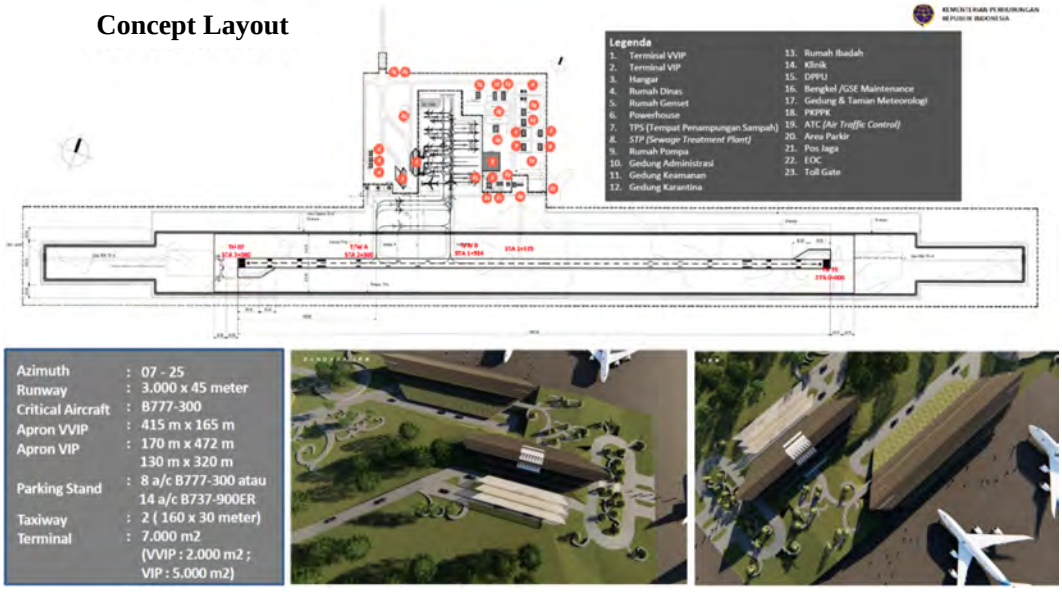
Figure 2-44　Location map of airports in East Kalimantan Province

In addition, the VVIP airport is being developed at a rapid pace in the PPU Regency, and it is expected to be used by political people. Roads between the VVIP airport and IKN are also being developed. The figure below shows the location of the VVIP airport and the outline of the Plan of the VVIP airport.



Source: MOT

Figure 2-45　VVIP Airport location



Source: MOT

Figure 2-46 VVIP Airport plan overview



Source: JICA Study Team (photos taken by JICA Study Team)

Figure 2-47 Progress situation of the VVIP Airport Development as of September 2024

2.4.2 Climate Change Measures (Zero Emissions, Disaster Prevention)

According to the East Kalimantan Province Regional Long-Term Development Plan 2025-2045 and East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, East Kalimantan Province is relatively safe from tectonic movement and volcanic earthquakes, but climate change is increasing the risk of frequent floods, fires, and droughts. Although the National Disaster Management Agency (BNPB) has decreased its disaster risk index for East Kalimantan Province from 153.28 in 2021 to 146.47 in 2022, the province is still at risk and the situation may worsen in the future as climate change progresses.

The following section summarizes the factors for floods and fires as major disasters.

(1) Floods

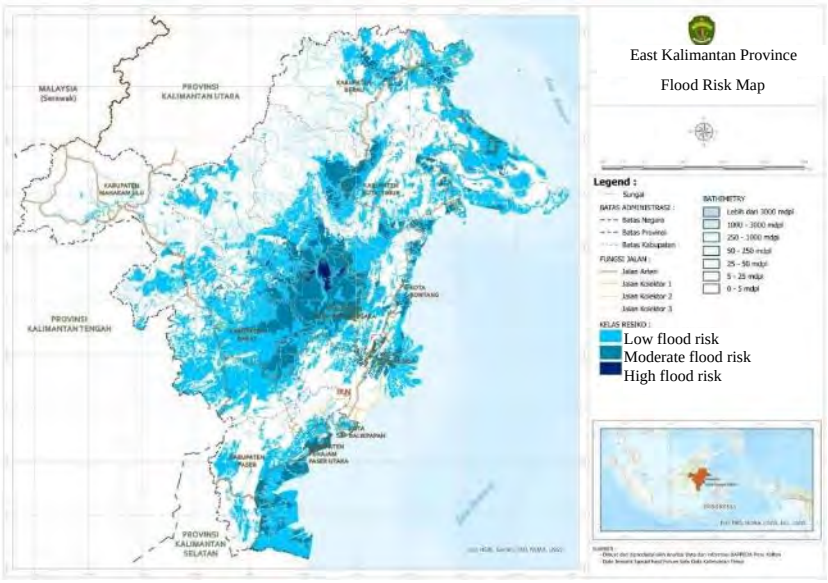
The issue of countermeasures against this disaster is particularly urgent, as it is one of the disasters that have most serious damage and social impacts. The following are the main causes of flood in East Kalimantan Province:

1. Natural factors
   - Increased rainfall associated with recent climate change impacts

- Sediment deposition and reduced channel flow capacity in constricted areas
- Water level fluctuations in coastal areas and rivers due to tides

2. Human factors

- Inadequate stormwater drainage system: drainage capacity reduced due to unimproved channels, clogged channels with debris, and concrete covering of channels
- Decrease in infiltration area: Decrease in green areas due to urban development mainly in downstream areas and illegal logging in upstream areas, which reduces the infiltration and storage capacity of rainwater in the soil.
- Insufficient channel maintenance: River structures (levees, revetments, etc.) are damaged due to lack of maintenance, and illegal dumping of waste (general and industrial waste) in the river channel reduces the channel's flow capacity.



Source: *Rancangan Rencana Pembangunan Jangka Panjang Daerah Provinsi Kalimantan Timur 2025-2045* Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

Figure 2-48 Flood disaster risk map of East Kalimantan Province

Within East Kalimantan Province, three cities, Balikpapan City, Samarinda City, and Bontang City, have been designated as Provincial Strategic Areas (KSP), where management related to flood disasters is a priority. Due in part to this impact, the area inundated has been decreasing over the past four years (2018-2021).



Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

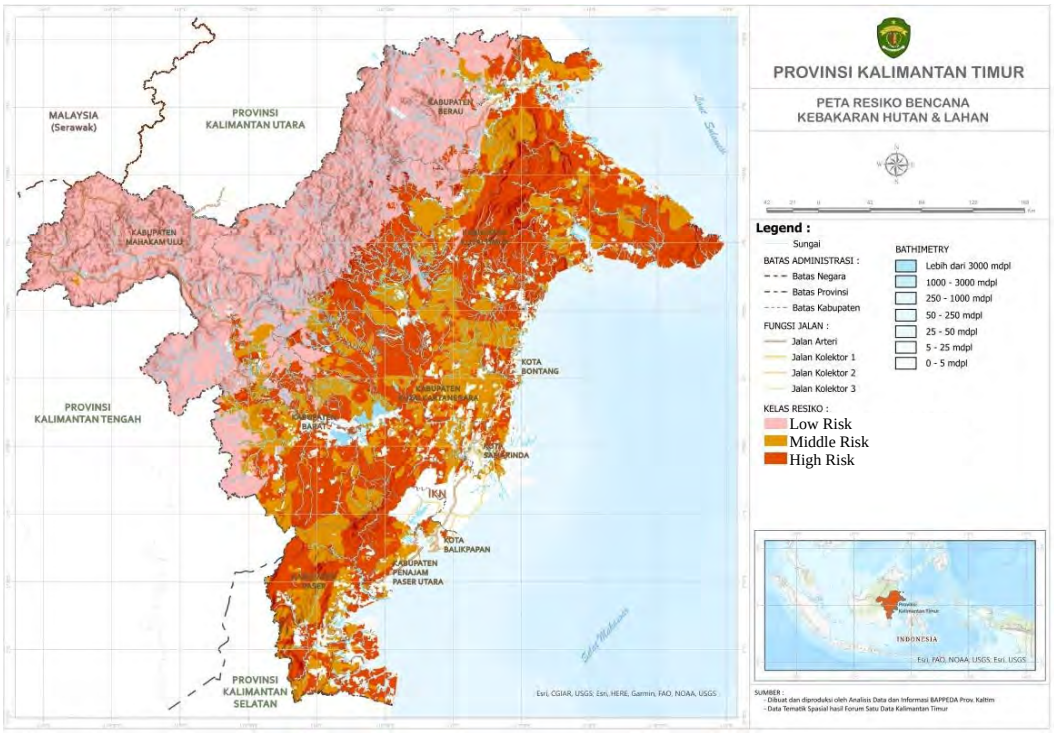
Figure 2-49 Flooded area (Ha) in three cities in East Kalimantan Province in 2018-2021

However, difficulties in acquiring land for the project and difficulties in dealing with existing public infrastructure such as water, electricity, and telecommunications have slowed the progress of construction of further flood control infrastructure.

(2) Fires

The following map is a disaster risk map for land and forest fires in East Kalimantan. Major factors of fires include human activities such as arson and carelessness, and fires induced by the El Niño phenomenon. El Niño events are caused by deteriorating environmental conditions and declining socioeconomic conditions.

The most fire-prone period is the dry season, when rainfall is very low and solar heat intensity is high, generally from June to October, when the El Niño phenomenon increases the risk of fires.



Source: *Rancangan Rencana Pembangunan Jangka Panjang Daerah Provinsi Kalimantan Timur 2025-2045* Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

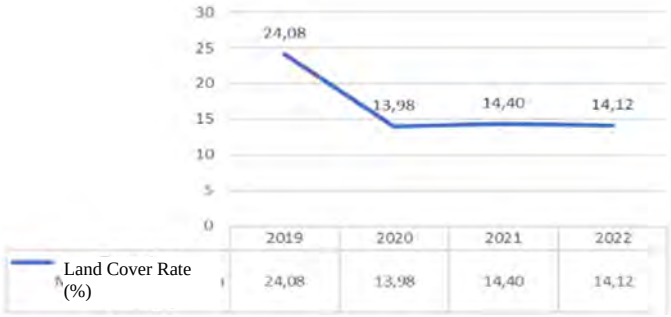
Figure 2-50 East Kalimantan Province Land and Forest Fire Disaster Risk Map

To prepare for these disasters, the Regional Disaster Management Agency of East Kalimantan Province will prepare a Disaster Risk Assessment (KRB) document and a Disaster Management Plan (RPB).

Long-term strategies for disaster risk and damage reduction include the following items in the East Kalimantan Province Regional Long-Term Development Plan 2025-2045.

- Development of early warning systems
- Watershed management of the Mahakam River, especially in the upper reaches
- Managing Green Space Use in Urban and Rural Areas
- Efforts to improve soil infiltration capacity
- Protection of ecosystems in general with stormwater infiltration functions

In East Kalimantan Province, the forest area has been decreasing due to the development of economic activities and disasters such as forest fires. The Government of Indonesia is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and has ratified the Paris Agreement through Law of Republic of Indonesia No.16/2016, submitting a national commitment to contribute to addressing climate change. It has set a GHG emission reduction target for 2030 of 31.89% through its own efforts and 43.20% through internationally supported efforts and has committed to promote emission reduction efforts in the agricultural, energy, and industrial sectors.



Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-51 Land coverage in East Kalimantan Province 2019-2022 (%)

To achieve the Sustainable Development Goals (SDGs), East Kalimantan Province will also promote actions in accordance with its national commitments, and the main commitments as of 2022 are as follows

- Develop local disaster reduction strategies in line with national disaster reduction plans and strategies to mitigate the economic impact of disasters
- Inclusion of climate change forecasting measures in state policies and strategies to reduce greenhouse gas (GHG) emissions

According to the RAD GRK 2010-2030, an action plan for reducing GHG emissions in East Kalimantan Province, the main source of GHG emissions in East Kalimantan Province is the burning of coal and other fuels for power generation and logging for plantations. The following actions have been defined for this mitigation.

- Efficiency in energy use
- Reduction of coal mining using biodiesel
- Expanding use of renewable energy for power generation in rural areas
- Promoting agriculture with low carbon emissions

- Protection of natural forests and peatlands
- Minimum Impact Logging (RIL-C)
- Promotion of agroforestry
- Effective use of nitrogen fertilizers in plantations and rice cultivation
- Reducing Methane Emissions with Methane Capture Technology

Long-term strategies for forest management to reduce greenhouse gas emissions include the following items in the Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045:

- Eradication of illegal logging
- Appropriate control of land use conversion through conservation of forested areas
- Protection of customary forests
- Controlling land use change and preserving forest areas that need to be protected
- Educating the community about forest sustainability

In the East Kalimantan Province Provincial Regulation No.7/2019 on Climate Change Adaptation and Mitigation, the main areas where adaptation and mitigation measures should be taken are defined as follows

Priority areas where adaptation measures should be taken:

- food security
- energy
- infrastructure improvement
- health & wellness
- housing
- coastal management

Priority areas for mitigation measures to be taken:

- land use and forestry
- agriculture
- energy conversion
- waste

In addition, the total annual potential for water resources in East Kalimantan Province is abundant, but unevenly distributed both geographically and monthly. There is concern that population growth will change land use, leading to increased incidence of disasters, increased water demand, and decreased water quality. Therefore, strategies need to be developed to enhance water security in conjunction with building resilience against water-related disasters.

2.4.3 Environmental Management, Waste Treatment, Waste Management

This sector and section provide the review of information related to environmental indices, waste treatment and waste management in East Kalimantan Province.

According to the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045, environmental degradation and pollution are increasing in both urban and rural areas in East Kalimantan Province through the exploitation of potential natural resources. Specifically, deforestation, illegal mining, and unregulated fishing are the main causes of

environmental degradation. In addition, in the forestry sector, the overexploitation of forests has resulted in a significant decline in forest quality. These trends are expected to continue during the above planning period, and it is feared that population growth and economic development will increase the demand for new land and exploitation of natural resources, resulting in accelerated environmental degradation.

In the Long-Term Development Plan, 8 strategical issues were proposed on the Strategic Environmental Assessment (KLHS) section to be considered in the RPJPD:

1. Eradication of poverty and hunger
2. Improving the service quality of health, welfare, education, and gender equality
3. Development of industries, innovations, and infrastructures
4. Peace, justice, and institution
5. Ecosystem and climate change
6. Increasing appropriate job, decreasing inequality, partnership, and economic development
7. Realization of sustainable city and settlement by improving clean water supply, sanitation, clean energy, and responsible consumption and production
8. Effects of the national capital relocation to Kalimantan Island

Among the proposed issues, the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045 acknowledges that environmental aspect is one of the important issues that need to be addressed, resulting in coverage of environmental aspect in 4 out of 8 determined strategical issues; 1) acceleration of economic transformation; 2) opportunity on economic superhub development and partner of IKN; 3) environmental quality and GHG emission; and 4) long-term and sustainable development.

Further, the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045 also identifies 5 super prioritized transformation; 1) social transformation; 2) economic transformation; 3) governance transformation; 4) resilient regional security, substantial democracy, and regional macroeconomic stability; and 5) socio-eco-cultural resiliency. Out of 5 transformations, 2 items consisted of targets which related with environmental management:

- Economic transformation: environmental preservation-based tourism development; urban development among 3 cities (IKN, Balikpapan City, Samarinda City) which considers the environmental capacity and capability; effort on decarbonization of electricity supply; integrated and sustainable rural development through social, economic, and environmental resilience
- Social, culture, and ecological resilience: rehabilitation of forest and ex-mining sites; preservation of landscapes, protection of biodiversity, and strengthening of environmental ecosystems; wild-life habitat preservation; environmental-based spatial planning; construction of dam, irrigation channel, and flood prevention measures; reformation of integrated municipal solid waste management; integrated ecosystem-based area management

The East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, which

is based on the above Long-Term Plan, describes the current situation and measures in more detail.

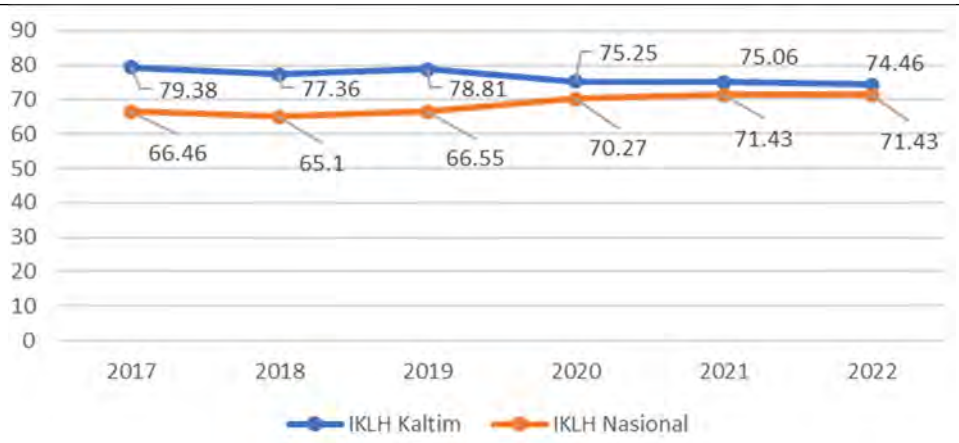
Indonesia has adopted a unique environmental quality index (IKLH) throughout the country, mainly to quantify environmental pollution. The parameters used for IKLH are listed in the table below, and IKLH is obtained as an overall value by using region-specific formulas for these indicators.

Table 2-12 Environmental Indices and Parameters that Make Up IKLH

IKLH Components	Provisional Translation	Parameter	
Indeks Kualitas Air（IKA）	Water Quality Index	【River】 pH BOD COD TSS Fecal Colifrom Total Fosfat Nitrat(NO -N)	【Lake and Marsh】 pH BOD COD TSS Fecal Colifrom Total Fosfat Total Nitrogen Kecerahan Klorofil a
Indeks Kualitas Udara（IKU）	Air Quality Index	NO_2, SO_2	
Indeks Kualitas Lahan（IKL）	Land Quality Index	Tutupan Hutan: Forest Cover Tutupan vegetasi Non-Hutan: Non-forest Cover Faktor Koreksi: Kanal dan Luasan Area Terbakar(Untuk wilayah yang memiliki ekosistem gambut): Correction Factor Canals and area lost (land with peat ecosystems)	
Indeks Kualitas Air Laut	Sea Water Quality Index	DO TSS Minyak dan Lemak: oil and grease Amonia Total : total ammonia Orto-Fosfat: orthophosphate	

Source: PROFIL INDEK KUALITAS LINGKUNGN HIDUP 2022（Direktorat Jenderal）

The IKLH in East Kalimantan Province in recent years has been higher than the environmental quality index for Indonesia with several fluctuations. The level of pollution has remained low during early observation (2018-2019) but it has been decreasing in recent years (2020-2022) and slightly increase again in 2023. However, with the continuation of the capital relocation project, there are concerns about further deterioration of environmental quality in the future. As shown in the table below, the decline in IKLH in recent years has been attributed to the decline in water quality index and seawater quality index.



Source: *Rancangan Rencana Pembangunan Jangka Pangjang Daerah Provinsi Kalimantan Timur 2025-2045* Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

Figure 2-52 Trends in IKLH throughout Indonesia and in East Kalimantan Province

As shown in the table below, the recent decline in IKLH is due to the decline in the water quality index and seawater quality index.

Table 2-13 Trends of the Environmental Indices Comprising the IKLH

Index	2018	2019	2020	2021	2022	2023
IKA: Water Quality	57.73	77.09	53.7	51.92	53.02	52.64
IKU: Atmospheric Quality	83.36	89.42	89,06	88.84	87.59	89.64
IKL: Land Quality	87.59	72.12	79.76	82.21	81.85	83.86
IKAL: Seawater Quality	not yet installed	not yet installed	83.51	85.40	81.45	81.36

Source: *Rancangan Rencana Pembangunan Jangka Pangjang Daerah Provinsi Kalimantan Timur 2025-2045* Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

The table below shows the environmental index and the targets for each region. The forest cover is used in the calculation of the land quality index (IKL), and at the same time, the proportion of the land quality index (IKL) in the IKLH formula is as large as 40% resulting urban areas tend to have relatively lower IKLH compared to the rural areas. The IKLH is particularly low (rated “medium”) in the urban areas of Balikpapan City, Bontang City, and Samarinda City while other regions were relatively better (rated “good”). Environmental degradation is becoming a relatively serious problem in two region which bordering directly to IKN, the PPU Regency and Kutai Kartanegara Regency, particularly on the water quality, land quality, and seawater quality. On the other hand, Samarinda City has the lowest values for all indicators compared to other areas in East Kalimantan Province, making environmental conservation a major issue. Although the Plan sets a goal of maintaining these environmental indices, further efforts are considered necessary in consideration of the future development of IKN and the associated population influx and industrial development in each area.

Table 2-14 Regional Environmental Indices in East Kalimantan Province in 2023

Area	IKA	IKU	IKL	IKLH	Rating
Paser Regency	54.09	90.46	71.20	72.57	Good
Kutai Barat Regency	53.08	91.80	70.30	72.53	Good
Kutai Kartanegara Regency	50.53	91.53	74.62	72.41	Good

Kutai Timur Regency	49.47	87.00	83.48	72.12	Good
Berau Regency	53.33	85.17	93.76	75.08	Good
PPU Regency	50.95	90.96	65.10	70.25	Good
Mahakam Ulu Regency	61.28	94.43	100	83.19	Good
Balikpapan City	54.50	89.98	48.91	67.64	Medium
Samarinda City	50.00	85.31	29.92	59.90	Medium
Bontang City	52.22	89.74	49.44	66.81	Medium

Source: *Rancangan Rencana Pembangunan Jangka Pangjang Daerah Provinsi Kalimantan Timur 2025-2045* Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

The target values for the final year of this plan (2026) are shown in the table below, and as of 2022, all indicators are already below these values, so future improvement will be a challenge.

Table 2-15 Environmental Index Targets in the Plan

Index	2022	2026
IKA: Water Quality	53,02	53,72
IKU: Air quality	87,59	88,37
IKL: Land quality	81,85	82,55
IKAL: Seawater Quality	81,45	82,15
IKLH	74.46	75,2

Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

The measures, tasks, and programs envisioned in accomplishing these tasks are listed below. Further specific actions were not identified in this plan.

Table 2-16 Measures, Operations, and Programs in the Environmental Sector in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Operations and Programs	Performance Indicators	Initial Value	Exit Target
Environmental Planning Project	Percentage of environmental planning policies recommended in development plans and regional planning documents (%)	100%.	100%.
Pollution and Environmental Destruction Prevention Program	Pollution index	3,06	≤5 (light contamination)
Environmental Pollution/Damage Control Program	Air Pollutant Standard Index	49	46 (Good)
Biodiversity Management Program	Areas of high biodiversity value inside and outside managed forests	532,134ha	1159 ha
Hazardous and Toxic Substances (B3) and Waste Management Programs	Percentage of hazardous waste collected by collectors as a percentage of total hazardous waste generated (%)	51,01% of the total	52,5%
Guidance and Supervision Program for Environmental Permits and Environmental Protection Management	Supervision rate of environmental permits issued by provincial governments	36,4%	75%

Permits			
Programs to Improve Environmental Education, Training, and Counseling for Communities	Number of community groups/organizations that have increased their awareness of environmental protection	Group of 100	Group of 130
Local Environmental Award Program	Percentage of environmental awards received by the community/educational institution/business community (%)	84%	84,42%
Environmental Grievance Program	Percentage of complaints resolved in environmental protection and management under the jurisdiction of provincial authorities (%)	100%	100%
Waste Management Program	Waste management rate (%)	87,02% of the total	90%

Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Related to the municipal solid waste/ general waste and hazardous waste (B3) management and treatment, both the East Kalimantan Province Regional Long-Term Development Plan and Regional Middle-Term Development Plan described how waste management remains as critical urban issue that need to be addressed. Waste and hazardous waste management itself is recognized as an urban issue, however, waste management also translated further into one of the causes of other urban issues such as urban slum areas and urban flood. Following table shows problems and root problems related to general waste hazardous waste management.

Table 2-17 Problems and root problems related to general waste and hazardous waste management in East Kalimantan Province

Problem	Root problem
Unoptimized hazardous material and hazardous waste handling	Unoptimized coordination and synchronization of hazardous waste collection in provincial scale
Lack of regional scale waste management facilities	• Lack of planning document for regions that have potential for regional scale waste treatment facilities construction • Lack of community awareness to reduce the amount of generated waste
Unoptimized waste management	Unoptimized waste management on land and ocean

Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

East Kalimantan Province generated 0.8 Million tons of waste in 2023 and with the rapid population growth enhanced by the capital relocation, it was projected that in 2045, there is going to be significant need to increase the number of integrated waste management facility (TPST) as shown on the table below. The urgency to address waste management issue also stated in the East Kalimantan Province Regional Long-Term Development Plan represented

by one of the super-prioritized issues “social, culture, and ecological resiliency” which stated 100% target on waste management and recycling as well as a reformation into integrated waste management.

Table 2-18 Projection of integrated waste treatment facility needed in East Kalimantan Province 2025-2045

Item	Existing 2023	Year				
		2025	2030	2035	2040	2045
Population (Million)	3.91	4.27	5.20	5.74	6.11	6.44
Projection of waste generation (Million ton/year)	0.80	0.85	1.02	1.12	1.20	1.23
Projection of number integrated waste treatment facility /TPST needed (unit)	9	28	51	65	76	85

Source: *Rancangan Rencana Pembangunan Jangka Pangjang Daerah Provinsi Kalimantan Timur 2025-2045*/Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

2.4.4 Industrial Development and Investment Promotion

Regarding industrial development and investment promotion in East Kalimantan Province, the following reports are reviewed, and the relevant contents are organized by theme and the relationship with the six economic clusters in industrial development under IKN Law No. 63 of 2022 are considered. The six economic clusters are renewable energy manufacturing, integrated medicine, sustainable agriculture, eco-medical tourism, advanced chemistry, and low-carbon energy sectors.

- National Middle-Term Development Plan 2020-2024: It outlines the industrial hubs of Kalimantan Island and East Kalimantan Province as part of the national industrial development and their positioning.
- East Kalimantan Province Regional Middle-Term Development Plan 2024-2026: This plan provides a comprehensive description of the current state of each sector and the province's future policies regarding industrial development in East Kalimantan Province. It also includes industrial-related data up to 2022.
- Industrial Development Plan East Kalimantan Province 2019-2039: outlines the industrial areas and major industries in the regions surrounding IKN, including Balikpapan City, Samarinda City, PPU Regency, and Kutai Kartanegara Regency, based on the industrial overview and challenges as of 2017. This development plan is created with reference to the National Industrial Development Master Plan (RIPIN) and the National Industrial Development Policy (KIN), and it is reflected in the spatial plans of the province, regencies, and cities.
- East Kalimantan Province Tourism Development Master Plan 2022-2037: It covers general considerations related to tourism but does not include specific strategies. It serves primarily as a guideline for the tourism development plans formulated by local

governments within the province.

- East Kalimantan Province General Profile and Regional Achievements: As of June 2023, the infrastructure projects related to industrial development in East Kalimantan Province include transportation networks, water supply, and power projects, as well as the province's climate change measures.
- East Kalimantan Province Investment Potential and Opportunities: A presentation document prepared by the One-Stop Investment Coordination Office (*Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu*/DPMPTSP) in Samarinda City, introducing the investment situation from both domestic and international sources and investment opportunities in East Kalimantan Province.
- Investment Potential Map of East Kalimantan Province: A document outlining the characteristics of cities and regencies within East Kalimantan Province as investment targets.
- Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045: A document presenting the long-term development strategy for East Kalimantan Province, including industrial development based on the IKN project.

(1) Overview of Population and Industrial Development Policies and Support System

1) Population

According to the East Kalimantan Province Industrial Development Plan 2019-2039, as a background to the economic and industrial growth, the population of the three cities and seven regencies in East Kalimantan Province reached approximately 3.57 Million in 2017, with a 1.98% increase over the five-year period from 2018 to 2022. This high population growth rate is the foundation for economic and industrial growth.

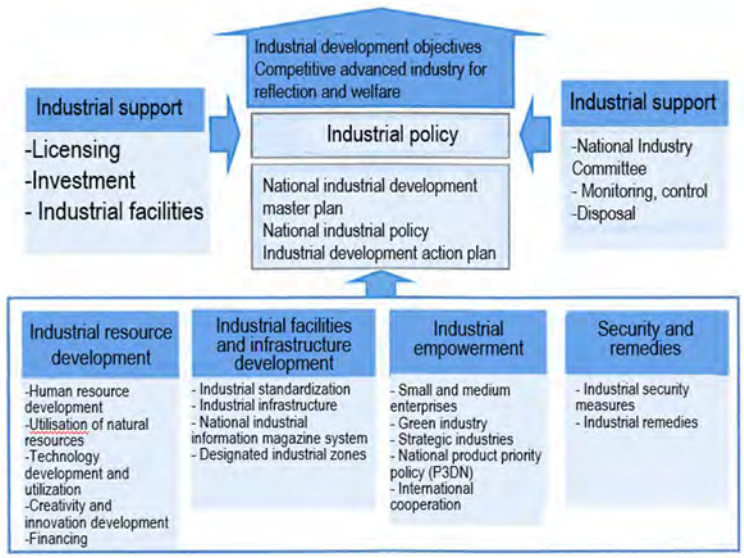
2) Overview of Industrial Development Policies

The 2020-2024 National Middle-Term Development Plan positions the industrial development policy of the Kalimantan region as a national energy source, and its forest resources are considered the 'lungs of the world'. While preserving the local ecological environment, the development of industries utilizing coal for value-added products, renewable energy sources such as biomass, hydropower, and solar power, as well as industries based on palm oil, rubber, bauxite, minerals, liquefied natural gas, zircon (used as refractory materials and abrasives), and quartz sand, is being encouraged. In light of the IKN economic cluster, biomass as a low-carbon fuel, renewable energy development, palm oil as a raw material for oleochemical products and biofuels, natural gas as a low-carbon fuel, and quartz sand as a raw material for solar panels are among the relevant industries, which align with the IKN's industrial development policies.

3) Industrial Development Support System

According to the East Kalimantan Province Industrial Development Plan 2019-2039, the provincial government, industry, and various support organizations are shown in the diagram below. Based on the four themes at the bottom, the structure provides support in two areas: permits, investment, and industrial facilities, as well as supervision and management by the National Industrial Committee. Among the four themes in the diagram below, industrial

resource development includes human resource development, natural resources, certification systems and vocational training, and financing. Industrial infrastructure includes environmental management, industrial designated areas, energy and power networks, communications, water resources, and transportation facilities. Industrial empowerment covers support systems for the revitalization of small and medium-sized enterprises, development goals, etc. Security and remedial measures include information security measures and management-related remedial actions. In the future, as the industrial development policies of IKN are incorporated into the National Industrial Development Master Plan, it will be important to closely monitor how they are reflected in the province's support system.



Source: Prepared by the Study Team based on the East Kalimantan Province Industrial Development Plan 2019-2039

Figure 2-53 Industrial Support System of the Industrial Law No. 3 of 2014

(2) Sectoral Trends in Gross Regional Domestic Product, Domestic and Foreign Exports, and Investment

1) Gross Regional Domestic Product Share and Growth Rate by Sector

a) Trends in GRDP share and growth rate by sector

Based on information from the East Kalimantan Provincial Regional Middle-Term Development Plan 2024-2026, the GRDP share by sector in East Kalimantan Province (2022) is shown below.

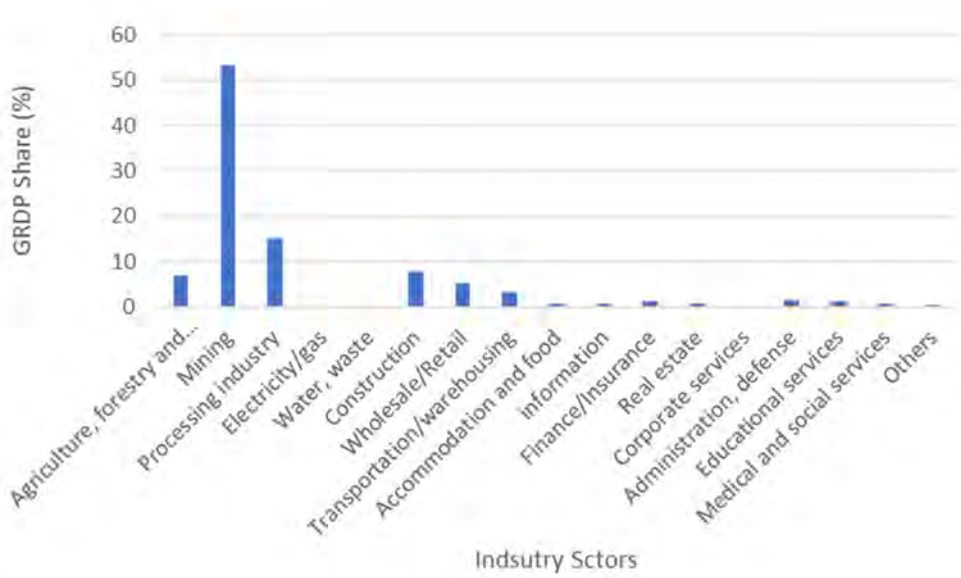
Table 2-19 Sectoral Nominal Gross Regional Domestic Product (Top row: in Million IDR) and Share (Bottom row: in %)

Category	Sector	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Average Annual Growth Rate from 2018 to 2022
A	Agriculture, Forestry, and Fisheries	50,147,994	51,567,377	53,455,323	59,089,937	64,891,735	7.4%
		7.89	7.91	8.80	8.48	7.04	-
B	Mining	296,725,329	297,371,390	250,845,967	314,198,045	490,501,116	16.3%

		47.00	45.60	41.27	45.11	53.24	-
C	Manufacturing	115,272,211	116,204,903	115,564,453	123,816,183	138,636,144	5.1%
		18.14	17.82	19.02	17.77	15.05	-
D	Electricity and Gas Procurement	315,059	344,961	385,062	395,471	422,609	8.5%
		0.05	0.05	0.06	0.06	0.05	-
E	Water Supply and Waste Management	288,891	307,667	326,534	348,377	379,899	7.9%
		0.05	0.05	0.05	0.05	0.04	-
F	Construction	53,500,578	58,472,319	58,308,248	62,313,147	70,945,215	8.2%
		8.42	8.97	9.59	8.95	7.70	-
G	Wholesale and Retail Trade, Repair Services	35,227,602	38,245,238	39,053,042	41,474,909	47,547,015	8.7%
		5.54	5.86	6.43	5.95	5.16	-
H	Transport and Storage	22,990,716	24,172,248	22,067,334	23,218,927	28,980,671	6.5%
		3.62	3.71	3.63	3.33	3.15	-
I	Accommodation and Food Services	6,106,132	6,691,563	6,479,402	6,707,636	7,520,922	5.8%
		0.96	1.03	1.07	0.96	0.82	-
J	Information and Communication	7,988,163	8,708,382	9,390,805	10,206,752	11,087,181	9.7%
		1.26	1.34	1.55	1.47	1.20	-
K	Financial and Insurance Services	9,717,119	10,216,630	10,490,249	11,244,159	13,379,873	9.4%
		1.53	1.57	1.73	1.61	1.45	-
L	Real Estate	5,574,934	5,768,853	5,868,848	5,891,471	6,152,947	2.6%
		0.88	0.88	0.97	0.85	0.67	-
M,N	Corporate Services	1,299,480	1,346,710	1,334,744	1,384,556	1,516,507	4.2%
		0.20	0.21	0.22	0.20	0.16	-
O	Public Administration and Defense	12,337,921	13,019,826	12,750,605	13,198,181	14,448,961	0.01%
		1.94	2.00	2.10	1.89	1.57	-
P	Educational Services	10,107,377	10,995,564	11,724,048	12,340,328	13,132,703	4.3%
		1.59	1.69	1.93	1.77	1.43	-
Q	Health and Social Services	3,905,167	4,289,673	5,331,020	6,205,096	6,692,400	17.8%
		0.61	0.66	0.88	0.89	0.73	-
R,S,T, U	Other Services	3,994,008	4,434,754	4,368,801	4,551,864	5,097,080	6.9%
		0.63	0.68	0.72	0.65	0.55	-
Total		635,498,680	652,158,057	607,744,486	696,584,498	921,332,980	11.2%
		100	100	100	100	100	

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

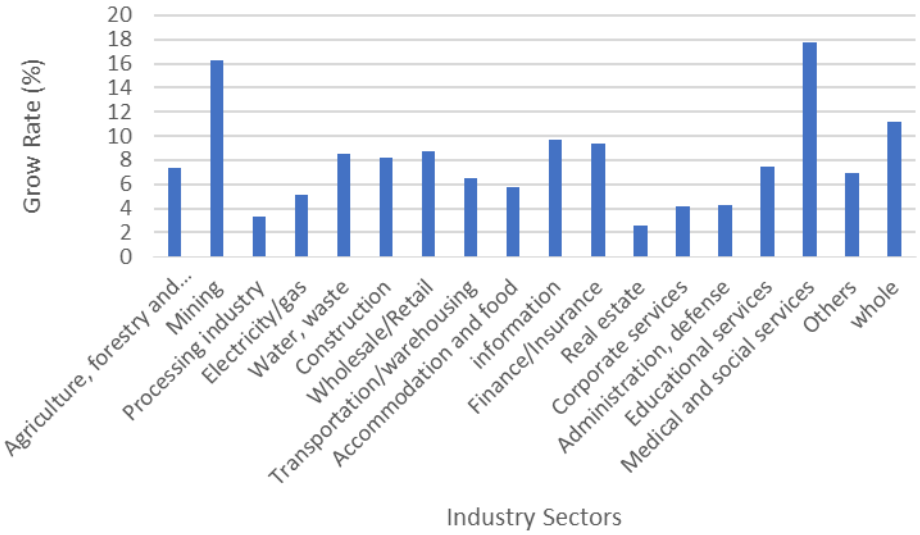
According to Table above, mining has an overwhelming share of 53% of GDP, followed by manufacturing at 15%, construction at 7.7%, and agriculture, forestry, and fisheries at 7.0%. In terms of sector classification, resources and agriculture have the largest production values. Below is a graph created based on Table above.



Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-54 Sectoral GRDP Share of East Kalimantan Province

Based on Table 2-19, the average annual growth rate of GRDP by sector from 2018 to 2022 is shown in Figure 2-55, The overall growth rate is 11.2%, with mining and healthcare & social services showing high growth rates, while other sectors have growth rates ranging from 2% to 10%. It is believed that the increase in healthcare costs due to COVID-19 and the strong demand for coal after COVID-19 have had an impact.



Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-55 Sectoral Average Annual Growth Rate of GRDP in East Kalimantan Province

2) Import and Export Situation, Including Domestic and International

Between 2018 and 2022, East Kalimantan Province's trade balance was in surplus, as export

values exceeded import values. As shown in the table below, East Kalimantan Province's total exports in 2022 increased by 33.0% compared to 2021, rising from 24.16 Billion USD to 36.05 Billion USD. The increase in exports in 2022 was due to the rise in exports of oil and gas as well as non-oil and gas products. Exports of oil and gas products in 2022 reached 2.99 Billion USD, marking a 46.5% increase compared to 2021. On the other hand, exports of non-oil and gas products reached 33.05 Billion USD, a 31.8% increase from 2021.

Table 2-20 Export Value by Items in East Kalimantan Province (Unit: Million USD)

No.	Item	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Growth Rate from 2021 to 2022
Oil・Gas		4,302.83	3,356.38	2,068.20	1,605.15	2,998.12	46.5%
1	Crude Oil	334.7	12.63	7.27	-	8.48	-
2	Petroleum Products	12.97	224.05	108.64	7.4	763.12	99.0%
3	Gas	2,977.57	1,831.52	1.032.38	1,597.75	2,226.52	28.2%
Non-oil・Non-gas		13,230.03	15,029.36	14,113.59	22,554.76	33,052.95	31.8%
1	Mineral Resources	13,580.80	12,408	9,600.36	17,767.61	27,665.96	35.8%
2	Industrial Products	1,445.92	1,696.72	2,222.52	4,780.52	5,377.14	11.1%
3	Agricultural Products	4.21	8.87	9.11	6.63	9.85	32.7%
Total Exports		18,385.73	16,183.21	12,980.28	24,159.90	36,051.07	33.0%

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

3) Sectoral Trends in the Number of Investments in Industrial Sectors

As shown in Table below, the total number of domestic investment (PMDN) / foreign investment (PMA) projects has increased nearly tenfold over the five years from 2018 to 2022. In 2021, the total number of domestic and foreign investment projects in East Kalimantan Province was 10,325, more than double the 4,702 projects in 2020. The number of domestic investment projects increased by 5,367, from 3,924 to 9,291, while the number of foreign investment projects increased by 256, from 778 to 1,034. Along with the increase in investment projects from both domestic and foreign sources, as shown in the bottom row of Figure 2-56, the investment amount itself has also increased. In 2022, the number of domestic investment projects was 6,706, and the number of foreign investment projects was 1,055. Domestic investment projects were predominantly concentrated in Balikpapan City, with 1,850 projects, and Samarinda City, with 1,845 projects. Foreign investment projects were also concentrated in Balikpapan City, which had a total of 332 projects.

Table 2-21 Number of Domestic and Foreign Investment Projects (Unit: Projects)

Year	Domestic Investment PMDN	Foreign Investment PMA	Total
2018	520	513	1,033
2019	2,227	903	3,130
2020	3,924	778	4,702
2021	9,291	1,034	10,325

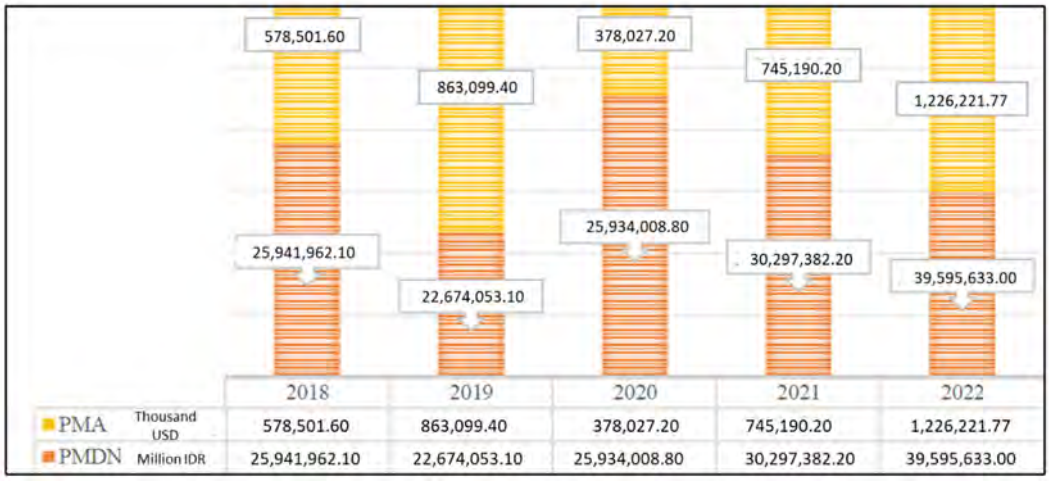
2022	6,706	1,055	7,711

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

4) Sectoral Trends in Domestic and Foreign Investment Amounts in Industrial Sectors

a) Domestic and Foreign Investment Ratio

The following figure illustrates the ratio of domestic and foreign investment amounts in USD from 2018 to 2022, with foreign investment fluctuating between one-quarter and one-half of domestic investment.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-56 Domestic/Foreign Investment Amount Ratio (2022, Unit: Domestic PMDN: Million IDR / Foreign PMA: Thousand USD)

b) Sectoral Trends in Domestic Investment

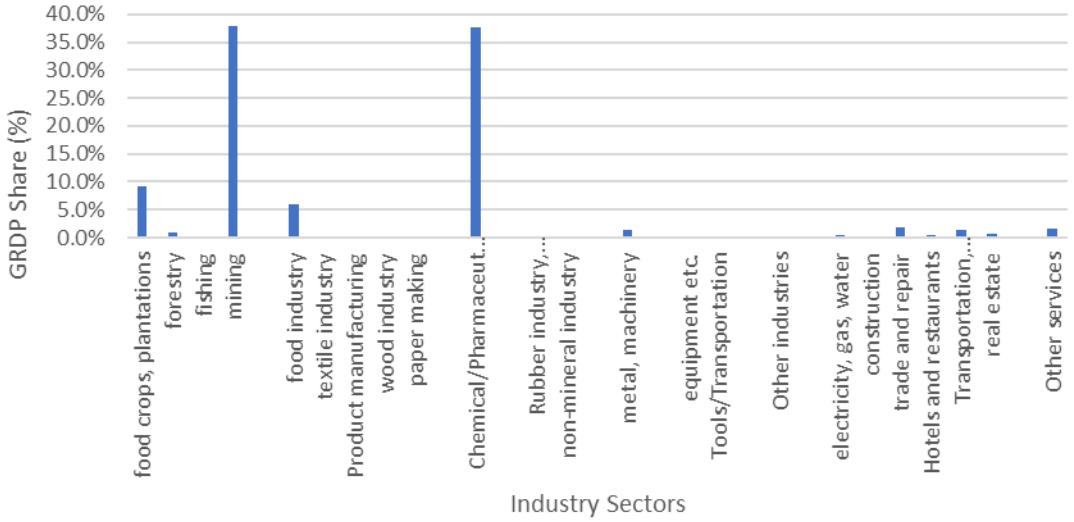
Domestic investment performance from 2018 to 2022 is shown in Table and Figure below.

Table 2-22 Actual Domestic Investment Amount by Sector in East Kalimantan Province (Unit: Million IDR)

	Sector	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Share in 2022	Average Annual Growth Rate from 2018 to 2022
I.	Primary Industry							
1.	Plantation	3,747,270	4,278,148	4,738,084	4,828,002	3,650,818	9.2%	-0.6%
2.	Forestry	602,835	283,625	125,550	73,974	346,854	0.9%	-10.6%
3.	Fisheries	0	0	3.00	0.50	2.00	0.0%	-
4.	Mining	12,559,385	8,712,258	3,818,588	5,859,330	15,012,379	37.9%	4.9%
II.	Secondary Industry							
1,	Food Industry	1,687,496	569,891	1,397,339	671,841	2,390,782	6.0%	10.4%
2,	Textile Industry	0	0	0	2.00	431.00	0.0%	-
3.	Goods Manufacturing	0	0	0	0	0	0.0%	-
4.	Timber Industry	264,104	350,224	97,510	5,996	24,002	0.1%	-22.7%

5.	Paper Industry	0	0	0	5.00	500	0.0%	-
6.	Chemicals and Pharmaceuticals	1,035	444,146	7,965,222	15,145,338	14,914,625	37.7%	360,336.1%
7.	Rubber and Plastics	0	9,000	70.80	0	7,210	0.0%	-
8.	Non-mineral resources	17,920	292,133	95	2,351	18,185	0.0%	0.4%
9.	Metals and Machinery	0	0	5,000	10	521,797	1.3%	-
10.	Machinery and Equipment	0	0	0	40	4,382	0.0%	-
11.	Tools and Transportation	7,620	151,707	3,626	9,222	21,487	0.1%	45.5%
12.	Other Secondary Industries	0	510	70,349	5,201	48,889	0.1%	-
III.	Tertiary Industry							
1.	Electricity, Gas, and Water	2,559,557	2,021,364	759,123	298,897	165,781	0.4%	-23.4%
2.	Construction	3,204,290	1,223,385	5,777,777	113,414	55,395	0.1%	-24.6%
3.	Trade (Domestic and International Export/Import Operations) and Machinery Repair Services	82,557	341,328	218,380	295,260	687,631	1.7%	183.2%
4.	Hotels and Restaurants	480	1,086,262	25,127	55,385	199,550	0.5%	10368.2%
5.	Transportation, Warehousing, and Communications	165,404	940,606	459,299	1,503,072	573,564	1.4%	61.7%
6.	Real Estate	26,874	345,944	53,687	840,351	286,655	0.7%	241.7%
7.	Other Services	1,015,135	1,623,525	419,150	589,691	664,718	1.7%	-8.6%
Total		25,941,962	22,674,053	25,934,009	30,297,382	39,595,633	100.0%	13.2%

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026



Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-57 Sectoral Share of Domestic Investment in East Kalimantan (2022)

According to Table 2-22, the domestic investment amount (PMDN) in 2022 reached 39.59 Trillion IDR. The main sectors were mining (37.9%), food crops, plantations, and livestock (9.22%), food industry (6.0%), trade (domestic and international export/import activities), and machinery repair services (1.7%). The foreign investment (PMA) implementation amounted to 1.26622 Billion USD, with the main investment sectors being mining (40.7%), non-metallic mineral industries (17.1%), food crops, plantations, and livestock (15.0%), food industry (7.6%), and base metal industries, metal products, and non-machinery equipment (7.4%). The emergence of IKN in East Kalimantan Province is expected to stimulate investment activities by investors and positively impact future investment value.

Looking at the year-on-year changes in Table above, from 2017 to 2019, the mining sector had the highest investment. However, in 2020, the sector with the highest investment was the chemicals and pharmaceuticals sector, reaching 7.9652 Trillion IDR, and by 2022, it had increased to 14.0914 Trillion IDR, with a share of 37.7%. Investment in the mining sector, which was 3.81859 Trillion IDR in 2020, reached 15.11238 Trillion IDR in 2022, surpassing pre-COVID-19 levels. This was due to the acceleration of investment in the mining sector, driven by the high and sustained coal commodity prices. In other sectors, the plantation sector follows with 3.65082 Trillion IDR.

The average annual growth rate of domestic investment from 2018 to 2022 is 13.2%, but there is significant variability in the figures. Among them, the chemicals and pharmaceuticals sector has shown a rapid growth trend, the hotel and restaurant sector has also increased significantly, while the forestry and wood-related sectors have seen a notable decline.

c) Sectoral Trends in Foreign Investment

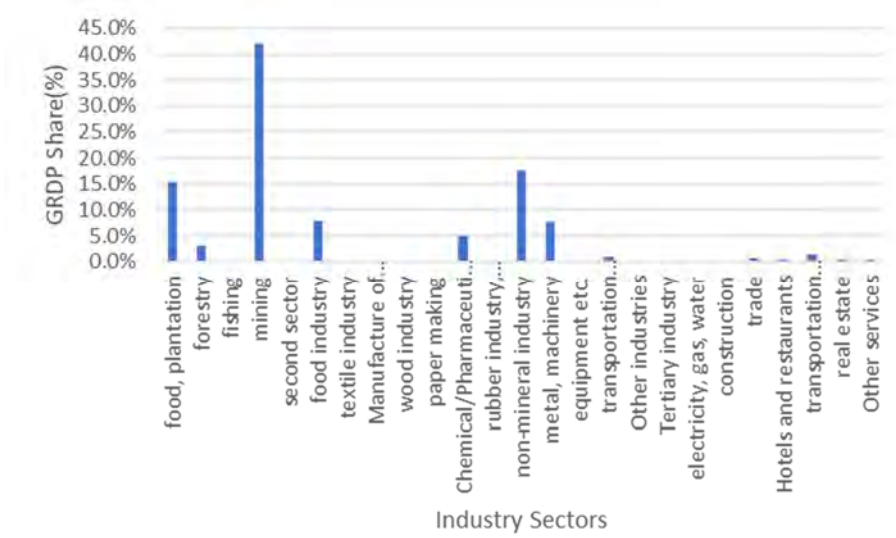
Foreign investment performance from 2018 to 2022 is shown in the table below.

Table 2-23 Sectoral Foreign Investment Performance in East Kalimantan Province (Unit: USD)

No.	Sector	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Share in 2022	Average Annual Growth Rate from 2018 to 2022
I	Primary Industry							
1.	Plantation	64,114,100	185,796,300	67,781,500	58,097,000	190,013,892	15.0%	49.1%
2.	Forestry	657,100	2,751,700	2,071,400	2,330,000	37,276,491	2.9%	1393.2%
3.	Fisheries	135,500	-	-	-	-	0.0%	-
4.	Mining	188,763,000	306,457,800	167,858,400	252,125,200	515,919,940	40.7%	43.3%
II	Secondary Industry							
1.	Food Industry	118,386,600	14,264,600	41,235,500	242,430,000	96,106,592	7.6%	-4.7%
2.	Textile Industry	-	-	-	-	-	0.0%	-
3.	Goods Manufacturing	-	-	-	-	-	0.0%	-
4.	Timber Industry	6,600	33,300	-	15,291,200	1,811,899	0.1%	6838.3%
5.	Paper Industry, Products	-	-	-	-	-	0.0%	-
6.	Chemicals and Pharmaceuticals	760,700	60,000	32,861,600	66,411,000	60,176,592	4.8%	1952.7%
7.	Rubber Industry, Products	256,700	561,100	986,400	990,600	136,400	0.01%	-11.7%
8.	Non-mineral Resources	-	15,809,600	24,840,000	40,020,700	216,016,282	17.1%	-
9.	Metals, Machinery	22,600	1,879,400	276,400	24,600	93,934,693	7.4%	103885.1%
10.	Machinery and Equipment	253,200	1,533,400	3,550,700	1,084,700	1,967,500	0.2%	169.3%
11.	Transportation Equipment Industry	-	43,800	-	-	10,091,596	0.8%	-
12.	Other Industries	526,100	134,600	-	-	-	0.0%	-
III	Tertiary Industry							
1.	Electricity, Gas, and Water	53,012,000	280,607,900	278,800	-	-	0.0%	-
2.	Construction	5,093,100	-	-	-	-	0.0%	-
3.	Trade	3,738,700	4,258,100	5,618,500	3,804,800	9,497,500	0.8%	38.5%
4.	Hotels and Restaurants	2,245,800	1,297,000	791,000	586,000	3,682,299	0.3%	16.0%
5.	Transport, Warehousing	86,566,000	14,847,700	29,415,000	52,588,300	16,726,698	1.3%	-20.2%

6.	Real Estate	301,200	146,900	221,300	9,379,800	6,288,898	0.5%	497.0%
7.	Other Services	62,662,600	32,616,200	240,700	26,300	6,574,500	0.5%	-22.4%
Total		587,501,600	863,099,400	378,027,200	745,190,200	1,266,221,770	100.0%	28.9%

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026



Source: Prepared by the Study Team based on East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-58 Sectoral Share of Foreign Investment in East Kalimantan Province(2022)

The mining sector was the largest recipient of investment in East Kalimantan Province from 2018 to 2022, with investment reaching 510 Million USD in 2022. Meanwhile, the food industry also saw a significant increase in 2021, reaching 240 Million USD. Other sectors that followed in terms of investment included metals and machinery, as well as chemicals and pharmaceuticals. Overall, there were considerable fluctuations by year, but the food, plantation, and mining sectors remained consistently high.

[Investment in non-oil, gas and coal sectors]

Based on Tables 2-22 and 2-23, the total investment amount, including both domestic and foreign investments, has been continuously increasing since 2018. In 2021, the investment in the non-oil, non-gas, and non-coal sector reached 31.64 Trillion IDR, with domestic investment accounting for 24.44 Trillion IDR and foreign investment 7.2 trillion IDR. Furthermore, the target investment for the non-oil, non-gas, and non-coal sector in 2022 was 35 Trillion IDR, but it reached 35.35 Trillion IDR. For 2023, the target investment amount for the non-oil, gas, and coal sector is 35.67 Trillion IDR, and it is expected that investments in this sector will continue to increase in the future.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-59 Investment Performance in East Kalimantan Province's Non-Oil, Gas, and Coal Sector (Unit: Trillion IDR)

5) Recent Investment Situation in East Kalimantan Province

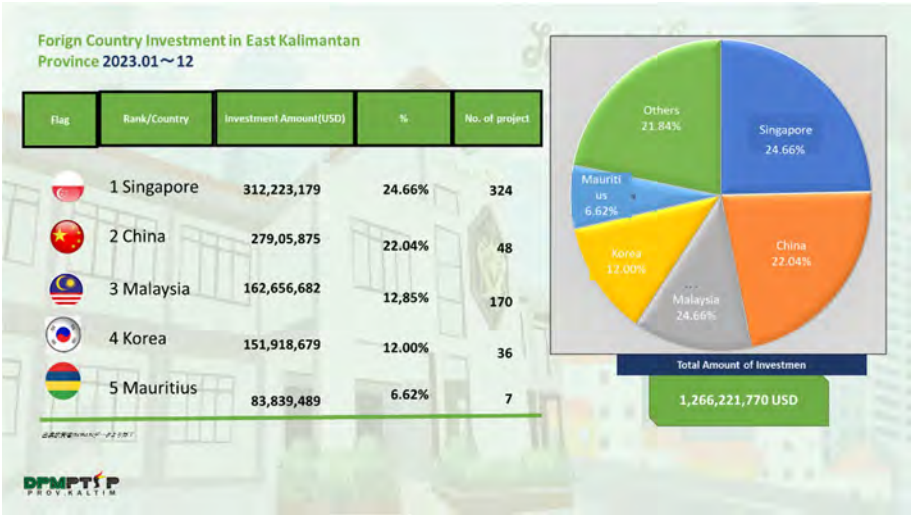
a) Investment Situation by Country and Sector

According to the Investment Potential and Opportunities in East Kalimantan Province provided by the East Kalimantan Province government, the industrial investment trends in East Kalimantan Province from October 2022 to December 2022 totaled approximately 57 Trillion IDR, with 69% coming from domestic investments and 31% from foreign investments.

In terms of regional investment, domestic investments are predominantly in Balikpapan City and Kutai Kartanegara Regency, while Samarinda City has a similar number of projects as Balikpapan but with a larger proportion of smaller-scale projects. Foreign investments, on the other hand, are concentrated in Kutai Timur Regency, followed by Kutai Barat Regency, Kutai Kartanegara Regency, and Paser Regency, with more investments directed to regions other than Balikpapan City and Samarinda City.

With sector, domestic investments are primarily in mining, chemicals/pharmaceuticals, and food/plantations, accounting for about 75% of the total. Similarly, foreign investments are predominantly in mining, non-metallic industries, and food/plantations, also making up around 75%.

By country, the top five investors—Singapore, China, Malaysia, South Korea, and Mauritius—account for over 75% of the total foreign investments.



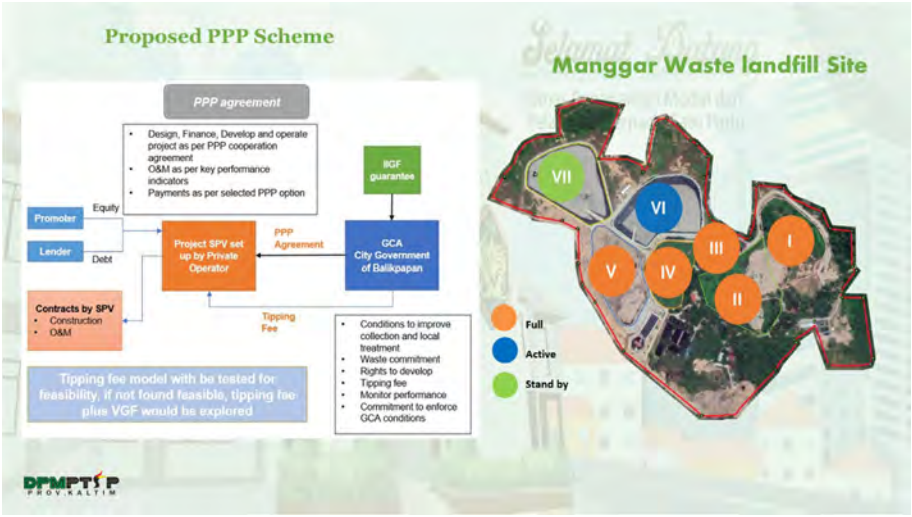
Source: Prepared by the Study Team based on East Kalimantan Province Investment Potential and Opportunities

Figure 2-60 Investment Amount by Country into East Kalimantan Province (2023, in USD)

b) The Process of Obtaining Business Licenses and Investment Projects

According to East Kalimantan Province Investment Potential and Opportunities, the process of obtaining business licenses, the online application process, and application records are described. In 2022, business applications were predominantly in the sectors of environment, fisheries, manufacturing, and transportation. The investment incentives for East Kalimantan Province include "Government Regulation No. 6 of 2015 on Business Promotion and Encouragement" and "Government Regulation No. 35 of 2019 on Incentives and Facilities in the Maloy Batuta Special Economic Zone." These regulations offer tax exemptions, reduced reward fees, and subsidized interest rates for local banks.

The industrial areas include the Maloy Batuta Special Economic Zone and the Kariangau Industrial Area. As individual projects, the following are introduced: the Manggar waste management project in Balikpapan City under a PPP scheme, a toll bridge[1] connecting Balikpapan City and PPU Regency, sustainable marine economy (Blue Economy) projects on Kaniungan Island in the northern part of the state and in Kelautan north of Bontang, a solar power generation project in IKN, cargo handling services at the Penajam Port in the Buluminung Industrial Area, and a tire recycling project.



Source: Prepared by the Study Team based on East Kalimantan Province Investment Potential and Opportunities

Figure 2-61 PPP Project Proposal for the Manggar Waste landfill Site in Balikpapan City

c) List of Investment Projects

The East Kalimantan Province Investment Potential highlights distinctive investment projects for each city and regency, as shown in the table below.

Table 2-24 Example of Investment Projects in Tri-City Related Local Governments in East Kalimantan Province Province

Area	Investment Project Examples
Balikpapan City	- Karang Joang New Tpwn Area - Kariangau Industrial area - Maanggar and Minapolitan Manggar District - Coastal reclamation area

[1] The project has been suspended at present due to the completion of the Balang Island Grand Bridge in the north.

	- Teritip New Town - KPPN：KariangauAndBulumining Industrial area - KPPN：Balikpapan City and Samboja and its surrounding areas
Samarinda City	- Kecamatar Palaran Industrial zone - Citra Niaga Commercial district - Urban-scale trade of Sambutan district・Service area - Industrial park for service industries - KPPN：Samarinda City and surrounding area
Kutai Kartanegara Regency	- The Triangle area including Kecomatan subdistrict, Kembang Jaggut subdistrict, and Tabang subdistrict - Oil and gas and petrochemical industrial zone based on oil and gas mixtures - Agricultural industrial park - KPPN：Bangun City and Tanjung Isuy Subdistrict - KPPN：Tenggarong and surrounding areas - KSPN（National Tourism Strategic Area）：Bangun City
PPU Regency	- Penajam District's Perkotosn Petung Urban Area - Deer Farm in Api Api Village, Waru District - Marine Tourism Area in Panajam Regency - Agricultural Area in Babulu Subdistrict - Punajam-Balikpapan Overpass Bridge (currently on hold)

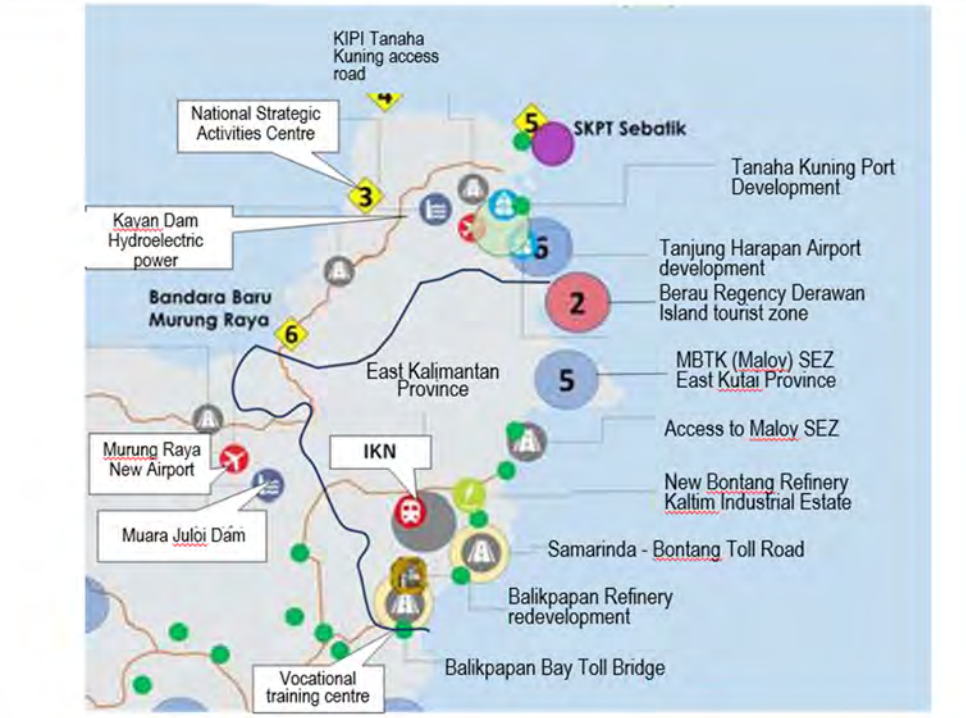
Source: Prepared by the Study Team based on East Kalimantan Province Investment Potential and Opportunities

(3) Industrial Location-related Plans

1) High Level Plans for Industrial Locations

According to the National Middle-Term Development Plan 2020-2024, the key industrial development hubs in East Kalimantan Province are the Maloy Economic Zone, the Berau Island Tourism Zone, the three oil and gas refineries in Bontang, Mynyak, and Balikpapan, and five vocational training centers. The vocational training centers include the UPTD Industry Training Hall in Balikpapan and the BPVP Vocational Training Center in Samarinda. Infrastructure development includes the Samarinda-Bontang toll road and the toll bridge in Balikpapan Bay, as shown in the diagram below.

The Kayan Dam in North Kalimantan Province, a neighboring province, is one of the largest hydroelectric power facilities in Southeast Asia and has the potential to become a power supply source for the Tri-City area in the future.



Source: Prepared by the Study Team based on National Middle-Term Development Plan 2020-2024

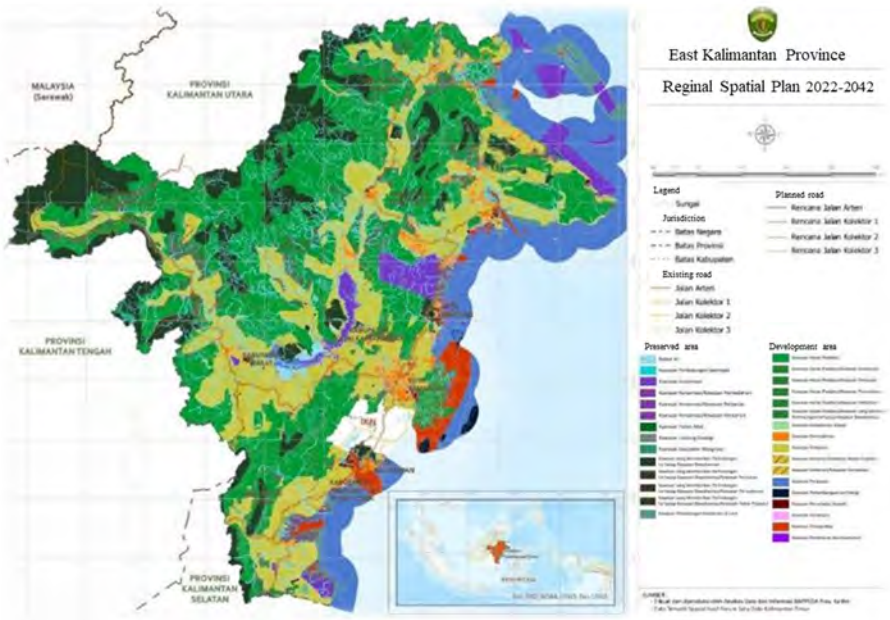
Figure 2-62 Regional Development Map of North East Kalimantan Region

2) Alignment of the East Kalimantan Province Regional Spatial Plan 2023-2043 (RTRW) with Industrial Location.

a) Alignment with the Special Plan

The East Kalimantan Province Regional Long-Term Development Plan 2024-2026 refers the land use planning map of the East Kalimantan Province Regional Spatial Plan 2023-2043, as shown in the figure below. Approximately half of the inland area of Balikpapan City is designated as a conservation area, while the remaining half along the coast is designated for development. The water areas along the coastline are also part of the conservation area. Samarinda City is largely designated as a development area; however, the alluvial fan downstream of the Mahakam River is a conservation area, and the area further offshore from the oil and gas extraction concession along the coastline is also designated as a conservation area. The area within IKN (the white-outlined section in the figure) is planned to preserve 75% of its green space, with KP-IKN at the center.

Industrial locations must be situated within the areas designated as industrial zones within the industrial development areas, in accordance with the East Kalimantan Province Regional Spatial Plan.

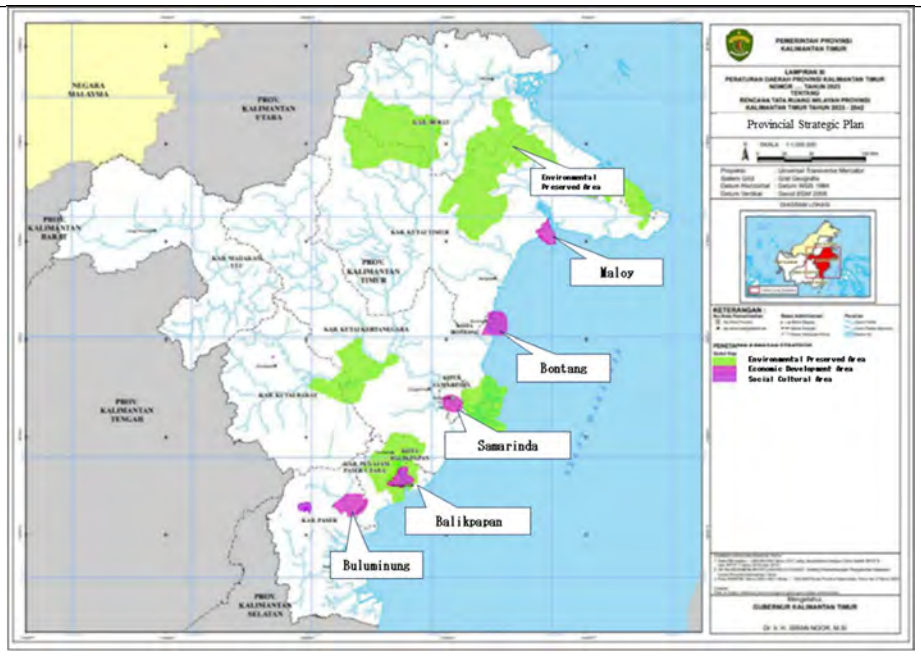


Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-63 East Kalimantan Province Land Use Planning Map

b) Consistency with the regional development policy or Alignment with the regional development policy

Similarly, the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 references the regional development policy map of the East Kalimantan Province Regional Spatial Plan 2023-2042, as shown in the figure below. Environmental conservation areas, economic development areas, and socio-cultural areas have been designated, and industries other than agriculture and mining, such as manufacturing, need to be located in the economic development areas. In this diagram, IKN has not yet been positioned as an economic development area on the map.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-64 East Kalimantan Provincial Regional Development Policy Map

c) Regional Development Policies by Theme

The regional development policies by theme related to industrial location are shown below. As a premise, it is assumed that the designated cities for each cluster will serve as the base, with the expectation of national industrial development support. In terms of industries related to IKN, the issues concerning sustainable agriculture include the establishment of industrial hubs encompassing maritime areas, balancing within the province, food self-sufficiency, high-value agricultural products, and the utilization of existing palm oil plantations. Regarding the low-carbon energy sector, the policy emphasizes advancing coal, oil, and gas field development while harmonizing industrial activities with environmental management and considering the environment.

■An advanced, safe, comfortable, and sustainable spatial plan to create the IKN core areas, green industries, agriculture, marine and fisheries, mining

- Development of residential and employment areas, including hubs for industrial development, agriculture, marine and fisheries, and oil and gas extraction.
- Development of regional infrastructure networks for services, aiming for equitable wealth distribution across the entire province and improving the quality of life.
- Sustainable conservation of environmental protection areas in terrestrial and coastal marine areas.
- Development of independent, competitive, advanced industries and green industries for the welfare of local communities.
- Development of marine and fisheries areas based on sustainable potential and the blue economy.
- Development of new agricultural land to improve the welfare of local communities.

■Development strategy for integrated residential areas and central facilities for industrial development, agriculture, marine and fisheries, and oil and gas extraction.

- Development of national activity centers (PKN: IKN) covering multiple provinces, regional activity centers (PKW: Balikpapan City, Samarinda City, Bontang, Tarakan) for

one or multiple cities, and local activity centers (PKL: other major cities) targeting districts and cities, as centers for manufacturing and service industries such as agricultural and marine products, mining, tourism, administrative services, health, education, and trade and services.

- Establishment of major service centers in border areas as National Strategic Activity Centers (PKSN).
- Development of a road network to improve access between residential areas, green industries, agriculture, fisheries, and mining.
- Development of an integrated road network connecting terminals, stations, ports, and airports.
- Development of a railway network to improve access to settlement center system, green industries, agriculture, fisheries, and mining.
- Development of a river and ferry transport network to improve inter-regional connectivity and eliminate isolated areas.
- Increased exports and inter-island trade through the development of environmentally friendly ports and airports adapted to climate change.
- Development of coastal maritime routes to support domestic and international shipping.
- Development of oil, gas, energy, and network infrastructure in terrestrial and coastal areas to meet the needs of local communities and manufacturing industries.
- Development of power networks using new energy and renewable energy in inland and coastal areas.
- Development of telecommunications networks and systems to enhance investment competitiveness in terrestrial and coastal water areas.
- Development of water resource infrastructure considering the availability of water resources, environmental capacity, and the region's hydrogeological conditions.
- Development of infrastructure and networks for drinking water supply systems (SPAM), wastewater treatment systems (SPAL), hazardous and toxic waste treatment systems, and environmentally friendly waste management systems.

■Strategy for developing independent, competitive, advanced industries, and green industries that contribute to the welfare of society.

- Development of comprehensive industrial designated areas for environmentally friendly and economically valuable upstream (close to raw material production) agricultural plantations.
- Development of comprehensive industrial designated areas for environmentally friendly and economically valuable basic chemicals derived from petroleum, gas, and coal.
- Development of designated areas for upstream agricultural industries, diverse industries, and the food industry, ranging from forestry, fisheries, and marine activities.
- Synergistic effects of logistics routes between industrial designated areas, other cultivation areas, protected areas, and marine biodiversity.
- Pollution management in industrial zones.

■A development strategy for agricultural areas based on the principles of sustainable development.

- Development of food crop areas, horticultural areas, and livestock areas to support food self-sufficiency.
- Development of plantations for palm oil, coconut, rubber, cocoa, pepper, and local specialties, according to environmental capacity and carrying capacity.
- Development of reforestation areas according to environmental carrying capacity and

environmental capacity.

■A strategy for developing marine and fisheries areas based on sustainable potential and the blue economy.

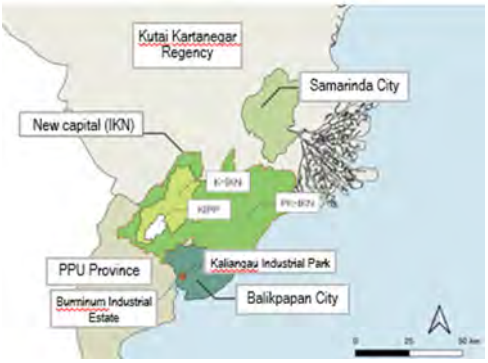
- Development of marine and fisheries processing industry areas.
- Development of natural fishing areas.
- Development of aquaculture fishing areas.
- Development of infrastructure and facilities for marine and fisheries areas integrated with other regions.

■Development strategy for mining sites that considers the surrounding ecosystem.

- Development of oil and gas extraction areas, fully considering environmental carrying capacity and capacity.
- Development of mineral and coal mining areas, fully considering environmental carrying capacity and capacity.
- Development of infrastructure and facilities for the smooth distribution of oil, gas, mineral, and coal mining products.
- Synergistic effects of logistics routes between mining areas, agricultural production areas, nature conservation areas, and marine biodiversity.

3) Industrial areas in the two cities and two provinces adjacent to IKN

The East Kalimantan Provincial Industrial Development Plan 2019-2039 states that industrial development in the two cities and two regencies adjacent to the new capital will be carried out through the development of industrial growth center areas (WPPI: the four regions of Balikpapan City, Samarinda City, Bontang, and Tarakan), the development of industrial designated areas (KPI), the development of industrial estates (KI), and the development of small and medium-sized industrial centers (IKM centers). The status of the industrial areas in the two cities and two regencies adjacent to the new capital is as follows.



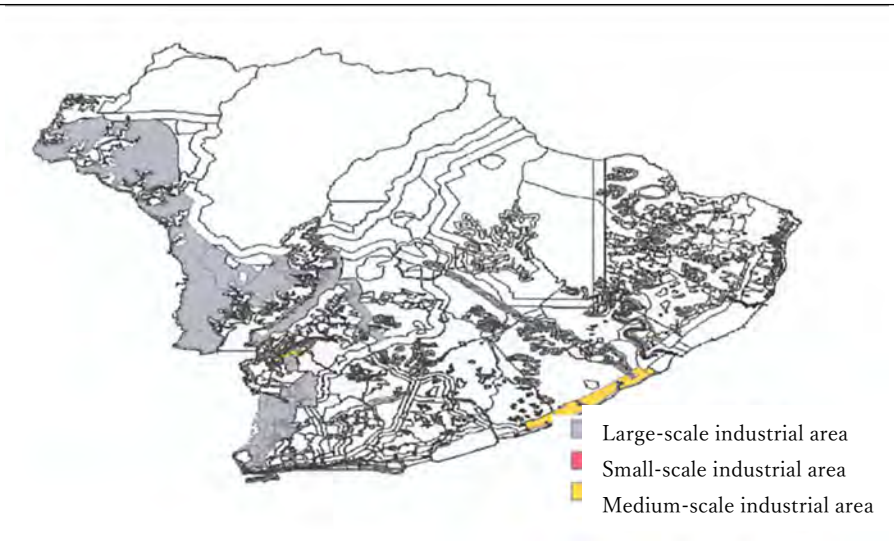
Source: Prepared by the Study team based on Open Street Map.

Figure 2-65 Map of the Two Cities and Two Regencies Adjacent to the New Capital

a) Industrial areas in Balikpapan City

The area of the industrial designated area (KPI) in Balikpapan City is 5,091 ha and is designated as follows.

- Large-scale industrial area 4,170 ha (gray)
- Medium-scale industrial area 918 ha (beige)
- Small-scale industrial area 3 ha (pink)



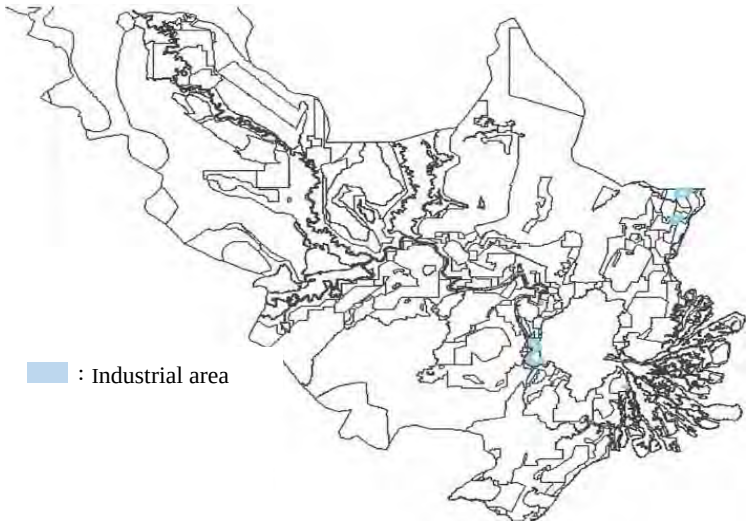
Source: East Kalimantan Provincial Industrial Development Plan 2019-2039

Figure 2-66 Industrial Areas in Balikpapan City

b) Industrial areas in Kutai Kartanegara Regency

The industrial designated area (KPI) in Kutai Kartanegara Regency, covering an area of 3,543.61 ha, is outlined as follows.

- 1,000 ha of large-scale industrial land in the Marang Kayu sub-district.
- Small and medium-sized industrial land spans across all sub-districts.



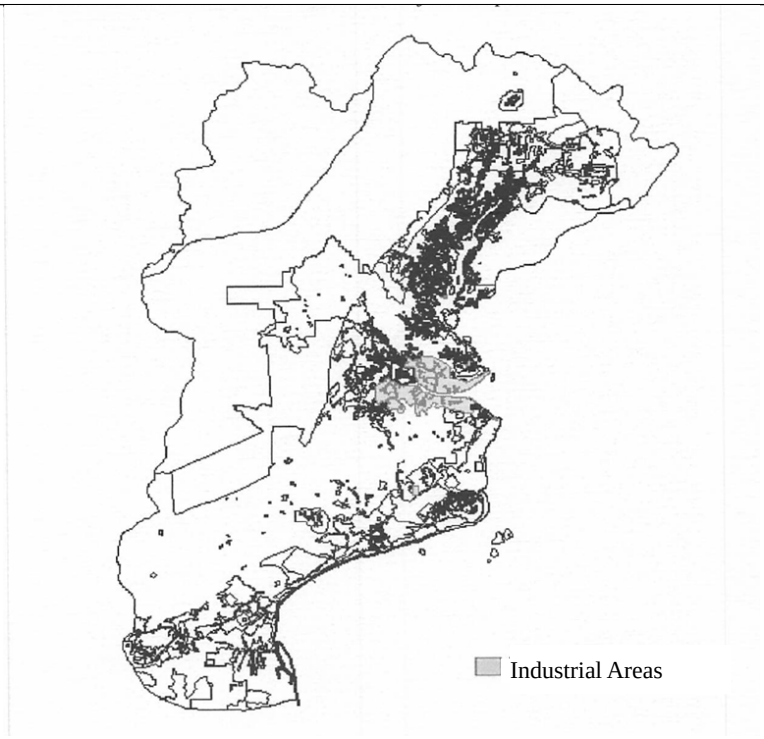
Source: East Kalimantan Provincial Industrial Development Plan 2019-2039

Figure 2-67 Industrial Areas in Kutai Kartanegara Regency

c) Industrial areas in PPU Regency.

The industrial designated area (KPI) covers 5,089.93 ha and is intended for agriculture, food, and miscellaneous industries.

- Large and medium-scale industrial areas are designated in the Maridan village of Sepaku subdistrict, Pantai Lango subdistrict, Gersik subdistrict, Jenebora subdistrict, Buluminung subdistrict, Gunung Seteling subdistrict, and Nipah Nipah village in Penajam subdistrict.
- Small-scale industrial areas are scattered across the regency.

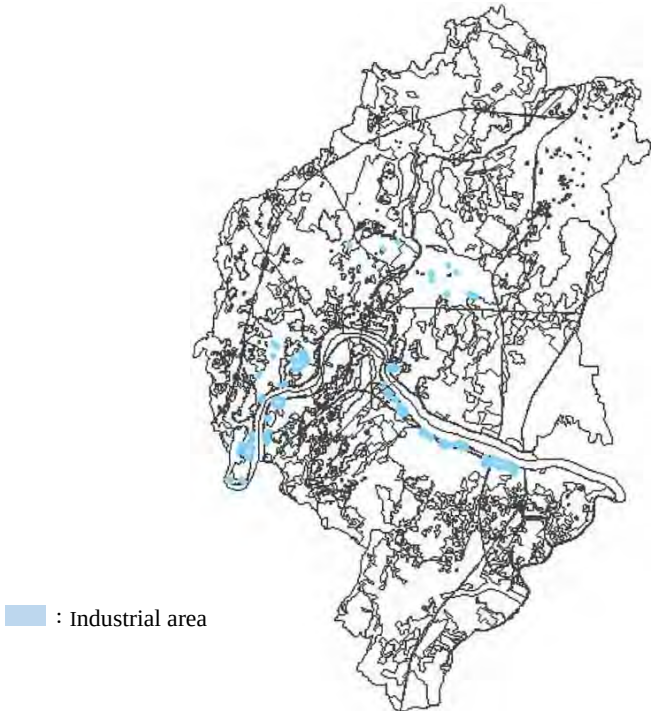


Source: East Kalimantan Provincial Industrial Development Plan 2019-2039

Figure 2-68 Industrial Areas of PPU Regency

d) Industrial areas in Samarinda City

The industrial designated area covers 270 ha and is intended for upstream agriculture, miscellaneous industries, petroleum, gas, and coal-based basic chemical industries, as well as food industries.

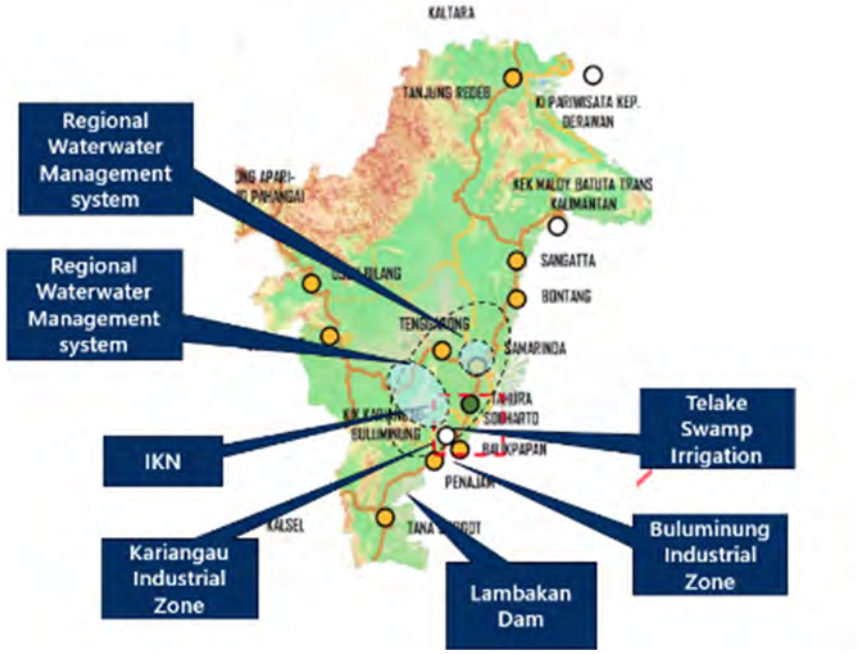


Source: East Kalimantan Provincial Industrial Development Plan 2019-2039

Figure 2-69 Industrial Areas in PPU Regency

e) Industrial locations in the provincial document "Overview of East Kalimantan Province and Achievement of Goals."

As representative industrial areas, the Balikpapan City Kariangau Industrial Area and the PPU Regency Buluminung Industrial Area are shown in the figure below. Additionally, individual projects such as the Lambakan Dam, the Telake Wetland Irrigation Canal, and the waste management plans for Balikpapan City, Samarinda City, and Kutai Kartanegara Regency are outlined.



Source: Prepared by the Study Team based on the "Overview of East Kalimantan Province and Achievement of Goals"

Figure 2-70 Major Industrial Development and Infrastructure near IKN

(4) Issues and Challenges of Industrial Development by Sector

The East Kalimantan Provincial Industrial Development Plan 2019-2039 reports the issues and challenges in the industrial development of East Kalimantan Province as follows.

4) Common Challenges in Industrial Development

The following six challenges have been identified, including the insufficient development of low-carbon energy, renewable energy industries, and the improvement of industrial areas. When visiting the industrial designated areas near Balikpapan City, issues such as steep, unpaved roads and inadequate supply of utilities were observed.

- Development of renewable energy to reduce excessive dependence on non-renewable natural resources.
- Development of infrastructure necessary for industries.
- Optimization of the management of industrial resources such as raw materials, facilities, and human resources to produce value-added products.
- Improvement of the growth potential and productivity of regional industries.
- Improvement of exports of renewable energy-related industries outside the province.

· Optimization of industrial area development.

The issues and challenges related to agriculture, forestry, fisheries, energy, and tourism in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 are outlined as follows.

5) The status, issues, and challenges of agriculture, forestry, and fisheries

Dealing with price fluctuations of products and improving productivity are the challenges. The contribution of the agricultural sector to the GRDP has shown an increasing trend from 2018 to 2022, reaching 7.0% in 2022. The agricultural sector is influenced by the performance of the plantation crop sector and the fisheries sector, both of which are significantly affected by market commodity prices and production costs. In 2022, the plantation crop sector experienced a decline in consumption due to the export ban on crude palm oil (CPO), causing a significant drop in the price of fresh fruit bunches (FFB) for farmers and a decrease in income levels. The agriculture, forestry, and fisheries sectors are reported to have not achieved optimal performance in terms of production items and productivity.

a) Issues and challenges of fisheries and aquaculture

East Kalimantan Province has a vast marine area of 3.99 Million ha, as well as an inland sea with great fishing potential. As shown in the figure below, fishing production in East Kalimantan Province has been on the rise over the past five years. However, according to interviews with each city and province, some businesses have reduced production volume and even temporarily stopped production due to soaring feed prices. In addition, there is still a low level of awareness of using environmentally friendly fishing gear, and the facilities and aquaculture infrastructure at fish landing bases are insufficient. Other issues include examining marketing methods, increasing the added value of marine products, improving the quality of human resources, and responding to climate change.



Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-71 Fish Catch in East Kalimantan Province from 2017 to 2022.

b) Issues and challenges of food crops

Low self-sufficiency in rice, the staple food, is an issue in East Kalimantan Province, and past measures to improve productivity and expand farmland have not produced results. Rice is

cultivated in both dry and wet fields, and the provincial government is conducting activities such as Jerakan Tanam (aid in agricultural materials and technical support) to increase farmers' motivation to plant rice, but production continues to fall short of East Kalimantan Province's target, with yields falling from 4.04 tons per ha in 2018 to 3.63 tons per ha in 2022.The Status, Issues, and Challenges of Plantations

c) Issues and challenges of plantation products

East Kalimantan Province has five major plantation crops: oil palm, rubber, coconut, cocoa, and pepper. Palm oil plantations have a planted area of 1.59 Million ha and an annual production of 17.36 Million tons as of 2022. Another major contributor to the economy of East Kalimantan Province is rubber, with a planted area of 123,776 ha as of 2022 and an annual production of 71,000 tons in 2022.

Table 2-25 Area planted by crop type in East Kalimantan Province（2022）

No.	Product	Cultivated area(ha)	Production volume (tons)	Productivity (tons/ha)
1	Rubber	123,776	71,483	0.58
2	Coconut	20,068	7,201	0.36
3	Coffee	1,495	165	0.11
4	Pepper	8,321	5,080	0.61
5	Cocoa	7,777	2,566	0.33
6	Palm oil	1,411,861	16,938,307	11.99

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026.

All cities and regencies in East Kalimantan Province have oil palm plantations, and Kutai Timur Regency had the highest crude palm oil production in 2022 (6.835 Million tons/year). In addition, Paser Regency had the highest coconut production at 2,325 tons/year, Kutai Barat Regency had the highest rubber production at 32,000 tons/year, Kutai Timur Regency had the highest cocoa production at 1,664 tons/year, and Kutai Kartanegara Regency had the highest pepper production at 2,961 tons/year.

Table 2-26 Production by Region and Crop in East Kalimantan Province (2022, in Tons)

No,	Municipality	Palm oil	Coconut	Rubber	Coffee	Cocoa	Pepper
1	Paser Regency	1,974,991	2,325	8,703	71	4	18
2	Kutai Barat Regency	728,607	147	32,064	21	24	6
3	Kutai Kartanegara Regency	2,901,860	1,667	15,466	7	44	2,961
4	Kutai Timul Regency	6,835,708	751	1,868	51	1,664	156
5	Berau Regency	4,063,493	1,110	7,256	13	484	556
6	PPU Regency	299,681	723	1,564	1	2	1,240
7	Mahakam Ulu Regency	124,824	4	-	-	339	-
8	Balikpapan City	477	340	4,246	1	1	127
9	Samarinda City	8,548	126	316	-	4	16
10	Bontang City	118	8	-	-	-	-

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Challenges facing plantation crop production in East Kalimantan Province include rising fertilizer prices and the presence of a large number of old, low-productivity farmers.

A future challenge is the transformation of agriculture from individual management to corporate organization. When farmers belong to a company, the development of company-based plantations is carried out, and upstream activities such as seed and seedling procurement, processing and production, and distribution to final consumers are integrated as part of the company's operations. In this case, farmers are able to enjoy the added value generated by agricultural activities, which in turn is expected to improve their welfare.

To enhance the competitiveness of plantation products, efforts towards final product manufacturing are necessary. Owing to efforts in the downstream sector, the production volume in the upstream sector tends to increase, and the market price of products stabilizes. As shown in the diagram below, East Kalimantan Province has 97 large-scale palm oil companies (PBS) that process fresh fruit bunches (FFB), the raw material for palm oil, into semi-processed crude palm oil (CPO). In order to promote the economic development of East Kalimantan Province, attracting investors to foster manufacturing industries that provide final products for household consumption, and the government's support in developing industrial infrastructure from plantations surrounding the palm oil refining industry to final product manufacturing factories, are identified as key challenges.

Table 2-27 Large-Scale Palm Oil Companies (PBS) in East Kalimantan Province

Municipality	Large Palm Oil Companies	FFB Production Capacity (tons/hour)	
		Installed	In operation
1. Kutai Kartanegara Regency	18	975	858.87
2. Kutai Timul Regency	35	1917	1746.32
3. Kutai Barat Regency	8	460	446.99
4. PPU Regency	7	360	238.33
5. Paser Regency	17	890	674.67
6. Berau Regency	11	685	636
7. Mahakam Ulu Regency	1	60	50.5
8. Samarinda City	0	0	0
9. Balikpapan City	0	0	0
10. Bontang City	0	0	0
Total	97	5347	4651.68

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

d) Issues and Challenges in the Livestock Industry

One of the challenges facing the livestock industry in East Kalimantan Province is the lack of beef supply. As of 2022, the total number of livestock in East Kalimantan Province is 72.28 Million broiler chickens, 4.96 Million native chickens, and 1.975 Billion laying hens, while the number of beef cattle is low at 124.93 thousand and the number of pigs is low at 78.58 thousand. The supply of good quality and affordable beef is a challenge to improve self-sufficiency and food security in East Kalimantan Province. As of 2022, the supply of beef in East Kalimantan Province is about 30% of demand, and the province is dependent on supplies from outside the region, such as South Sulawesi, East Nusa Tenggara, and West Nusa Tenggara.

In Indonesia, it is common for farmers to develop production facilities, which determine

productivity, on their own. However, the East Kalimantan provincial government is supporting farmers in its efforts to promote beef cattle production by promoting small-scale livestock farming on former mine sites and implementing a development strategy for oil palm plantation areas through the Integrated System for Beef Cattle and Oil Palm (SISKA) program.

e) Issues and Challenges of Forestry

Forestry challenges in East Kalimantan Province include restoring plantations to natural forests on state land, generating national revenue from state forests, improving forest product production, and flooding caused by deforestation.

■ **The restoration status of plantation forests in state-owned forests**

East Kalimantan Province has a very large forest potential. The forest area is 8,371,478.05 ha, consisting of conversion production forests, limited production forests, permanent production forests, protection forests, and nature reserves/nature conservation areas. Based on the Minister of Environment and Forestry Regulation No. SK.306/MENLHK/PDASHL/DAS.0/7/2018 concerning Nationally Important Land Areas in 2018, the important land areas in East Kalimantan Province are 275,272 ha, and they are updated every five years. As shown in the diagram below, in 2018, the area of important land areas restored from eucalyptus plantations and other areas to natural forests was 38,771.77 ha. By 2022, the total area of important land restored was 184,856.64 ha, of which 80.68% was from former plantations.

Table 2-28 Restored Forests and Lands

No.	Year	Restored Critical Land Area (ha)
1	2018	38,771.77
2	2019	66,302.27
3	2020	38,737.80
4	2021	39,900.80
5	2022	1,144.00
Total		184,856.64

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

■ **The Area of State Forests in Each Region**

The state forests of East Kalimantan Province are distributed across cities and regencies as shown below, and are classified into four types.

Table 2-29 East Kalimantan Province Social Forests (State Forests) Area (PIAPAS) Revised 7th Edition Summary Table 2022 (Unit: ha)

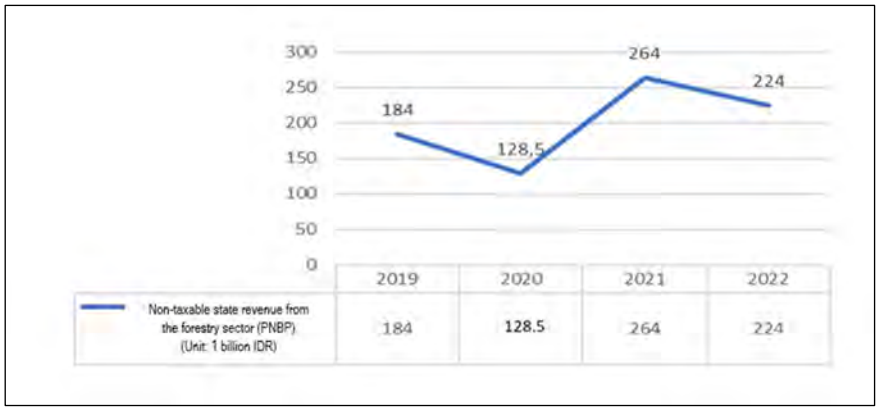
No.	Municipality	Current Situation and Function				Total
		HL（Conservation Forest）	HP（Production Forest）	HPK（Alternative Forest）	HPT（Production-Restricted Forest）	
1	Paser Regency	6,703.20	11,483.43	3,421.56	23,528.38	45,136.57
2	Kutai Barat Regency	13,809.10	10,806.60	-	5,271.50	29,887.19
3	Kutai Kartanegara Regency	5,264.61	30,362.96	1,497.82	19,193.10	56,318.49
4	Kutai Timul Regency	11,395.93	15,947.34	685.74	9,017.65	37,046.67
5	Berau Regency	20,963.55	18,183.52	181.72	2,615.23	41,944.01

6	PPU Regency	-	2,421.47	-	-	2,421.47
7	Mahakam Ulu Regency	11,742.98	6,863.48	318.73	25,332.58	44,257.77
8	Balikpapan City	-	127.55	-	-	127.55
9	Bontang City	-	-	61.98	-	61.98
Total		69,879.36	96,196.35	6,167.55	84,958.44	257,201.70

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

■ **The government revenue from state-owned forests**

The realization of non-tax state revenue (PNBP) from the forestry sector, including concessions, fluctuates from year to year, but nationwide, it has been decreasing. In East Kalimantan Province, over the past four years, forestry revenue in 2019 was 184 Billion IDR, which then declined. The contribution in 2020 was the lowest at 128.5 Billion IDR, while in 2021 it increased to 264 Billion IDR. However, in 2022, it decreased again to 224 Billion IDR.



Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-72 Non-tax Revenue from the Forestry Sector in East Kalimantan Province (Unit: Billion IDR)

■Challenges in the Production Management of Forest Products

The production of forest products such as timber increased from 4,104,271.21 m³ in 2021 to 4,471,286.16 m³ in 2022. The factors are (1) strengthening guidance, supervision, and management of annual work plan (RKT) activities related to production, environmental, and social aspects within management zones, (2) monitoring and evaluation of permit holders for forest product management, and (3) access to the forest management information system.

The production of forest products in management zones can be monitored through the system, but the following issues are identified in the current situation. (1) Heavy rainfall interferes with production. (2) Production equipment is outdated, and the productivity of tools is low. (3) The price of timber has significantly dropped, and operating costs are increasing due to rising fuel costs, maintenance costs, and storage fees. Developing measures to address these issues is a challenge.

6) The Issues and Challenges of the Tourism Industry

As shown in the table below, the number of domestic and international tourists to East Kalimantan Province has been declining over the past five years.

The recovery of tourist numbers and the development of tourism infrastructure and promotion strategies are identified as key challenges. It is also necessary to collaborate with eco-medical tourism in IKN (Indonesian Capital City).

The decline in tourist numbers was due to the impact of COVID-19, which occurred in Indonesia in 2020. Widespread social restrictions were imposed, including a ban on domestic and international travel. Furthermore, cooperation between sectors and ministries in subsequent tourism development has been insufficient, particularly in terms of promotion and tourist destinations. It is believed that further development of facilities and infrastructure is necessary to support the tourism growth of East Kalimantan Province. In the third quarter of 2022, the total number of tourist visits (both foreign and domestic) reached 2,511,419, achieving 125.26% of the 2022 target of 2,005,000.

Table 2-30 Number of Domestic Visitors by Region (Unit: Persons)

No,	Municipality	Year				
		2018	2019	2020	2021	2022
1	Balikpapan City	2,837,034	2,878,561	1,072,569	1,431,862	1,214,958
2	Samarinda City	2,036,236	1,643,536	654,984	1,119,174	700,798
3	Bontang City	409,319	472,037	215,029	156,212	93,965
4	Paser Regency	39,566	7,501	32,965	89,931	44,534
5	PPU Regency	86,375	57,576	20,263	114,869	49,824
6	Kutai Kartanegara Regency	1,715,660	1,394,171	692,689	617,018	221,918
7	Kutai Timul Regency	36,717	70,560	40,129	72,438	12,757
8	Kutai Barat Regency	32,205	56,125	25,929	10,871	54,126
9	Mahakam Ulu Regency	3,464	3,058	2,596	5,590	5,002
10	Berau Regency	283,294	292,692	127,176	141,398	102, 770
Total		7,479,870	6,875,817	2,884,329	3,759,363	2,500,652

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Table 2-31 Number of International Visitors by Region (Unit: Persons)

No,	Municipality	Year				
		2018	2019	2020	2021	Up to the 3rd Quarter of 2022
1	Balikpapan City	47,040	56,577	16,510	17,458	8,860
2	Samarinda City	4,835	2,735	2,075	444	80
3	Bontang City	174	168	-	-	1,024
4	Paser Regency	431	-	-	1	1
5	PPU Regency	135	8	26	-	-
6	Kutai Kartanegara Regency	4,557	3,872	557	46	4
7	Kutai Timul Regency	2,340	345	365	6	2
8	Kutai Barat Regency	279	273	28	5	190
9	Mahakam Ulu Regency	47	-	5	-	562
10	Berau Regency	2,586	8,323	220	85	44
Total		62,424	72,301	19,786	18,045	10,767

Source: Prepared by the Study Team based on the East Kalimantan Province Regional Middle-Term Development

Plan 2024-2026

(5) Issues Related to the Balance of Industrial Development Between Regions

As stated in the regional development policy of the state's spatial planning, East Kalimantan Province emphasizes the regional balance within the state related to industrial development and has the following issues and concerns.

1) Issues and Challenges of Regional Development

The table below organizes the issues. These include considerations related to human resource development, energy transition, infrastructure development, and environmental conservation.

Table 2-32 Issues, Problems, and Current Awareness of Regional Development

No.	Key Issues	Problems	Current Awareness
1.	Optimization of the Quality of Human Resource Competitiveness	Disparities in the Education Levels of Local Communities	Unable to meet the needs for educational infrastructure and facilities.
			The quantity and quality of teaching staff are insufficient.
			The environment in which students can easily access educational services cannot yet be considered optimal, and there are regions with unfavorable educational conditions.
		Inequality in Public Health Conditions	Equal distribution of the quantity and quality of healthcare professionals.
			The needs for healthcare facilities and measures for local communities are insufficient.
		Relatively High Unemployment Rate	Low skill levels and a lack of workforce skills.
			A mismatch between the labor market needs and job seekers, centered around qualifications discrepancies.
			Underdeveloped vocational education services in a situation where there is a need for immediately deployable human resources.
2.	Low quality of regional economic growth	Suboptimal economic diversification in the non-oil, gas, and coal sectors	Low productivity and efficiency in the production of agricultural-related goods.
			Low value-added and limited quality of plantation products. Underdevelopment of the food crops and horticulture subsector.
			Underdeveloped downstream product development for fostering popular local products.
			Decline in exports in the non-oil, gas, and coal sectors.
			Imbalance in investment towards oil, gas, and coal, and a lack of investor interest in non-resource sectors.
			Low level of effort in tourism site development.
			Persistence of inadequate housing conditions.
			Underdeveloped role of village communities (BUMDES) in efforts for economic improvement.
			Underdeveloped management system for price stability of essential goods.
		Inadequate infrastructure distribution and implementation.	Suboptimal road connectivity and accessibility that support the distribution of goods and services. Lack of infrastructure for the delivery of goods and services.
			Underdeveloped transportation facilities and infrastructure.
			Challenging development of water resource infrastructure.
			Incomplete development of drinking water infrastructure.
3.	Increased risk of environmental degradation.	Degradation of water quality, seawater, air, and land.	Optimal management of the causes of environmental damage and sources of pollution.
		Increase in deforestation due to economic activities	Suboptimal management of sustainable forest use.
			Inadequate forest protection and regional management by the state in important ecosystem value areas (KBEP).

No.	Key Issues	Problems	Current Awareness
		and disasters.	Imperfect implementation of land and forest restoration in the optimal management of watersheds (DAS).
			Lack of optimal counseling for the empowerment of forest communities.
		Optimal utilization of new and renewable energy.	Failure to achieve optimal utilization of new and renewable energy to meet the service needs, such as electricity infrastructure, in rural areas.
			Underutilization of power generation facilities using new energy.

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

2) Revitalization of Small and Medium-sized Enterprises (SMEs) in Each Region of the State

In meetings with local Tri-City-related municipalities, it was pointed out that, under the influence of state-owned enterprises such as Pertamina, the benefits of economic development are often not reaching the local communities. In East Kalimantan Province, efforts are being made to monitor and revitalize the activities of small and medium-sized enterprises (SMEs) as outlined below

The number of micro, small, and medium-sized enterprises (SMEs) in East Kalimantan Province in 2022 was 460,147. The highest number is 130,524 companies in the Samarinda City, and the second highest is 127,675 companies in the Balikpapan City. The types of small and medium-sized business ventures in East Kalimantan Province include a wide range such as food, manufacturing, handicrafts, commerce, and services. By industry, food businesses account for 215,036 companies, while commerce has 195,704 companies, making them the most numerous.

Table 2-33 Number of Small and Medium-Sized Enterprises by Industry in Each Region (2022)

No.	Municipality	Industry			Commerce	Services	Total
		Food	Manufacturing	Handicrafts			
1	Paser Regency	18,469	983	783	21,886	5,368	47,489
2	Kutai Barat Regency	2,235	-	861	8,511	2,223	13,830
3	Kutai Kartanegara Regency	35,320	825	130	23,719	434	60,428
4	Kutai Timul Regency	11,221	1,204	30	3,360	875	2,989
5	Berau Regency	4,509	62	53	9,467	851	14,942
6	PPU Regency	5,813	489	18	6,269	878	13,467
7	Mahakam Ulu Regency	338	1	-	247	-	586
8	Balikpapan City	59,861	1,999	443	52,791	12,581	127,675
9	Samarinda City	60,629	1,626	620	53,172	14,477	130,524
10	Bontang City	16,631	968	160	16,282	475	34,516
	Total	215,026	8,157	3,098	195,704	38,162	460,147

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

(6) Objectives and Plans for Industrial Development

1) Industrial Development Goals of the East Kalimantan Provincial Industrial Development Plan 2019-2039

As the mission and vision of industrial development, the promotion of renewable energy and the final productization of natural resources is proposed.

To increase the added value of domestically produced agricultural products, oil and gas, minerals, and coal, industrial activities that process raw materials and primary products and create further derivative products are being proposed. The target products include both non-renewable natural resources (minerals, coal, oil and gas) and renewable natural resources (broadly defined agricultural products) produced in East Kalimantan Province. These are linked to the sustainable agriculture, advanced chemicals, and low-carbon energy sectors within the economic clusters of IKN, and collaboration is expected under the Tri-City concept.

a) Industrial Development Goals of East Kalimantan Province

The industrial development goals of East Kalimantan Province are as follows:

1. To achieve the growth of the industrial sector in order to increase its contribution to the Gross Regional Domestic Product (GRDP).

2. Reduce dependence on imports from both domestic and international sources, and expand market share both domestically and internationally by increasing exports.

3. Increase the contribution of small-scale industries to the industrial growth of East Kalimantan Province.

4. Improve the employment rate of skilled labor in the industrial sector.

5. Achieve the acceleration of industrial distribution in East Kalimantan Province.

6. Strengthen the industrial structure through the growth of upstream and intermediate industries based on natural resources.

7. Quantitatively design the industrial development goals of East Kalimantan Province regarding technological innovation and technological enhancement.

b) Selection of Priority Industries

In the following table, the priority industries are defined based on specific selection criteria for major industrial sectors as part of the provincial industrial development strategy program. The left column has been updated to include the relation to IKN's economic clusters.

Table 2-34 Key Industries with Development Potential in East Kalimantan Province

IKN Economic Clusters	Industry			Location
	2019-2023	2024-2028	2029-2039	
Advanced Chemistry	Oils and Fats Food Industry			
	1. Edible Oil 2. Packaging of Edible Oil	1. Edible Oil 2. Oil Packaging 3. Margarine 4. Shortening	1. Edible Oil 2. Packaging of Edible Oil	1. Balikpapan City 2. PPU Regency 3. Kutai Timul Regency 4. Bontang City
	Oils and Fats Chemical Industry			

	1. Vegetable Fatty Acids 2. Essential Oil	1. Vegetable Fatty Acids 2. Essential Oil 3. Fatty Alcohol 4. Fatty Amine	1. Vegetable Fatty Acids 2. Essential Oil 3. Fatty Alcohol 4. Fatty Amine 5. Methyl Ester Sulfonic Acid 6. Bio Lubricants	1. Balikpapan City 2. PPU Regency 3. Kutai Timul Regency 4. Bontang City
Low Carbon Energy	Biofuel Industry			
	1. Biodiesel 2. Biogas from Palm Oil Mill Effluent	1. Biodiesl 2. Bioethanol 3. Biogas from Palm Oil Mill Effluent	1. Biodiesel 2. Bioethanol 3. Biojet FuelBiogas from Palm Oil Mill Effluent	1. Balikpapan City 2. PPU Regency 3. Kutai Timul Regency 4. Bontang City 5. Paser Regency
Sustainable Agriculture	Feed Industry			
	1. Feed and Aquaculture Supplements	1. Feed and Aquaculture Supplements	Feed and Aquaculture Supplements	1. Berau Regency 2. Kutai Kartanegara Regency
	Wood Products Industry			
	1. Wood-Based Components (Woodworking, Laminate, Finger Joint) 2. Wood Waste Utilization Products 3. Wood Molded Products	1. Wood-Based Components (Woodworking, Laminate, Finger Joint) 2. Wood Waste Utilization Products 3. Wood Molded Products	1. Wood-Based Components (Woodworking, Laminate, Finger Joint) 2. Wood Waste Utilization Products 3. Wood Molded Products	1. Balikpapan City 2. Samarinda City PPU Regency 3. Kutai Timul Regency 4. Kutai Barat Regency 5. Kutai Kartanegara Regency
	Pulp and Paper Industry			
	1. Pulp and Various Paper Products	1. Pulp and Various Paper Products	Microbial Cellulose Fiber	1. PPU Regency 2. Berau Regency

	Industry			Location
	2019-2023	2024-2028	2029-2039	
Sustainable Agriculture	Manufacturing of Rattan Products and Other Wooden Products			
	1. Wooden and Rattan Furniture 2. Handicrafts Made from Wood Processing Industry Waste 3. Handicrafts, Wood Carvings	1. Wooden and Rattan Furniture 2. Handicrafts Made from Wood Processing Industry Waste 3. Handicrafts, Wood Carvings	1. Wooden and Rattan Furniture 2. Handicrafts Made from Wood Processing Industry Waste 3. Handicrafts, Wood Carvings	1. Kutai Barat Regency 2. Mahakam Ulu Regency 3. Samarinda City 4. Kutai Kartanegara Regency 5. Balikpapan City
	Rubber Manufacturing, Rubber Products			
	1. General Purpose Rubber 2. Rubber for Special Purposes (Especially for Health) 3. Automotive, Electronics	1. General Purpose Rubber 2. Rubber for Special Purposes (Especially for Health) 3. Automotive, Electronics	1. General Purpose Rubber 2. Rubber for Special Purposes (Especially for Health) 3. Automotive, Electronics	1. Samarinda City 2. Balikpapan City 3. Kutai Barat Regency 4. Kutai Timul Regency 5. Mahakam Ulu Regency 6. PPU Regency
Advanced Science	Upstream Petrochemical Industry			
	1. Ethylene 2. Methanol 3. Ammonia 4. Formic Acid	1. Ethylene 2. Methanol 3. Ammonia 4. Formic Acid	1. Ethylene 2. Methanol 3. Ammonia 4. Formic Acid	1. Balikpapan City 2. Bontang City

	5. Paraffin Liquid	5. Paraffin Liquid	5. Paraffin Liquid	
	Fertilizer Industry			
	1. Single Basic Fertilizers (Nitrogen, Phosphate, Potassium) 2. Compound Fertilizer 3. Organic Fertilizer	1. Single Basic Fertilizers (Nitrogen, Phosphate, Potassium) 2. Compound Fertilizer 3. Organic Fertilizer	1. Single Basic Fertilizers (Nitrogen, Phosphate, Potassium) 2. Compound Fertilizer 3. Organic Fertilizer	1 Bontang City 2 Samarinda City
	Seafood Processing Industry			
Sustainable Agriculture	1 Preserved Fish (Frozen, Dried, Smoked) and Stuffed Fish Various Seaweed Products	1 Preserved Fish (Frozen, Dried, Smoked) and Fillets 2 Various Fish, Seaweed, and Other Seafood Products (Including Carrageenan, Fish Oil, Supplements, and Functional Foods) Other Functional Foods	1 Preserved Fish (Frozen, Dried, Smoked) and Fillets Various Fish, Seaweed, and Other Seafood Products (Including Carrageenan, Fish Oil, Supplements, and Functional Foods) Other Functional Foods	1 Kutai Kartanegara Regency 2 Balikpapan City 3 PPU Regency 4 Paser Regency 5 Bontang City 3 Samarinda City

Source: Prepared by the Study Team based on the East Kalimantan Provincial Industrial Development Plan 2019-2039

2) Industrial Development Goals of the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

The development goals, strategies, and policy directions regarding industrial development are organized around energy transition, food self-sufficiency, infrastructure development, and environmental conservation as follows. In the right column, the relationship with the IKN economic clusters is added, with related items highlighted in bold. Items related to sustainable agriculture, eco-medical tourism, and renewable energy manufacturing are also observed.

Table 2-35 Strategies and Policy Directions Related to Development Goals

Goal 2: Achieving High-Quality Economic Growth			Economic Clusters of IKN
Development Goals	Goal 5: Achieving Economic Diversification		
Strategy	Number	Policy Direction	
Development of Non-Oil, Gas, and Coal Product Exports	1	Enhancing the Competitiveness of Small and Medium Enterprises (SMEs)	
	2	Improving the Marketing of Small and Medium Enterprises (SMEs) Products	
	3	Provision of Industrial Park Facilities and Infrastructure	
	4	**Upstream Development of Agricultural, Other, and Food Products**	**Sustainable Agriculture**
	5	Competitiveness through Human Resource Capacity Building	
	6	**Policy of the Ministry of Tourism and Creative Economy for East Kalimantan Province**	**Eco and Medical Tourism**
	7	**Improvement of Regional Tourism Marketing**	
	8	**Enhancement of Regional Tourism Amenities, Accessibility, and Attractions**	
Enhancing Investment Competitiveness in the Non-Oil, Gas, and Coal Sectors	1	Improving the Quality of Investment Implementation Based on Online Single Submission (OSS)	
	2	Improving Industrial Promotion Strategies and Promotional Activities at the Regional	

Goal 2: Achieving High-Quality Economic Growth			Economic Clusters of IKN
Development Goals	Goal 5: Achieving Economic Diversification		
Strategy	Number	Policy Direction	
		Level	
	3	Provision of Investor Facilities/Incentives in Industrial Parks	
Enhancing Food Supply Capacity through Monitoring of Food Supply and Stockpiles	**1**	**Ensuring Food Availability through Accurate Food Supply Analysis and Information**	**Sustainable Agriculture**
	2	**Improving the quality of food sources and nutrition by optimizing the use of gardens and neighboring land.**	
Response to Food Insecure Areas	**1**	**Food Insecurity Mapping through Nutrition and Food Warning Systems and Food Security.**	
	2	**Food Aid Distribution to Areas Affected by Food Insecurity and Disasters**	
Progress in Diversification Local Production for Local Consumption	**1**	**Promote the Diversification of Safe, Balanced, and Nutritionally Diverse Food Consumption Based on Local Foods (B2SA).**	
Improving the Production and Added Value of Key Agricultural Products	**1**	**Rehabilitation of Non-Productive Plantation Land**	
	2	**Development and Strengthening of Plantation Institutions**	
	3	**Increase the Use of Certified High-Quality Plantation Seeds**	
	4	**Improvement of the Quality and Added Value of Plantation Products**	
Improvement of Livestock Production and Productivity	**1**	**Optimization of Livestock Breeding**	**Sustainable Agriculture**
	2	**Improvement of Livestock Feed Production and Productivity**	
	3	**Improvement of Livestock Health and Transportation Management**	
	4	**Development and Strengthening of Livestock Facilities**	
Improvement of Fishery Production and Productivity	**1**	**Improvement of Fishery Production Facilities and Infrastructure**	
	2	**Improvement of Fishery Product Quality and Added Value**	
Improvement of Production, Productivity, and Added Value of Food Crops and Horticultural Subsector Products	**1**	**Revitalization of Agricultural Land for Food Crops and Horticulture**	
	2	**Increase the Use of Certified High-Quality TPH Seeds**	
	3	**Strengthen the organizational capacity and skills of food crop and horticultural farmers through the use of technology in agriculture.**	
Improvement of Productivity Output in the Forestry Subsector Products	**1**	**Increase in the Production of Timber and Non-Timber Forest Products**	

Optimization of Road Operations for Economic Growth	1	Upgrade and Maintenance of Provincial Road Services	
	2	Construction of New Road Segments to Support Economic Growth	
Improvement of Water Resource Infrastructure	1	Integrated Water Resources Management to Improve Water Use	
	2	Development and Improvement of Hydroelectric Control Facilities and Infrastructure	
Optimization of Spatial Planning Implementation	1	Sharing of Spatial Distribution and Planning Documents	

	2	Optimization of Management to Control Local Space Utilization	
	3	Implementation of a Single Map Policy	
Fulfillment of Drinking Water Infrastructure Needs	1	Development of Regional Water Supply Systems	
Improvement of Living Conditions in Slums	1	Slum Revitalization Measures and Infrastructure Provision by Provincial Authorities	
Improvement of Transportation Infrastructure and Services	1	Type B Terminal・Improvement of Services	
	2	Supply of Traffic Safety Equipment	
Improvement of Stability in 24-Hour Power Supply	1	Improvement of Availability in Low Voltage Networks and Distribution	

Development Goals		Goal 9: Reducing Greenhouse Gas Emissions from the Forestry and Land Use Sector	Economic Clusters of IKN
Optimization of Sustainable Forest Management and Utilization	**1**	**Improvement of Management for Sustainable Forest Use**	**Sustainable Agriculture**
Optimization of Forest Protection and Management in Key Biodiversity Ecosystem Areas (KBEP) and Local Conservation	**1**	**Improvement of Provincial Management Capacity**	
	2	**Improvement of Plant and Wildlife Conservation Activities**	
	3	**Optimization of Damage Mitigation and Forest Surveillance through Community Participation**	
	4	**Management of High Conservation Value Areas (ANKT) in Reforestation Projects**	
Rehabilitation of Land and Forests and Optimization of Suboptimal Watershed Management	**1**	**Optimization of Integrated Watershed Management through Multi-Stakeholder Participation**	
	2	**Optimization of Forest and Land Restoration Implementation**	
Optimization of Extension Activities and Empowerment of Forest Communities	**1**	**Provide legal access to forest management for forests and surrounding communities, and enhance the capacity of community business groups based on social forestry.**	
Development Goals		Goal 10: Expansion of the Use of New and Renewable Energy	Economic Clusters of IKN
Expansion of Villages Using New Renewable Energy	**1**	**Utilize new renewable energy to accelerate the development of power plants in villages not electrified by PLN.**	**Renewable Energy Manufacturing Industry**
Increase in Power Supply from New Renewable Energy	**1**	**Expand the Provision of Power Generation Facilities from Renewable Energy**	

Source: Prepared by the Study Team based on the East Kalimantan Provincial Industrial Development Plan 2019-2039

3) Tourism Development Goals of the East Kalimantan Provincial Tourism Master Plan 2022-2037

Regarding tourism development, the following policy framework and designated tourism development regions are specified, but the details are not provided. For specific tourism resource surveys and policy details, refer to the "Comprehensive Survey of Tourism Potential in East Kalimantan Province 2022" and the KIPP tourism development plan, "New Capital Tourism Area Development Action Plan 2023," as outlined in section 6.1.3.

a) Tourism Development Strategy

- Develop comprehensive plans for each tourist destination.
- Develop tourism destinations according to their unique characteristics to strengthen the identity that supports regional promotion themes.
- Conduct maintenance of tourist facilities and provide services such as attractions.
- Respond to the latest trends in traveler demand.
- Pay attention to environmental, social, and cultural aspects in tourism destination development.
- Implement information, safety, and security measures in tourism destination development.
- Promote tourism villages and other activities developed by the community.

b) Designated Tourism Development Areas

The plan designates state tourism destinations (DPP) that focus particularly on tourism, regional tourism strategy areas (KPPP) where tourism strategies are formulated at the local level, and provincial tourism development zones (KSPP) where each province promotes tourism development.

■State Tourism Destination (DPP), Provincial Tourism Development Zone (KSPP)

State Tourism Destination（DPP）: Balikpapan City、Tenggarong City、Samarinda City、Bontang City

Provincial Tourism Development Zone（KSPP）: Teluk Bayur（Berau Regency）、Harapan（Berau Regency）、Sangatta（Kutai Timur Regency）、Tnjung Redeb（Berau Regency）

■Regional Tourism Development Zone KPPP

KPPP l : Sangatta（Kutai Timur Regency）、Bontang City

KPPP 2：Samboja（Kutai Kartanegara Regency）、Balikpapan City、PPU Regency、Tanah Grogot（Paser Regency）

KPPP 3 : Ujoh Bilang、Long Bagun、Long Pahangai（All of Mahakam Ulu Regency）



Source: East Kalimantan Province Tourism Development Master Plan 2022-2037

Figure 2-73　Tourism Strategy Area Map of East Kalimantan Province

4) Infrastructure Development Plan through the National Budget (APBN)

According to the East Kalimantan Provincial Middle-Term Development Plan 2024-2026, Presidential Regulation No. 109 of 2020, which is the third amendment to Presidential Regulation No. 3 of 2016 on the Acceleration of the Implementation of National Strategic Projects, outlines the National Strategic Projects (PSN) in Indonesia. National Strategic Projects refer to a program of projects implemented by the government, local governments, and business entities, with a strategic nature aimed at promoting growth and equitable development to improve the welfare of communities and regional development.

a) National Strategic Projects in East Kalimantan Province

The project summary outlined in the province's plan and the project status as of September 2024 are as follows:

- **Samarinda-Bontang Toll Road**: The construction is ongoing, but due to delays in the construction of the connecting road to Balikpapan, it was removed from the National Strategic Project in 2023.
- **Balikpapan-Samarinda Toll Road Access & Section V Reservoir and Canal Construction, part of the Balikpapan-Samarinda Toll Road**: As of June 2022, the construction progress was at 55.1%. The road itself, including Section V, was completed and opened in 2021.
- **Maloy Economic Special Zone (KEK) and Maloy International Port (MBT)**: A multi-purpose pier, platform expansion, and embankment road are under construction, but there is no Environmental Impact Assessment (EIA) for the port area, and no Environmental Evaluation Document (DELH) or Environmental Management Document (DPLH). As a result, there are constraints based on the Minister of Environment's written directive. As of June 2024, it is still not operating properly, and there is a risk that the KEK may be revoked. The current situation could not be confirmed.
- **Malangkayu Dam**: The asset transfer process has been unclear for the land acquired by the Kutai Kartanegara district government in 2007 (49.57 ha) and the land acquired by the provincial government in 2011 (22.47 ha). As the operation began in April 2024, it is likely that the asset issue has been resolved, even though the transfer of assets to PUPR had not been completed. The current situation could not be confirmed.
- **Sepaku Semoi Dam**: The dam consists of offices, a workshop, a plaza, facility management office, cafeteria, a camp area, a helipad, and a viewpoint. It began operation in June 2024.
- **Regional Drinking Water Supply System (SPAM) Construction, Marangkayu Water Supply System (Intake, Transmission Network, IPA)**: As the dam began operations in April 2024, it is assumed that the regional water supply has also commenced. The current situation could not be confirmed.
- **Construction of the Talake Wetland Irrigation Network**: The project was planned in 2020 and was expected to begin operation in 2024. However, no further information has been obtained, and the current status is unclear.
- **Bontang Refinery**: Since Pertamina suspended the plan in 2021, there has been no new related information, so it is believed that there has been no progress. The current situation could not be confirmed.
- **Upgrade of the Balikpapan Existing Refinery I**: The Refinery Development Master Plan (RDMP) was 51.29% complete as of the third week of June 2022. Given that the completion was mentioned for May 2024, it is assumed that the project has been completed as of April 2024. The current situation could not be confirmed.
- **Development of the Gendalo, Maha, Gandang, Gehem, and Bangka Mining Blocks**

(Indonesia Deepwater Gas and Oil Field Development Project lDD) (According to SKK Migas data): As of January 2024, it was announced that the interests were transferred from Chevron to ENI Indonesia, indicating that the project is continuing. The Bontang refinery is also included in the project. The current situation could not be confirmed.

- **Construction of the Coal-to-Methanol Production Facility in East Kutai Regency**: Since Air Products announced its withdrawal in March 2023, it is believed that the project has been suspended. The current situation could not be confirmed.

(7) Impact of the New Capital Development on Industrial Development

5) The Overview of East Kalimantan Province and the Impact of IKN on Accomplishment

In the mentioned document, the following functions are envisioned for the three surrounding cities to support IKN, and the six economic clusters of IKN have been added. These align closely with the role distribution planned by IKN.

- Balikpapan City: Agriculture, rubber, basic chemicals, secondary food products, shipbuilding, downstream industries in the Kariangau industrial area, tourism, creative industries, MICE (related IKN economic clusters: renewable energy manufacturing, ecotourism, advanced chemicals).
- Samarinda City: Agriculture (palm oil, vegetables), low-carbon energy (biogas), tourism, green technology (related IKN economic clusters: sustainable agriculture, tourism, low-carbon energy, sustainable agriculture).
- Kutai Kartanegara Regency: Agricultural products, fisheries (related IKN economic cluster: sustainable agriculture).

6) The Impact of IKN on the East Kalimantan Province Middle-Term Development Plan 2024-2026

a) Concerns about the Increase in Poverty Rate and the Rise in the Gini Coefficient

The East Kalimantan Regional Middle-Term Development Plan 2024-2026 is concerned about the negative impacts of IKN development. It is feared that the emergence of IKNs, which are intended for middle- and high-income earners to live in, may result in low-income earners having no choice but to live in poor environments outside the IKNs while working in the IKNs, which could result in an increase in the Gini coefficient in neighboring regions. In order to achieve the goal of achieving the lowest regional Gini coefficient in Indonesia by 2045, economic stability should occur not only in the IKN region but also in areas adjacent to the IKN, and wealth distribution should be spread throughout the entire Kalimantan region.

b) Infrastructure Development and Human Resource Development to Achieve Regional Balance within the Province

To support the development of IKN, regional cooperation between the Kalimantan regions must also be strengthened. The integration of East Kalimantan Province's development and the achievement of IKN's key performance targets will be carried out under the following policies.

- Infrastructure development to improve access from surrounding areas to IKN.
- Improving the quality of human resources to ensure East Kalimantan Province achieves high-quality growth. Furthermore, the human resources of East Kalimantan Province are

expected to contribute to and collaborate in driving the regional economy and the development of the Eastern Indonesia region.

- Improving the welfare of the people of East Kalimantan Province and supporting the goal of achieving the lowest Gini coefficient in the Kalimantan region.
- Ecosystem support that contributes to the development of IKN, including policy support, regulations, cooperation, and facilitation.

7) The Impact of IKN in the Draft East Kalimantan Province Regional Long-Term Development Plan 2025-2045

a) Cooperation Items for IKN in East Kalimantan Province

In the East Kalimantan Province Regional Long-Term Development Plan 2025-2045, the following vision and related guidelines are presented as part of industrial development, aiming for comprehensive support for IKN development and a transition to a sustainable regional economy. The vision and mission are organized in the table below, with the relevant IKN economic 6 clusters written in bold at the far right.

Table 2-36 Summary of the Draft East Kalimantan Province Regional Long-Term Development Plan 2025-2045

Level	Contents	IKN 6 Economic Cluster-related Matters
Vision	Prosperous East Kalimantan 2045: Towards an advanced, equitable and sustainable economic super-hub in the Kalimantan archipelago	
Sub-theme	The driving force behind the archipelago's economic super-hub - Leading to the development of agglomeration centers and new economic sectors based on IKN's future economic clusters moving forward East Kalimantan Province is best placed to serve as an economic super-hub for IKN and its partners. Sustainability **Optimizing economic transformation to ensure that the economic structure is not dominated by the mining and quarrying sector, and that high value-added industrial,** service and commercial sectors contribute significantly to the economic structure of East Kalimantan.	**・Move away from fossil fuels through development of low-carbon energy**
Vision Goals	Improving local economies and competitiveness ・ Economic growth rate: From a baseline of 5.5-6.0% in 2025 to 2.0-3.0% in 2045 ・ Regional Competitiveness Index: From a baseline of 3.40 in 2025 to 4.08 in 2045 Strengthening the competitiveness of human resources ・ Human capital index: from a baseline of 0.58 in 2025 to 0.75 in 2045	
Mission	Economic transformation through optimizing the country's role as a second economic super-hub, including a new capital city **- Increase downstream investment, strengthen industrial parks, enhance superior products, and prepare workers' capabilities** - Productivity improvement and economic diversification in the secondary and tertiary industries	**・Shift to product manufacturing in the renewable energy and advanced chemical fields**

	(phase 2) Strengthening global value chain networks and national accumulation centers (Phase 3) Achieving fair distribution of development areas **- Fair distribution of infrastructure, preservation of local identity and culture, empowerment of local economies, education and training to increase the capacity and skills of local communities. Promoting tourism and ecotourism**	**・Promotion of ecotourism**
Development stage Policy direction	Kalimantan aims to become economic superhub of the archipelago - Comprehensive and sustainable economic development through expanding inter-regional exchanges and cooperation between IKN Economy Superhubs and IKN partner regions, developing downstream industries based on high-value-added and sustainable regional excellent products, developing economies, and developing potential tourist destinations. Providing quality basic infrastructure to support socio-economic development in all regions - Develop accessibility and connectivity infrastructure to support the development of the IKN Economic Superhub and the region. Increasing self-sufficiency and food security is a fundamental component of efforts to improve environmental and ecological integrity in all dimensions of development.	

Source: Prepared by the Study Team based on the Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

b) Four Development Phases

The development direction is divided into four phases, each lasting five years, in line with the IKN development policy. Details are as shown in the table below, with items related to IKN's six economic clusters in bold.

Table 2-37 Development Direction for Draft of East Kalimantan Provincial Long-term Development Plan 2025-2045

Vision	Mission	Development direction			
		2025-2029	2030-2034	2035-2039	2040-2045
Prosperous East Kalimantan 2045: Promoting an advanced, fair and sustainable economic super-hub for the Japanese archipelago	Mission 1: Achieving social change	Stage 1: Strengthening the foundations of transformation	Stage 2: Accelerating transformation	Stage 3: Transformation Region Expansion	Stage 4: Achieving prosperity in East Kalimantan Province
		Laying the foundation for transformation as an Economic Superhub and IKN Partner	Role of IKN Partner and Improving Regional Competitiveness to Accelerate Transformation	Strengthening the region's role as a centre of sustainable economic activity in the archipelago	Achieving progressive, equitable and sustainable development Towards a prosperous East Kalimantan Province society
	Mission 2: Achieving economic transformation	**Increasing downstream enterprises, strengthening industrial areas, enhancing superior**	**Significantly improve productivity, transform the economic structure, accelerate economic**	**Realization of its role as a national accumulation centre, supported by economic and environmental**	A strong and sustainable local economy

		products, and preparing the workforce capabilities.	**diversification in the secondary and tertiary industries, and achieve a sustainable economy.**	**stability and strengthening of global and national value chain networks.**	
	Mission 6: Achieving fair and equitable regional development	Improving infrastructure Basic settlements based on carrying capacity and social inclusion	Improving facility capacity Transport infrastructure, access and economic opportunity for the 3T region	Development planning, landscape-based regional development based on territoriality and 3T regions and ecological balance	Equalization. Regional development in a fair and integrated manner along with developments in information technology.
	Mission 7: Providing high-quality, environmentally friendly facilities and infrastructure	**Realization of facilities and infrastructure based on green technologies and renewable energies, based on environmental and ecological planning**	Improving the energy efficiency and energy conservation capabilities of housing, infrastructure and public facilities	Strengthening the capacity of green infrastructure to adapt to climate change. Climate resilience	Enhancing the quality of green and sustainable facilities and infrastructure.

Source: Prepared by the Study Team based on the Draft of East Kalimantan Province Long-Term Development Plan 2025-2045

c) Specific Proposals in the Development Agenda Phase IV (2040–2045)

In the final phase of development of the Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045, specific issues for consideration are outlined, and indicators for measuring progress for each of these issues are also proposed. Aiming for the realization of "advanced, equitable, and sustainable development towards a prosperous East Kalimantan Province society," the economic transformation is to be achieved through a resilient and sustainable regional economy. The following priorities for economic transformation are set.

Economic Transformation Priorities

- Increase in scientific and technological activities based on the concepts of the Green Economy and Blue Economy.
- Industrial Activity Hub in Eastern Indonesia
- Renewable energy
- Prioritization of entrepreneurship and human resource development based on MSMEs.
- Ease of connectivity across the entire region between economic growth centers.
- Development of an economic superhub for IKN and IKN partners.
- Expansion of interregional and international trade cooperation to strengthen the value chain.

Indicators of progress in industrial development transformation.

The following target values are set as indicators of progress in industrial development transformation, with the relevant fields of IKN's six economic clusters added in the rightmost

column, and the indicators displayed in bold.

Table 2-38 Target Values for Industrial Development Transformation 1

Main Goals	Development direction	Key development indicators	Baseline 2025	Target		Six related IKN economic clusters		
				Stage 1 2025-2029	Stage 2 2030-2034	Stage 3 2035-2039	Stage 4 2040-2045	
Strengthening local economic development and sustainability	**4. Scientific and Technological Innovation and Economic Productivity**	**11. Manufacturing GRDP ratio(%)**	14.40 - 14.49	22.60 - 23.41	30.80 - 32.33	38.99 - 41.25	47.19 - 50.17*	**Renewable Energy Production**
		12. Tourism Development GRDP a) Food supply, accommodation, and alcohol consumption (%)	1.03	1.25	1.47	1.68	1.90	**Eco-Medical Tourism**
		b) Number of overnight stays by foreign tourists (Star Hotel) (Thousands of people)	23.41	35.12	46.82	58.53	70.23	
		13. Creative Economy GRDP Proportion (%)	0.29	0.48	0.66	0.85	1.03	
		14. Productivity and Cooperation of MSMEs, BUMDes (Government Enterprises) a) Percentage of non-agricultural small and medium-sized enterprises by level (%)	11.56	12.93	14.31	15.68	17.05	
		b) Proportion of small and medium-sized enterprises by level (prefectures) (%)	3.33	5.00	6.67	8.33	10.00	
		c) Local entrepreneurship rate (%)	3.37	4.33	5.30	6.26	7.22	
		d) Proportion of the business volume of the cooperative GRDP (%)	1.33	2.87	4.42	5.96	7.50	**Sustainable Agriculture**
		e) Return on assets (ROA) BUMD (Government-owned enterprises) (%)	1.24	2.37	3.50	4.63	5.76	

Source: Prepared by the Study Team based on the Draft of East Kalimantan Province Long-Term Development Plan 2025-2045

Table 2-39 Industrial Development and Transformation Targets 2

Main Goals	Development direction	Key development indicators	Baseline 2025	Target			Related IKN Economic Clusters:	
				Stage 1 2025-2029	Stage 2 2030-2034	Stage 3 2035-2039	Stage 4 2040-2045	

Strengthening local economic development and sustainability v	4. Scientific and Technological Innovation and Economic Productivity	15. Unemployment rate (%)	4.7 - 5.4	4.45 - 5.23	4.20 - 5.05	3.95 - 4.88	3.7 - 4.7	
		16. Female labor force participation rate (%)	52.1	54.55	57	59.45	61.9	
		17. Science, Technology and Innovation Proficiency a) Percentage of Science, Technology and Innovation Budget	6.80	7.10	7.40	7.70	8.00	
		b) Regional Innovation Index	50.00	58.86	67.73	76.59	85.45	
	Implementing a Green Economy	**18. Green economy implementation rate Regional Green Economy Index**	58.66	61.87	65.07	68.28	71.48*	**Renewable and natural energy manufacturing**
		b) Percentage of renewable energy in the primary energy mix	12.40	29.05	45.70	62.35	79.00	**Low Carbon Energy**
	Digital transformation	19. Information Technology and Development Index communication	6.7	7.03	7.35	7.68	8	

Source: Prepared by the Study Team based on the Draft of East Kalimantan Province Long-Term Development Plan 2025-2045

d) Alignment with IKN's Economic Transformation Policy

The key directions for economic transformation outlined in the draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045 are as follows, and they are aligned with the policies of IKN.

- Strengthening the supply chain and value chain by ensuring the smooth flow of goods and services from production centers to industrial zones and retail outlets, optimizing added value through downstream product development, and reinforcing a sustainable economic structure.
- Development of the Kariangau Industrial Area, Buluminung Industrial Area, and Maloy Special Economic Zone.
- Bioeconomy, utilization of herbs, pharmaceuticals, electric vehicle (EV) manufacturing, and others.
- Utilization of new energy and renewable energy.
- Development of innovative bio-generics, vaccines, plant-based proteins, and renewable energy.
- Development of sustainable food production center regions and the development of integrated, modern, and sustainable food production centers.
- Development of potential tourist destinations based on world-class ecotourism. Additionally, in the implementation phase, spatial planning, land reform, port development, utilization of the ALKI II sea lanes, airport development, road infrastructure, and public transportation systems are also highlighted.

2.4.5 Power & Energy

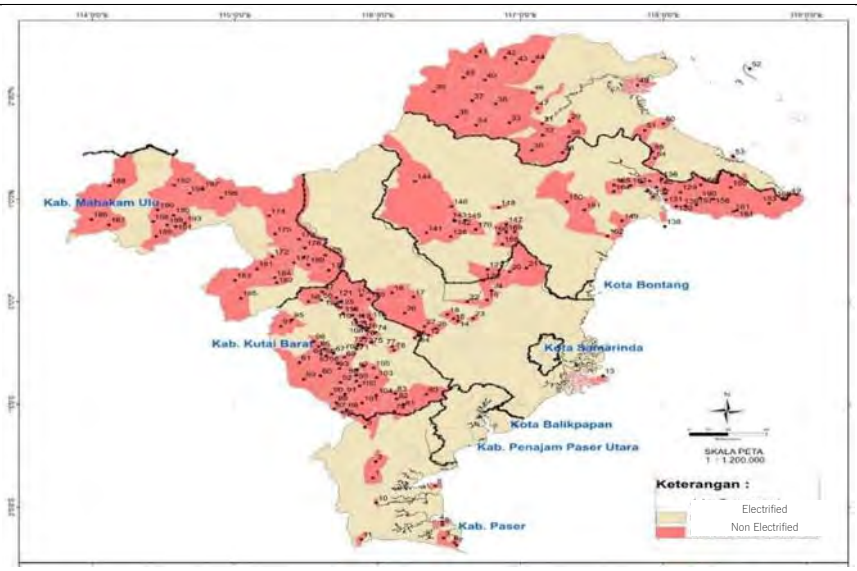
(8) Power Sector

According to the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, the electrification rate in East Kalimantan Province as of 2021 is 91.98%, less than 100%. In addition, among the electrified areas, there are some areas that only use solar power provided by the East Kalimantan Province Provincial Government, and these areas do not have 24-hour access to electricity. The provincial government's inability to provide electricity infrastructure to all communities is a challenge.

Table 2-40 Electrification Status of East Kalimantan Province

No.	City	Village No.	Family	Population	Electrification Village			Non Electrification	Electrification Population			Electrification Village Rate (%)	Electrification Population Rate (%)
					PLN	Non PLN	Total		PLN	NON PLN	JUMLAH		
1	2	3	4	5	6	7	8=6+7	9=3-8	10	11	12=10+11	13=(8/3)*100	14=(12/4)*100%
I	Balikpapan	34	240.079	710.293	34	0	34	0	224.999	416	225.415	100,00%	93,89%
II	Berau	110	88.427	263.150	82	28	110	0	68.252	13.104	81.356	100,00%	92,00%
III	Kutai Kartanegara	237	243.862	753.862	221	16	237	0	198.502	13.426	211.928	100,00%	86,90%
IV	Samarinda	59	272.054	831.220	59	0	59	0	281.599	0	281.599	100,00%	100,00%
V	Kutai Timur	141	139.068	424.743	96	45	141	0	84.798	30.053	114.851	100,00%	82,59%
VI	Bontang	15	58.292	185.393	15	0	15	0	52.447	1.123	53.570	100,00%	91,90%
VII	Penajam Paser Utara	54	59.995	186.801	54	0	54	0	46.687	2.963	49.650	100,00%	82,76%
VIII	Paser	144	94.080	288.225	133	11	144	0	77.728	6.652	84.380	100,00%	89,69%
IX	Kutai Barat	194	55.789	170.871	124	70	194	0	44.152	8.383	52.535	100,00%	94,17%
X	Mahulu	50	12.185	35.274	21	29	50	0	4.596	6.461	11.057	100,00%	90,74%
TOTAL	KALTIM	1.038	1.263.831	3.849.832	839	199	1.038	0	1.083.760	82.581	1.166.341	100,00%	92,29%

Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun* 2024-2026 East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026



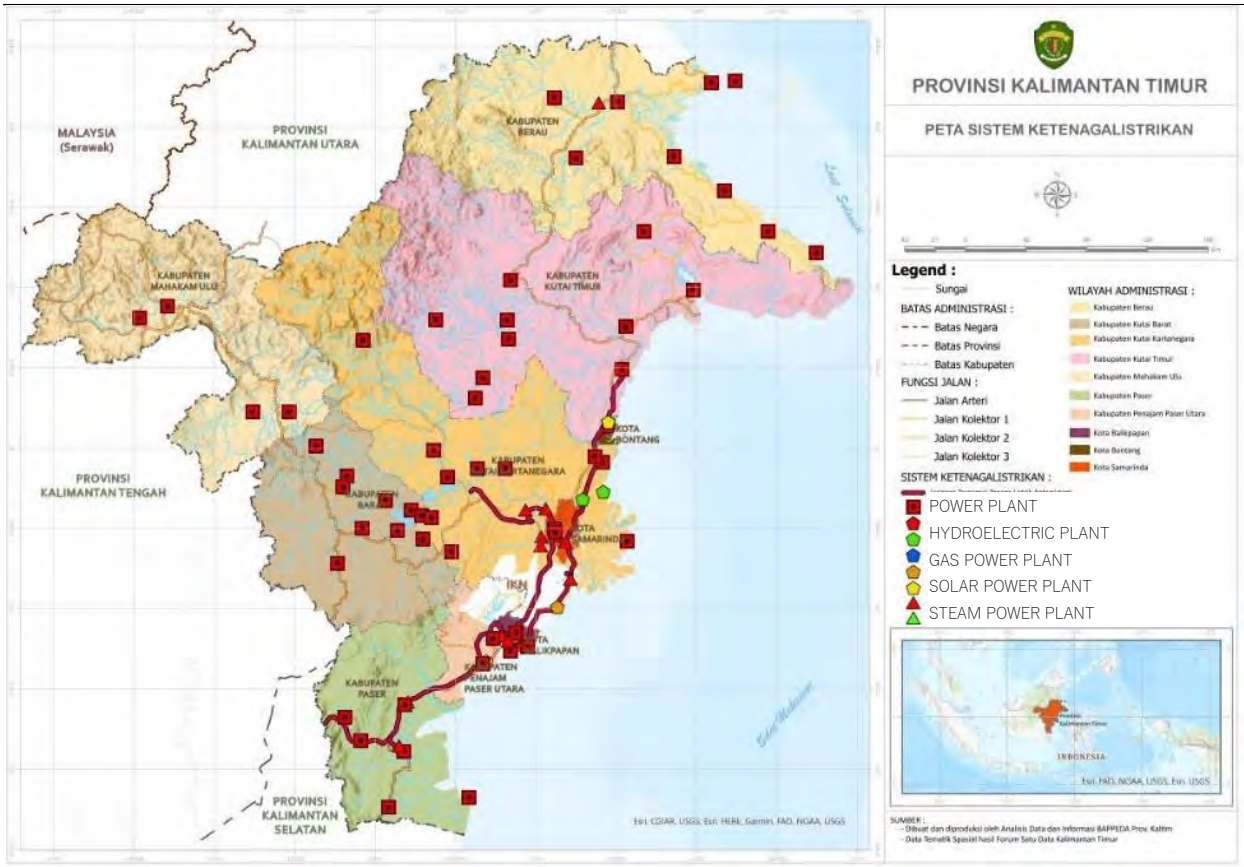
Non PLN Area

Kab. Paser (11 Desa)		Kab. Berau (28 Desa)		Kab. Kutai Barat (70 Desa)								Kab. Mahulu (29 Desa)	
1	Desa Rantau Buta	28	Desa Mea'du	57	Desa Ujoh Hilang	86	Desa Randa Empas	115	Desa Atil	143	Desa Long Lunyi	171	Desa Long Hurai
2	Desa Rantau Layung	29	Desa Pamaian	58	Desa Kelian Luar	87	Desa Tukung	116	Desa Rambakan	144	Desa Mekar Baru	172	Desa Long Midumiam
3	Desa Keladen	30	Desa Merapun	59	Desa Binsig	88	Desa Tender	117	Desa Gunung Rampah	145	Desa Rantau Sentosa	173	Desa Merahak Bersatu
4	Desa Liabuang Baito	31	Desa Muara Lesan	60	Desa Bermai	89	Desa Sambung	118	Desa Jengan	146	Desa Long Nawang	174	Desa Merahak Ulu
5	Desa Selengot	32	Desa Lesan Dayak	61	Desa Muara Nilig	90	Desa Antan Jaya	119	Desa Muara Kelag	147	Desa Long Noran	175	Desa Batu Majang
6	Desa Rantom	33	Desa Long Beliu	62	Desa Mantar	91	Desa Jamu Sibak	120	Desa Tondoh	148	Desa Rantau Panyang	176	Desa Long Merah
7	Desa Semoyh	34	Desa Long Duhung	63	Desa Muara Bomboi	92	Desa Suakong	121	Desa Tukul	149	Desa Sekrebt	177	Desa Rukun Damai
8	Desa Harapan Baru	35	Desa Long Lamcin	64	Desa Lumpat Dalhug	93	Desa Penarung	122	Desa Muyub Ulu	150	Desa Tepian Langsat	178	Desa Mutiabeq
9	Desa Kepala Telake	36	Desa Long Kelub	65	Desa Muara Tokong	94	Desa Intu Lingau	123	Desa Muyub Aket	151	Desa Tebalingan Lembaik	179	Desa Tri Parig Makmur
10	Desa Luan	37	Desa Long Pera	66	Desa Muara Nyahing	95	Desa Lacan Biarn	124	Desa Linggang Muyub Ilir	152	Desa Muara Bengalon	180	Desa Wana Parig
11	Desa Muara Andeh	38	Desa Mapulu	67	Desa Kelian Luar	96	Desa Sentalar	125	Desa Gabung Baru	153	Desa Sandaran	181	Desa Laham
Kab. Kukar (16 Desa)		39	Desa Long Sului	68	Desa Muara Begai	97	Desa Betung	Kab. Kutai Timur (45 Desa)		154	Desa Manubar	182	Desa Long Getawang
12	Desa Tanjung Batuq Hulu	40	Desa Long Lirai	69	Desa Lotag	98	Desa Klag	126	Desa Long Peq Baru	155	Desa Tadoan	183	Desa Muara Ratuh
13	Desa Sepatin	41	Desa Punan Segah	70	Desa Jerang Dayak	99	Desa Tendig	127	Desa Senambah	156	Desa Marukangan	184	Desa Danum Paroy
14	Desa Muhuran	42	Desa Long Ayap	71	Desa Mendung	100	Desa Penavang	128	Desa Mulupan	157	Desa Susuk Luar	185	Desa Nyaribungan
15	Desa Sembelimbingan	43	Desa Long Ayan	72	Desa Jerang Melayu	101	Desa Lendan Uang Nayu	129	Desa Kerayaan	158	Desa Susuk Dalam	186	Desa Naha Tifab
16	Desa Lamin Telihan	44	Desa Punan Malinau	73	Desa Dasaq	102	Desa Kenyanyan	130	Desa Tanjung Manis	159	Desa Tanjung Mangkalat	187	Desa Naha Silat
17	Desa Lamin Pulut	45	Desa Punan Maharai	74	Desa Tanjung Pagar	103	Desa Rikong	131	Desa Peridan	160	Desa Susuk Tengah	188	Desa Long Apari
18	Desa Teluk Muda	46	Desa Baru Rajang	75	Desa Gurung Bayar	104	Desa Kendaq	132	Desa Saka	161	Desa Manubar Dalam	189	Desa Delang Kerohong
19	Desa Tunjungan	47	Desa Siduung Indah	76	Desa Muara Belean	105	Desa Muara Ponaq	133	Desa Mandu Dalam	162	Desa Kadungan Jaya	190	Desa Long Pakaq
20	Desa Menamang Kiri	48	Desa Pegat Batumbi	77	Desa Muara Ohong	106	Desa Sakaq Lotog	134	Desa Sempayau	163	Desa Pengadan Baru	191	Desa Long Lunuk
21	Desa Menamang Kanan	49	Desa Teluk Sumbang	78	Desa Tanjung Jone	107	Desa Sakaq Tada	135	Desa Pelawan	164	Desa Mata Air	192	Desa Long Isun
22	Desa Kupang Baru	50	Desa Tabalar Muara	79	Desa Gerungung	108	Desa Gemuruh	136	Desa Tepian Terap	165	Desa Bukit Permata	193	Desa Naha Aru
23	Desa Bukit Jering	51	Desa Tabalar Ulu	80	Desa Pereng taliq	109	Desa Karangan	137	Desa Kolek	166	Desa Beno Harapan	194	Desa Datah Naha
24	Desa Liang Buaya	52	Desa Teluk Alulu	81	Desa Tanjung Soke	110	Desa Merayaq	138	Desa Pulau Miang	167	Desa Mugi Rahayu	195	Desa Lirung Ubing
25	Desa Melintang	53	Desa Balikukup	82	Desa Deraya	111	Desa Linggang Marmun	139	Desa Perupuk	168	Desa Mawai Indah	196	Desa Long Tuvoq
26	Desa Enggelam	54	Desa Biatan Ulu	83	Desa Lemper	112	Desa Gadur	140	Desa Mandu Pantai Sejat	169	Desa Himba Lestari	197	Desa Liu Mulang
27	Desa Muara Enggelam	55	Desa Bukit Makmur	84	Desa Loa Deras	113	Desa Linggang Muara Bat	141	Desa Long Bantuq	170	Desa Melan	198	Desa Long Pakaq Baru
		56	Desa Kelwai	85	Desa Minta	114	Desa Muara Jawaq	142	Desa Long Pejeng			199	Desa Long Lunuk Baru

Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-74 Data for Non-PLN Power Supply Villages

The power system in East Kalimantan Province is transmitted through an integrated interconnected system called the Mahakam system, which is connected to Barito system in South Kalimantan. Therefore, the electricity demand in East Kalimantan Province is mainly supplied by power plants in East Kalimantan Province and South Kalimantan.



Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-75 Power System Diagram

(9) Energy Sector

As a state energy policy, the Energy Transformation is defined as “the roadmap to shift the global energy sector from fossil fuel-based to zero-carbon. A key feature of the energy transition is the shift of the global energy sector from fossil-based energy production and consumption systems such as oil, natural gas, and coal to renewable energy sources such as wind, solar, and hydropower.” With the implementation of the National Energy Policy, the share of new and renewable energy sources in the energy mix was set as one of the indicators to measure the success of the energy transition, with a target of at least 23% in 2025 and 31% by 2050. It also recognizes the state's Regional Integrated Energy Plan 2019-2050 (RUED), which is based on the National Comprehensive Energy Plan (RUEN).

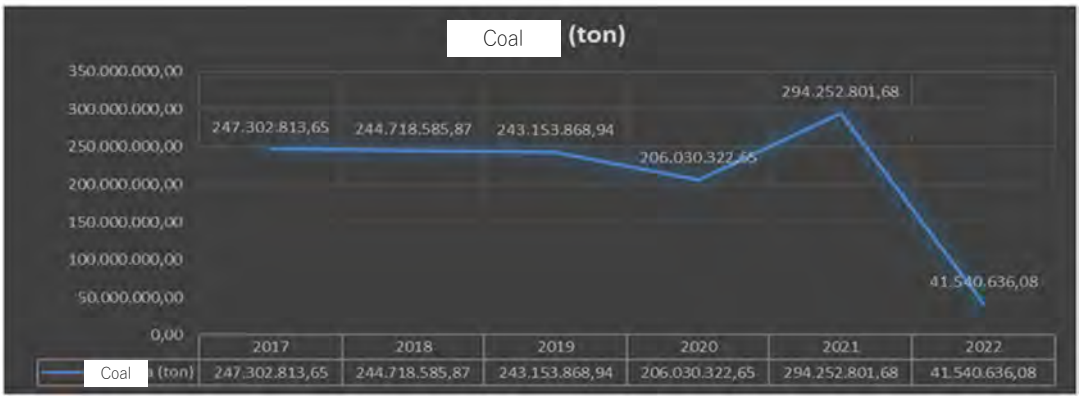
East Kalimantan is the second largest province in Indonesia by area and is recognized as having excellent solar/solar based energy development. There is considerable potential for power generation from renewable energy sources such as hydropower, solar, wind, bioenergy, geothermal, ocean wave power, and mining sites, and the potential is very large, but its location is mostly in undeveloped, remote, and perimeter areas, with high installation costs and subsidy systems that do not function properly The IKN economic cluster is directly related to renewable energy manufacturing and low-carbon energy, and close collaboration between IKN, Tri-City, and East Kalimantan Province is needed in the future.

The following section summarizes the current status and issues regarding fossil fuels, which are currently the main energy source, and solar and bioenergy, which have the highest potential among renewable energy sources.

8) Fossil fuels

a) Coal production

Coal production in 2021 was 289.53 Million tons, up 40.53% from the previous year. The increase in coal production is due to increased demand for coal from destination countries such as China and India.



Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-76 Coal Mining Production in the East Kalimantan Province (ton)

b) Total production of coal, oil, and natural gas

In 2022, oil and gas production are declining in other major mining production in East Kalimantan Province. The decline in oil and gas production cannot be separated from the negative impact of the COVID-19 pandemic on the performance of upstream oil and gas activities.

Table 2-41 Major Mining Production in the East Kalimantan Province

Year	Coal (ton)	Petroleum (thousand barrels)	Natural Gas (thousand MMBTU)
2018	244,718,585.87	23,720.00	296,830.00
2019	243,153,868.94	21,038.83	231,067.41
2020	206,030,322.65	19,296.85	203,955.18
2021	294,252,801.68	17,742.36	172,829.53

Source: *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

9) Solar energy

a) Large-capacity photovoltaic power generation

Solar cells are power plants that convert sunlight into electricity. Solar energy is the most promising energy source due to its sustainability and abundance. In equatorial regions such as East Kalimantan Province, solar radiation can reach 1000 watts peak (Wp) per square meter. With a solar panel efficiency of 20%, 200 Wp per square meter can be obtained. Since the power obtained from a photovoltaic system at the assumed time is 1 MWp per ha, a mine cavity area of 1000 ha to be constructed with a floating photovoltaic system would yield 1 GWp of power. Although the efficiency of solar panels is expected to improve further with technological innovation, the challenge is that a large installation area is required to obtain a large-capacity power source for the conversion to renewable energy. One possible solution to this problem is to use idle land for power generation.

The following is an example of photovoltaic power generation using idle land, based on calculations assuming the use of a former mining site. Given that 1.5 MWp of electricity can be obtained from a photovoltaic power generation system per ha, it can be estimated that 1.5 GWp of electricity can be obtained from a 1,000 ha area of former mining sites that can be utilized for the construction of a photovoltaic power generation system. This would provide an option for utilizing the vast amount of former mining sites in the state, and could contribute to solving problems in the industrial sector.

b) Use as a centralized power plant for small villages

Electricity is a basic infrastructure that serves as the foundation for industry, and while the electricity situation in East Kalimantan Province is showing a trend toward improvement, efforts to improve community access to electricity in order to make it optimal are still a challenge. One way to address this challenge is to use solar power plants as centralized power plants to supply electricity to small communities.

The East Kalimantan Province has seven regencies (Pasar, Berau, Kutai Kartanegara, Kutai Timur, Kutai Barat, PPU, and Mahakam Ulu) and three cities (Samarinda City, Balikpapan City, and Bontang City), with 1,038 villages (kelurahan). As of 2021, there are 199 villages not electrified by PLN, and solar power plants (PLTS) will be constructed in such areas. The development of concentrated solar power plants is one of the flagship programs of the Governor of East Kalimantan Province in 2019-2023. The implementation status of the Concentrated Solar Power Flagship Program is shown in the table below.

Table 2-42 Status of Concentrated Solar Power Flagship Program Implementation in the East Kalimantan Province

NO.	Year	Activity	Location	Department of provincial Administration	OUTPUT/OUTCOME
1	2019				
2	2020	Construction of concentrated solar power plant (PLTS)	Paser Regency	Department of Energy and Mineral Resources	51 Pelanggan, kapasitas 23 kWp
			Kutai Timur Regency		130 Pelanggan, kapasitas 65.34 kWp
			Kutai Timur Regency		54 Pelanggan, kapasitas 27.72 kWp
3	2021	Construction of concentrated solar power plant (PLTS)	Kutai Timur Regency		203 Pelanggan, kapasitas 58.80 kWp
			Kutai Kartanegara Regency		201 Pelanggan, kapasitas 83.16 kWp
			Kutai Kartanegara Regency		91 Pelanggan, kapasitas 47.04 kWp
			Berau Regency		67 Pelanggan, kapasitas 29.40 kWp
			Paser Regency		79 Pelanggan, kapasitas 33.60 kWp
			West Kutai Regency		49 Pelanggan, kapasitas 29.40 kWp
4	2022	Construction of concentrated solar power plant (PLTS)	Paser Regency		293 Pelanggan, kapasitas 73.65 kWp
			Berau Regency		139 Pelanggan, kapasitas 40.45 kWp
			Kutai Kartanegara Regency		208 Pelanggan, kapasitas 65.54 kWp
			Kutai Kartanegara Regency		141 Pelanggan, kapasitas 37.45 kWp
			Berau Regency		69 Pelanggan, kapasitas 21.89 kWp
5	2023	Construction of concentrated solar power plant (PLTS)	Berau Regency		Undecided
			Berau Regency		Undecided
			West Kutai Regency		Undecided
			Mahakam Ulu Regency		Undecided
			West Kutai Regency		Undecided
			Paser Regency		Undecided
			Paser Regency		Undecided
			Kutai Kartanegara Regency		Undecided
			Berau Regency		Undecided
			Paser		

Source: Prepared by the Study Team based on the *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026* East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

10) Biomass energy

Although the state plan does not provide a specific explanation, the state has estimated the potential amount of biomass energy that can be utilized by considering the liquid waste from palm oil production and biomass discharged from forestry as diverse biomass energy sources. Since some Japanese companies are engaged in biomass business, it is an issue to promote the study of commercialization including PPP in the future.

The following section summarizes the types of biomass energy and their potential for utilization.

a) Types of biomass energy

Biomass energy is energy derived from biomass, whether liquid, gaseous or solid, and includes;

Livestock waste such as dairy, cow, goat, and chicken manure.

Industrial wastes such as tofu and tapioca. Especially, waste oil from palm oil production is called POME.

Biomass, woody debris, and wood waste from woody plantations, such as biomass, woody debris, and woody waste from woody trees, etc,

Biomass such as wood waste, rice husks, corn cobs, palm kernel shells, and palm stems.

b) Potential for utilization of palm oil waste (POME)

This is a method that utilizes the oil content of a few percent of palm waste oil, which itself has a large environmental impact, and is expected to be a method of utilization that also serves as waste liquid treatment.

Table 2-43 Bioenergy Potential of Palm Oil

No	Area	Number of palm oil plants	Fresh fruit bunches (ton)	Palm oil waste (m3)	Amount of power generated (MWh)	Total amount of power generated (MW)
1	Kutai Timur	34	8.325.264	4.995.158	264.978	32,6
2	Kutai Kartanegara	18	4.260.823	2.556.494	135.614	16,7
3	Berau	11	3.064.374	1.838.624	97.534	12
4	Kutai Barat	6	1.736.580	1.058.148	56.132	6,9
5	Penajam Paser Utara	7	1.405.494	843.296	44.734	5,5
6	Paser	17	3.080.340	1.848.204	98.942	12,1
7	Mahakam Ulu	1	152.550	91.530	4.855	0,60
	Jumlah	94	22.025.425	13.231.454	702.789	86,4

Source: Prepared by the Study Team based on the *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026*
East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

c) Biomass energy utilization in forestry-related industries

The state plan allocates biomass energy use to specific forestry and wood processing enterprises. However, the actual situation is unclear.

Table 2-44 Biomass Energy Potential in Energy Forests

Unit Usaha	Lokasi (Kab)	Luas (ha)	Kelas Perusahaan	Luas Alokasi HTE	Rencana Penanaman 2015-2024	Jenis Tanaman Energi
Unit Usaha yang telah mengembangkan THE di Kaltim						
PT. Dharma Hutani Makmur	Kutai Kartanegara	41,545	Pertukangan dan energi	7,500	7,500	Akasia, Gamal, Giant Bamboo
Unit Usaha yang Berkomitmen untuk Mengembangkan Bioenergi di Kaltim						
PT. Inhutani I	Paser	16,816		0	0	
PT. Hutan Mahligai	Kutai Barat	11,275		100	0	
PT. Belantara Pusaka	Berau	14,010		500	500	
PT. Oceanic Timber Product	Berau	16,600		3000	0	

Source: Prepared by the Study Team based on the *Peraturan Gubernur Kalimantan Timur Nomor 16 Tahun 2023 tentang Rencana Pembangunan Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2024-2026*
East Kalimantan Province Regional Regulation No.16/2023 regarding East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

(10) Policy Direction for the Electricity and Energy Sector

Within the Regional Spatial Plan for East Kalimantan Province (RTRW) 2016-2036, the following policy directions are provided with respect to electricity and energy

- Increase the electrification rate by improving the power distribution network and utilizing renewable energy sources
- Increased power generation capacity from renewable energy sources

Furthermore, the following two policies for IKN development cooperation in the energy and power sector by the Province of East Kalimantan Province have been identified.

- Expansion of necessary power plants and smart grids throughout Kalimantan
- Construction of hydrogen gas production plant outside of IKN area

2.4.6 Urban Management

In this section, the scope of "urban management" is considered including the following areas:

a. Administration and Urban and regional development planning

b. Finance and budgeting

c. Economy and employment

d. Education

e. Medicine and Social Welfare

f. Housing

g. Village Development

h. Public safety and security

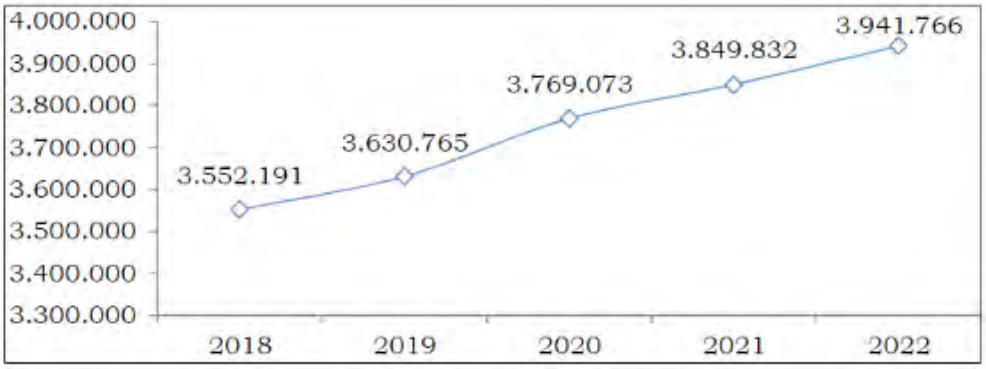
The following urban infrastructure and issues are not included in the urban management area: transportation and logistics, communications and ICT, portable water supply, sewage, waste management, power and energy, industrial development, disaster prevention, environmental management, and climate change countermeasures.

In the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, Chapter 2 "Regional Overview" analyzes the geography, demographics, local economy and social welfare, public infrastructure, and services in general, as well as the key indicators on level of achievements under the previous East Kalimantan Province Regional Middle-Term Development Plan 2019-2023. Chapter 3 describes "Regional Finances"; Chapter 4 "Regional Issues and Strategic Challenges"; Chapter 5 "Goals and Objectives"; Chapter 6 "Strategies, Policies and Priority Programs"; Chapter 7 "Development Financing Framework"; and Chapter 8 "Performance Indicators for the Local Administration". A brief summary of these subjects related to urban management is extracted below.

(11) Administration and Urban and Regional Development Planning

11) Population Growth Trajectory

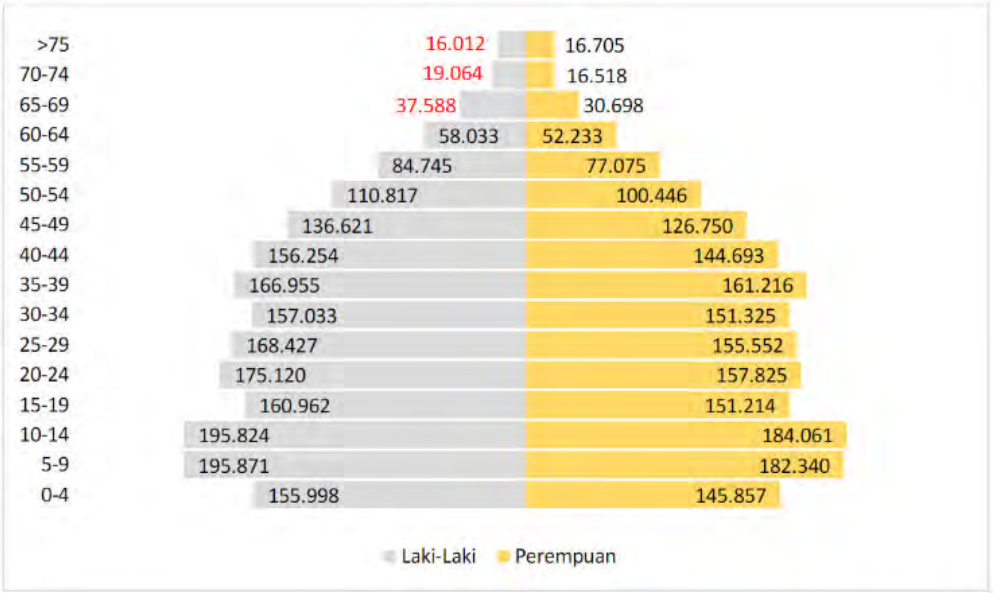
The population growth rate of East Kalimantan Province from 2018 to 2022 is at about 2%. The total population in the province has reached approximately 4 Million.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-77 Population Trends in Urban and Rural Areas of East Kalimantan Province (2018-2022) (Unit: Million People)

Looking at the population pyramid by age group, the age-sex structure diagram is roughly bell-shaped with a large proportion of young to middle-aged people. There is a trace of slight stagnation in population growth in the age group between 15 and 35 years old (for 20 years), followed by a recovery in the age group between 5 and 15 years old. The workforce population will peak around 2030 when these young people between the ages of 5 and 15 will reach the working age. Notably, the population between the ages of 0 and 5 shows a significant downward trend, and the natural population growth will likely shrink. Therefore, the immigration from other regions and islands following the relocation of the New Capital City is deemed important for the sustainable development of the region.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-78 Population Pyramid of East Kalimantan Province (2021) (Unit: Persons)

12) Policy Basis for Local Administration

a) Basic Documents in Regional Planning

The provincial government prepares and implements the Regional Long-Term Development Plan (RPJPD), the Regional Middle-Term Development Plan (RPJMD), and the Regional Government Work Plan (RKPD) as regional planning documents for East Kalimantan

Province, in accordance with the scheduled effective period. Along with the RPJMD and RKPD, the local government also prepares a Strategic Plan (Renstra-PD) and an Operational Plan (Renja PD). These are prepared through respective prescribed processes and serve as guidelines for the downstream planning and as foundational documents in the spatial, organizational, budgetary, and implementation aspects of the regional urban management.

b) Assessment of RPJMD2019-2023 Achievement

The achievement level of the key performance indicators in the previous middle-term plan is evaluated as shown in the table below. The achievement levels did not reach 100% for the following items, which require continued efforts in the future.

- Increase in Number of Schooling Years
- Reduction of Residents at Poverty Level
- Improvement in Labor Absorption
- Creation and Strengthening of Non-Fossil Fuel Industries
- General Improvements in Agro-Industrial Sector
- Creation and Strengthening of Tourism and Creative Economy Sectors

Table 2-45 Assessment of Achievements by Goal in RPJMD2019-2023

Mission Goals/Objectives	Indicator	2022		
		Target	Achieved	Achieved Level(%)
[MISSION] 1: Human resource development and competitiveness, sovereignty of women, youth and persons with disabilities				
1. achieving a competitive workforce	Human Development Index (HDI)	77,25	77,44	100,25%
[Target] 1.1 Equalization of educational standards in the community	Estimated years of schooling (years)	14,02	13,84	98,72%
	Average years of schooling (years)	10,04	9,92	98,80%
[Target] 1.2 Increased role of youth in development	Percentage of youth own participation in youth development	0,85	0,88	103,53%
[Target] 1.3 Equalization of regional health care coverage	Average life expectancy (years)	74,6	74,62	100,03%
[Target] 1.4 Increased active participation of women in development	gender empowerment index	65,64	66,64	101,52%
2. improvement of community welfare	Poverty level (%)	6	6,31	94,83%
	Unemployment rate (%)	6,75	5,71	115,41%
[Target] 2.1 Improving Community Empowerment in Rural Areas	village development index	0,6825	0,732	107,25%
[Target] 2.2 Workforce Competitiveness	Labor absorption rate (%)	35	25,08	71,66%
[MISSION] 2: Strengthening the local economy and equitable national economy				
3. Realization of quality economic growth	Economic growth rate (%)	3,5±1	4,48	128,00%
	GRDP per capita (Million IDR)	172	238,7	138,78%
	Non-oil, gas and coal LPE (%)	2	6,11	305,50%
	Farmers' Exchange Rates	113	126,03	111,53%
[Target] 3.1 Increase in local development funds	Sales by region (Billion IDR)	11.038	15.909	144,13%
[Target] 3.2 Increase export value of non-oil and non-coal commodities	Non-oil and non-coal commodity exports (Billion USD)	1,72	5,05	293,60%
[Target] 3.3 Increased contribution of non-oil, non-coal and non-gas industry sectors	Contribution of non-oil, non-coal and non-gas industry sectors to GRDP	9,64	8,24	85,48%

Mission Goals/Objectives	Indicator	2022		
		Target	Achieved	Achieved Level(%)
	(%)			
[Target] 3.4 Expansion of the agriculture, forestry, and fisheries sector	GRDP contribution of food crops and agricultural subsector businesses (%)	0,65	0,43	66,15%
	GRDP contribution of the livestock subsector (%)	0,37	0,27	72,97%
	GRDP contribution of afforestation subsector (%)	5,2	4,22	81,15%
	Contribution of Subsector Businesses Fishery as % of GDP (%)	1,7	1,28	75,29%
	GRDP contribution of forestry subsector (%)	1,07	0,81	75,70%
[Target] 3.5 Increased investment realizations in non-oil, non-coal and non-gas industry sectors	Realized investment in non-oil, non-coal and non-gas industry sectors (Trillion IDR)	35	36,17	103,34%
[Target] 3.6 Expanding the role of small and medium-sized businesses in the local economy	GRDP contribution rate of cooperatives and SMEs (%)	13	15,13	116,38%
[Target] 3.7 Increased contribution of the tourism sector and creative economy to the local economy	GRDP contribution of the tourism sector (%)	9,67	8,58	88,73%
	GRDP Contribution of Creative Economy Sector (%)	15,23	14,38	94,42%

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

c) Regional Issues and Strategic Challenges

The following are identified as the main development issues related to the urban management sector, based on the evaluation of RPJMD's achievement level in the previous year.

- Education: Inadequate basic services in secondary education and special needs education.
- Health: Nutritional status and health of mothers and children, sub-standard health services, uneven distribution of health professionals, lack of professional and auxiliary personnel in RSUD at district/urban governments
- Public Works: Unequal distribution of basic infrastructure and services
- Public Housing and Settlement Areas: Inadequate infrastructure in public housing and settlement areas
- Social Welfare: Inadequate support for socially vulnerable groups
- Employment: Lack of employment opportunities, inadequate labor conditions and regulations
- Women's Empowerment: Income inequality, domestic violence, poor family planning
- Village Development: Inadequate village management

Strategic issues for East Kalimantan Province are defined as conditions or matters that must be actively promoted in the regional development plan because they are important, fundamental, urgent, and of such a nature as to affect the achievement of future regional

administrative objectives. The strategic development issues for East Kalimantan Province in the period between 2024 and 2026 include the following:

1. Strengthening the competitiveness of human resources
   - Equal education and improved health and welfare
   - Improve labor competitiveness
   - Strengthening Women's Competitiveness
2. Accelerating Economic Transformation and Inclusive Economic Growth
   - Economic Diversification
   - Increased economic empowerment of local communities
3. Improved accessibility and connectivity of infrastructure
   - Development of infrastructure to meet minimum service standards
   - Strategic infrastructure investment to stimulate the local economy
4. Improvement of environmental quality
   - Improve and maintain the quality of water, seawater, air, and land
   - Reduction of GHG emissions
   - Introduction of new renewable energies
5. Improvement to a professional and accountable administration
   - Clean and accountable bureaucracy
   - Competent bureaucracy
   - Excellent public service

d) Goals and Objectives

Chapter 5 of the RPJMD 2024-2026 indicates the development goals and objectives. The development goals refer to the regional development outcomes that result from the achievement of regional program outcomes, and the objectives refer to the state of affairs to be achieved within the next three years. The following development objectives are established.

Goal 1: Achieve a competitive workforce

Realization of competitiveness in the human resources (HR) development means that the human development index reminds high and on an increasing track, with no regency or city in the region below the national average. Realization of human resource competitiveness is achieved through achieving universal education access, improved health status, reduction in unemployment rates, and gender empowerment.

Goal 1 includes:

- Achieving equity in educational standards in the community: 12 years of compulsory education for all school-aged children; Supporting access and continuation in receiving higher education.
- Improving public health: improving and expanding the quality of services in public

health facilities, supporting private hospitals, and providing basic health services in the villages. Equitable access to health facilities, equipment, and services for the entire provincial population.

- Decrease in unemployment rate: absorption of labor force beyond vocational school graduates
- Strengthening women's competitiveness: gender empowerment in the programs and activities in all regional structures; strengthening women's competitiveness in the economic sphere; strengthening women's representation in parliamentary and professional positions.

Goal 2: Achieve high quality economic growth

Quality economic growth means stable and resilient economic growth that is not dependent on the mining sector, and economic diversification (horizontal and vertical) in the key economic sectors to maintain economic growth between 4.50 and 5.30%. Economic growth must also extend to all levels of society in order to narrow the welfare gap.

Strategic objectives for Goal 2 include:

- Achieve economic diversification: Horizontal diversification of the economy means encouraging growth in non-oil and non-coal sectors, such as the agricultural sector (plantations, fishing, livestock, forestry, food, food crops, horticulture), the industrial sector, and the tourism sector. Vertical diversification of the economy means encouraging industrial upgrading in which superior goods are processed for value-addition.
- Economic empowerment of the poor: average per capita spending of the poor to be above the poverty line. Meeting the basic needs of the poor through government programs that encourage economic development projects to overcome extreme poverty in the region.
- Physical development that supports economic activity, including utilities, telecommunications, drinking water, sanitation (domestic wastewater, waste), utilities (roads, dams, irrigation, drainage, transportation sector, roads, railways, ports, airstrips), and electricity.

Goal 3: Improve the quality of the environment

Reduce greenhouse gas emissions and improve the quality of the environment by improving the quality of water, seawater, air, and land in synergy with efforts to encourage the development and use of renewable and new energy sources.

Strategic objectives for Goal 3 include the following:

- The quality of water, seawater, air, and land must be maintained.
- Reduce greenhouse gas emissions in the forestry and land use sector: control the rate of deforestation and forest degradation and control land use.
- Expand use of new and renewable energy sources: Mitigate climate change by reducing the use of fossil energy and expanding the use of new and renewable energy sources.

Goal 4: Achieve bureaucratic reform

The goal is to provide service satisfaction to all target groups, especially the community, by practicing the core values of professional ASN and supporting public services that operate with high quality and innovative standards.

The strategic goal of the fourth objective supported by ASN Berlak is to achieve a professional, accountable, and public service-oriented bureaucracy. This means developing professional instruments to improve accessibility and ease of use of electronic-based public services and creating a transparent and honest bureaucracy.

e) Strategies, Policies and Priority Programs

Strategies are statements that describe how the goals and objectives of the provincial development plan will be achieved and are further articulated through a series of policies. The selected strategies are reflected in a number of policies and priority programs. The selected strategies may relate to one goal or multiple goals.

The strategic goals are supported by several programs and are cross-cutting. The goals of the most recent East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, which are to be achieved by the end of its effective period in 2026, will be accomplished through several programs. Priority programs have therefore been selected on the basis that they can support multiple targets. The table below shows the strategies and policy directions established based on the aforementioned targets. Since the list of priority programs is multi-sectoral, it is listed separately and collectively.

Table 2-46 Goals, Strategies, and Policy Directions of the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Target	Strategy	Policy Direction	
Goal 1: Achieve a competitive workforce			
Objective 1: Expansion and equalization of local education	Improving access to and quality of education	1	Expanding Access in Secondary Education and Special Needs Education
		2	Improving the quality of secondary education and special needs education
		3	Improving educational facilities and infrastructure in backward and border regions
		4	Optimizing Boarding Schools
		5	Tuition assistance for all students Improving the educational standards of students from socially disadvantaged backgrounds
		6	Improving the quality of educators and education professionals
		7	Improvement in reading, writing and calculation skills
		8	Improving the quality of vocational education that is aligned with market needs
Objective 2: Improvement of public health conditions	Improving access to and quality of health care	1	Accelerating improvement of community nutritional health
		2	Improve maternal, child and reproductive health
		3	Improving management of communicable and non-communicable diseases and other health emergencies
		4	Improving and integrating medical referral services
		5	Healthcare Facility Management and Facility Quality Improvement
		6	Promoting healthy behaviors through

Target	Strategy	Policy Direction	
			community health campaign
		7	Health System Strengthening and Health Care Financing
		8	Fulfillment and improvement of the competence of healthcare professionals
Objective 3: Decline in unemployment rate	Improve labor quality and competitiveness	1	Increased capacity and labor productivity
		2	Vocational education and training based on industrial cooperation
		3	Provide training and promote labor certification
	Expansion of employment opportunities	1	Worker Dispatch and Empowerment
Objective 4: Strengthening Women's Competitiveness	Implementation of gender equality in development	1	Promoting the understanding and commitment of decision makers on gender equality and role of women in social development
		2	Strengthening and fostering community groups and women's empowerment institutions in the areas of economy and politics
		3	Elevating professional mindset and prospects in female workers
Goal 2: Achieve high quality economic growth			
Target 5: Realization of economic diversification	Export development of non-oil, gas and coal commodities	1	Strengthening the competitiveness of small and medium-sized enterprises
		2	Improved marketing of SME products
		3	Development of facilities and infrastructure in industrial park
		4	Promoting downstream product development
		5	Capacity building in human resource development
		6	Agency for development of tourist destinations in East Kalimantan Province
		7	Improved marketing for promoting regional tourism
		8	Improvement of local tourism amenities, accessibility, and attractiveness
	Improve competitiveness of investments in non-oil, gas, and coal sectors	1	Improvement of the quality of implementation Investments based on Online Single System (OSS)
		2	Improving marketing strategies and activities in the region industry
		3	Providing facilities and incentive areas in industrial parks
	Monitoring of food supply and stockpiles to improve food availability	1	Ensuring food availability through accurate food supply analysis and updating related information
		2	Improving quality of foods and nutrition by optimizing the use of gardens and neighboring idle land plots
	Responding to food insecure areas	1	Mapping food insecurity through food alert systems
		2	Food assistance and distribution for food insecurity areas / disaster-stricken areas
	Diversification local production for local consumption	1	Promoting diversification in food consumption, nutritional balance and food safety using local foods
	Production and value addition of major agricultural products	1	Restoration of unproductive plantation lands
		2	Development and strengthening of plantation institutions
		3	Increase use of certified quality plantation seed
		4	Improve quality and add value to plantation products
	Livestock Production and Productivity	1	Optimizing Livestock Reproduction
		2	Livestock feed production and productivity
		3	Improved animal health and traffic management of livestock
		4	Development and enhancement of animal husbandry facilities

Target	Strategy	Policy Direction	
	Fisheries Production and Productivity	1	Facility and infrastructure improvements in fishery production
		2	Improve quality and added value of marine products
	Increase production, productivity, and value addition of food crops and horticultural subsector commodities	1	Revitalization of agricultural land for food crops and horticulture
		2	Increasing the use of certified superior TPH seeds
		3	Strengthening the organizational capacity and skills of farmers through technology renewal in agriculture
	Increased Production and Productivity Forestry subsector products	1	Increased production of timber and non-timber forest products
Target 6: Empowerment of the poor	Promoting the socioeconomic independence of the poor and socially vulnerable	1	Improving the ability of the poor and vulnerable to meet their basic needs
		2	Improving function of PMKS
		3	Increasing social and economic independence of poor families and vulnerable groups
		4	Improve the quality of human resources and organizational systems in welfare services
		5	Entrepreneurship and strengthening of micro, small and medium enterprises (MSMEs) and cooperatives
		6	Promoting a stronger role for village-owned enterprises (BUMD) to promote greater independence of the villages
		7	Repairing uninhabitable houses for the poor and vulnerable
	Increased productive business opportunities for the poor	1	Provision of agricultural and fishing facilities for the poor, especially in underdeveloped areas and border regions
		2	Training and counseling on agriculture and fisheries for the poor
		3	Granting legal access to forest management to forest areas and surrounding communities
		4	Training and capital stimulus package for microenterprise organizations and joint venture Groups (KUBE)
		5	Subsidizing logistics costs for sale of products destined for underdeveloped border areas
	Price stabilization of daily necessities	1	Securing essentials goods for sustenance
		2	Price controls on daily necessities and important commodities
Target 7: Improve quality and availability of infrastructure to support the economy and sufficiency of basic infrastructure	Optimization of road operations economic growth	1	Upgrading and maintaining state toll-road service
		2	Construction of new road sections to support economic growth
	Improvement of water resources infrastructure	1	Integrated water resources management to improve water use
		2	Maintenance and improvement of power control equipment and infrastructure against humid conditions
	Optimization of spatial planning implementation	1	Synchronization of spatial planning documents to actual ground conditions
		2	Optimizing supervision and control of the land uses and spatial layout in the community
		3	Map Integration Policy Implementation
	Meeting Water Infrastructure Needs drink	1	Development of regional-scale water supply systems
	Improving the quality of slums	1	Activation of state authorities for slum clearance and infrastructure improvement
	Improve transportation infrastructure and services	1	Improved Type B terminal services
		2	Providing traffic safety supplies
	Improving equity in	1	Improved availability of low voltage network

Target	Strategy	Policy Direction	
	electricity supply 24 hours a day		and distribution
Goal 3: Improve the quality of the environment			
Target 8: Maintain quality of water, seawater, air, and land	Optimal control of causes of damage and sources of environmental pollution	1	Maintaining the quality of the environment through prevention of pollution and damage
Target 9: Reducing Greenhouse Gas Emissions from the Forestry and Land Use Sector	Sustainable forest management and use optimization	1	Improved management of sustainable forest use
	Optimization of forest protection and management and rural conservation in Key Ecosystem Value Areas (KBEP)	1	Improved management efforts
		2	Improving plants and wildlife conservation
		3	Optimize damage control and forest security through community participation
		4	Management of Areas of High Conservation Value (ANKT) in afforestation projects
	Land and forest restoration and optimization of suboptimal watershed management	1	Optimizing multi-stakeholder integrated watershed management
		2	Optimization of forest and land restoration implementation
	Optimization of extension activities and empowerment of forest communities	1	Provide legal access to forest management to the forest and surrounding communities and build the capacity of social forestry-based community business groups.
Target 10: Expand use of new and renewable energy sources	Expansion of energy use villages New and renewable	1	Accelerate the development of power plants in villages that have not been electrified by PLN. New Renewable Energy
	Increased electricity supply from new energy sources renewable	1	Increased provision of power generation facilities from new renewable energy sources
Goal 4: Achieve bureaucratic reform			
Goal 11: Create a professional, accountable, public-service oriented bureaucracy	Improved implementation and enforcement of public service standards	1	Preparation of public service standards based on regulations
		2	Perform public services in accordance with standards, practices, and procedures
		3	Improving the work culture within the government
	Management Optimization	1	Improve the quality of public services based on information technology

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

The East Kalimantan Province Regional Spatial Plan 2023-2042 aims to create advanced, safe, comfortable, and sustainable spaces in order to develop centers of green industry, agriculture, marine and fishing, mining, and IKN's central nodes. Spatial planning policies include the following:

- Integrated development for industry, agriculture, marine and fisheries, and oil and gas extraction
- Development of IKN as a universal world city
- Equitable development throughout the province, improvement in quality of life, and development of regional service infrastructure network
- Establishment of environmental conservation function areas on land and in coastal waters
- Developing a self-sustaining, competitive, progressive, green industry for the welfare of the community
- Development of marine and fisheries areas based on sustainable blue economy
- Development of agricultural land and strengthening of agroindustry to improve local

economy

- Development with reduced disaster risk
- Strengthening regional capabilities for national defense and security

Priority programs in each development sector are listed. Among them, those related to urban management mainly address the following areas:

a. Construction and environment	b. Logistics	c. Education	d. Health
e. Regional Industry	f. Tourism	g. Sports	h. Defense

The list of priority programs related to urban management is organized below.

(12) Regional Finance and Budgeting

13) Overview of Local Finance

a) Local Revenue

The components of local revenue consist of the Province's own revenue (PAD), transfer funds, and other statutory local revenue; PAD is the main component of local revenue in East Kalimantan Province; the largest source of PAD for the period 2018-2022 is from local tax revenue, with an average share of 77.85%. The next largest source of local revenue is transferring income related to the relocation of the capital.

Local revenue in East Kalimantan Province is projected to grow at an average rate of 9.17% from 2024 to 2026. The projections are based on regional revenue data analysis calculations for 2018-2022 and 2023. Over the next three years, East Kalimantan Province’s development funding will still rely on revenues from the Equalization Fund. In particular, it will be financed by non-tax revenue sharing from oil and gas natural resource revenue sharing and mineral and coal natural resource revenue sharing. On the other hand, it still relies heavily on local tax revenues, which are expected to contribute 87-88%, mainly through motor fuel taxes.

b) Local Expenditure

The change in regional expenditures in East Kalimantan Province for the period 2018-2022 fluctuated in an increasing trend, from 9.36 Trillion IDR in 2018 to 12.39 Trillion IDR in 2022. The exception was 9.33 Trillion IDR in 2020, due to lower grant expenditures, capital expenditures, and transfer expenditures due to the COVID-19 pandemic. Expenditure items include regional operations, sales, public personnel costs, public services, subsidies, social assistance, capital expenditures, and expenditures associated with capital relocation projects.

14) Financial Analysis

From 2018 to 2022, East Kalimantan Province provincial government assets fluctuated with an average growth of 3.21%. The average growth rate for each asset was 28.44% for current assets, 5.56% for long-term investments, 0.86% for fixed assets, and -17.02% for other assets.

Provincial government debt during the same period peaked at an increase in 2020, but declined from 2021 to 2022. The growth was average during the period. The increase in debt was due to short-term and long-term debt.

15) Financial Policy

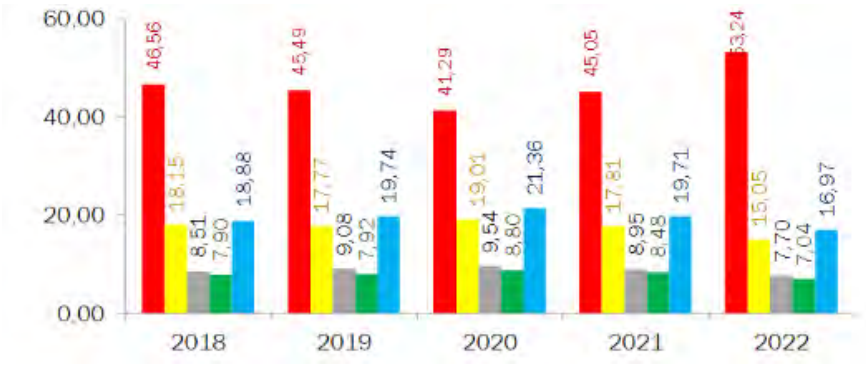
The East Kalimantan Province is seeking to increase its financial independence through an increase in self-financing income (PAD). To increase the province's financial independence, it is necessary to improve the capacity and performance of the province's publicly owned enterprises (BUMD), as well as sustainably develop value-added non-oil and non-coal economic sectors such as processing industries, tourism, fisheries, and agriculture.

The degree of local fiscal independence/ local fiscal autonomy (DOFD) is calculated by the ratio of the region's own revenues (PAD) to the APBD's total revenues for the same year, excluding the capital transfer budget from the central government, and is the benchmark for assessing the achievement of fiscal decentralization The average DOFD for East Kalimantan Province from 2018 to 2022 is 54.07%. This indicates that the financial independence of local governments is sufficiently high in financing regional development.

(13) Economy and Employment

16) Economic Structure and Major Industries

The current value of gross regional domestic product (GRDP) in East Kalimantan Province from 2018 to 2022 has an increasing trend due in part to favorable rally in the coal sector. In 2020, export demand decreased due to the COVID-19 epidemic, but by 2022, the domestic demand had began to recover and GRDP value has showed an increasing trend since. Most of the major business sectors have recovered in 2022, with the mining and quarrying business sector -the largest industry in the province - contributing 53.24% of GRDP, higher than the previous year's value of 45.11%. Construction (15.05%) and agriculture, forestry, and fisheries (7.7%) were the next largest contributors. (Refer to graph below).



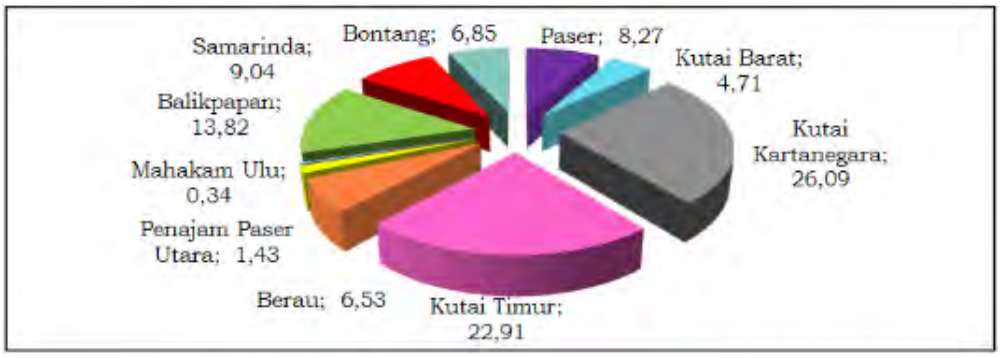
Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026
Red indicates resource extraction; yellow, processing; gray, construction; green, agriculture, forestry, and fisheries; and blue, other.

Figure 2-79 Trends in the Main Industrial Economy of East Kalimantan Province (2018-2022)
(Unit: Billion IDR)

Given the mining and quarrying sector's dependence on non-renewable natural resources, the emphasis is on both horizontal diversification into new sustainable economic sectors and vertical transformation by strengthening downstream industries. In particular, the expansion of agriculture, forestry, and fisheries is expected, and it is specifically noted that a major push for innovation in product development is needed for agriculture, livestock production, agricultural services, and plantation sub-crops.

As for the planned relocation of the New Capital City, a number of development projects are expected to boost the province's economic growth. A general increase in economic activity in the region will absorb the labor force in East Kalimantan Province and expand the consumption needs of the thousands of workers in IKN. The hospitality and catering industry, retail trade, and small and medium-sized enterprises are also expected to be positively affected.

In terms of the rural-urban ratio in the economic formation of East Kalimantan Province in 2022, Kutai Kartanegara Regency, the mining center, has the largest share of 26.09%, followed by Kutai Timur with 22.91%. Balikpapan City, with 13.82%, is a thriving center of services and commerce as well as the oil refining industry. Other regencies and cities contribute less than 10% to GRDP. Currently, there are five regencies in the province whose main source of income is from mining and quarrying, with the coal mining industry accounting for 85.09% of GRDP in Kutai Timur Regency, 76.37% in Pasar Regency, and 70.77% in Kutai-Kartenagara Regency (Refer to chart below).



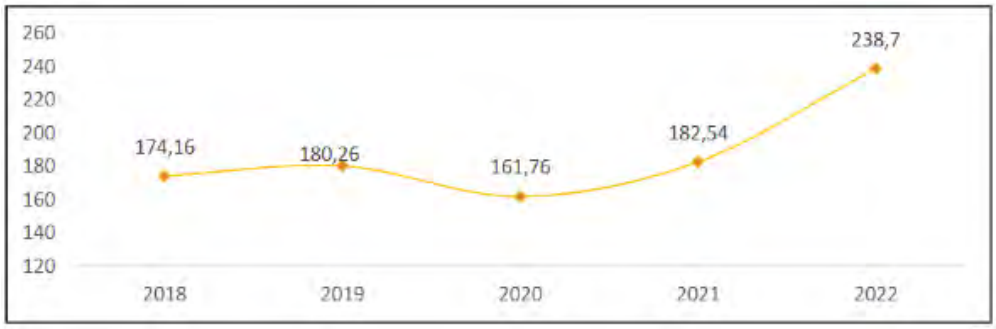
Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-80 GRDP by city/region in the province (Unit: Billion IDR)

17) Gross regional product, GRDP per capita

In the regencies/cities of East Kalimantan Province, the highest GRDP (present value per capita) in 2022 is followed by Kutai Timur Regency, Bontang City, and Kutai Kartanegara Regency. On the other hand, the municipalities with the lowest GRDP per capita are PPU Regency and Mahakam Ulu Regency.

Nationally, East Kalimantan Province's GRDP per capita in 2022 is higher than the national per capita GRDP of 238.7 Million IDR, the second highest in the country after DKI Jakarta. (Refer to grapg below) This is due to the province's high GRDP value due to the resources and energy industry, as well as its small population compared to other islands.



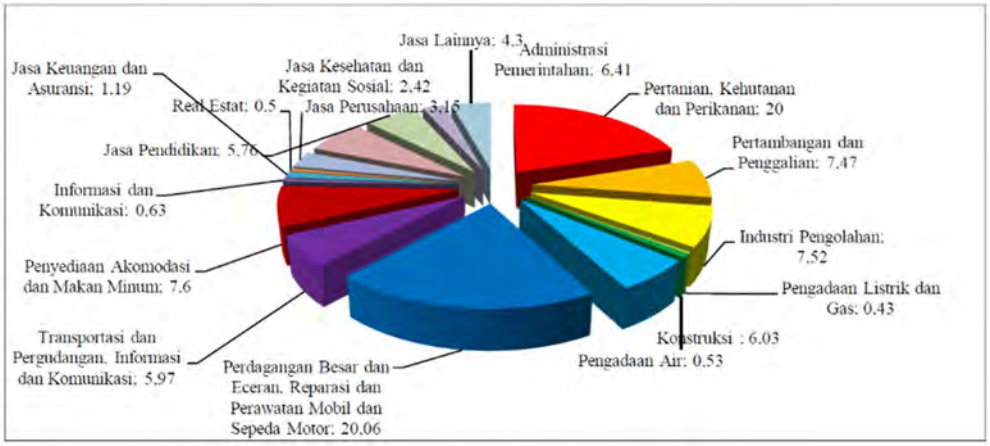
Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-81 GRDP per capita in East Kalimantan Province, 2018-2022 (Unit: Million IDR)

18) Employment

In 2022, the labor force in East Kalimantan Province will be divided into 17 industries, as shown in the graph below. 20% of East Kalimantan Province's population is employed in the wholesale and retail trade, followed by motor vehicle and motorcycle repair and maintenance (20.06%), then agriculture, forestry, and fishing (20%), hospitality and catering (7.6%), processing (7.52%), and mining and quarrying (7.47%).

The province's unemployment rate has been in the 5% to 6% range.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Red indicates agriculture, forestry, and fisheries; dark yellow, mining and quarrying; light yellow, processing; light blue, construction; dark blue, wholesale and retail; purple, transportation, logistics, and information and communication; and dark red, hospitality and catering.

Figure 2-82 Percentage of the Employed Population by Occupation in East Kalimantan Province, 2022 (Unit: %)

19) Capital Investment

The total number of PMDN (domestic investment)/PMMA (foreign investment) projects in East Kalimantan Province in 2021 was 10,325, a significant increase from 4,702 in 2020. The number of domestic investment projects increased by 5,367 projects, while the number of foreign investment projects increased by 256 projects.

As of 2022, domestic investment projects are concentrated in Balikpapan City and Samarinda City, while foreign investment projects are concentrated in Balikpapan City. In the same year, domestic investment realization reached 39.59 Trillion IDR, with five main sectors: mining (37.91%), industry (37.91%), food (37.91%), and chemicals (37.91%). Foreign investment amounted to 1,266.22 Million USD and was in five sectors: mining (40.74%), non-metallic mineral industry (17.06%), food crops, plantations, and livestock (15.01%), food industry (7.59%), and basic metals, metal products, and non-machinery and equipment (7.42%).

20) Priority Programs

The list of priority programs in the economic and industrial development sector in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 is below:

Table 2-47 Priority Programs for Economic and Industrial Development Sector in East Kalimantan Province (2023-2042)

Priority Program	Location	Financia Sources	Implementor
■ **Logistics Facility Improvement Program** Development and management of regional/local distribution centers and auction markets: 1) Development of regional/local distribution center facilities and infrastructure ■ **Domestic product use and marketing programs**	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City 2. IKN	APBN, Provincial APBD and other Legal Funding Sources	Ministry of Trade (MOT), Provincial Department of Industry and Trade, Small and Medium Enterprises, Private-sector businesses, Local Community
	1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency		
	Long Pahangai, Long Apari in Mahakam Ulu Regency		
	1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency 4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency		
■**Development and management of industrial activities by business entities and local communities**	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City 2. IKN	APBN, Provincial APBD and other Legal Funding Sources	Private-Sector Businesses, Local Community
	1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency		
	Long Pahangai, Long Apari in Mahakam Ulu Regency		
	1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency 4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency		
■**Programs to improve the attractiveness of tourist attractions** 1) Selection of the province's leading tourist destinations; 2) Design and planning for development; 3) Development	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City 2. IKN	APBN, Provincial APBD and other Legal Funding Sources	Ministry of Tourism and Creative Economy, Provincial Tourism Office, Private-Sector Businesses, Local Community
	1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency		
	Long Pahangai, Long Apari in Mahakam Ulu Regency		
	1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency		

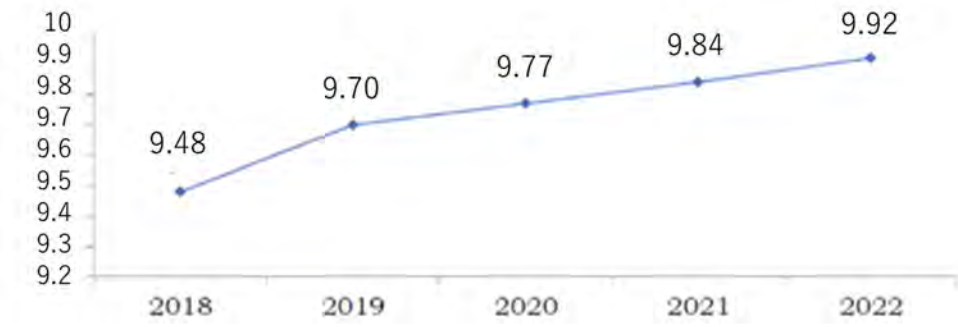
Priority Program	Location	Financia Sources	Implementor
	4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency		

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

(14) Education

21) Access to Education

The average years of schooling in East Kalimantan Province has increased over the years, reaching 9.92 years in 2022 (See graph below). This figure indicates that the average population of East Kalimantan Province over the age of 25 has received education up to grade 10 (SMA Class I, equivalent to the first grade of high school). The achievement of the average years of schooling in East Kalimantan Province in 2022 exceeds the set target of 9.40 years.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-83 Average Years of Schooling in East Kalimantan Province (2018-2022) (Unit: Years Old)

In 2022, three cities in East Kalimantan Province exceeded the provincial average years of schooling, with Balikpapan City having the highest average years of schooling (10.92 years). On the other hand, Mahakam Ulu Regency had the lowest average years of schooling (8.36 years). These figures are still far from the government's goal of 12 years of compulsory education.

22) Priority Programs

The list of priority programs in the education sector in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 is below.

Table 2-48 Priority Programs for Education Sector in East Kalimantan Province (2023-2042)

Priority Program	Location	Financial Sources	Implementor
■ **Education Management Program** Management of Higher	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City	APBN, Provincial APBD and Other	Ministry of Education and Culture (MoEC),

Priority Program	Location	Financial Sources	Implementor
Education and Secondary Education: Management of Vocational High School Education: Special Education Administration: 1) USB (New School Building) Construction; 2) Classroom Expansion; 3) Laboratory Construction; 4) Classroom Renovation	2. IKN 1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency Long Pahangai, Long Apari in Mahakam Ulu Regency 1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency 4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency	Legal Funding Sources	Provincial Department of Education and Culture, Private-Sector Businesses, Local Community
■Sports Competitiveness Improvement Program Teaching and development of educational sports at the educational level under central jurisdiction: 1) Establishment and development of sports coaching, training centers and sports schools organized by local communities and business communities; 2) Development of sports facilities and infrastructure Teaching and development of educational sports at the educational level, the state authorities: 1) Coordination and development of the establishment and development of sports coaching and training centers; 2) Development of sports facilities and infrastructure in rural areas	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City 2. IKN 1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency Long Pahangai, Long Apari in Mahakam Ulu Regency 1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency 4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency	APBN, Provincial APBD and Other Legal Funding Sources	Ministry of Youth and Sports, Provincial Department of Sports, Private-Sector Businesses, Local Community

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

(15) Medicine and Social Welfare

23) Poverty

The poverty rate in East Kalimantan Province in 2022 decreased from the previous year to 6.31%. Even in absolute terms, the poverty population decreased from 241,770 in 2021 to 236,250.

The increase/decrease in poverty levels in East Kalimantan Province is also influenced by the increase in the poverty line in the province to 728,208 IDR/person/month, with a larger increase in the poverty line in rural areas than in urban areas. The poverty line increased from

689,035 IDR/person/month in March 2021 to 728,208 IDR/person/month in March 2022, which is affected by soaring prices and other factors.

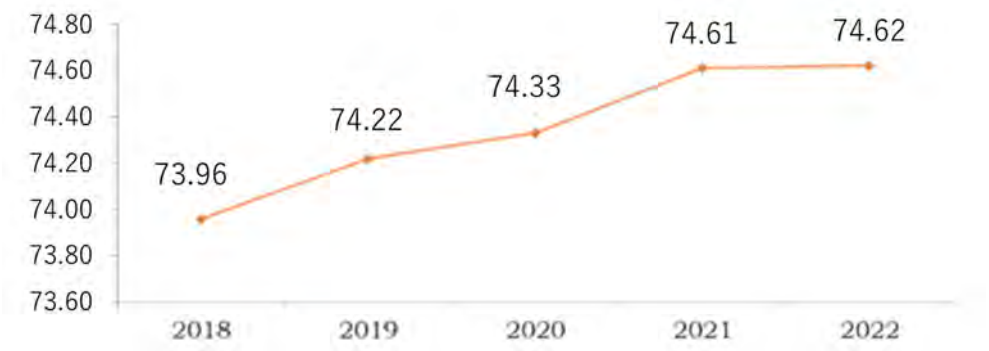
By municipality, the highest poverty rate in 2022 is in Mahakam Ulu Regency, reaching 11.55%. On the other hand, the lowest is Balikpapan City with only 2.45%. The former is a newly established regencies, and its lack of accessibility is one of the reasons for its high poverty rate. The Gini index for 2022 is also below the target of 0.308, indicating that the provincial government needs to focus on reducing income inequality.

24) Human Development Index

East Kalimantan Province's human development attainment is in "high" status, ranking third nationally after Jakarta Special Region and Yogyakarta Special Region. The increase in HDI at the provincial level is also reflected at the regency and city levels: in 2022, all regencies and cities in East Kalimantan Province improved their HDI, with the largest increase in the province of 1.18% in Kutai Barat Regency. Mahakam Ulu Regency, the lowest in the GRDP, also saw its HDI increase by 1.18%, also from 2021 to 2022. the spatial distribution of HDI attainment shows that regional service disparities have emerged. municipal residents in the "very high" and "high" HDI attainment categories are the "very opportunities to access employment and health and education services in particular, compared to residents of municipalities in the "medium," "low," and "very low" categories.

25) Health and Social Welfare

Life expectancy in East Kalimantan Province has been increasing year by year, reaching 73.96 years in 2018 and 74.62 years in 2022 (an increase of 0.20% per year), which means that the government target of 74.75 years has been achieved (See graph below). On the prevention side, the government's success in tackling infectious diseases, pregnancy-related diseases, neonatal diseases, and nutrition-related diseases. On the treatment side, it shows the success of the various county and city governments and the private sector in providing the necessary health care facilities. Over the past five years, efforts have been made to increase the number of health facilities to optimize support for social welfare services, and the distribution of health facilities within the municipalities has become more even, with the addition of 15 public hospitals, 6 private hospitals, 28 community health centers, and an increase of 221 health centers. In addition, 983 general practitioners, 91 dentists, 90 specialists, and 4,127 nurses are added. The distribution of health workers within the district is even, although the needs at the sub-district level need to be accurately addressed.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-84 Average Life Expectancy in East Kalimantan Province (2018-2022)

26) Gender Empowerment

East Kalimantan Province's gender empowerment index increased from 65.65 in 2019 to 66.89 in 2022, but remains stagnant. Some of the reasons for East Kalimantan Province's low index include women's participation in the National Assembly at 20% and women's income contribution at 24.02%.

27) Priority Programs

The list of priority programs in the health and social welfare sector in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 is below:

Table 2-49 Priority Programs for Medicine and Social Welfare Sector in East Kalimantan Province (2023-2042)

Priority Program	Location	Financial Sources	Implementor
■ **Programs to fulfill individual health efforts and public health efforts** Provincial UKP/UKM service facilities, equipment, infrastructure, and medical equipment: 1) construction of hospitals and supporting facilities and infrastructure; 2) construction of other medical facilities; 3) hospital development and attraction; 4) development and attraction of other medical facilities; 5) development and attraction of regional medical facility development units; 6) renovation and maintenance of other medical facilities; 7) hospital renovation and maintenance Provincial UKP, Provision of Health Services to Small and Middle Enterprises: 1) Maintenance and management of an integrated emergency management system (SPGDT)	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City 2. IKN 1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency Long Pahangai, Long Apari in Mahakam Ulu Regency 1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency 4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency	APBN; Provincial APBD; and Other Legal Funding Sources	Ministry of Health (MOH); Provincial Department of Health (DHO); Private-Sector Businesses; Local Community

Sources: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

(16) Housing

28) Public Housing and Residential Areas

a) Reduction of uninhabitable houses

The number of households living in habitable houses in East Kalimantan Province reached 73.18% (an increase of about 2.84% from the previous year), while 345,031 households (26.82%) were living in houses that were not suitable for habitation.

The reduction of uninhabitable houses (RTLH) was one of the priority activities in the 2019-2023 middle-term development. Within this period, a reduction of 25,000 units was targeted through various funding schemes, including the Corporate Social Responsibility (CSR) program, the State-funded APBN, the East Kalimantan Province Provincial APBD, and the county and city APBDs. As of 2022, East Kalimantan Province has at least 63, 213 RTLHs in 10 regencies/cities. In terms of implementation, the decision to grant APBD funds will be

based on criteria to assess the occupancy potential of houses. Repairs to roofs, floors, and walls of buildings will be carried out with the grant funds.

b) Slum

There are 1,881.67 ha of slums in East Kalimantan Province. The Law on Housing and Residential Districts defines a slum as "an uninhabitable residential area due to irregular construction, high building density, inadequate building quality and facilities and infrastructure". In more detail, the PUPR Ministerial Regulations include seven aspects and 16 variables as criteria for determining a slum area. Among these seven aspects, the considerations for rural areas in East Kalimantan Province are fire protection, waste management, wastewater management, environmental drainage, and environmental road conditions.

Slum recognition is a mayoral authority, with the central government having the authority to intervene in areas larger than 15 ha, the provincial government in slum areas of 10 to 15 ha, and the provincial and municipal governments in areas of 10 ha or less.

29) Achievement of Minimum Service Standards (MSS) for public housing

Minimum Service Standards ("MSS") in Indonesia are regulations on the type and quality of basic services that all citizens have a minimum right to obtain and that the government should mandatorily provide. MSS types include education, public works, public housing, security, and welfare. According to the relevant report for 2021, the achievement rate of "provision of adequate housing" for the population affected by the Government Relocation Plan was 22%. The achievement of the two basic services that comprise the Public Housing MSS has not shown significant progress, due to the unavailability of accurate and up-to-date data on the number of houses and residents in need of provincial-level intervention. In 2022, an initial data collection on the Public Housing MSS was conducted. In addition, an MSS Action Plan document is currently being developed and will eventually take the form of a regional regulation.

In order to achieve MSS for public housing, it is necessary to identify strategic projects where resettlement may occur and to coordinate with the Regional Disaster Management Agency. In East Kalimantan Province, the provincial authorities are supposed to provide housing to victims of major natural disasters but have not been able to provide and rebuild livable housing for the said persons. Based on the preliminary survey, residential districts in the province were categorized into high, medium, and low disaster risk districts.

30) Priority Programs

The list of priority programs in the housing sector in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 is below:

Table 2-50 Priority Programs for Housing Sector in East Kalimantan Province (2023-2042)

Priority Programs	Location	Source of funds (money)	Implementing agency
1. Housing development program ■ Infrastructure development in settlements in the State Strategic Region 1) Infrastructure development and improvement in residential areas; 2) Utilization and maintenance of housing infrastructure in local strategic areas; 3)	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community

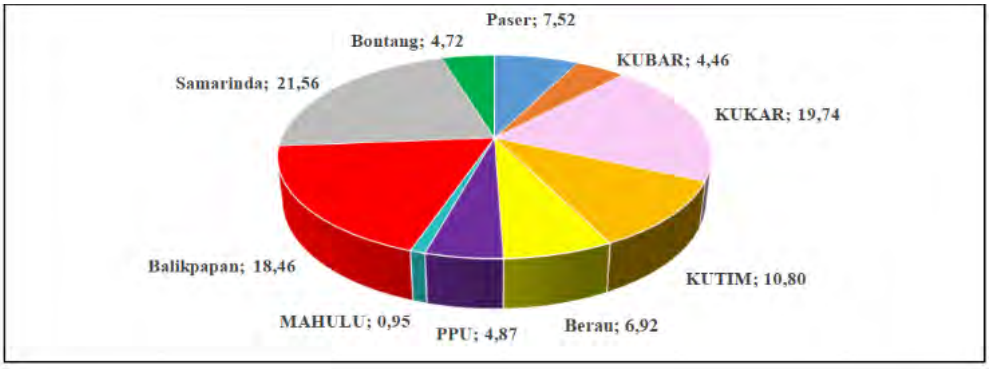
Priority Programs	Location	Source of funds (money)	Implementing agency
Supervision and management of housing infrastructure in local strategic areas; 4) Guidelines for the development of housing infrastructure in local strategic areas.			
2. Designated building and environmental programs ■ Determination and implementation of building for the provincial strategic interests 1) Planning, construction, management and operation of buildings of strategic importance to the province 2) Renovation, remodeling, and customization of buildings for local strategic interests. 3) Maintenance and management of buildings for the strategic benefit of the state 4) Implementation of provincial house management	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD, and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
3. Housing Development Program ■Data collection on the supply and rehabilitation of housing for disaster victims or province-planned relocations 1) Identification of homes located in disaster risk areas or affected by local relocation programs 2) Identification of potential housing relocation sites; 3) Data collection of damaged houses 4) Past incidents that have not been addressed 5) Data collection on damage to houses caused by disasters 6) Data collection and verification of housing recipients affected by natural disasters and relocation of local plans 7) Data collection on jointly owned rental housing, apartments, and special housing	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD, and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
4. Socialization and preparation of housing provision and restoration for the affected population, or relocation of provincial programs 1) Socialize technical standards for housing supply and recovery to communities and volunteers involved in disaster response. 2) Socialization of new housing development and KPR-FLPP housing access mechanism	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
5. Housing Construction and Rehabilitation Local Programs for Disaster Victims or Displaced Persons 1) Housing reconstruction for victims 2) Preparation of site plans and or detailed engineering design (DED) of the houses for the affected persons. 3) Land acquisition for construction of housing for disaster victims 4) Construction of housing for victims 5) Work with PSUs to build special housing for victims and relocate local programs. 6) Operation and maintenance of the housing environment in rural relocation programs	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD, and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
6. Allocation, handover and relocation program of housing for disaster victims 1) Construction and restoration of houses for the affected population and relocation of rural programs 2) Guidance on the management of public apartments and/or special housing	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
7. Residential Area Program ■ Structuring of slum settlements from 10 ha to less than	Including all rural and urban areas as	APBN, Provincial APBD and other	PUPR Provincial

Priority Programs	Location	Source of funds (money)	Implementing agency
15 ha: 1) Development of self-help groups in slums 2) Educational activities to prevent the increase and development of slums 3) Coordination and synchronization of slum upgrading, rejuvenation and resettlement. 4) Provide housing distribution to communities affected by the Slum Improvement and Rehabilitation Plan ■ Improve the quality of slum settlements with an area of less than 10 ha to 15 ha 1) Repair of uninhabitable houses in residential areas of 10 ha to less than 15 ha 2) Improvement and rejuvenation development of slums from 10 ha to less than 15 ha	well as the coastal waters of the Makassar Strait and the Sulawesi Sea	legal funding sources	PUPRPERA Office private-sector business Local Community
8. Public Infrastructure, Facilities, and Utilities (PSU) Improvement Program 1) Provision of infrastructure, facilities and utilities within the settlement to support the functioning of the settlement 2) Verification and submission of settlement PSUs from the developer 3) Cooperation in providing/managing settlement PSUs	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
9. Disaster Prevention Program ■ Local Disaster Information Service 1) Socialization, communication, information and education (IEC) in disaster prone states (by type of disaster) ■Disaster Prevention and Preparedness Services 1) Disaster prevention and mitigation training 2) Provision of disaster response equipment 3) Strengthen local capacity for disaster prevention and preparedness ■Survivor Rescue and Evacuation Services 1) Provide logistics for rescue and evacuation of victims 2) Family training for natural disaster response	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
10. Fire prevention, suppression, rescue and non-fire rescue programs ■ Organization of fire-prone mapping (1) Family training for disaster response in the home	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
11. Disaster Prevention Program Social protection for victims of natural and social disasters in the region (1) Development of refugee shelters	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community
12. Migrant Community Development Program ■ Strengthen social, economic, and institutional infrastructure to stabilize the development forces of the residential units in the stabilization phase.	Including all rural and urban areas as well as the coastal waters of the Makassar Strait and the Sulawesi Sea	APBN, Provincial APBD and other legal funding sources	PUPR Provincial PUPRPERA Office private-sector business Local Community

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

(17) Village Development

There is an inequality between rural and urban areas in terms of both population distribution and population density in the province: in 2022, residents of Samarinda City and the two Balikpapan City cities accounted for 40% of the province's total population, while residents of Bontang City (4.72%), PPU Regency (4.87%), Kutai Barat Regency (4.46%), and the smallest Mahakam Ulu Regency (0.95%) had less than 5% of the population distribution. (See graph below). With the exception of the city of Bontang City, which thrives on the gas industry, all are rural areas in less developed regions. As discussed below, it can be inferred that the unequal distribution of rural and urban populations is related to the widening economic disparity, and is a structural problem that needs to be addressed for correction in the future.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-85 Population Distribution by Urban and Rural Areas in East Kalimantan Province (2022)

1) Village Development Index (IDM)

The achievement level of the Village Development Index reflects the status of progress and self-reliance of villages, which are divided into the following categories of village status. into the following categories

Self-supporting village (IDM>0.8155)

Advanced villages (0.7072 < IDM ≤ 0.8155)

Well-developed villages (0.5989<IDM≤0.7072)

Disadvantaged villages (0.4907<IDM≤0.5989)

Very unfavorable villages (IDM ≤ 0.4907)

Over the past five years, IDM in East Kalimantan Province has continued to increase, most recently reaching 0.7320 (advanced villages). East Kalimantan Province ranks 8th among Indonesian provinces.

By 2022, of the 841 villages in East Kalimantan Province, spread across seven regencies, there will be no more “very disadvantaged villages” and only 17 “disadvantaged villages” will remain: eight in Mahakam Ulu, six in Kutai Barat, two in Kutai Timur, and one in Berau. In order to reduce the number of underdeveloped villages in the province, the government needs to make efforts to integrate all stakeholders, especially to improve the achievement of the Economic Resilience Index.

(18) National Defense and Security

1) Priority Programs

The list of priority programs in the housing sector in the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 is below:

Table 2-51 Priority Programs for National Defense Sector in East Kalimantan Province (2023-2042)

Priority Program	Location	Financia Sources	Implementor
■**Defense and Security Development Program** Develop and strengthen defense and security operations centers	1. Balikpapan City, Tungalong in Kutai Kartenagara Regency, Samarinda City, Bontang City 2. IKN	APBN, Provincial APBD and Other Legal Funding Sources	Ministry of Defense (MoD) Indonesian National Armed Forces (TNI) National Police
	1. Paser Regency 2. Sendawar in Kutai Barat Regency 3. Sangatta in Kutai Timur Regency 4. Tanjung Redeb in Berau Regency		
	Long Pahangai, Long Apari in Mahakam Ulu Regency		
	1. Batu Kajang, Kuaro, Long Ikis, Klalin in Paser Regency 2. Kembang Janggut, Bangun, Loa Kulu in Kutai Kartenagara Regency 3. Talisayan, Sido Bungin, Tanjung Batu, Tepian Buah in Berau Regency 4. Tanjung Isui, Linggang Bigung, Bongan in Kutai Barat Regency 5. Muara Bengkal, Muara Wahau, Sangkulirang in Kutai Timur Regency 6. Penajam in PPU Regency 7. Ujoh Bilang, Long Bagun, Tiong Ohang, Long Apari in Mahakam Ulu Regency		

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

2.4.7 Living Environment

The Living Environment sector will cover Population and Housing; Water Supply; and Sewage and Wastewater.

(19) Population and Housing

According to East Kalimantan Province Regional Long-Term Development Plan 2005-2025, the population distribution in East Kalimantan Province in 2005 was concentrated in urban areas, accounting for about 46.57% of the total population, especially in Samarinda City (20.22%) and Balikpapan City (16.54%) and Kutai Kartanegara Regency (17.27%). Urban areas cover 259,000 km^2 (1.13% of East Kalimantan Province's total land area) with an average population density of 421.99 persons/km^2. On the other hand, 1.52 Million persons (53.43% of the population) are dispersed among nine regencies/cities covering 227.27 Million km^2 (98.87% of the total land area) with an average population density of only 10.20 persons/km^2.

As for the welfare situation, the economically poor population of East Kalimantan Province, mostly living in rural, inland and border areas, decreased from 532,711 in 2000 to 318,004 in 2004 and 299,100 in 2005 (about 10.57% of the total population). Looking at the future, the population is expected to grow at an average annual rate of 2.24%, reaching approximately 4.78 Million in 2025.

As infrastructures and facilities are developed throughout the region, population distribution

will become more even across the regencies/cities and the working-age population will increase, requiring support to improve the quality of human resources through education and health services.

The strategic issues are listed below.

1) The basic rights of the economically poor, especially those living in rural areas, inland areas, and border regions, need to be realized.

2) The quality of human resources needs to be improved through higher quality education and health services.

3) Development in rural, inland and border areas need to be accelerated to distribute the population more evenly.

4) The quality of public services needs to be improved for people living in urban areas and centers of economic activity.

The development of urban settlements has caused slums, limited urban facilities and infrastructure, and urban social problems, while rural settlements, especially in the inland, island and border areas have been relatively slow to develop. Housing conditions in 2005 were generally good, with 98.54% of the houses being non-shingled, 92.95% having non-foliage roofs, and stone walls were only 22.23%. Only 87.01% of residential facilities had electricity and lighting, 46.55% had piped drinking water, 36.49% had clean drinking water, and 46.43% had septic tanks. Home ownership is 60% self-owned, 30% rented, and 10% on credit. The private sector is responsible for the majority of housing procurement. Housing development in East Kalimantan Province has recorded an average annual demand of 12,000 housing units, with 567,082 households already owning a home, representing 87% of all households.

Looking ahead, the housing situation in East Kalimantan Province is expected to improve, but housing supply remains urban-centric and the role of the private sector in housing supply is very limited. On the other hand, the situation in rural and border area housing and settlements remains relatively unchanged. It is hoped that increasing the supply of adequate and healthy low-income housing, as well as improving the settlement environment and empowering communities in urban areas, will reduce the number of slums in the future.

The strategic issues are listed below.

1) There is a need to develop healthy, clean, and comfortable housing and housing systems for people, both in urban areas and in rural and inland areas.

2) Basic housing and settlement infrastructure should be developed in an integrated manner, considering the established spatial layout.

3) In rural and border areas, housing and settlements need to be integrated with the development of centers of economic activity.

4) Cooperation between local governments and the private sector in housing and settlement development needs to be developed.

For housing and residential areas, the long-term regional development strategies and policy directions include

Strategy: Develop environmentally healthy housing and settlements that meet the community's capacity, with private sector participation, to equitably distribute the

community's housing needs and achieve a slum-free city.

a. Guidelines for improving the quality of housing and settlements in accordance with environmental conditions, accompanied by the development of appropriate basic infrastructure.

b. Housing and tenure in accordance with the income levels of the community.

c. Provision of adequate facilities and infrastructure in housing and settlements.

d. Arrangement and revitalization of slum areas.

For settlement and immigration, the following three long-term regional development strategies and policy directions have been identified

Strategy 1: Provide adequate housing for immigrants.

a. Development of suitable housing and business sites for migrants.

b. Providing facilities and infrastructure for residential and community business activities.

c. Creating a healthy, safe, harmonious and sustainable living environment.

Strategy 2: Increase business activities with high economic value.

a. Provision of land for settlement development in accordance with minimum standards

b. Selection of products with high economic value.

c. Development of agro-industry and agribusiness-based investments.

Strategy 3: Establish self-sustaining immigration settlements.

a. Strengthening of cooperation between relocation sites and sales centers.

b. Development of infrastructure to support the establishment of links between resettlement facilities and resettlement centers.

c. Development of new businesses in the community.

According to East Kalimantan Province Regional Middle-Term Development Plan 2019-2023, in terms of regional competitiveness, the high number of uninhabitable housing (RTLH: Rumah Tidak Layak Huni) units is a challenge in meeting the basic needs of the community. Uninhabitable housing is defined as houses that do not meet minimum standards for roof, floor, and wall quality. It is documented that through 2020, the number of uninhabitable housing units reached 72,881, an increase of 10,195 from the previous year. The high rate of uninhabitable housing is attributed to the low physical quality of housing and the poor quality of housing facilities, which has increased due to updated RTLH data.

Residential areas with uninhabitable housings may be classified as slums according to seven aspects (building quality, environmental roads, environmental drainage, waste management, sewage management, drinking water supply systems, and fire protection) and criteria in accordance with the Minister of PUPR Regulation No. 2/PRT/M/2016. The extent and distribution of slum areas in the municipality is described in the Governor’s and Mayor’s Decree. It will be prioritized to be dealt with according to the powers contained in Law No. 23/2014 on Regional Government 2015-2020 Governor’s/Mayor’s Decree updated by the

Central, Provincial, Regency/City Authorities. Slum areas in East Kalimantan Province under their jurisdiction are 1,371.21 ha across 10 Regency/city in East Kalimantan Province; in 2020, the slum areas are expected to be reduced to 1,287.82 ha as 83.39 ha of measures will be implemented.

Table 2-52 Extent of Slum Areas in East Kalimantan Province

No.	KAB/KOTA Regency/City	Luas(Ha) Area (ha)	SK Bupati/Walikota Regulation
1	Paser	179.56	No.653/KEP-332/2020
2	KUBAR	488.59	No.413.2/K.719/2018
3	KUKAR	168.12	No.454/SK-BUP/HK/2019
4	KUTIM	120.63	No.050/K.661/2015
5	Berau	28.26	No.30 Tahun 2020
6	PPU	49.07	No.593.33/270/2017
7	MAHULU	39.60	No.050.136.146/K.63/2020
8	Balikpapan	153.30	No.188.45-326/2020
9	Samarinda	70.52	No.663/404/HK-KS/XI/2020
10	Bontang	73.56	No.188.45/509/DPKP2/2020
Kalimantan Timur East Kalimantan Province		**1,371.21**	

Source: East Kalimantan Province Regional Middle-Term Development Plan 2019-2023

According to East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, the data for 2022 (March) shows that 73.18% of households in East Kalimantan Province live in habitable houses, which is improving every year. On the other hand, the number of people living in uninhabitable houses is estimated to be at least 63,213, and the reduction of uninhabitable houses (repair of roofs, floors, and walls of buildings) is one of the priority activities in the Middle-Term Development Plan.

Law No. 1/2011 on Housing and Residential Districts defines a slum as an uninhabitable residential area due to irregular construction, high building density, inadequate building quality and facilities and infrastructure. As shown in the following table, the slum area in East Kalimantan Province is 1,881.67 ha and will be improved 1,185.14 ha by 2022.

Table 2-53 Slum Area Targets and Realization

Uraian Description	Luas Kawasan Kumuh(Ha) Slum Area(ha)				
	2018	2019	2020	2021	2022
Target Target	673.42	620.06	1,287.82	1,237.82	1,187.82
Realisasi Realization		645.47	1,287.82	1,190.14	1,185.14

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

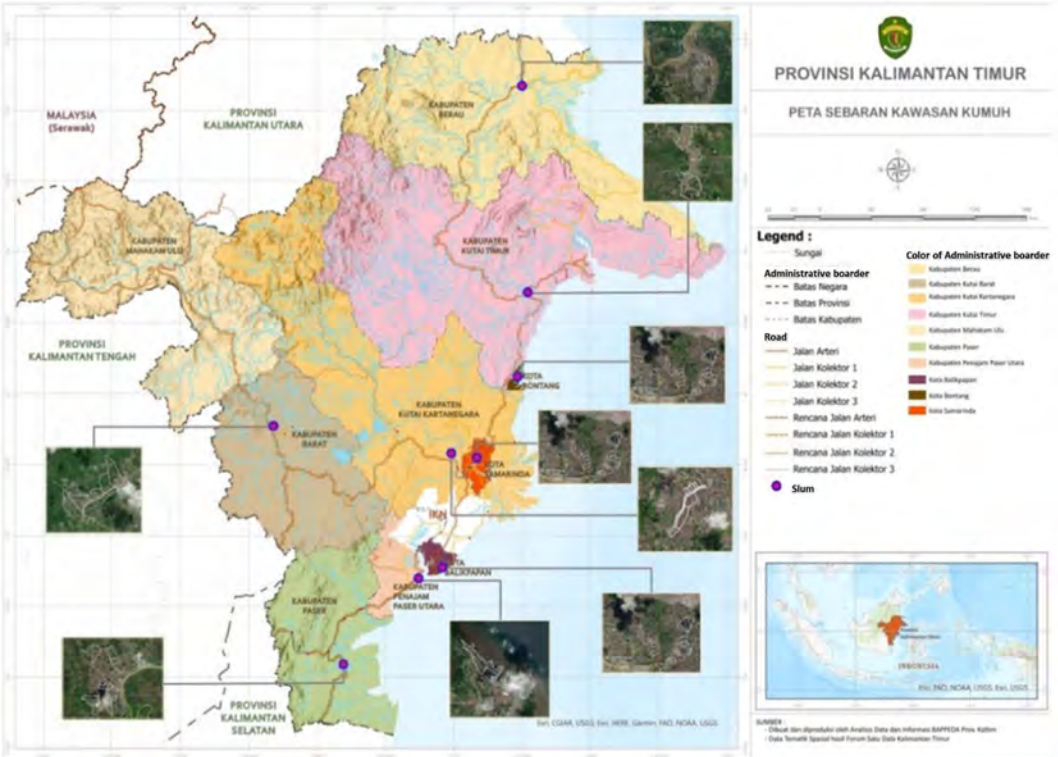
On the other hand, as shown in the following table, the latest figures somewhat inconsistent.

Table 2-54 Total slum Area by regency/city (latest version)

No.	KAB/KOTA Regency/City	Luas(Ha) Area(ha)			SK Bupati/Walikota Regulation
		Pusat Center	Provinsi Province	Kab/Kota Regency/City	
1	Paser	180.74	35.06	8.72	No.653/KEP-116/2021
2	KUBAR	969.43	37.50	38.69	No.592/K.425/2021
3	KUKAR	122.99	37.51	7.61	No.454/SK-BUP/HK/2019
4	KUTIM	783.73	0.00	0.00	No.050/KK.268/2016
5	Berau	0.00	25.79	2.47	No.30 Tahun 2020
6	PPU	49.07	0.00	0.00	No.593.33/270/2017
7	MAHULU	37.15	0.00	2.45	No.050.136.146/K.63/2020
8	Balikpapan	137.51	10.39	5.40	No.188.45-326/2020
9	Samarinda	21.43	24.25	24.83	No.663/404/HK-KS/XI/2020
10	Bontang	32.80	33.35	7.41	No.188.45/509/DPKP2/2020
Kaltim East Kalimantan Province		**2,334.85**	**203.85**	**97.58**	

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

The following figure shows the distribution of slums in each administrative district of East Kalimantan Province.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-86 Slum Distribution Map

According to the 2021 Local Government Implementation Report (LPPD: Laporan Penyelenggaraan Pemerintahan Daerah), the achievement rate of the SPM (Standar Pelayanan Minimal) for “provision of adequate housing” for those affected by the provincial government relocation plan was 22%.

Achieving minimum service standards for public housing in accordance with provincial

authorities will require coordination with the Regional Disaster Management Agency and the identification of strategic projects that may require population relocation. Preliminary studies conducted in previous years have shown that East Kalimantan Province has residential areas that are classified as high, medium, and low disaster risk areas.

According to East Kalimantan Province Regional Spatial Plan 2016-2036, article 35 includes a plan for designated areas for settlement, which stipulates two types of areas: urban residential areas and rural settlements. Article 46 then specifies the content and direction of zoning regulations.

In addition, other directions such as the National Activity Center (PKN: Pusat Kegiatan Nasional), the Regional Activity Center (PKW: Pusat Kegiatan Wilayah), and the Regional Activity Center proposed by the province (PKWp: Pusat Kegiatan Wilayah yang diusulkan Provinsi) indicate urban zoning regulations that will function.

(20) Water Supply

According to East Kalimantan Province Regional Middle-Term Development Plan 2019-2023, in the description of the drinking water supply system (SPAM), the national target in the RPJMN (2020-2024) is to achieve access to decent drinking water in 2024. The target is 100% and includes a 15% proportion of access to safe drinking water. The coverage of drinking water services through the piped network in East Kalimantan Province is, as shown the following table, 62.64% in 2020, which is an increasing trend compared to 2016, but still falling short of the national target.

The challenge for achieving the target is to ensure the quantity and reliability of raw water sources, and efforts are needed to equalize access to the potential raw water sources that can be utilized. It has been stated that this will require the establishment of a drinking water supply system (SPAM) across cities and regions, and that this should be achieved through cooperation between regional, central and provincial governments.

Table 2-55 Water Service Penetration Rates by Equipment and Piping for Residential Customers Supplying Drinking Water

No.	KAB/KOTA Regency/City	Sambungan Rumah(SR) Number of households					Cakupan Layanan Air Minum Perpipaan(%) Drinking Water Supply Coverage				
		2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
1	Paser	18.743	19.050	19.050	21.551	23.599	24.21	38.29	38.29	37.16	43.79
2	KUBAR	9.987	10.012	10.012	11.009	9.565	34.25	34.35	34.35	34.24	28.84
3	KUKAR	69.942	68.035	68.035	73.203	67.017	63.25	63.39	63.39	58.68	49.52
4	KUTIM	20.656	15.945	15.945	20.122	30.335	31.67	33.13	33.13	15.43	38.08
5	Berau	16.120	16.517	16.517	23.738	18.101	44.34	44.70	44.70	81.59	54.87
6	PPU	5.339	5.470	5.470	7.845	10.399	14.19	15.87	15.87	34.79	30.13
7	MAHULU	N/A	N/A	N/A	1.554	1.656	N/A	N/A	N/A	12.00	22.49
8	Balikpapan	95.781	97.243	97.243	100.927	100.163	76.50	76.98	76.98	79.05	77.79
9	Samarinda	137.135	146.225	146.225	158.901	158.900	90.96	95.46	95.46	99.29	85.28
10	Bontang	22.970	23.999	23.999	22.953	28.464	84.37	87.05	87.05	51.10	97.96
Jumlah Total		**360.996**	**396.673**	**402.496**	**441.803**	**448.199**	**51.70**	**51.50**	**54.30**	**54.59**	**62.64**

Source: East Kalimantan Province Regional Middle-Term Development Plan 2019-2023

Samarinda City and Balikpapan City are also facing high levels of water loss. Leaks in old pipe networks and broken or inaccurately recorded water meters are the main causes, which need to be reduced through repair and replacement.

Raw water supply shortages that have been identified as a challenge to the availability of drinking water services are listed below.

Table 2-56 Shortages raw water demand

No.	KAB/KOTA Regency/City	Defisit Kebutuban Air Baku (m^3/Tahun) Raw Water Shortage (m3/年)	
		2018	2023
1	Paser	(13,262,992.45)	(16,823,065.72)
2	KUBAR	(4,109,424.37)	(4,572,610.85)
3	KUKAR	(2,453,614.96)	(13,252,406.91)
4	KUTIM	(16,181,957.16)	(25,275,031.62)
5	Berau	(2,426,389.82)	(6,119,490.31)
6	PPU	(8,472,603.46)	(9,696,067.38)
7	MAHULU	(4,109,424.37)	(4,572,610.85)
8	Balikpapan	(4,512,187.52)	(3,382,418.18)
9	Samarinda	(22,710,346.28)	(18,568,251.44)
10	Bontang	(3,124,422.15)	(5,796,593.97)

Source: East Kalimantan Province Regional Middle-Term Development Plan 2019-2023

A further challenge is the lack of properly piped drinking water services. Regional drinking water companies (PDAMs) in East Kalimantan Province continue to improve access to drinking water for communities.

According to the performance of the regional drinking water companies that is shown below, the total installed production design capacity in 2020 was 8,395 liter /sec and production was 7,347 liter/sec, which is only 87.51% of demand. Because of resulting in idle capacity, if idle capacity is not utilized through the construction of pipe networks, the realization of SPAMs services will be hindered.

Table 2-57 Performance Indicators of Drinking Water Companies in East Kalimantan Province 2016-2020

No.	URAIAN Description	Defisit Kebutuban Air Baku (m^3/Tahun) Raw Water Shortage (m3/年)				
		2016	2017	2018	2019	2020
1	Jumlah Perusahaan Air Minum Number of Drinking Water Companies	9	9	9	9	9
2	Kapasitas Produksi Potensial (ltr/detik) Production Capacity Potential(little/sec)	7,185	7,354	7,583	8,018	8,395
3	Kapasitas Produksi Efektif(ltr/dtk) Effective production capacity(little/sec)	6,445	6,743	6,919	7,201	7,347
4	Efektivitas Produksi(%) Production Efficiency	89.70	91.69	91.24	89.81	87.51

Source: East Kalimantan Province Regional Middle-Term Development Plan 2019-2023

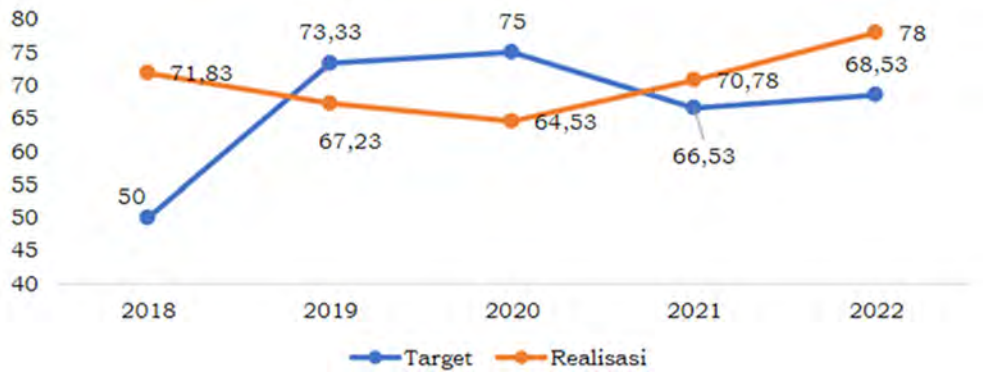
According to the opinions of regional development stakeholders, the main problem of regional development in East Kalimantan Province is the “lack of optimal equitable distribution of the welfare of the people of East Kalimantan Province”.

Among them, regarding the “optimal distribution and development of basic infrastructure services”, the provision of basic infrastructure in East Kalimantan Province is faced with unequal access and good connectivity to production and marketing centers and strategic areas

of the province. It is a result of unequal access to road infrastructure, drinking water, adequate sanitation, livable housing and settlements, and low availability and quality of basic infrastructure such as electricity.

In the drinking water service sector, there are three areas in Balikpapan City, Bontang City and PPU Regency where the implementation of drinking water supply systems is not optimal due to the raw water supply source crisis. Raw water is shared from areas with surplus water sources, such as Kutai Kartanegara Regency (Malangkayu reservoir), Kutai Timur Regency (Exvoid mine, Bendari Suka Rahmat) and Pasar Regency (Longkari river, Lambakan dam), which is the basis for planning to implement a transverse SPAM in the province and city.

According to East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, the rate of access to decent drinking water (the ratio of the number of people receiving drinking water supplies to the total population) has shown positive results over the past five years as shown the following figure. The target was not achieved at the beginning and middle of the plan year (2019-2020), but since 2021, the realization of access to decent drinking water has exceeded the set target.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 2-87 Targets for Access to Decent Drinking Water and Percentage Achieved(%)

Looking at the achievement rate by each city as shown the following table, Balikpapan City has the highest achievement rate. On the other hand, Balikpapan City is still dependent on groundwater for raw water supply, which needs to be improved.

Table 2-58 Access to Decent Drinking Water Targets and Achievement Rates by District

No.	Kabupaten/Kota Regency/City	Air minum layak (%) Decent drinking water
1	Balikpapan	99.25
2	Penajam Paser Utara	30.90
3	Paser	70.14
4	Bontang	83.55
5	Kutai Timur	51.73
6	Berau	82.60
7	Samarinda	87.27
8	Kutai Kartanegara	72.85
9	Kutai Barat	86.02
10	Mahakam Ulu	66.06
Provinsi Province		78.00

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

The national target for access to decent drinking water is set at 100%, which has not been reached in East Kalimantan Province.

The existing raw water supply capacity is 7,922 liter/sec, because the construction of the Malangkayu and Sukaramat dams, which are expected to meet the raw water demand of Bontang City, is being implemented under the constraints of land acquisition, construction of dams in protected areas, etc.

Particularly in Balikpapan City and Bontang City, there is still a high dependence on groundwater and reliance on surface water to secure raw water in the long-term. On the other hand, short-term raw water supply relies on the use of groundwater through the construction of deep wells. Additional raw water capacity is also considered very important, especially with the designation of East Kalimantan Province as the location of IKN. With the establishment of IKN in East Kalimantan Province, the demand for raw water is expected to increase due to population growth and the growth of new economic activities supporting IKN.

There are five regional drinking water supply systems (SPAMs) under development that will supply large volumes of drinking water throughout the city (No.2, 3, 4, 5, and 6 in the following table). Planning documents were completed in 2022, the land acquisition process will be expected to start in 2023 and construction will start in 2024.

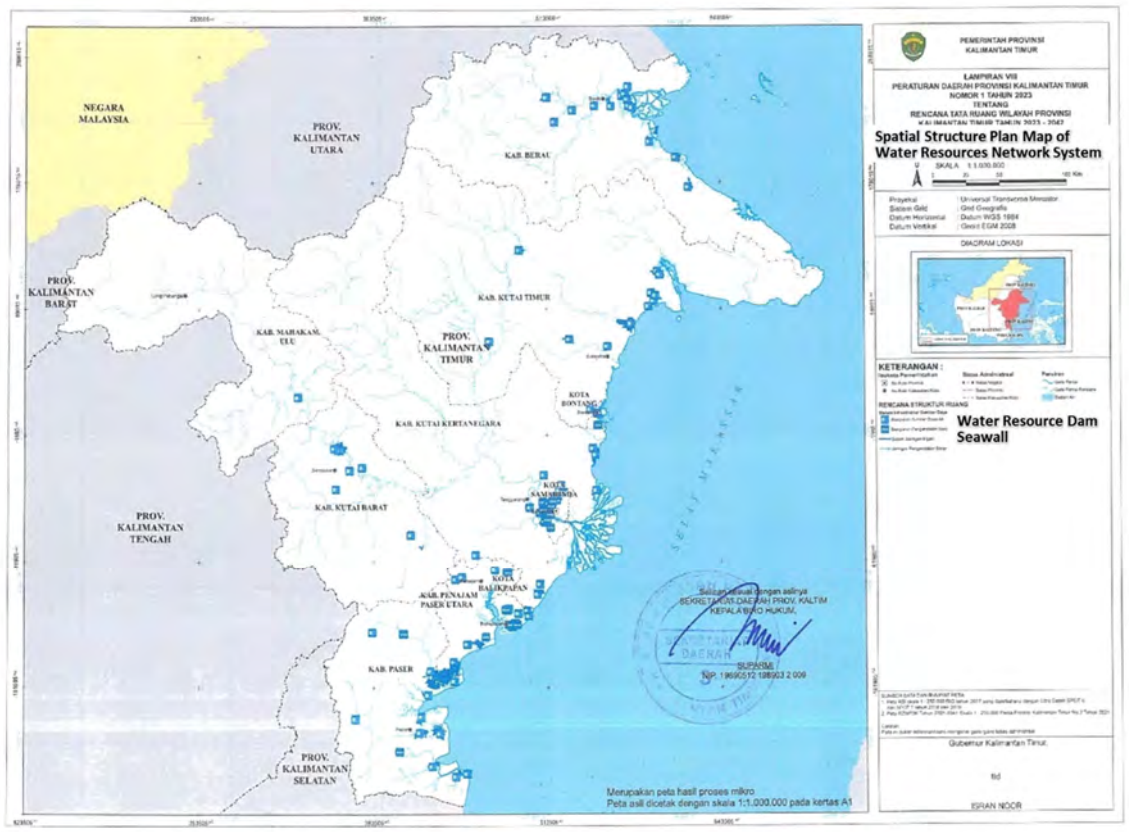
Table 2-59 Potential for Regional SPAM Implementation

No.	Potensi Spam Regional Potential Regional SPAM	Area cakupan Covered Area	Sumber Air Baku Source of raw water	
			Nama Name	Kapasitas Capacity (little/sec)
1	KUKAR-Bontang	2 Kabupaten/Kota(5 Kec-22 kelurahan)	Bendungan Marangkayu	450 l/det
2	KUTIM-Bontang	2 Kabupaten/Kota	Waduk Ex Tambang	Up to 250 l/det
		(4 kec-21 kelurahan)	Indominco & S. Mayang	
3	KUTIM-Bontang	2 Kabupaten/Kota (4kec-21 kelurahan)	Bendali Sukarahmat	Up to 240 l/det
4	PPU-Balikpapan	IKN, 2 Kab/Kota(8Kec)	Waduk Sepaku Semoi, Waduk Sepaku	Up to 1,270 l/det
5	KUKAR-Balikpapan	IKN, 2 Kab/Kota(8Kec)	Waduk Batu Lepek	5,000 l/det
6	Paser-PPU	2 Kab/Kota (2Kec)	Bendung Telake	210 l/det

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

According to East Kalimantan Province Regional Spatial Plan 2016-2036, a water resources network system is in Article 20. And it describes river basins and water resources conservation. Although the names of existing and planned projects are listed in Appendix VI, future locations and other information are only mentioned in the Regional Infrastructure Network Plan Map. Article 48 also provides directions for zoning regulations for infrastructure networks. The directions for regulations on water resource network systems include 'consideration for the protection of springs and areas prone to natural disasters' and 'tourism, provided that it does not damage the water quality in the vicinity of the natural resource network'.

The spatial structure plan of the water resource system network according to the East Kalimantan Regional Spatial Plan 2023-2042 is shown below. This figure shows the locations of water resource dams, flood barriers, etc.



Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-88 Water Resources Network System Planning Chart

According to SPAM Master Plan for East Kalimantan Province, the plans are listed as follows, which is based on the contents of the long-term and Middle-term development plans etc.

1) Collection of secondary data as a basis for RISPAM preparation

2) Review and evaluation of existing planning documents

3) Tables of existing SPAMs relating to technical and non-technical aspects

4) Water demand

5) Assessment of potential raw water sources

6) Regional SPAM development master plans

7) Analysis of SPAM alternatives for each region

8) Institutional development

Idle capacity in East Kalimantan Province is 1,371.85 liter/sec, representing approximately 15.11% of the total. Raw water sources from deep wells and water treatment plants (Instalasi Pengolahan Air (IPA)) exceed capacity, and it is leaving 898.08 liter/sec (9.89%) of capacity available for service improvement and pipe network expansion.

The water loss is 26.72% of the total volume.

Table 2-60 Overview of PDAM Pipeline Network in East Kalimantan Province

No.	Kabupaten/KOTA Regency/City	Jumlah Penduduk (2020) Population	Jumlah Unit Number of Households	Kapasitas (l/det) Capacity (little/sec)								Rata-Rata Dstribusi(jam) Average Distribution (hours)	Kehilangan Air (%) Water Loss	Jumlah Sambungan Number of Connection		Pelayanan Penduduk(jiwa) Watar Supply Population	Cakupan Pelayanan Administrasi(%) Service Area
				Kapasitas Intake Raw water capacity	Kapasitas IPA IPA Capacity	Over Kapasitas Over Capacity	Kapasitas Produksi Production Capacity	Distribusi Distribution	Kapasitas Air Terjual Sold Water Capacity	Idle Capacity Idle Capacity	Idle Capacity (%) Idle Capacity			SR Domestik Households in the area	SR Non Domestik Households outside the area		
	Kabupaten																
1	Paser	275,452	9	455	405.00	3.24	327.99	316.69	220.03	80.25	19.81	24.00	24.53	25,392	1,309	103,080	46.09
2	Kutai Barat	165,938	15	221	320.00	0.00	219.30	194.50	155.40	100.70	31.47	7.73	19.83	15,628	352	78,140	47.09
3	Kutai Kartanegara	729,382	37	1,535	1,816.50	83.80	1,707.10	1,151.51	999.13	193.20	10.64	15.73	33.33	92,334	1,708	127,905	63.30
4	Kutai Timur	434,459	27	1,202	650.00	0.00	457.47	421.19	335.61	192.53	29.62	13.59	33.71	36,400	6,880	128,875	41.89
5	Berau	238,214	18	780	925.00	0.00	750.00	686.80	607.50	175.00	18.92	9.89	15.12	31,276	4	160,155	65.85
6	Penajam Paser Utara	181,349	5	158	340.00	1.86	150.80	137.79	97.22	191.06	56.19	12.40	13.08	10,801	254	54,005	29.78
7	Mahakam Ulu	35,010	9	35	42.00	0.00	0.00	0.00	0.00	42.00	100.00	-	-	1,028	-	5,140	-
	Kota																
8	Balikpapan	688,318	8	2,180	1,510.00	44.12	1,428.97	1,343.30	840.78	125.15	8.29	24.00	44.07	109,347	2	94,050	79.43
9	Samarinda	827,994	14	3,450	2,540.00	252.53	2,612.95	2,366.95	1,459.65	179.58	7.07	21.86	35.76	146,434	12,239	628,655	88.43
10	Bontang	178,917	11	605	530.00	0.00	406.71	424.53	424.53	92.38	17.43	22.00	21.02	24,898	5,197	124,490	69.58
	Jumlah Total	**3,755,033**	**148**	**10,621**	**9,078.50**	**385.55**	**8,061.29**	**7,043.26**	**5,139.86**	**1,371.85**	**15.11**	**16.80**	**26.72**	**493,538**	**27,945**	**1,504,495**	**53.12**

Source: SPAM Master Plan for East Kalimantan Province

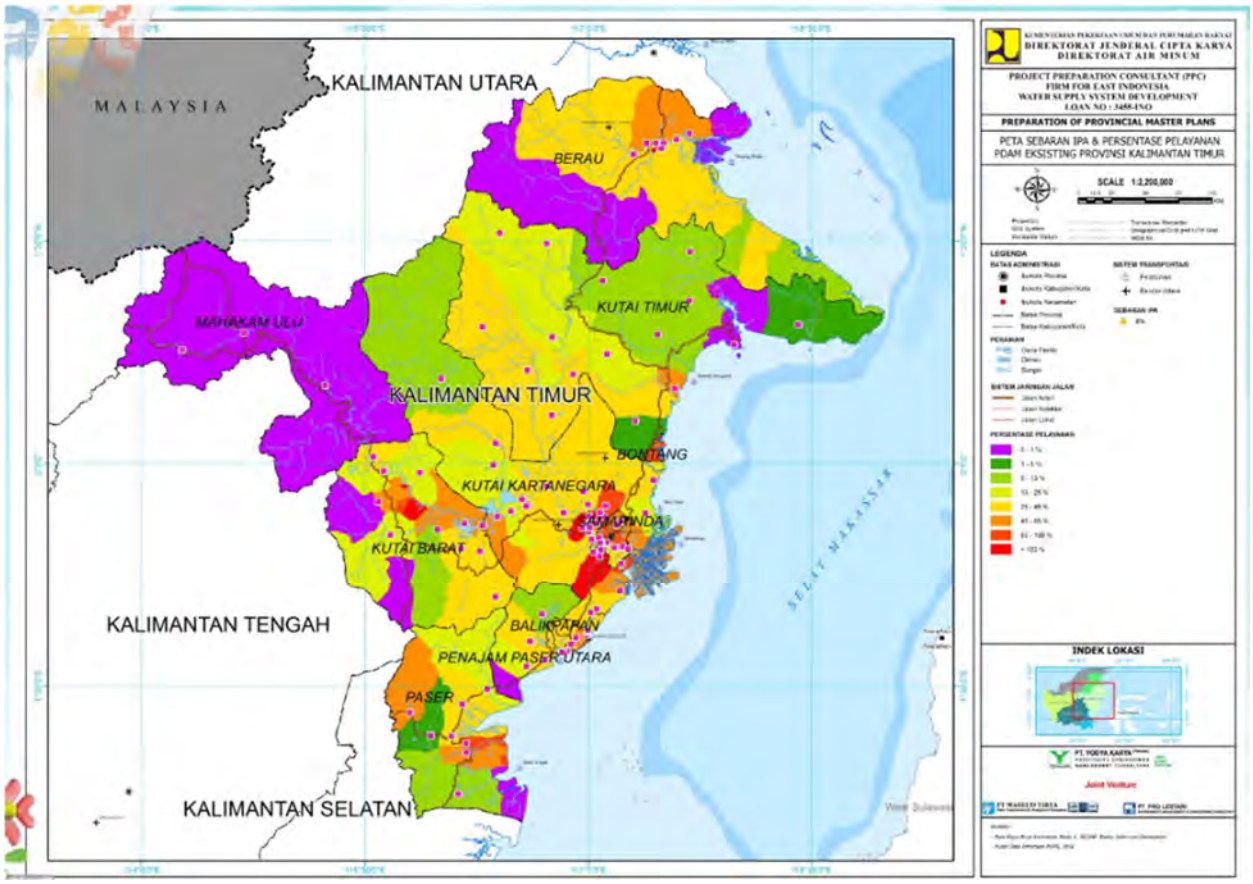
Idle capacity in Balikpapan City is 125.15 liter/sec (8.29%), which is due to the limited distribution pipe network and the inability to increase production capacity because of raw water shortages. In addition, because of limited raw water sources, most water treatment plants use water sources from deep wells. It is necessary to procure raw water sources and bulk water.

The water loss in Balikpapan City is 669.22 liter/sec (44.07%), which is caused by broken water meters of many customers, old water distribution pipes and frequent leakages. As a response measures, leakage conditions should be investigated, and water meters should be replaced/upgraded and old pipes should be upgraded (e.g. high-density polyethylene piping materials).

Idle capacity in Samarinda City is 179.58 liter/sec (7.07%), which is due to the presence of six water treatment plant units with excess capacity. As the idle capacity is difficult to utilize because of the lack of interconnection, it is necessary to expand the service area and upgrade the water treatment plants by adding or updating water treatment plants that are already over capacity.

The water loss in Samarinda City is 1,080.34 liter/sec (35.76%), which, as in Balikpapan City, is due to damaged customer water meters, old water distribution pipes and frequent leakages. Proposed measures include investigating the state of leakage, replacing/updating water meters and renewing old pipes (e.g. high-density polyethylene piping materials).

As shown the following figure, the distribution map of water treatment plants and the percentage of PDAM services shows that the area around Balikpapan City and Samarinda City has a higher number of water treatment plants and percentage of services.



Source: SPAM Master Plan for East Kalimantan Province

Figure 2-89 Distribution of Water Treatment Plants and Percentage of Existing PDAM Services

In East Kalimantan Province, the proportion of decent drinking water is planned to be 79.23% in 2024 falling short of the national target of 100%.

The percentage of pipeline networks (JP: Jaringan Perpipaan, not limited to PDAM) and non-pipeline networks (BJP: Bukan Jaringan Perpipaan) in East Kalimantan Province is shown below. In East Kalimantan Province, the pipeline and non-pipeline networks account for 54.59% and 24.72% respectively, for a total service provision rate of 79.31%.

Balikpapan City is 79.43% served by the pipeline network and 19.13% by the non-pipeline network, for a total service provision rate of 98.56%.

Samarinda City has 88.43% in the pipeline network and 9.22% in the non-pipeline network, for a total service provision rate of 97.64%.

Table 2-61 Status of Pipe and Non-Pipe Networks in East Kalimantan Province

No.	Kabupaten/KOTA Regency/City	JP(%) Pipe	BJP(%) Non-Pipe	Jumlah Pelyanan(%) Number of service
	Kabupaten			
1	Paser	46.09	37.37	83.46
2	Kutai Barat	47.09	32.44	79.53
3	Kutai Kartanegara	63.30	25.46	88.76
4	Kutai Timur	41.89	25.62	67.51
5	Berau	65.65	20.92	86.57
6	Penajam Paser Utara	29.78	57.02	86.80
7	Mahakam Ulu	14.68	0.00	14.68
	Kota			
8	Balikpapan	79.43	19.13	98.56
9	Samarinda	88.43	9.22	97.64
10	Bontang	69.58	20.01	89.59
	Rata-Rata Average	**54.59**	**24.72**	**79.31**

Source: SPAM Master Plan for East Kalimantan Province

An overview of the non-pipeline network in East Kalimantan Province is showed below. In whole East Kalimantan Province, the total number of users of drilled wells/pumps, protection wells, springs and rainwater are 170,163 households. The breakdown is dominated by users of drilled wells and protection wells with 127,609 households (74.99%).

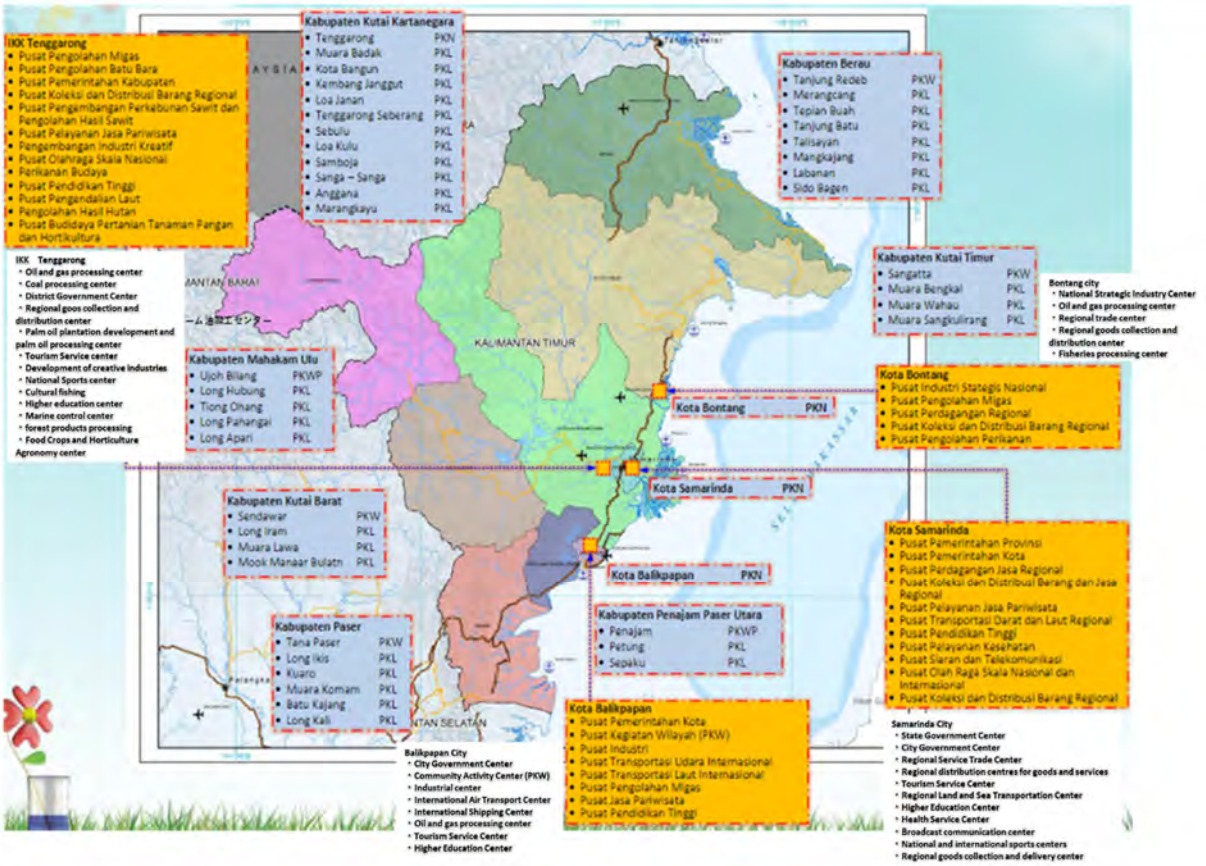
Balikpapan City has a total of 26,329 households that are users of drilled and protection wells.

Samarinda City has a high number of users of drilled and protected wells with a total of 15,263 households.

The reasons for not meeting the RISPAM target include the fact that Balikpapan City has an old pipe network with many leaks and uses groundwater sources due to limited raw water sources. Similarly, Samarinda City is cited as having an old pipe network with many leaks.

In the expected water quantity needs in East Kalimantan Province, facilities in four cities (Tenggarong in Kutai Kartanegara Regency (IKK), Balikpapan City, Samarinda City and Bontang City) are specifically mentioned as development direction in spatial planning. The anticipated facilities are shown in the following figure.

National activity centers (PKN) and community activity centers (PKW and PKL) are also mentioned for other cities.

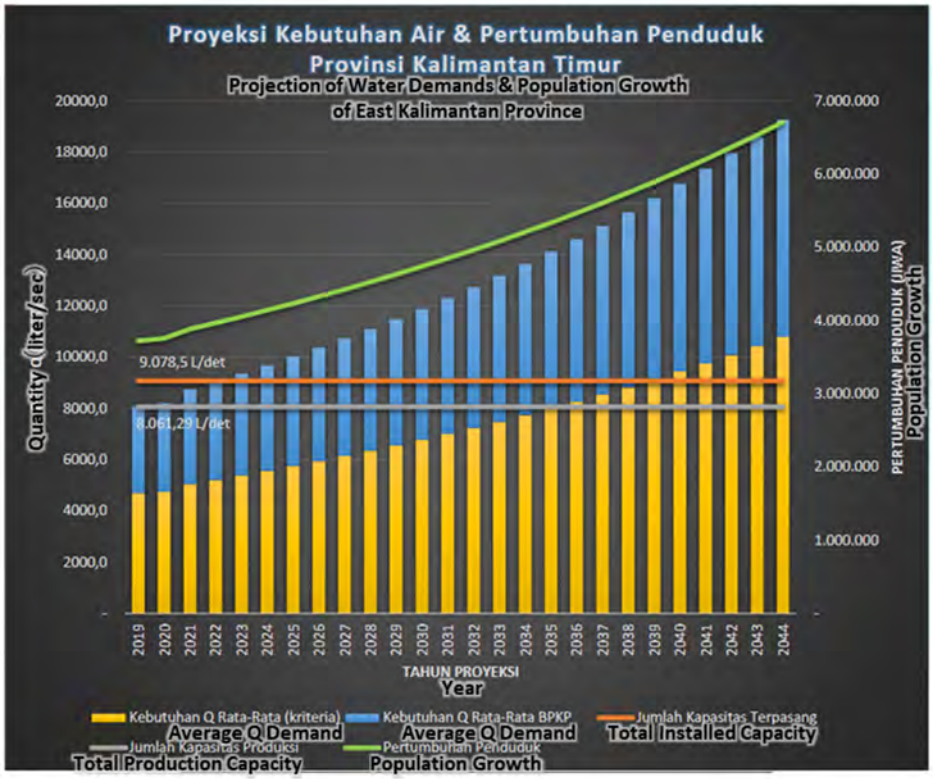


Source: SPAM Master Plan for East Kalimantan Province

Figure 2-90 Direction of Development in East Kalimantan Province

Projected water demand and population growth in East Kalimantan Province are presented below.

The drinking water access target for East Kalimantan Province (population of approximately 6.7 Million) is to have 100% service (80% piped access and 20% non-piped access) in 2044, with a total demand of 19,274 liter/sec.



Source: SPAM Master Plan for East Kalimantan Province

Figure 2-91 Projected Water Demand and Population Growth in East Kalimantan Province

The following is a breakdown of the population projections for East Kalimantan Province for water supply demand projections in 2044: 995,906 for Balikpapan City and 1,484,166 for Samarinda City.

Table 2-62 Population Projections for East Kalimantan Province

No.	Kabupaten/KOTA Regency/City	Jumlah Penduduk(Jiwa) Popolation Projection (person)							Nilai R R Value
		2019	2020	2024	2029	2034	2039	2044	
	Kabupaten								
1	Paser	265,354	275,452	296,468	331,254	370,150	413,644	462,286	2.25
2	Kutai Barat	163,142	165,938	173,731	185,360	198,169	212,324	228,018	2.84
3	Kutai Kartanegara	786,123	729,382	887,718	1,006,505	1,145,985	1,310,491	1,505,418	2.37
4	Kutai Timur	376,111	434,459	439,295	513,105	599,328	700,055	817,729	3.15
5	Berau	232,287	238,214	268,354	313,776	371,118	443,667	535,631	1.89
6	Penajam Paser Utara	160,912	181,349	176,243	193,114	211,688	232,149	254,699	1.07
7	Mahakam Ulu	30,321	35,010	38,671	50,838	68,849	95,842	136,685	0.51
	Kota								
8	Balikpapan	655,178	688,318	711,080	772,471	839,947	914,176	995,906	1.42
9	Samarinda	872,770	827,994	952,472	1,048,962	1,166,219	1,309,215	1,484,166	0.81
10	Bontang	181,618	178,917	196,669	214,241	234,877	259,245	288,178	2.21
	Jumlah Total	**3,723,816**	**3,755,033**	**4,140,701**	**4,629,626**	**5,206,330**	**5,890,810**	**6,708,714**	**1.85**

Source: SPAM Master Plan for East Kalimantan Province

Demand and supply projections for East Kalimantan Province are presented below.

As of 2044, Balikpapan City and Samarinda City are under supplied by 906,14 liter/sec and 1,956,63 liter/sec, respectively.

Table 2-63 Demand and Supply in East Kalimantan Province

No.	Kabupaten/KOTA Regency/City	Satuan Unit	2019			2024			2029			2034			2039			2044		
			Demand Demand	Supply Supply	Sisa Difference	Demand Demand	Supply Supply	Sisa Difference	Demand Demand	Supply Supply	Sisa Difference	Demand Demand	Supply Supply	Sisa Difference	Demand Demand	Supply Supply	Sisa Difference	Demand Demand	Supply Supply	Sisa Difference
	Kabupaten																			
1	Paser	liter/detik	324.93	327.99	3.06	453.72	327.99	-125.73	596.19	327.99	-268.20	761.28	327.99	-433.29	951.84	327.99	-623.85	1,171.01	327.99	-843.02
2	Kutai Barat	liter/detik	172.06	219.30	47.24	227.18	219.30	-7.88	288.87	219.30	-69.57	358.11	219.30	-138.81	436.02	219.30	-216.72	523.96	219.30	-304.66
3	Kutai Kartanegara	liter/detik	1,673.41	1,707.10	33.69	2,085.46	1,707.10	-378.36	2,550.18	1,707.10	-843.08	3,099.33	1,707.10	-1,392.23	3,750.22	1,707.10	-2,043.12	4,524.14	1,707.10	-2,817.04
4	Kutai Timur	liter/detik	495.50	457.47	-38.03	742.69	457.47	-285.22	1,041.04	457.47	-583.57	1,406.09	457.47	-948.62	1,849.71	457.47	-1,392.24	2,385.56	457.47	-1,928.09
5	Berau	liter/detik	689.00	750.00	61.00	863.53	750.00	-113.53	1,084.28	750.00	-334.28	1,365.44	750.00	-615.44	1,725.38	750.00	-975.38	2,187.78	750.00	-1,437.78
6	Penajam Paser Utara	liter/detik	93.72	150.80	57.08	155.44	150.80	-4.64	226.18	150.80	-75.38	307.00	150.80	-156.20	399.06	150.80	-248.26	503.66	150.80	-352.86
7	Mahakam Ulu	liter/detik	5.44	42.00	36.56	13.09	42.00	28.91	26.96	42.00	15.04	49.13	42.00	-7.13	85.13	42.00	-43.13	144.09	42.00	-102.09
	Kota																			
8	Balikpapan	liter/detik	1,481.83	1,428.97	-52.86	1,631.43	1,428.97	-202.46	1,791.27	1,428.97	-362.30	1,961.68	1,428.97	-532.71	2,142.91	1,428.97	-713.94	2,335.11	1,428.97	-906.14
9	Samarinda	liter/detik	2,758.60	2,612.95	-145.65	3,032.60	2,612.95	-419.65	3,319.81	2,612.95	-706.86	3,663.08	2,612.95	-1,050.13	4,074.71	2,612.95	-1,461.76	4,569.58	2,612.95	-1,956.63
10	Bontang	liter/detik	411.00	406.71	-4.29	483.50	406.71	-76.79	567.98	406.71	-161.27	667.75	406.71	-261.04	786.55	406.71	-379.84	929.14	406.71	-522.43
	Jumlah Total	liter/detik	**8,105.48**	**8,103.29**	**-2.19**	**9,688.64**	**8,103.29**	**-1,585.35**	**11,492.76**	**8,103.29**	**-3,389.47**	**13,638.89**	**8,103.29**	**-5,535.60**	**16,201.54**	**8,103.29**	**-8,098.25**	**19,274.03**	**8,103.29**	**-11,170.74**

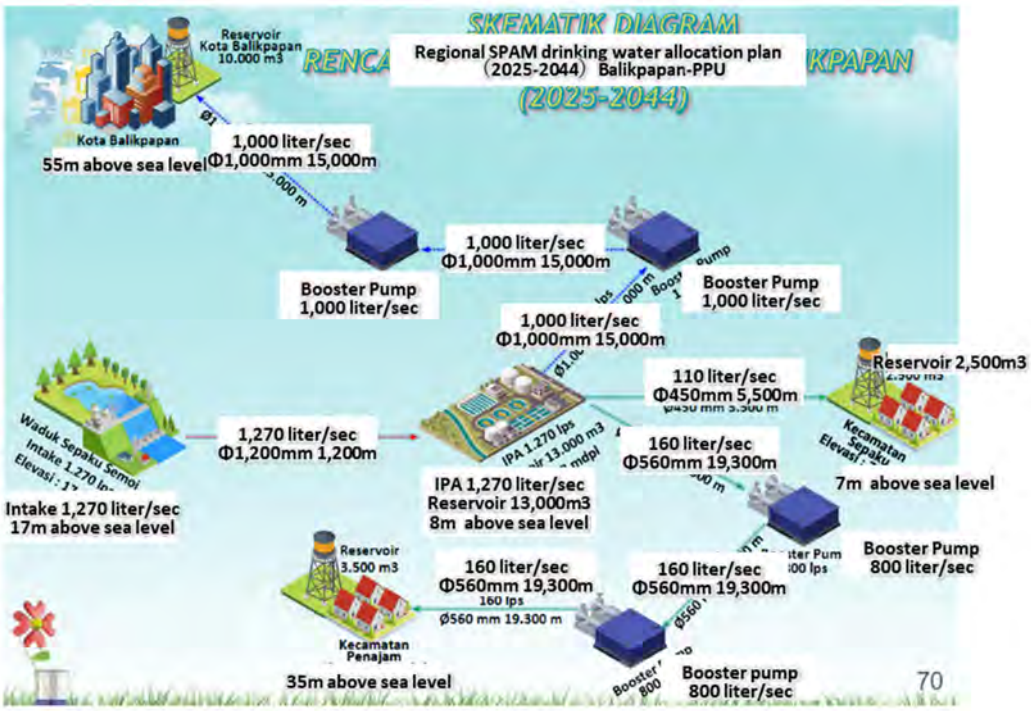
Source: SPAM Master Plan for East Kalimantan Province

The following is the plan for the allocation of drinking water by the regional SPAM. Of the 1,270 liter/sec from Sepaku Semoi Dam, 1,000 liter/sec will be supplied to Balikpapan City, 110 liter/sec to Sepaku District, and 160 liter/sec to Penajam District. Balikpapan City will be supplied with 200 liter/sec from Teritip dam and 150 liter/sec from Aji Raden dam.



Source: SPAM Master Plan for East Kalimantan Province

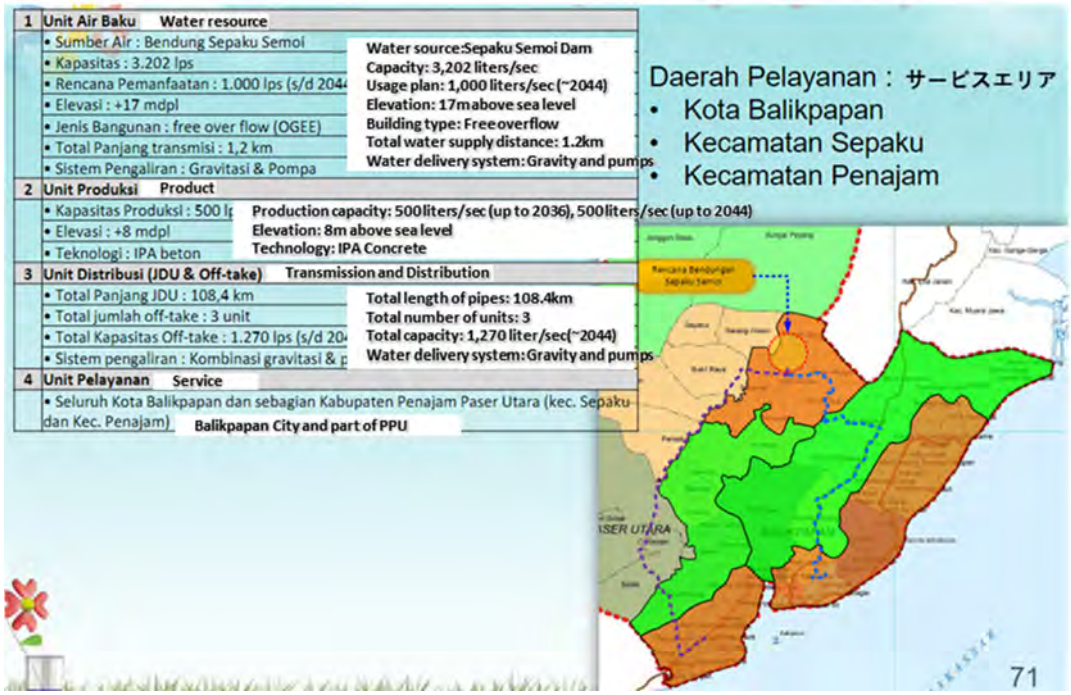
Figure 2-92 Balikpapan City PPU Regional SPAM Drinking Water Allocation Scheme



Source: SPAM Master Plan for East Kalimantan Province

Figure 2-93 Regional SPAM Future Plan Balikpapan City・PPU

The details of water from Sepaku Semoi Dam are shown below. They are planned to be allocated to Balikpapan City, Sepaku District and Penajam District.



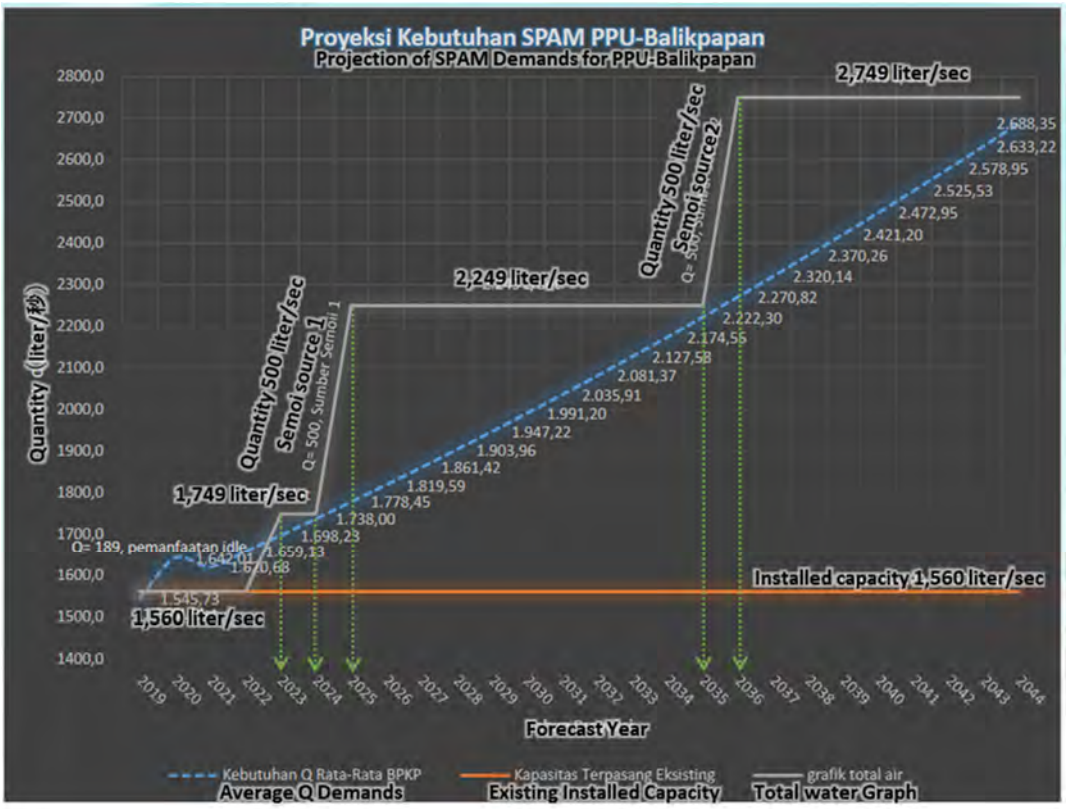
Source: SPAM Master Plan for East Kalimantan Province

Figure 2-94 The details of water from Sepaku Semoi Dam

The water to be supplied to Balikpapan City from Sepaku Semoi dam is planned to be 500

liter/sec in Stage 1 (2025-) and 500 liter/sec in Stage 2 (2036-), for a total of 1,000 liter/sec in the two stages as shown the following figure.

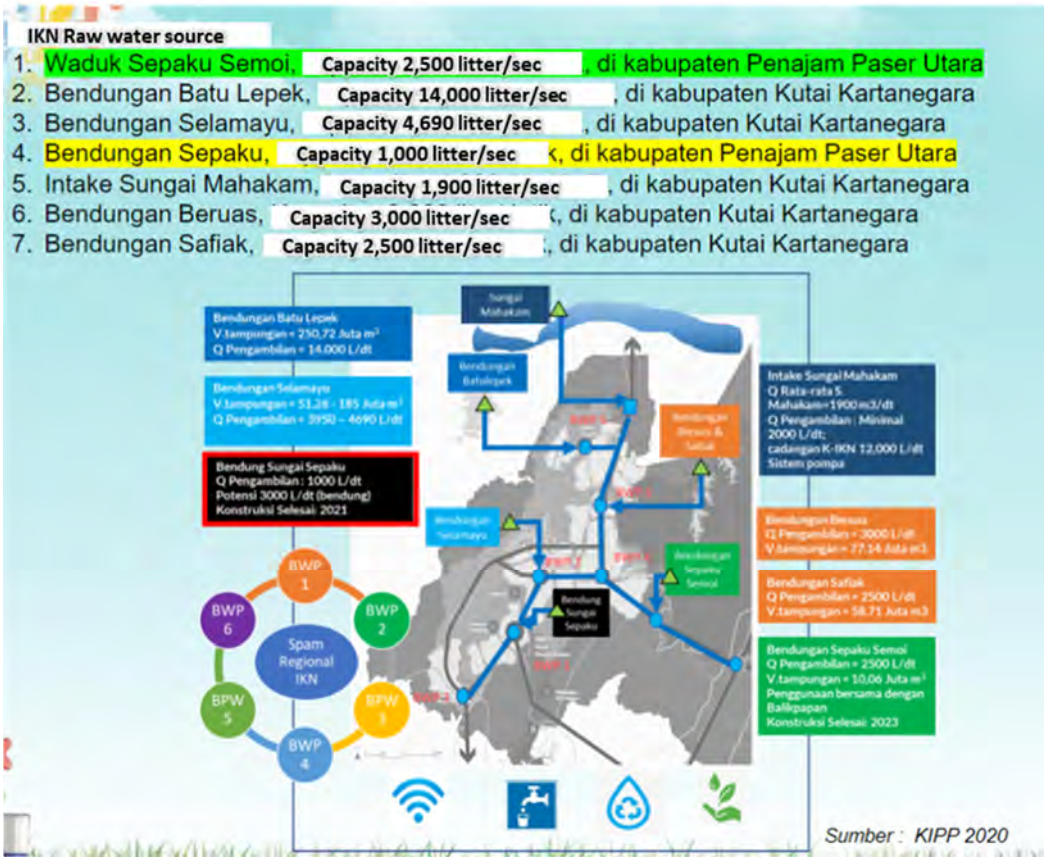
The existing water treatment plant has a capacity of 1,560 liter/sec, and the Plan is to satisfy the demand by utilizing a total of 1,000 liter/sec from the Sepaku Semoi dam.



Source: SPAM Master Plan for East Kalimantan Province

Figure 2-95 Demand Projections for Regional SPAM

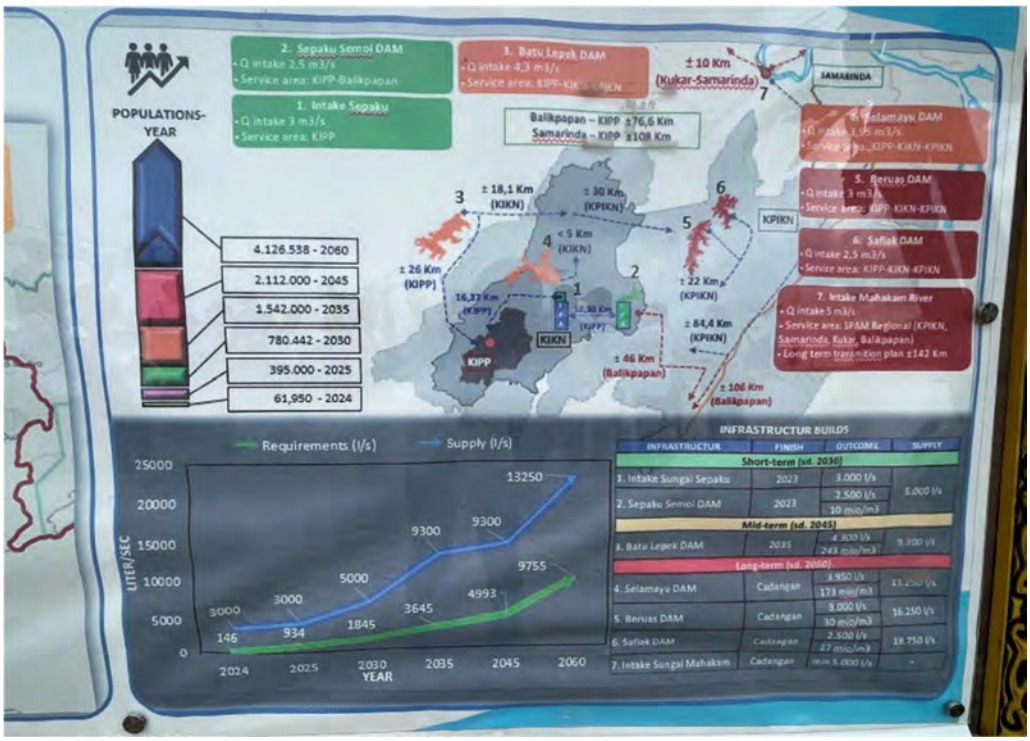
The following is a list of planned water sources in IKN. The use of water sources in the surrounding area as well as the Sepaku Semoi Dam and Sepaku Intake are planned.



Source: SPAM Master Plan for East Kalimantan Province

Figure 2-96 National Capital SPAM Program

As shown in the following figure, which can be seen in the photo posted at the Sepaku Semoi Dam site, the dam is planned to be built with seven water sources.



Source: Photographed on-site by survey team

Figure 2-97 Photographs posted at the site of the Sepaku Semoi Dam

(21) Sewage and Drainage

According to East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, as shown the following table, 81.79% of the population receives sanitation services in East Kalimantan Province, although no specific indicators are given for sewerage. On the other hand, safety outcomes have been negligible because of amounting to less than about 5%.

In East Kalimantan Province, 92.83% of the population will be treated in septic tanks by 2022 (March), which is above the national average. On the other hand, many households dispose of fecal matter directly in various parts of the natural environment, which needs to be addressed.

Table 2-64 Outcomes for the Sewerage Sector in 2022

Kabupaten/Kota Regency/City	Jumlah Penduduk(Jiwa) Popolation Projection (person)	Air Limbah	
		Layak(%) Decent	Aman(%) Safe
Balikpapan	718,423	91.40	9.18
Penajam Paser Utara	186,801	95.68	3.70
Paser	288,225	71.24	0.71
Bontang	185,928	94.93	7.63
Kutai Timur	424,743	89.10	2.70
Berau	263,150	88.45	3.35
Samarinda	838,935	78.02	7.95
Kutai Kartanegara	753,862	75.02	0.32
Kutai Barat	170,871	59.82	1.59
Mahakam Ulu	35,274	52.50	2.91
Kaltim 2022 East Kalimantan Province 2022	**3,866,212**	**81.79**	**4.71**

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Implementation of a sewage treatment system on the scale of East Kalimantan Province is limited to the initial stage. A Regional Sewage Treatment System Master Plan has been prepared and six service zones have been established, including Samarinda City and Balikpapan City.

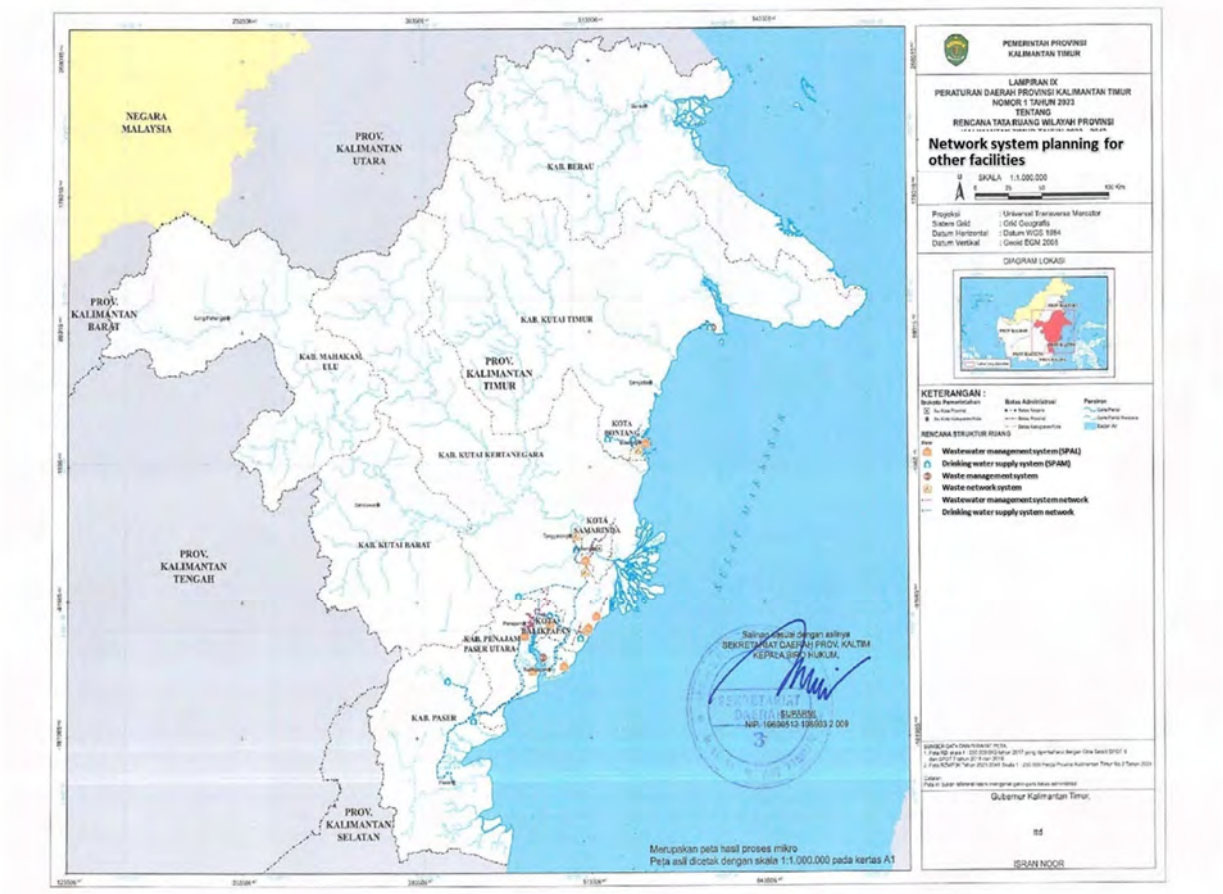
The service target plan that is shown the following table expects safe access to sanitation services for 766,571 persons by 2041.

Table 2-65 Service Objectives for Regional Sewage Treatment Systems

Kabupaten/Kota Regency/City		Tahun 2020 Stage		Renc. Tahap 1 (s.d 2023) Stage 1		Renc. Tahap 2 (s.d 2028) Stage 2		Renc. Tahap 3 (s.d 2041) Stage 3	
		%	Jiwa Person	%	Jiwa Person	%	Jiwa Person	%	Jiwa Person
Zona 1	Bontan, Kutim, Kukar	1.80	1,429	15.00	15,709	50.00	58,553	60.00	96,009
Zona 2A	Samarinda-Kukar (Sambutan-Anggana)	1.40	815	15.00	12,828	50.00	48,724	60.00	83,136
Zona 2B	Samarinda-Kukar(Palaran-Sanga-sanga)	0.70	366	15.00	11,585	50.00	44,656	60.00	78,145
Zona 2C	Samarinda-Kukar(Samarinda Severang-Loa Janan-Loa Janan Hilir)	2.51	3,330	15.00	27,968	50.00	106,600	60.00	182,989
Zona 3	Balikpapan-Kukar-PPU(Balikpapan Barat-Loa Janan-Samboja-Sepaku)	2.33	2,977	15.00	25,606	50.00	94,369	60.00	151,627
Zona 4	Balikpapan-Kukar(Balikpapan Utara-Samboja)	4.38	6,649	15.00	28,541	50.00	106,458	60.00	174,665
TOTAL RENCANA LAYANAN Total Service Plan			**15,566**		**122,237**		**459,360**		**766,571**

Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Plans for other infrastructure system networks (including SPAM and SPAL) are shown below. East Kalimantan Province Regional Spatial Plan also describes the facilities required for the sewage treatment system and drinking water supply system.



Source: East Kalimantan Province Regional Spatial Plan 2023-2042

Figure 2-98 Other Infrastructure Network System Planning Diagram

According to the Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021), as shown the following table, the percentage of households with access to adequate sanitation in East Kalimantan Province was 74.47%, Samarinda City was 72 .90% and 95.11% in Balikpapan City in 2019.

Table 2-66 Percentage of Households with Access to Adequate Sanitation in East Kalimantan Province in 2019

No.	Kabupaten/KOTA Regency/City	Jumlah KK dengan Akses Jamban Sehat Permanen(JSP) Individual Permanent Toilets	Jumlah KK dengan Akses Jamban Sehat Semi Permanen(JSSP) Individual semi-	Jumlah KK dengan Akses Jamban Sharing(JSH) Shared Toilet	Jumlah KK dengan Akses Tangki Septik Layak Septic tanks, etc.	Jumlah KK yang BABS Open defecation, etc.	Akses Air Limbah Layak(%) Decent Sewer Access	BABS(%) Open defecation, etc.	Akses Air Limbah aman(%) Safe Sewer Access
1	Paser	41,320	15,489	3,933	60,742	6,186	69.78	7.11	0.37
2	Penajam Paser Utara	26,034	9,760	5,168	40,962	3,502	73.82	6.31	0.26
3	Kutai Barat	21,083	12,572	2,716	36,371	8,558	71.60	16.85	0.95
4	Kutai Kartanegara	105,343	15,024	1,971	122,338	62,592	54.98	28.13	0.29
5	Kutai Timur	80,703	22,230	979	80,703	9,363	65.69	7.62	2.46
6	Berau	-	-	-	70,019	9,281	88.30	11.70	2.86
7	Mahakam Ulu	2,414	147	781	3,342	4,318	32.62	42.15	2.93
8	Balikpapan	138,041	34,343	10,889	183,273	-	72.90	0.00	1.11
9	Samarinda	174,129	32,848	10,406	217,383	8,725	95.11	3.82	8.47
10	Bontang	45,750	3,987	3,274	53,011	-	92.15	0.00	2.64
	Total Kaltim Total East Kalimantan Province	634,817	146,400	40,117	868,145	112,525	74.47	9.65	2.58

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

As shown the following table, the goal of achieving 90% sanitation in East Kalimantan Province and 100% in Samarinda City and Balikpapan City is set by 2024.

Table 2-67 Percentage of Targets to be Achieved for Eligible Sanitation Facilities

No.	Kabupaten/KOTA Regency/City	BaseLine 2019 (%) Base Line	Tahun Year				
			2020	2021	2022	2023	2024
1	KOTA BONTANG	92.15	92.54	93.33	95.29	97.65	100.00
2	KOTA SAMARINDA	72.90	74.26	76.97	83.74	91.87	100.00
3	KOTA BALIKPAPAN	95.11	95.36	95.85	97.07	98.53	100.00
4	PENAJAM PASER UTARA	73.82	74.63	76.25	80.29	85.15	90.00
5	KUTAI TIMUR	65.69	66.41	67.84	71.41	75.71	80.00
6	BERAU	88.30	88.78	89.75	92.18	95.09	98.00
7	PASER	69.78	70.29	71.31	73.87	76.93	80.00
8	KUTAI BARAT	71.60	71.97	72.71	74.56	76.78	79.00
9	KUTAI KARTANEGARA	54.98	55.98	57.99	62.99	68.99	75.00
10	MAHAKAM HULU	32.62	33.49	35.23	39.57	44.79	50.00
	PROVINSI East Kalimantan Province	74.47	75.25	76.80	80.68	85.34	90.00

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

As shown the following table, the goal of 13% safe sanitation in East Kalimantan Province, 12% safe sanitation in Samarinda City and 26% safe sanitation in Balikpapan City respectively is set to be achieved by 2024.

Table 2-68 Percentage of Safe Sanitation Facilities Meeting Targets

No.	Kabupaten/KOTA Regency/City	BaseLine 2019 (%) Base Line	Tahun Year				
			2020	2021	2022	2023	2024
1	KOTA BONTANG	2.64	3.00	3.74	5.58	7.79	10.00
2	KOTA SAMARINDA	1.11	1.66	2.75	5.47	8.73	12.00
3	KOTA BALIKPAPAN	8.47	9.35	11.10	15.48	20.74	26.00
4	PENAJAM PASER UTARA	0.26	0.60	1.27	2.96	4.98	7.00
5	KUTAI TIMUR	2.46	2.79	3.44	5.08	7.04	9.00
6	BERAU	2.86	3.22	3.93	5.72	7.89	10.00
7	PASER	0.37	0.75	1.51	3.42	5.71	8.00
8	KUTAI BARAT	0.95	1.25	1.85	3.37	5.18	7.00
9	KUTAI KARTANEGARA	0.29	0.78	1.75	4.18	7.09	10.00
10	MAHAKAM HULU	2.93	3.28	3.99	5.76	7.88	10.00
PROVINSI East Kalimantan Province		**2.58**	**3.10**	**4.14**	**6.75**	**9.87**	**13.00**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

As shown the following table, the population of East Kalimantan Province for sewage and drainage plan has been increasing since 2015 and estimated to be 3,766,645 in 2020.

Table 2-69 Population Trends in East Kalimantan Province

No.	Kabupaten/KOTA Regency/City	Jumlah Penduduk (jiwa) Population Projection (person)					
		2015	2016	2017	2018	2019	2020
1	KOTA SAMARINDA	755,604	820,758	769,632	781,193	793,576	817,254
2	KOTA BALIKPAPAN	611,331	618,128	633,196	649,806	670,505	697,079
3	KOTA BONTANG	164,258	173,770	176,515	179,408	181,618	184,784
4	PASER	242,786	248,037	255,648	259,417	261,478	290,970
5	PENAJAM PASER UTARA	159,479	166,055	168,012	170,475	173,671	181,349
6	KUTAI TIMUR	413,508	415,553	418,625	420,760	418,169	424,334
7	KUTAI KARTANEGARA	655,167	662,481	674,759	677,755	696,784	709,829
8	KUTAI BARAT	156,953	158,085	160,000	162,200	153,931	174,597
9	BERAU	208,274	211,512	221,836	224,654	232,189	251,439
10	MAHAKAM HULU	24,291	24,381	26,938	28,833	30,321	35,010
JUMLAH Total		**3,391,651**	**3,498,760**	**3,505,161**	**3,554,501**	**3,612,242**	**3,766,645**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

As shown the following table, the number of households in 2020 is 1,229,906 and the population density is 29.57 persons/km^2.

Table 2-70 Population, Households, and Density in East Kalimantan Province in 2020

No.	Kabupaten/KOTA Regency/City	Luas Area (Km^2) Area	L(Jiwa) Man	P(Jiwa) Woman	Jumlah Penduduk(Jiwa) Total Population	Jumlah KK Number of Households	Kepadatan Penduduk (Jiwa/Km^2) Population Density
1	KOTA SAMARINDA	716.53	416,182	401,072	817,254	266,232	1,155.57
2	KOTA BALIKPAPAN	512.25	356,643	340,436	697,079	236,293	1,343.73
3	KOTA BONTANG	163.14	96,023	88,761	184,784	58,676	1,096.69
4	Kab. PASER	11,096.96	151,060	139,910	290,970	91,147	24.82
5	Kab. PENAJAM PASER UTARA	2,923.73	93,955	87,394	181,349	57,806	61.11
6	Kab. KUTAI TIMUR	31,051.71	226,969	197,365	424,334	132,827	13.99
7	Kab. KUTAI KARTANEGARA	25,988.08	370,163	339,666	709,829	237,482	28.07
8	Kab. KUTAI BARAT	13,709.92	91,413	83,184	174,597	53,682	12.57
9	Kab. BERAU	21,735.19	133,482	117,957	251,439	83,923	11.41
10	Kab. MAHAKAM HULU	19,449.41	18,676	16,334	35,010	11,838	1.67
JUMLAH Total		**127,346.92**	**1,954,566**	**1,812,079**	**3,766,645**	**1,229,906**	**29.57**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

The population breakdown for Samarinda City in 2020 is as follows.

Table 2-71 Demographics of Samarinda City in 2020

No.	Kabupaten Regency	L(Jiwa) Man	P(Jiwa) Woman	Jumlah Penduduk(Jiwa) Total Population	Jumlah KK Number of Households
1	PALARAN	31,806	29,794	61,600	20,150
2	SAMRINDA SEBERANG	32,531	31,081	63,612	20,788
3	SAMARINDA ULU	66,327	64,630	130,957	43,368
4	SMARINDA ILIR	35,661	34,291	69,952	22,943
5	SAMARINDA UTARA	52,137	50,123	102,260	32,281
6	SUNGAI KUNJANG	66,037	63,791	129,828	42,069
7	SAMBUTAN	28,646	27,379	56,025	17,516
8	SUNGAI PINANG	53,276	51,815	105,091	34,301
9	SAMARINADA KOTA	16,692	16,485	33,177	11,421
10	LOA JANAN ILIR	33,069	31,683	64,752	21,395
TOTAL Total		**416,182**	**401,072**	**817,254**	**266,232**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

The population breakdown for Balikpapan City in 2020 is as follows

Table 2-72 Demographics of Balikpapan City

No.	Kabupaten Regency	L(Jiwa) Man	P(Jiwa) Woman	Jumlah Penduduk(Jiwa) Total Population	Jumlah KK Number of Households
1	BALIKPAPAN BARAT	49,646	46,625	96,271	32,489
2	BALIKPAPAN KOTA	44,034	42,235	86,269	30,503
3	BALIKPAPAN SELATAN	74,904	72,109	147,013	49,742
4	BALIKPAPAN TENGAH	54,687	52,853	107,540	37,762
5	BALIKPAPAN TIMUR	46,431	43,563	89,994	29,540
6	BALIKPAPAN UTARA	86,941	83,051	169,992	56,257
TOTAL Total		356,643	340,436	697,079	236,293

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

The indicators and criteria for the selected areas and the results of the analysis to solve the drainage and regional problems in East Kalimantan Province are presented below.

1) Regional Function - National Activity Center (PKN: Pusat Kegiatan Nasional)
2) It is within the regional SPAM development area
3) National Strategic Special Zone (KSN)
4) State Strategic Region (KSP)
5) Metropolitan Urban Development Area SAMBO
6) Development Area of IKN

Table 2-73 Analysis of Selected Regions in East Kalimantan Province

No.	Regency / City	Region Function	Regioanl SPAM Development Area	Nation Strategy Region	State Strategy region	Capital Region urban development ateas	IKN deevelopment area	Indicate	Notes
1.	Paser	-	-	-	1	-	-	1	
2.	Kutai Kartanegara	1	1	1	1	1	1	6	Wilayah Rencana SPALD Regional
3.	Berau	-	-	-	1	-	-	1	
4.	Kutai Barat	-	-	-	1	-	-	1	
5.	Kutai Timur	-	-	-	1	1	-	2	Wilayah Rencana SPALD Regional
6.	Penajam Paser Utara	-	1	1	1	1	1	5	Wilayah Rencana SPALD Regional
7.	Mahakam Ulu	-	-	-	1	-	-	1	
8.	Kota Balikpapan	1	1	1	1	1	-	5	Wilayah Rencana SPALD Regional
9.	Kota Samarinda	1	1	1	1	1	-	5	Wilayah Rencana SPALD Regional
10.	Kota Bontang	1	1	1	1	1	-	5	Wilayah Rencana SPALD Regional

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Based on the results of the analysis, the potential areas to be served by the regional SPALD in East Kalimantan Province are as follows. Samarinda City and Balikpapan City are the top in results.

1) Samarinda City
2) Balikpapan City

3） Bontang City

4） Kutai Kartanegara Regency

5） East Kutai Regency

6） PPU Regency

The weather conditions for the year 2020 in East Kalimantan Province are shown below. The province has a tropical climate with temperatures ranging from 22.2 degrees Celsius to 34.3 degrees Celsius and two seasons: the dry season and the rainy season. The dry season is usually from May to October, and the rainy season is from November to April.

Furthermore, due to its equatorial location, East Kalimantan Province's climate is influenced by the monsoon (west monsoon (November-April) and east monsoon (May-October)).

In recent years, however, the seasons in East Kalimantan Province have been irregular, with no rain at all in months when it is supposed to rain, or conversely, rain in months when it is supposed to be dry.

Table 2-74 Weather Conditions in East Kalimantan Province

Unsur Iklim Meteorological elements	2018	2019	2020
Suhu Temperature			
Minimum Minimum	22.20	21.70	22.20
Rata-rata Average	27.50	27.73	27.60
Maksimum Maximum	34.00	34.50	34.30
Kelembaban(%) Humidity			
Minimum Minimum	54.00	21.70	39.00
Rata-rata Average	86.73	27.73	87.00
Maksimum Maximum	100.00	34.50	100.00
Kecepatan Angin(m/det) Wind Speed			
Minimum Minimum	Calm	Calm	Calm
Rata-rata Average	3.7	42.0	19.532
Maksimum Maximum	22.0	85.67	11.308
Tekanan Angin (mb) Air Pressure			
Minimum Minimum	1,002.70	1,004.10	1,002.60
Rata-rata Average	1,009.36	1,009.36	1,008.70
Maksimum Maximum	1,020.60	1,014.40	1,014.50

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Samarinda City is in a low-lying area divided by the Mahakam River in a flat terrain. According to the table of elevation classes and areas, 42.77% of the land area of Samarinda City lies between 7 and 25 meters above sea level.

Table 2-75 Topographic Analysis of Samarinda City

No.	Kelas Ketinggian(mdpl) Altitude	Luas(Ha) Area	Persentase dari Luas Total(%) Ratio of Area
1	0-7	14,747	20.11
2	7-25	32,486	42.77
3	25-100	26,029	37.07
4	100-500	38	1.05
	Jumlah Total	**72,300**	**100**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

As shown the following table, throughout 2020, the maximum temperature in Samarinda City was 36.20 degrees Celsius and the maximum humidity was 99%. In terms of rainfall and rainy days, Samarinda City had the highest rainfall in September (282.50 mm) and the highest number of rainy days in August (27 days).

Table 2-76 Weather Conditions in Samarinda City

Bulan Month	Jumlah Curah Hujan(mm) Precipitation	Jumlah Hari Hujan(hari) Number of rainy days	Suhu(℃) Temperature			Kelembaban(%) Humidity		
			Min. Minimum	Maks. Maximum	Rata-rata Average	Min. Minimum	Maks. Maximum	Rata-rata Average
Januari Jan.	247.00	13	23.20	35.00	29.65	49	98	74.35
Februari Feb.	91.80	11	23.60	35.00	30.28	49	98	70.09
Maret Mar.	135.50	16	22.80	35.80	30.34	39	97	71.77
April Apr.	176.50	19	23.30	36.20	30.31	48	97	72.80
Mei May.	224.70	19	23.60	35.20	29.74	53	97	78.50
Juni Jun.	172.60	25	23.60	33.90	28.84	57	99	79.67
Juli Jul.	148.00	23	23.80	33.40	28.53	57	97	79.20
Agustus Aug.	228.70	27	23.20	34.60	28.83	54	98	77.91
September Sep.	282.50	26	23.50	34.40	28.77	39	99	78.24
Oktober Oct.	170.00	24	22.60	35.20	29.34	43	97	75.96
November Nov.	185.30	19	22.60	34.60	29.47	51	97	75.56
Desember Dec.	117.90	25	23.00	35.80	29.20	48	97	77.97

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

In accordance with the climatic conditions of Samarinda City, which has a tropical humid climate, the soils in this area are also classified as acid-reactive soils. The soil types found in Samarinda City are classified according to the USDA Soil Taxonomy into soil types: Ultisols, Entisols, Histosols, Inceptiols and Mollisols, or according to the Bogor Soil Institute if the soil type consists of: podisols, Alluvial soils, and Organosols. Podzol soils (Ultisols) are the most extensive in Samarinda City, reaching 57.57% of the total area, and can be developed as agricultural areas.

In these soil areas, water supply from heavy rainfall is generally adequate. When this type of soil is used for agricultural purposes, good production is usually possible for the first few years, as long as surface nutrients are not depleted by the biological cycling process.

As shown in the following table from the topographical analysis, Balikpapan City is located between 0 and 100 meters above sea level. The largest classification is 20-100 meters above sea level, covering 26,090.57 ha (51.66% of the total area), 17,260 ha (34.17% of the total area) above 10-20 meters above sea level, and 6,980 ha (13% of the total area) between 0-10 meters above sea level.

In addition, as shown in the following table for area by slope, Most of Balikpapan City is located on a slope of 15 to 40%, a topography that covers an area of 21,305.57 ha (42.33% of the total area). In addition, more than 30% of the terrain is steep, with a slope of 40% or more.

Table 2-77 Topographic Analysis of Balikpapan City

No.	Ketinggian(mdpl) Altitude	Luas(Ha) Area	
		(Ha)	(%)
1	0-10	6,980.00	13.64
2	>10-20	17,260.00	34.70
3	>25-100	26,090.57	51.66
	Jumlah Total	**50,330.57**	**100.00**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Table 2-78 Balikpapan City Area by Gradient

No.	gradien(%) Gradient	Luas(Ha) Area	
		(Ha)	(%)
1	0-2	7,050.00	14.01
2	>2-15	3,325.00	6.61
3	>15-40	21,305.57	42.33
5	>40	650.00	37.05
	Jumlah Total	**50,330.57**	**100.00**

※Only areas with a slope of 40% are modified.

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Balikpapan City has a tropical climate with rainfall all year round like many other regions in Indonesia. The highest temperature in 2020 was 34.3 degrees Celsius in January and the lowest was 22.2 degrees Celsius in August. the highest rainfall in 2020 was 545.6 mm in June and the lowest was 158.1 mm in January. in 2020. The highest number of days of rainfall recorded was 27 in July.

The maximum temperatures in the table below are different from those in the text, so it is referred from the text.

Table 2-79 Balikpapan City Weather Conditions

Bulan Month	Jumlah Curah Hujan(mm) Precipitation	Jumlah Hari Hujan(hari) Number of rainy days	Suhu(℃) Temperature			Kelembaban(%) Humidity		
			Min. Minimum	Maks. Maximum	Rata-rata Average	Min. Minimum	Maks. Maximum	Rata-rata Average
Januari Jan.	158.10	17	23.30	23.30	27.60	53	100	85
Februari Feb.	316.70	10	23.20	23.20	27.70	57	100	85
Maret Mar.	196.80	16	23.10	23.10	27.70	55	100	88
April Apr.	337.30	13	22.40	22.40	27.60	65	100	88
Mei May.	287.60	18	22.90	22.90	27.80	62	100	90
Juni Jun.	545.60	22	23.20	23.20	27.20	71	100	90
Juli Jul.	521.70	27	23.30	23.30	26.60	73	100	92
Agustus Aug.	263.50	20	22.20	22.20	27.20	66	100	89
September Sep.	473.90	23	22.60	22.60	27.20	63	100	89
Oktober Oct.	257.60	20	22.90	22.90	27.60	54	100	86
November Nov.	315.40	19	23.00	23.00	27.60	59	100	85
Desember Dec.	280.60	25	22.70	22.70	27.30	57	100	85

※The tables are the same as the references cited in the text, but any discrepancies are noted in the text.

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Balikpapan City is geologically composed of three formations: namely, the Lower Balikpapan City Formation, the Upper Balikpapan City Formation, and the Balikpapan City Kampung

Baru Formation. The Lower Balikpapan City and Upper Balikpapan City Formations consist of silt, shale, limestone, coal-bearing quartz sandstone and clay, and these formations are in urban areas. The geologic age of the formation is Miocene, and the rock layers are considerably weathered and easily saturated with water. The Baru consists of quartz sandstone with lignite and silt clay and is Pliocene in age. This formation is in the eastern and northern parts of Balikpapan City. This rock unit is also highly weathered and prone to erosion.

Alluvial soils composed of sand, clay, and silt formed in riverine and coastal environments. This type of soil covers about 5% of the area of Balikpapan City. Alluvial soils provide sufficient nutrients that are at least useful for plants, but most of these soils are influenced by the parent soils and are not fertile enough for cultivation. This type of soil covers about 80% of Balikpapan City and is clayey, less porous and more soluble in water. Sandy soils which comprise about 15% of Balikpapan City contain quartz, clay, and shale, with some marl and coal, are slightly gray with brownish tints, porous, brittle, and have very high erosion rates.

East Kalimantan Province is considered relatively safe from tectonic and volcanic earthquakes, with the most likely disasters being forest fires and floods.

Flood-prone areas are found in almost all regencies/cities in East Kalimantan Province, with the most frequent flooding occurring in the urban and residential areas of Bontang City, Samarinda City and Balikpapan City.

Landslide-prone areas are urban areas such as Samarinda City and Balikpapan City.

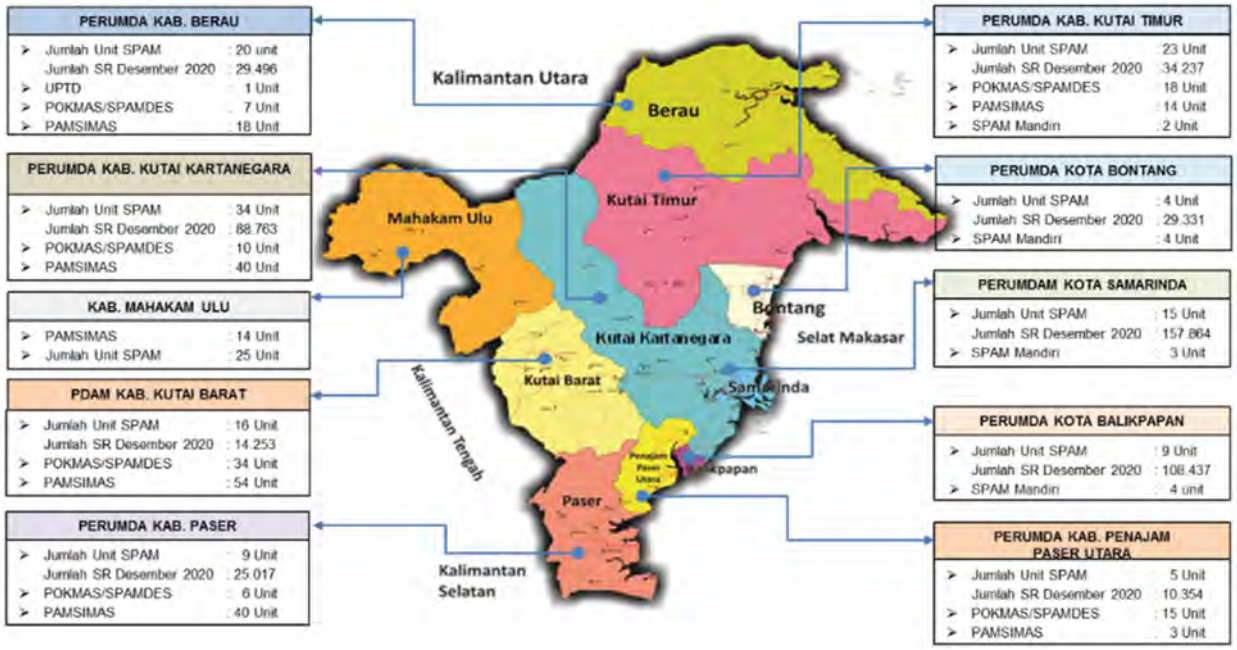
Forest and Land Fires prone areas are found in almost all regencies/cities except Bontang City and Samarinda City.

The implementation status and service map of the regional SPAM in East Kalimantan Province is shown below.

Table 2-80 SPAM Implementation in East Kalimantan Province

NO	KAB/KOTA	KELEMBAGAAN Institution						JUMLAH Total
		PDAM/ PERUMDA	UPTD	SPAM MANDIRI	POKMAS/ SPAMDES	PAMSIM AS	BELUM ADA KELEMBAGAAN there is no institution yet	
1	Kota Samarinda	1	-	3	-	-		4
2	Kota Balikpapan	1	-	4		-	-	5
3	Kota Bontang	1	-	4	-	-	-	5
4	Paser	1	-	-	6	40	-	47
5	Penajam Paser Utara	1	-	-	15	3	-	19
6	Kutai Timur	1	-	2	18	14	-	35
7	Kutai Kartanegara	1	-	-	10	40	-	51
8	Kutai Barat	1	-	-	34	54	-	89
9	Berau	1	1	-	7	18	-	27
10	Mahakam Ulu	-	-	-	0	14	11	23
	JUMLAH	**9**	**1**	**13**	**90**	**183**	**11**	**305**

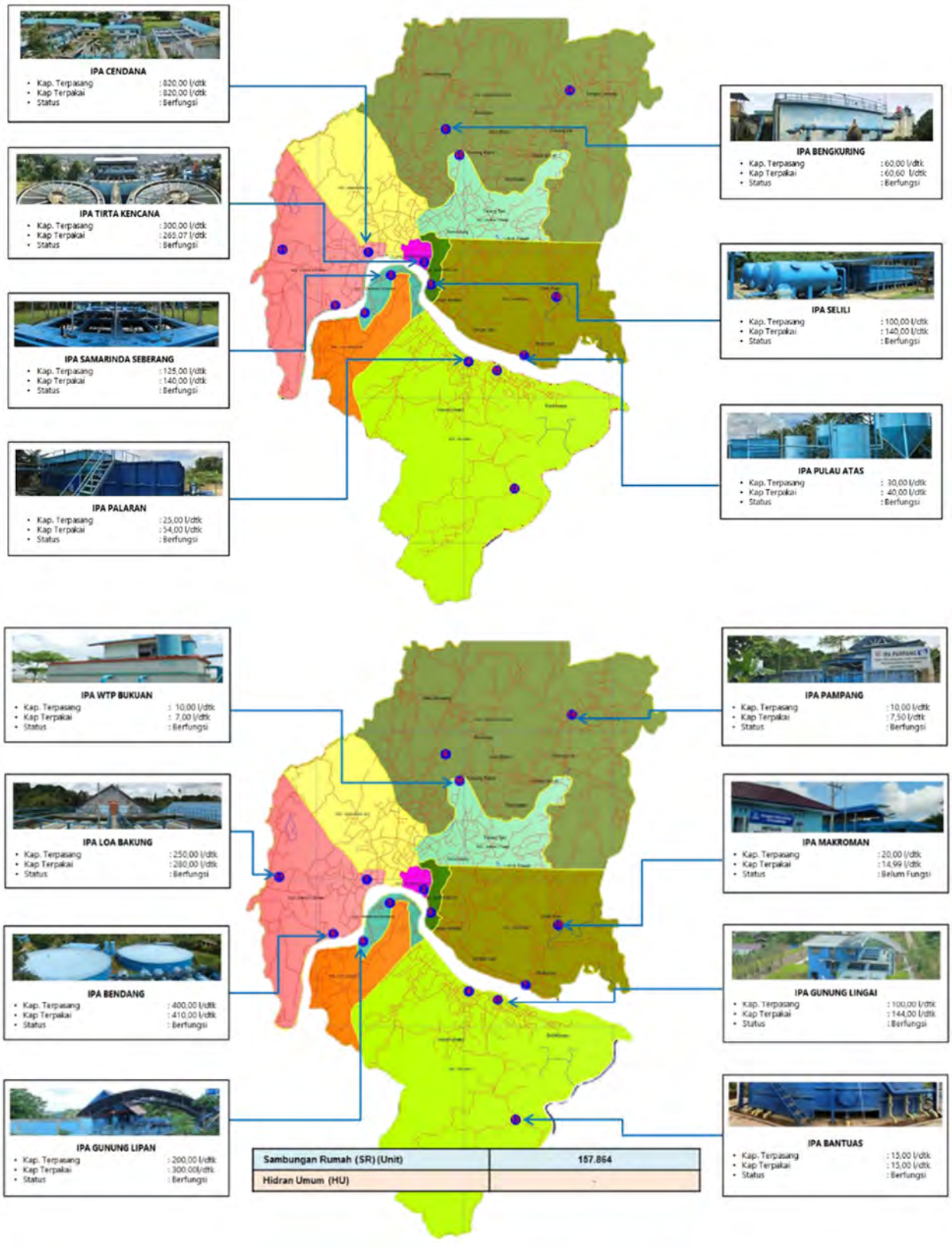
Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)



Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Figure 2-99 Service Map of Regional SPAM

As shown in the following figure, Samarinda City has 15 WTP (Water Treatment Plant) units serving 10 districts.



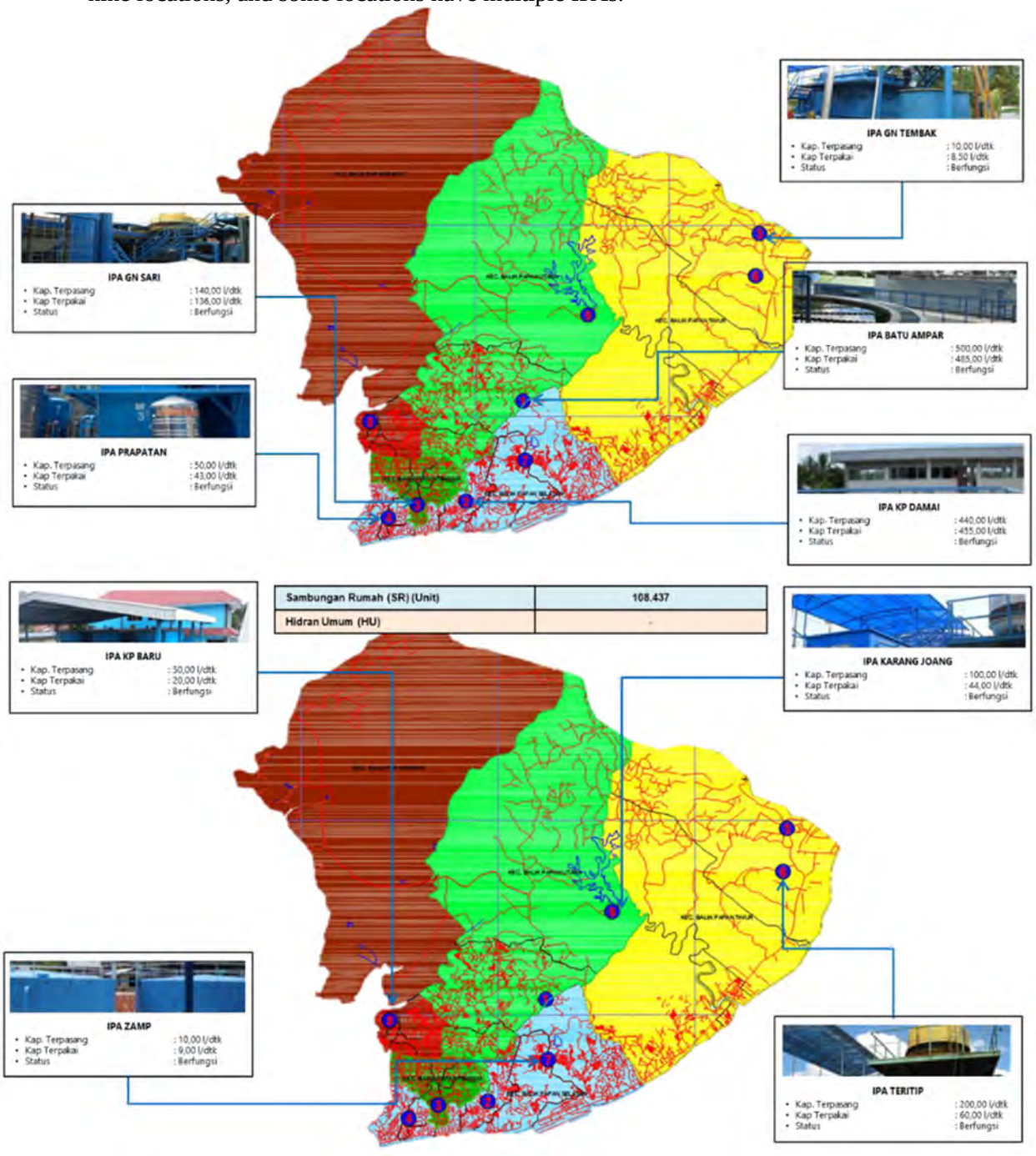
Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Figure 2-100 Service Map of Regional SPAM in Samarinda City

Balikpapan City has a service area of six districts covering the entire city. There are 11 WTP (Water Treatment Plants) with a total installed capacity of 1,600 liter/sec.

In addition, several companies (e.g., Pertamina) are meeting their own drinking water needs in Balikpapan City.

The following figure shows the service map for each IPA. Note that the figure shows only nine locations, and some locations have multiple IPAs.



Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Figure 2-101 Service Map of Regional SPAM in Balikpapan City

The following figure shows details of each SPAM and IPA in Balikpapan City.

No.	Nama SPAM SPAM Name	Tahun Dibangun SPAM Meintenance Period	Unit Air Baku Raw water			Kapasitas(L/det) Capacity			Volume Air Terjual(L/det) Volume of sold water	Pelayanan Unit Capacity			Jumlah penduduk teriayani Number of served People	Cakupan Pelayanan Service Area	
			Nama Sumber Source Name	Tahun Dibangun Built year	Kap. Pengambilan(L/det) Search	IPA Terpasang Implementation	Produksi Production	Distribusi Distribution		SR Aktif Active	SR Non Aktif Non Active	HU		Administrasi(%) Operation	Teknis(%) Technology
1	IPA Karang Joang	2018	Waduk Manggar Manggar Dum	2018	8.00	100.00	40.00	36.62	22.58						
2	IPA Batu Ampar	1990	Waduk Manggar Manggar Dum	1990		500.00	485.00	475.57	345.22						
3	IPA Kampung Damai	1982	Waduk Manggar Manggar Dum	1980	400.00	440.00	455.00	438.67	316.43						
4	IPA Gunung Sari	1980	Sumur	2010	110.00	140.00	136.00	118.39	85.93						
5	IPA Prapatan	2010	Sumur	2006,2008	50.00	50.00	43.00	35.66	25.88						
6	IPA Gunung Tembak	1985	Sumur	1985	5.00	10.00		8.50	6.17	108,437			542,185	80.58	80.58
7	IPA Teritip Lama	1990	Sumur	2005	50.00	200.00	60.00	40.00	36.00						
8	IPA ZAMP	2013	Sumur			10.00	9.00	6.46	4.68						
9	IPA Kampung Baru	2015	Sumur			50.00	20.00	17.50	12.70						
10	IPA Karang Joang(Baru)	2017	Waduk Manggar Manggar Dum			100.00	44.00	37.00	24.00						
11	IPA Teritip		Waduk Teritip Teritip Dum												
JUMLAH Total					623.00	1,600.00	1,292.00	1,214.37	879.59	108,437	—	—	542,185	80.58	80.58

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Figure 2-102 SPAM in Balikpapan City

Samarinda City's area of wastewater service is shown below. Samarinda City does not have a city-wide sewerage system and has installed a STP (Sewerage Treatment tank) and an IPLT (Instalasi Pengolahan Lumpur Tinja) to assist in the treatment of fecal sludge form and an on-site management system.

The number of BABS is 4,924 households in Samarinda City, which is 2.65% of the total households in 2019.

Table 2-81 Samarinda City Sewer Service Coverage

No.	Kecamatan District	Jumlah Penduduk Total Population	Tanpa Akses No sewer access		Akses Layak (KK) Decent access to sewer					
					SPALD Setempat Individua sewage system		SPALD Terpusat Centralized Sewerage System			
			BABS(KK) Open Defecation, etc.	Cubluk/tanki Septic Indv.Tdk Layak. Septic Tank	Skala Indv Individual Scale	Skala Komunal Joint Scale	Berbasis Masyarakat Regional Base	Berbasis Institusi Institution Base	Skala Perkotaan City Scale	Skala Kawasan Ttt. Wide Area Scale
1	PALARAN	54,819	332	615	13,413	1,518	50	173	-	-
2	SMARINDA ILIR	74,012	206	762	18,247	1,879	53	-	-	-
3	SAMARINADA KOTA	36,919	1,015	386	7,684	951	-	-	-	-
4	SAMBUTAN	48,756	248	501	11,618	1,236	-	-	-	-
5	SAMRINDA SEBERANG	64,262	571	716	16,046	1,763	245	-	-	-
6	LOA JANAN ILIR	63,280	213	685	14,838	1,687	-	-	-	-
7	SUNGAI KUNJANG	127,384	381	1,334	32,122	3,289	20	-	-	-
8	SAMARINDA ULU	135,814	379	1,497	34,471	3,690	-	-	-	-
9	SAMARINDA UTARA	100,750	770	1,018	23,640	2,508	69	-	-	-
10	SUNGAI PINANG	106,601	809	1,152	26,386	2,840	-	-	-	-
		812,597	**4,924**	**8,666**	**198,465**	**21,361**	**437**	**173**	**0**	**0**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Balikpapan City's area of wastewater service is shown below. Although some communal WWTPs (Waste-Water Treatment Plants) are maintained, the number of BABS is 128,121 households.

Table 2-82 Balikpapan City Sewage Service Coverage

No.	Nama Kecamatan/Kelurahan District/Sub District Name	Sanitasi tidak layak Inadequate sanitation	Sanitasi Layak Decent sanitation						
			Sistem Onsite			Sistem Berbasis Komunal Public Co-processing			Skala Kawasan/ terpusat Area scale/intensive
		BABS (KK) Open defecation, etc.	Cubluk jamban tidak aman (KK) Pit toilet	Cublukaman/Jamban Keluarga dgn tangki Septic aman(KK) Septic Tank	MCK/Jamban Bersama(KK) Joint Toilet	MCK/Komunal (KK) Public Joint Toilet	Tangki Septik Komunal > 10KK Public Septic Tank	IPAL Komunal Public Sewage Treatment Plant	Sambungan Rumah yg berfungsi(KK) Pipeline Connection
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
1	Balikpapan Selatan	28,967	1,102	18,324	87	0	344	737	0
2	Balikpapan Timur	12,598	343	13,461	26	0	96	221	0
3	Balikpapan Utara	27,131	31	23,242	238	6	96	276	0
4	Balikpapan Tengah	21,826	103	17,616	1,310	2	0	0	0
5	Balikpapan Barat	21,152	881	9,492	967	0	0	455	1,384
6	Balikpapan Kota	16,447	680	16,364	981	0	96	162	0
	Total	**128,121**	**3,140**	**98,499**	**3,609**	**8**	**632**	**1,851**	**1,384**

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

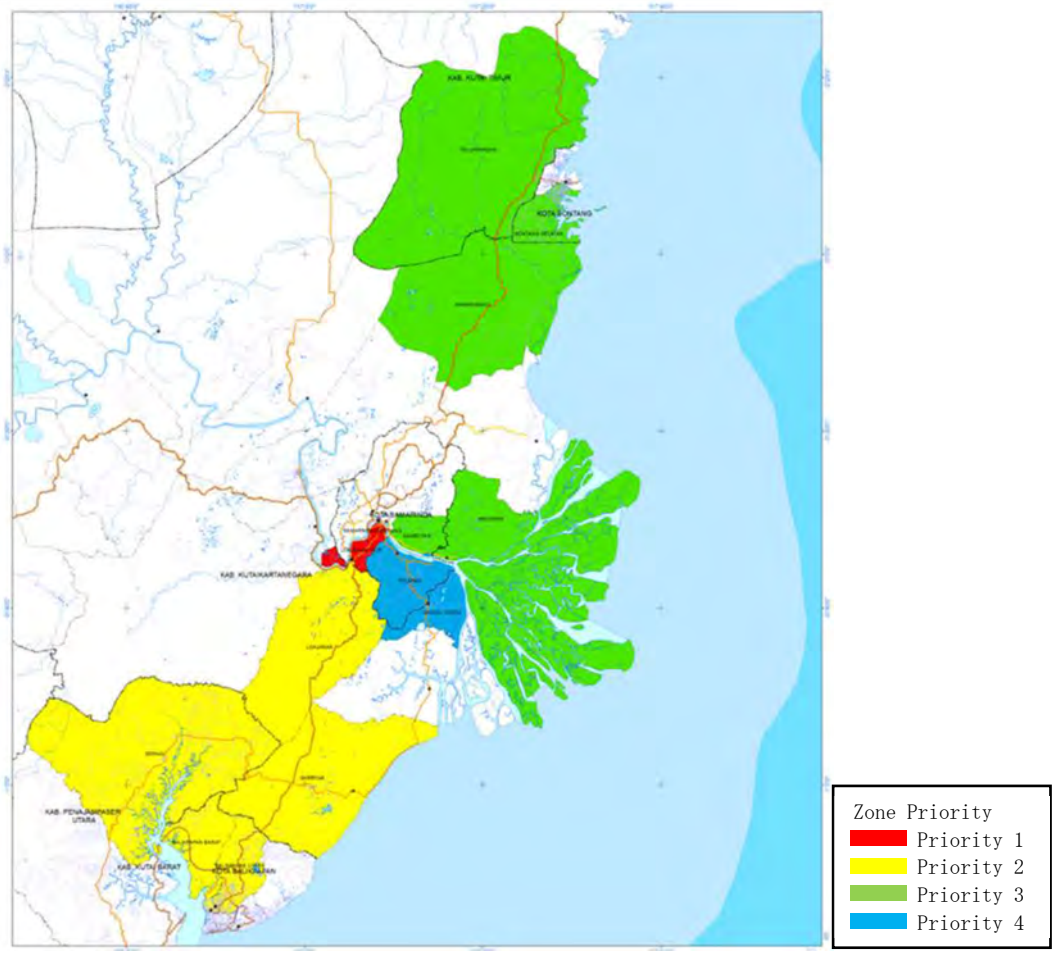
In order to select priority areas for the development of SPALD-T intensive wastewater services, three aspects are being extracted: the aspect of sanitation-prone conditions based on the EHRA assessment, the aspect of population density per subarea, the aspect of BOD pollution load.

As a result of the prioritization, as shown in the following table, Zone II2C has the highest priority.

Table 2-83 Evaluation of Priority Areas in East Kalimantan Province

ZONA Zone	KABUPATEN/KOTA Regency/City	KECAMATAN District	JUMLAH PENDUDUK (jiwa) Total	LUAS WILAYAH (Ha) Area	REKAPITULASI Summary		ZONA PRIORITAS Zone Priority
					Nilai Mark	Prioritas Priority	
I	KABUPATEN BONTANG	Bontang Selatan	70,297	33.03	14	Prioritas 1	3
	KABUPATEN KUTAI TIMUR	Teluk Pandan	14,933	3,196.24	5	Prioritas 4	
	KABUPATEN KUTAI KARTANEGARA	Marangkayu	26,902	1,165.71	5	Prioritas 4	
II 2A	KOTA SAMARNDA	Sambutan	56,025	100.95	11	Prioritas 1	3
	KABUPATEN KUTAI KARTANEGARA	Anggana	35,009	1,798.80	4	Prioritas 4	
II 2B	KOTA SAMARNDA	Palaran	61,600	221.29	13	Prioritas 1	2
	KABUPATEN KUTAI KARTANEGARA	Sanga-Sanga	20,194	233.4	6	Prioritas 2	
II 2C	KOTA SAMARNDA	Loa Janan Hillir	64,752	26.13	14	Prioritas 1	1
	KOTA SAMARINDA	Samarinda Seberang	63,612	12.49	15	Prioritas 1	
	KABUPATEN KUTAI KARTANEGARA	Loa Janan	69,876	644.2	10	Prioritas 1	
III	KOTA BALIKPAPAN	Balikpapan Barat	96,271	1,806.40	8	Prioritas 3	2
	KABUPATEN KUTAI KARTANEGARA	Loa Janan	69,876	644.20	10	Prioritas 1	
	KABUPATEN KUTAI KARTANEGARA	Samboja	67,345	1,045.90	8	Prioritas 3	
	KABUPATEN PENAJAM PASER UTARA	Sepaku	37,171	1,172.36	7	Prioritas 2	
IV	KOTA BALIKPAPAN	Balikpapan Utara	169,992	1328.70	9	Prioritas 3	3
	KABUPATEN KUTAI KARTANEGARA	Samboja	67,345	1,045.90	8	Prioritas 3	

Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)



Source: Preparation of Regional Domestic Wastewater Treatment System Master Plan (2021)

Figure 2-103 River Basins in East Kalimantan Province

2.4.8 Diversity

(22) East Kalimantan Province Regional Regulation No.8/2021 on the Amendments to Regional Regulation No.2/2019 on the Regional Middle-Term Development Plan of East Kalimantan Province for 2019-2023

2) Diversity Aspects in the Overview of Regional Conditions of East Kalimantan Province

Overview of Regional Conditions in the East Kalimantan Province Regional Middle-Term Development Plan 2019-2023 representing diversity aspects include the following:

a) Demographic Condition

East Kalimantan Province has a population of 3,505,161 persons, with 53.85% residing in 7 regencies and 46.15% in 3 cities. The average annual growth rate is 1.28%, and the low population density is 27.26 persons/km^2. The uneven distribution of the population poses a challenge, leading to substantial infrastructure costs to improve service access. This imbalance becomes one of the issues in achieving comprehensive development across all layers of society in East Kalimantan Province. In terms of population proportion, East Kalimantan Province has a significantly larger proportion of the working-age population compared to the non-working-age population.

b) Regional Inequality

The Gini Index for East Kalimantan Province during the last five years has shown a decreasing trend, but in 2017, it experienced a slight increase to 0.330. Meanwhile, the Williamson Inequality Index during 2013-2017 also exhibited a decreasing trend, but in 2017, there was an increase in inequality, reaching 0.51. This indicates that the inequality among regencies/cities in East Kalimantan Province is still relatively high. Disparities in resources, access, and the level of ease of mobility of goods and services contribute to the existence of such inequality.

c) Poverty

During the period from 2013 to 2017, the poverty rate in East Kalimantan Province fluctuated and tended to increase, although on the other hand, the open unemployment rate tended to decrease. The poverty rate is significantly influenced by the migration of poor people from outside the region, contributing to the increase in the number of poor people in East Kalimantan Province. The majority of the highest number of poor people in East Kalimantan Province are in urban areas, particularly in Balikpapan City, Samarinda City, Bontang City, Kutai Kartanegara Regency, and Kutai Timur Regency. The natural resource management activities in East Kalimantan Province are expected to bring significant benefits to the communities in the surrounding villages. However, until now, some residents have not directly benefited from these activities, and there are still many poor people in areas around protected and concession areas for production forests, mining, and plantations, totaling 341,114 persons or 53% of the total 643,743 poor persons in East Kalimantan Province.

d) Unemployment

The performance of labor development in East Kalimantan Province is relatively good; however, it still faces challenges related to the competitiveness of the workforce. When examining the educational background of the working population in East Kalimantan Province, the majority hold high school/vocational education, while the smallest percentage

consists of Diploma I/II/III graduates. In 2020, approximately 29.18 percent of the working population had elementary education and below, showing an increase from 28.51 percent in 2019. Meanwhile, the percentage of working individuals with Diploma I/II/III education backgrounds was around 3.38 percent, demonstrating a slight increase compared to 2019 when it was 3.81 percent.

The open unemployment rate in East Kalimantan Province is higher compared to the national average and other provinces on the island of Kalimantan. The economic development of East Kalimantan Province has implications for an increase in the number of job seekers coming from other regions, coupled with the limited availability of employment opportunities in labor-intensive sectors. This further exacerbates the level of open unemployment in the region.

e) Empowerment of Women and Child Protection

The East Kalimantan Province Provincial Government also considers the well-being indicator for women, namely the Gender Empowerment Index (IDG). The IDG reflects the level of women's participation compared to men in various public activities and their contribution to income. The achievement of the IDG in East Kalimantan Province is still lower compared to other benchmark areas and the national level. This indicates that gender development in East Kalimantan Province is still not optimal.

Meanwhile, East Kalimantan Province has experienced the underdevelopment of child-friendly public services. Out of 10 regencies/cities, 9 areas have become child-friendly city/regency developers. However, Kutai Timur Regency, Kutai Barat Regency, Kutai Kartanegara Regency, and Samarinda City have a significant number of child laborers.

3) The Diversity Aspect in the Formulation of the Vision, Mission, Objectives, Targets, and Indicators of the East Kalimantan Province Regional Middle-Term Development Plan 2019-2023

The Diversity aspect in formulating the Vision, Mission, Objectives, Targets, and Indicators of the East Kalimantan Province Regional Middle-Term Development Plan 2019-2023 is reflected in the first mission, which is “Sovereign in developing morally upright and competitive human resources, especially women, youth, and people with disabilities.” This first mission is then translated into objectives and targets as follows:

Table 2-84 RPJMD Mission and Performance Indicators

Missions Related to Diversity Aspects	Objectives/Targets for the First Mission	Performance Indicators
First Mission: Sovereign in developing morally upright and competitive human resources, especially women, youth, and people with disabilities.	Target 1: Realizing a society with noble character and competitiveness.	Human Development Index (HDI)
	Target 2: Increase in the practice of cultural and religious values in society	Indonesia Democracy Index
	Target 3: Improving the educational level of the local community	Average Years of Schooling
		Mean Years of Schooling
	Target 4: Improving the health and nutrition of local communities	Life Expectancy
	Target 5: Realizing the Welfare of the Community	Poverty Rate (%)
	Target 6:	Gender Empowerment Index (GEI) (%)

	Increase the active participation of women in development	
	Target 7: Improving the entrepreneurial spirit and performance of young people	Youth Development Index
	Target 8: Strengthening the competitiveness of the work force	Percentage of Employment

Source: East Kalimantan Province Regional Regulation No2/2019 concerning the East Kalimantan Province Regional Middle-Term Development Plan 2019-2023

(23) Regional Regulation of East Kalimantan Province No.15/2008 on the East Kalimantan Province Regional Long-Term Development Plan 2005-2025

4) Diversity Aspects in the Overview of Regional Conditions of East Kalimantan Province

Overview of the Regional Conditions in the East Kalimantan Province Regional Long-Term Development Plan 2005-2025, representing diversity aspects, includes the following:

a) Demographic Condition

The demographic conditions in the East Kalimantan Province Regional Long-Term Development Plan 2005-2025 depict the demographic situation from 1996 to 2005. The population of East Kalimantan Province in 1996 was 2.34 Million, increasing to 2.85 Million in 2005. The average population growth rate during 1990-2000 was 2.72%, and during 2000-2005, it was 4.04%, mainly due to urbanization from other regions. This growth rate is significantly higher than the national average population growth rate. The average population density in 2005 was 15 persons/km^2. The population distribution in East Kalimantan Province in 2005 was concentrated in urban areas, especially in Samarinda City (20.22% of the population) and Balikpapan City (16.54%), as well as Kutai Kartanegara Regency (17.27%). With an average growth rate of 2.24% per year, the estimated population of East Kalimantan Province in 2025 is expected to reach approximately 4.78 Million persons.

b) Employment

The number of labor force in East Kalimantan Province also increased from 1.02 Million in 1996 to 1.17 Million in 2004, with the labor force participation rate (TPAK) increasing from 55.6% to 62.67%. Until 2005, the population included in the labor force was 1,171,891 persons (60.22%), while 744,285 persons (39.78%) were not part of the labor force. The open unemployment rate in the four main cities Samarinda City, Balikpapan City, Bontang City, and Tarakan averaged 14.24%, attributed to limited job opportunities and an increasing number of job seekers, especially due to the growth of the working-age population, migration from other regions, and the rise in job terminations by timber companies.

c) Role of Women

The role of women in the government structure and political organizations in East Kalimantan Province is still not optimal. In 2005, the number of female officials in the government structure was 30 individuals, accounting for 9.2%, while the number of female officials in political organizations was 6 individuals, representing 7.8%.

d) Religion

The majority of the population in East Kalimantan Province currently adheres to Islam, numbering 2.24 Million individuals or 81.48% of the total population. Places of worship such as mosques, suraus and mushollas, churches, temples, and viharas are distributed throughout the regencies/cities. In terms of religious life, the harmony among people of different religions in East Kalimantan Province is relatively good.

e) Social Welfare

Social welfare involves social services to the poor, including foster children, abandoned children, individuals with social problems, and people with different abilities (disabled). The number of foster children and abandoned children fluctuates according to the social and economic developments in the community.

5) Diversity Aspects in the Formulation of Vision, Mission, Objectives, Targets, and Indicators of the East Kalimantan Province Regional Long-Term Development Plan 2005-2025

Diversity aspects in the formulation of the Vision, Mission, Objectives, Targets, and Indicators of the East Kalimantan Province Regional Long-Term Development Plan 2005-2025 can be seen in the following table.

Table 2-85 Diversity Strategies in RPJPD

Strategies Related to Diversity Aspect	Policy Directions Related to Diversity Aspect
Population Strategy 1: Reduction of fertility rates and population growth rates	Gender-inclusive Development.
Employment Strategy 2: Increasing the fulfillment of labor according to the job market, both domestically and abroad.	a. Strengthening the linkage between education and the business world in providing the workforce. b. Improving the quality and expanding the types of training through Vocational Training Centers (BLK) based on the required skills.
Employment Strategy 3: Increasing the participation of the business sector to drive the improvement of workforce quality.	a. Improving the quality of the workforce in the business world, especially for low and medium-skilled workers b. Enhancing the quality of education and skills for every workforce oriented towards meeting workforce and job market demands. c. Entrepreneurial spirit development for the workforce. d. Elimination of child labor.
Women and Children Strategy 1: Improving gender equality, enhancing the quality of life, and protecting against violence, exploitation, and discrimination against women and children.	a. Increasing the active role of women in various development sectors, including the economic, social, political, and cultural realms. b. Expanding broader opportunities for women in careers and creative pursuits. c. Enhancing the quality of life and protection for women as part of human resources, including the protection of female workers. d. Improving the welfare and protection of children e. Enhancing the quality of children and women. f. Strengthening institutions for mainstreaming gender and children's issues.
Religion Strategy 1: Improving services for religious worship activities and increasing community participation in religious affairs.	a. Ensuring freedom and expanding opportunities for the practice of religious teachings. b. Improving the quantity and quality of religious-based educational facilities and social institutions. c. Enhancing the quality of religious instructors.
Religion Strategy 2: Increasing the understanding and practice of religion for every individual and the community in implementing regional development.	

Social Welfare Strategy 1: Enhancing guidance and the quality of services and basic assistance for abandoned children, foster children, people with disabilities, the elderly, isolated indigenous communities, and those facing social welfare issues.	a. Improving the social welfare of poor families and people with disabilities. b. Empowering abandoned children, street children, and children with disabilities by ensuring and equipping them with appropriate skills for their development to be accepted in their communities. c. Empowering the social welfare of abandoned elderly individuals.

Source: Regional Regulation of East Kalimantan Province No.15/2008 on the East Kalimantan Province Regional Long-Term Development Plan 2005-2025

(24) Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045

1) Diversity Aspects in the Overview of Regional Conditions of East Kalimantan Province

Overview of the Regional Conditions in the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045, representing diversity aspects, includes the following:

a) Demographic Condition

The demographic conditions described in the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045 use demographic data from the years 2025 to 2023. The population of East Kalimantan Province in 2005 was 2,423,888 persons and continued to increase to 3,909,740 persons in 2023, an increase of 1,485,852 persons. As outlined in the East Kalimantan Province Regional Long-Term Development Plan 2005-2025, the largest concentration of residents from 2005 to 2025 was in Samarinda City, accounting for 21.76%, and Balikpapan City, accounting for 18.16%. The population growth rate of East Kalimantan Province from 2005 to 2023 was 4.44%, higher than the growth rate in previous years.

In the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045, the population projection calculations have taken into account the aspect of the construction period of the National Capital (IKN) by including a significant factor of population migration. The following table shows the projected population in East Kalimantan Province up to year 2045, estimated to reach 6,437,780 persons.

Table 2-86 Table of Projected Population of East Kalimantan Province

Population in 2023 (persons)	Projected Population (persons)				
Year	2025	2030	2035	2040	2045
3.909.740	4.267.600	5.197.920	5.741.830	6.116.320	6.437.780

Source: Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

b) Employment

In the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045, it is explained that data from 2023 shows that the majority of the population in East Kalimantan Province is employed in the wholesale and retail trade sector, and the repair and maintenance of cars and motorcycles, accounting for 19.74%, followed by the agriculture, forestry, and fisheries sector at 19.21%. Meanwhile, the sector with the least number of workers is the information and communication sector, with only 0.57%.

Overall, the employment situation in East Kalimantan Province in 2023 has improved, as indicated by the Open Unemployment Rate (TPT) reaching its lowest level in the last decade, from 11.17% in 2005 to 5.31% in 2023. The labor market in East Kalimantan Province was able to absorb an additional 100.38 Thousand workers in 2023. The development of the National Capital (IKN) has increased employment in the construction, accommodation and food services, and transportation and warehousing sectors, and has had a positive impact on employment conditions in the surrounding regencies/cities.

c) Social and Cultural Welfare

In the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045, social and cultural welfare, as part of the community welfare aspects, outlines 10 indicators:

1. Social

   The number of Social Welfare Problem Recipients (PMKS)/Recipients of Social Welfare Services (PPKS) in East Kalimantan Province has fluctuated over the past four years, with the highest number recorded in 2020. Based on the number of Social Welfare Problem Recipients (PMKS) in East Kalimantan Province, there was an increase from 243,459 persons in 2018 to 247,465 persons in 2021, an increase of 4,006 persons. This condition is one of the impacts of the COVID-19 pandemic, which has affected the welfare of the community.

2. Women Empowerment and Child Protection

   The Child Protection Index in East Kalimantan Province in 2021 reached 64.06, a decrease compared to the previous data which was 73.60. This situation indicates that children are vulnerable to become victims of violence and require integrative efforts from the Government, families, surrounding environments, schools, communities, businesses, and the mass media. Additionally, in the Women Empowerment and Child Protection indicator, data on children with disabilities who need special attention from the Government is outlined. However, no elaboration on women's empowerment was found in this indicator.

3. Healthy Family Index

   The Healthy Family Index (IKS) is one of the indicators used by the government to measure public health. IKS consists of 12 indicators covering aspects of physical, mental, social, and environmental health. The Healthy Family Index of East Kalimantan Province in 2023 was 0.286, which falls into the category of Unhealthy Families due to low indicators of pulmonary TB, hypertension, and severe mental disorders. The highest Healthy Family Index was in Balikpapan City, at 0.401, while the lowest was in Mahakam Ulu Regency, at 0.143.

4. Family Quality Index

   The Family Quality Index (IKK) serves as a basis for the Government to identify family issues and subsequently prepare policy interventions to improve family quality in the Development of Women's Empowerment and Child Protection to achieve gender equality and fulfill children's rights. The Family Quality Index (IKK) in East Kalimantan Province in 2021 reached 76.14 and increased by 2.42 points in 2022 to

77.88.

5. Gender Development Index

   The Gender Development Index (IPG) of East Kalimantan Province has increased over the five years from 2018 to 2022, with the highest achievement in 2023 at 87.13. Balikpapan City has the highest Gender Development Index with a score of 89.76, while Paser Regency has the lowest at 70.64.

6. Gender Empowerment Index

   The Gender Empowerment Index (IDG) is an indicator of women's active roles in economic and political life. The Gender Empowerment Index of East Kalimantan Province fluctuated from 2018 to 2022, reaching 57.53 and rising to 65.65 in 2019. The low Gender Empowerment Index is due to the low involvement of women in parliament, which is only 20%, and the Percentage of Women's Income Contribution, which is 24.02%. Meanwhile, the percentage of women working as professionals is 49.78%.

7. Gender Inequality Index

   Gender inequality in East Kalimantan Province has shown a downward trend from 2018 to 2022, with a decrease of 0.054 points. However, the Gender Inequality Index in East Kalimantan Province has consistently been lower than the national GII. Samarinda City experienced the largest decrease in the Gender Inequality Index, while Balikpapan City and Kutai Timur Regency saw an increase.

8. Developing Village Index

   The Village Development Index (IDM) reflects the capability of village residents to manage and utilize the potential within their villages. The achievements of the Village Development Index indicate the progress and independence of the villages. The Village Development Index in East Kalimantan Province has continuously improved, with the latest achievement in 2023 reaching 0.7526. This places East Kalimantan Province at the 9th position nationally. The highest IDM score is in PPU Regency with a value of 0.8052, and the lowest is in Mahakam Ulu Regency at 0.6968.

9. Cultural Development Index

   The development of culture and arts in East Kalimantan Province is reflected in the Cultural Development Index (IPK), which was 54.81 in 2022. This value is still lower than the national average of 55.13. However, the education dimension of the Cultural Development Index in East Kalimantan Province is higher compared to its national level.

10. Youth Development Index (IPP)

    The Youth Development Index (IPP) reflects the capacity of youth based on domains such as education, health and well-being, employment and job opportunities, participation and leadership, and gender and discrimination. The Youth Development Index in East Kalimantan Province increased from 53.50 in 2017 to 54.00 in 2022.

2) Diversity Aspects in the Formulation of Vision, Mission, Objectives, Targets, and

Indicators of the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045

In the Draft of the East Kalimantan Province Long-Term Development Plan 2025-2045, the regional development vision of East Kalimantan Province is "East Kalimantan Province Prosperous 2045: An Advanced, Fair, and Sustainable Economic Superhub of the Archipelago". This vision is derived into 8 development missions and also 5 super-priority transformation efforts (game changers) namely social transformation, economic transformation; governance transformation; resilient regional security, substantial democracy, and regional macroeconomic stability; and socio-cultural and ecological resilience. Diversity aspects are in Mission 1 and Mission 5, as described in the following table.

Table 2-87 Diversity Strategies in the Draft of the East Kalimantan Province Regional Long-Term Development Plan 2025-2045

Mission Related to Diversity Aspect	Main Targets Related to Diversity Aspect	Development Direction Related to Diversity Aspect
Mission 1: Social transformation to achieve an excellent and prosperous society	Enhance the competitiveness of human resources and the quality of life of the community	- Health for all - Quality and equitable education
	Enhance the socio-economic welfare of the community	- Adaptive social protection
Mission 5: Achieve socio-cultural and ecological resilience based on local wisdom	Strengthen societal socio-cultural values	- Beneficial religious practices and advanced culture - Quality families, gender equality, and inclusive communities

Source: Draft of East Kalimantan Province Regional Long-Term Development Plan 2025-2045

(25) Regional Regulation of East Kalimantan Province No.1/2023 on the East Kalimantan Province Regional Spatial Plan (RTRW) 2023-2042

In the East Kalimantan Province Regional Spatial Plan (RTRW) 2023-2042, the spatial aspect of diversity is more focused on customary land and how it is spatially implemented in spatial planning. In the RTRW, there are regulations concerning social forestry, which refers to the sustainable forest management system implemented in provincial forest areas or customary forests/indigenous forests managed by local communities or indigenous legal communities as the main actors to improve their well-being, maintain environmental balance, and manage social and cultural dynamics in the form of village forests, community forests, smallholder forests, customary forests, and forestry partnerships.

Customary forest areas are included in the protected zone, and their function should not be changed to cultivation areas. The customary forest areas in East Kalimantan Province, as regulated in the Spatial Plan (RTRW), cover an area of approximately 1,088 ha located in the Other Land Use Areas, consisting of:

a. Customary Forest Area of Hemaq Beniuq, Customary Forest Area of Bahau Uma Luhat, Customary Forest Area of Anyaang Apoq, Customary Forest Area of Benuaq Telimuk, Customary Forest Area of Teluyen Jarikng Lestari, Customary Forest Area of Benuaq Madjaun, and Customary Forest Area of Gunung Menaliq in Kutai Barat Regency; and

b. Customary Forest Area of Mului in Paser Regency.

Among the customary forest areas in East Kalimantan Province mentioned above, the Hemaq Beniung Customary Forest Area in Kutai Barat Regency and the Mului Customary Forest Area in Paser Regency are included in the Provincial Strategic Areas (KSP) from the perspective of socio-cultural interests. The development goals for customary forest areas are to achieve forest sustainability, community welfare, environmental balance, and accommodate social and cultural dynamics, with the development direction comprising:

a. Utilizing customary forests in accordance with local wisdom;

b. Preservation of the functions of customary forests;

c. Utilizing customary forests in accordance with their functions;

d. Restoration and improvement of forest functions;

e. Securing and protecting customary forests.

Indications of Zoning Guidelines for customary forest areas consist of:

1) Permitted activities include:

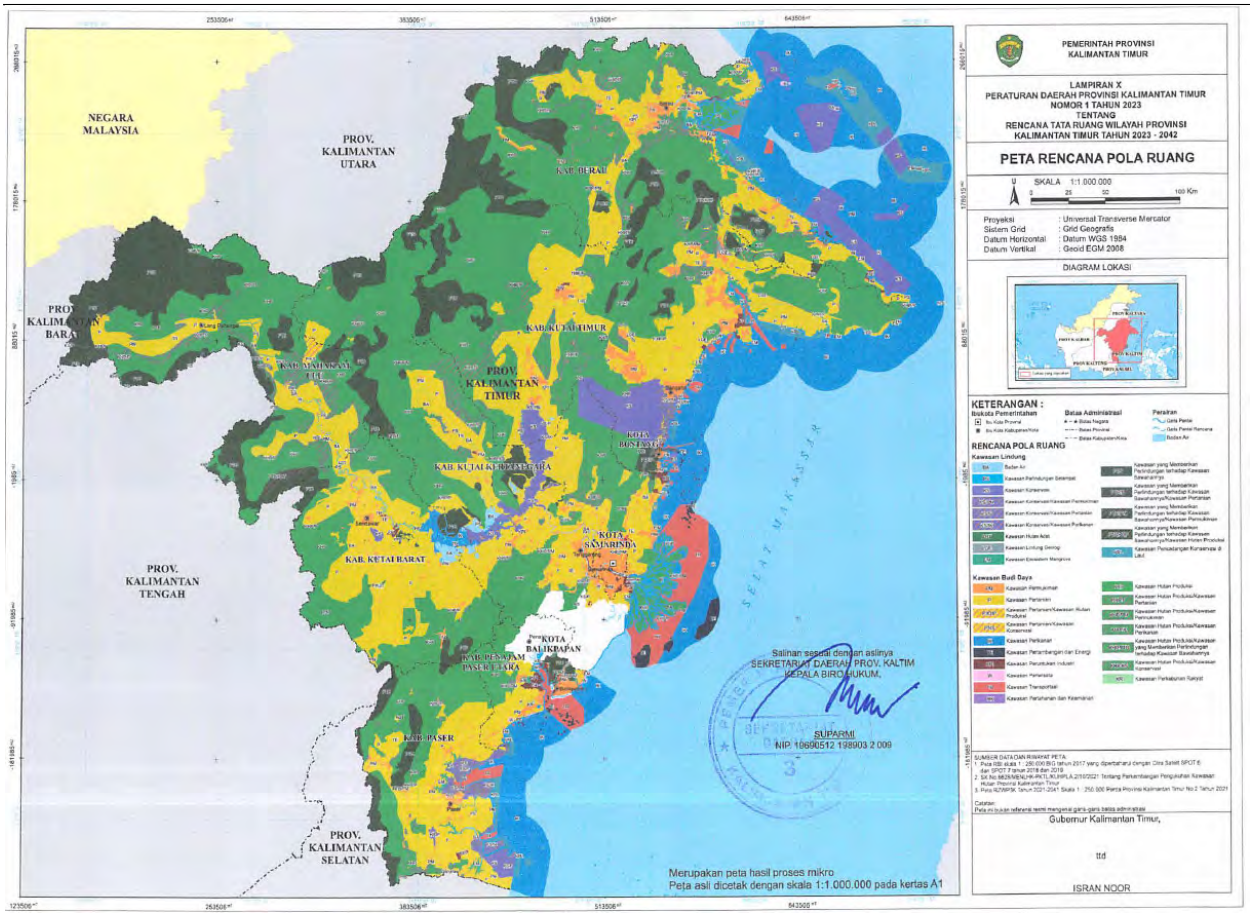
- Protected forest activities, conservation, and production forest activities;
- Utilizing customary forests in accordance with local wisdom and their functions; and
- Utilizing local wisdom in the utilization of genetic resources.

2) Permitted activities with conditions include:

- Utilizing non-timber forest products and environmental services in forests with conservation and protection functions;
- Utilizing non-timber forest products, timber forest products, and environmental services in forests with production functions;
- Forest and land rehabilitation activities, soil and water conservation, and biodiversity conservation;
- Fire prevention and protection of forests and land; and
- Defense and security activities.

3) Prohibited activities include:

- Renting out customary forest areas;
- Felling trees in customary forest areas with conservation functions;
- Using mechanical equipment in customary forest areas with conservation functions;
- Constructing facilities and infrastructure that alter the natural landscape in customary forest areas with conservation functions; and
- Planting oil palms in customary forest areas.



Source: East Kalimantan Province Regional Spatial Pattern Plan Map

Figure 2-104 Zoning of Customary Forest Areas

2.5 Overview of Existing Plans and Related Policies of Balikpapan City

To understand the potential of Tri-City, a sector-by-sector survey of relevant plans in Balikpapan City, one of the target cities, was conducted. The table below summarizes the Plans and policies reviewed.

Table 2-88 Review of Relevant Policies and Plans in Balikpapan City

Year	Title	Summary	Related Field
2013	Balikpapan City Regional Long-Term Development Plan 2005-2025	The Regional Long-Term Development Plan of Balikpapan City is positioned as a regional Long-Term development guideline for development stakeholders. Based on the Long-Term Development Plan, the Regional Long-Term Development Plan is a detailed set of policies.	✓ Connectivity ✓ Climate Change ✓ Environment and waste management ✓ Industrial Development and Investment Promotion ✓ Electricity & Energy ✓ Urban Management ✓ Livability and Diversity
2024	Draft of Balikpapan City Regional Long-Term Development 2025-2045	The Balikpapan City Regional Long-Term Development Plan is positioned as a regional Long-Term development guideline for development stakeholders. The document was formulated by considering the capital relocation	✓ Connectivity ✓ Climate Change Measures ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban Management ✓ Living Environment ✓ Diversity
2021	Balikpapan City Regional Middle-Term Development Plan 2021-2026	The Balikpapan City Regional Middle-Term Development Plan is a five-year planning document that includes goals, objectives, strategies, policy directions, regional development programs to be implemented by the Regional Organization, and a funding framework.	✓ Connectivity ✓ Climate Change Measures ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban Management ✓ Living Environment ✓ Diversity
2012	Balikpapan City Regional Spatial Plan 2012-2032	Balikpapan City's spatial plan is to make Balikpapan City a dynamic, harmonious, green service city that supports its function as a center of national growth.	✓ Connectivity ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban Management ✓ Living Environment
2022	Revision of Balikpapan City Drainage Master Plan 2022	Plans for rivers, drainage channels, etc., and surrounding land use are defined.	✓ Connectivity ✓ Climate Change Measures ✓ Environmental and Waste Management ✓ Living Environment

Source: Compiled by JICA Study Team from various sources.

(1) Balikpapan City Regional Long-Term Development Plan 2005-2025

This Plan is a long-term development plan covering the years 2005-2025, based on the Law of the Republic of Indonesia No.25/2004 on the National Planning System, which shows development direction of Balikpapan City. Although the Plan covers the period 2005-2025, it was officially approved in 2013, and most of the Plans reviewed and cited in the Plan were developed after 2005. The structure of the Plan is shown in the figure below.

Chapter 1. Introduction Chapter 2. Overview of Regional Conditions Chapter 3. Analysis of Strategic Issues Chapter 4. Regional Vision and Mission Chapter 5. Strategy and Policy Direction Chapter 6. Implementation Rules

Source: Balikpapan City Long-Term Development Plan 2005-2025

Figure 2-105 Structure of Balikpapan City Regional Long-Term Development Plan 2005-2025

In Chapter 1, the background of the Planning process, the legal basis, and the relationship with existing plans are summarized; in Chapter 2, the general situation of the region is described from various perspectives, including industrial development and disaster risks such as floods and landslides, in about 80 pages; in Chapter 3, regional development issues are discussed, including education, healthcare, employment, youth and sports, social welfare, community empowerment, administrative systems, legal systems, information and communication, spatial planning, and agriculture, fisheries, and tourism sectors, Social welfare, community empowerment, administrative system, legal system, information and communication, spatial planning, housing and residential areas, transportation, road infrastructure, environment, drinking water, industry and economy, agriculture, fishery, regional investment, and tourism. Strategic issues are then described in terms of improving administrative systems, environmental degradation, urban planning and infrastructure development and management, economic development, marine resources, and human resources.

Chapter 4 of this plan presents the vision and mission of long-term regional development. The long-term development vision for Balikpapan City 2005-2025 is “Realization of Balikpapan City as a Five-Dimensional City: Services, Industry, Trade, Tourism, Education and Culture in the Frame of Madinatul Iman”. The development missions to achieve this goal are 1) competitive human resource development, 2) development of appropriate urban infrastructure, 3) creation of an environmentally friendly and livable city, 4) creative economic development, and 5) good governance. In Chapter 5, the direction of measures is organized according to the policies established in Chapter 4. In addition, priority measures for each of the five missions are presented for each five-year period. On the other hand, no list or location map of priority measures is provided. As 10 years have passed since this plan was formulated, it is considered necessary to update the plan in consideration of the impact of IKN development and synergistic development.

(2) Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

On the previous Regional Long-Term Development Plan year 2005-2025, the establishment

of the New Capital City and the relocation plan of Indonesia's capital was not considered yet. As the expiration year comes closer and the capital project is progressing, a new Regional Long-Term Development Plan is also necessary to be developed. The new Balikpapan City Regional Long-Term Development Plan for 2025-2045, which currently still in draft form, consist of substances shown by the figure bellow.

Chapter 1. Introduction
Chapter 2. Overview of Regional Conditions
Chapter 3. Analysis of Regional Strategic Issues
Chapter 4. Regional Vision and Mission
Chapter 5. Strategy and Policy Direction
Chapter 6. Closing

Source: Balikpapan City Long-Term Development Plan 2025-2045

Figure 2-106 Structure of the Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

In Chapter 1, the background of the planning process, the legal basis, the relationship with existing plans, and objectives are summarized. In this Chapter, it is also mentioned that this document also considered the draft of East Kalimantan Province Regional Long-Term Development Plan in its formulation.

In Chapter 2, the general situation of the region is described from various perspectives, including geographical and demographical aspect; public welfare aspect; public service aspect; and competitiveness aspect. This Chapter also discusses items related to current achievement of Sustainable Development Goals, result evaluation, bases of assumption, demographical projection for the next 20 years, analysis of infrastructural needs, development of central growth regions, direction of regional policy in RPJPN 2025-2045, and indications of development based on sectoral plans.

In Chapter 3, regional strategical issues, which were set as bases to determine the directions of RPJPD 2025-2045, were determined. Those issues were derived from issues at the global scale, national scale, provincial scale, city scale, and from the strategic environmental assessment document (KLHS). Identified issues including education, healthcare, employment, youth and sports, social welfare, clean water, disaster management, environmental degradation, community empowerment, administrative systems, public service, legal systems, information and communication, spatial planning, food security, agriculture, fisheries, tourism, housing and residential areas, transportation, road infrastructure, environment, drinking water, industry and economy, regional investment, and smart city realization. Strategic issues are then described in terms of 4 dimensions; 1) human resource dimension; 2) economic and welfare dimension; 3) regional infrastructure and environment dimension; and 4) governance dimension. These 4 dimensions translated into 7 long-term strategical issues of Balikpapan City; 1) inclusive and sustainable economic development; 2) strengthening human resource and social protection; 3) reformation of bureaucracy and collaborative governance; 4) environmental management and disaster resiliency; 5) quality infrastructure and urban utility management; 6) improvement of smart and livable city; and 7) preparedness as IKN's partner.

Chapter 4 of this plan presents the vision and missions of long-term regional development. The long-term development vision for Balikpapan City 2025-2045 is "Comfortable

Balikpapan City 2045 Superhub of Sustainable Advanced Industry and Services for all with the Spirit of Madinatul Iman". The development missions to achieve this goal are: 1) social transformation by developing quality human resource and global-minded; 2) economic transformation by developing creative and inclusive economy; 3) governance transformation by developing integrated, collaborative, and adaptive government; 4) conducive city and substantial democracy; 5) social resilience-based environment and sustainable ecology; 6) development of modern, integrated, and equal city; 7) integrated and environmental friendly infrastructures; and 8) harmonic development.

In Chapter 5, the direction of measures is organized according to the vision and missions established in Chapter 4. In addition, priority measures for each of the eight missions are presented for each five-year period. However, as this document is still in a draft form, details such as maps, prioritized locations and measures are yet to be identified.

(3) Balikpapan City Regional Middle-Term Development Plan 2021-2026

This Plan is a five-year development plan for Balikpapan City for the period 2021-2026, which presents goals, policies, strategies, and community development programs. The plan was regulated under the Regional Regulation of Balikpapan City No.6/2021. It has been developed based on the contents of the four phases of the long-term plan (2020-2025) as well as the results of the evaluation of the previous five-year plan. The plan is also supposed to serve as a basis for providing direction in the work plan and strategic planning to be developed by the city. The structure of this plan is as shown in the figure below.

Chapter 1. Introduction
Chapter 2. General and Regional Conditions
Chapter 3. Regional Financial Overview
Chapter 4. Regional Problems and Strategic Issues
Chapter 5. Vision, Mission, Goals and Objectives
Chapter 6. Strategy, Direction, Policy, and Program
Chapter 7. Funding Framework and Regional Basic Program
Chapter 8. Role of Regional Government
Chapter 9. Closing

Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-107 Structure of Balikpapan City Regional Middle-Term Development Plan 2021-2026

In Chapter 1 of this plan, in addition to the policy of the mayor and others, the IKN Development is mentioned and the need to prepare the city as an adjacent city to the New Capital City is described. It also reviews and relates to related plans, but with respect to the East Kalimantan Province Regional Middle-Term Development Plan, the contents of the Plan for 2019-2023 are referenced. The Middle-term development plans of the neighboring provinces of PPU and Kutai Katanegara are also reviewed, with the former referring to road and bridge development along the coastline, and the latter also indicating the need for enhanced connectivity from an industrial development perspective.

Chapter 2 summarizes the status and potential of the region from various perspectives, including geographic characteristics, land use, social trends and statistics, and public welfare and services in Balikpapan City. Chapter 3 provides an overview of the region's fiscal management. While IKN development is mentioned in the descriptions of poverty reduction

and labor force, the expected impacts and predictions on socio-economy are not indicated. In Chapter 3, the regional economic growth rate and municipal budget projections for 2021-2026 are presented, and it is mentioned that IKN development is also considered and discussed.

In Chapter 4, problems and strategic issues related to the development of the region are summarized as a basic analysis of the planning study. Some problems related to IKN development are mentioned which are: rapid rise in land demand, impact on unregulated land development, problems in securing highly skilled human resources, lack of IKN impact analysis on the working environment, increased environmental burden, scope of fire response expansion, and the increase in the number of poor residents in response to population growth. In the section on development issues, the impact of IKN development is mentioned in terms of infrastructure development and improvement of the quantity and quality of human resource development based on the possibility of increased employment opportunities. It also mentions quality infrastructure development as one of the pillars of the development agenda, in which it is mentioned that Balikpapan City needs to promote the development of each infrastructure such as roads, water supply, transportation, electricity, and telecommunications in accordance with the development of the New Capital City. Also, in the environmental aspect, the need to address the impact of the relocation of the capital is briefly mentioned. However, this Development Plan does not provide a detailed and quantitative analysis of the population growth and increased demand for each infrastructure due to the impact of the IKN Development.

Chapter 5 summarizes the vision, mission, and goals of the City's five-year development, considering the challenges it faces. The vision is "to realize a livable, modern, and prosperous leading city of Balikpapan City" within the framework of "Madinatul Iman". "Madinatul Iman" is a term that refers to an advanced civilized society supported by good governance and various development activities. The five missions to realize the vision are 1) Good Governance, 2) Development of Highly Skilled Human Resources, 3) Provision of Adequate Infrastructure, 4) Creation of Environmentally Friendly and Livable Cities, and 5) Creative Economic Development, and goals, policies, and indicators are organized for each of these missions. Nine development priorities are also described in the Plan.

Chapter 6 presents the 16 development strategies and directions for achieving the goals and the 5-year target values, based on the top goals and SWOT analysis up to Chapter 5, etc. The second half of Chapter 6 describes the regional development directions and strategic development areas, referring to the Regional Spatial Plan of Balikpapan City 2012-2032. Regarding flood control, reference is made to the management system of the Ampal watershed, which runs north-south through the center of the city. For economic development, the Plan identifies priority development areas for each region of the city. The annual budget and target values for each of the 140 development programs are set. On the other hand, each program is described as a water resource management program or a road transportation program, for example, and specific projects and target areas are not specified. In addition, whereas strategies for infrastructure development, spatial planning, and industrial development are also listed, there is little mention of measures to deal with the relocation of the capital among them.

Chapter 7 outlines the overall direction of development and the framework and indicators for promotion, while Chapter 8 describes the relationship with related organizations, collaboration measures, and roles.

(4) Balikpapan City Regional Spatial Plan 2012-2032

The Balikpapan City Regional Spatial Plan 2012-2032 is a plan developed by Balikpapan City to promote integrated development in the city and is regulated by the Regional Regulation of Balikpapan City No.12/2012. It provides the contents and diagrams of the spatial plan, as well as regulatory provisions regarding land use. The structure of this plan is as shown in the figure below.

Chapter 1. General Provisions
Chapter 2. Scope
Chapter 3. Objectives, Policies and Strategies of Spatial Planning
Chapter 4. City Spatial Structure Plan
Chapter 5. City Spatial Pattern Plan
Chapter 6. City Strategic Area
Chapter 7. City Space Utilization Direction
Chapter 8. City Space Utilization Control Direction
Chapter 9. Penal Provisions
Chapter 10. Rights, Obligations and Role of the Community
Chapter 11. institutionalization
Chapter 12. Miscellaneous Provisions
Chapter 13. Transitional Provisions
Chapter 15. Closing

Source: Balikpapan City Regional Spatial Plan 2012-2032

Figure 2-108 Structure of Balikpapan City Regional Spatial Plan 2012-2032

The plan map included in the Regional Spatial Plan of Balikpapan City 2012-2032 is shown in the table below.

Table 2-89 Planning Diagrams shown in Balikpapan City Regional Spatial Plan 2012-2032

No.	Graphic Novel (esp. One Created Between the 12th and 19th Centuries)	Summary
1	Spatial Structure Plan Map (Figure 2-109)	・ Integrated map of major residential areas, transportation facility network, various infrastructure facility network plans, etc.
2	Spatial Pattern Plan Map (Figure 2-110)	・ Land Use Plan Map of Conservation Areas and Developed Areas
3	Strategic Area Map (Figure 2-111)	・ Location map of strategic areas related to environment, economic growth, and socio-cultural

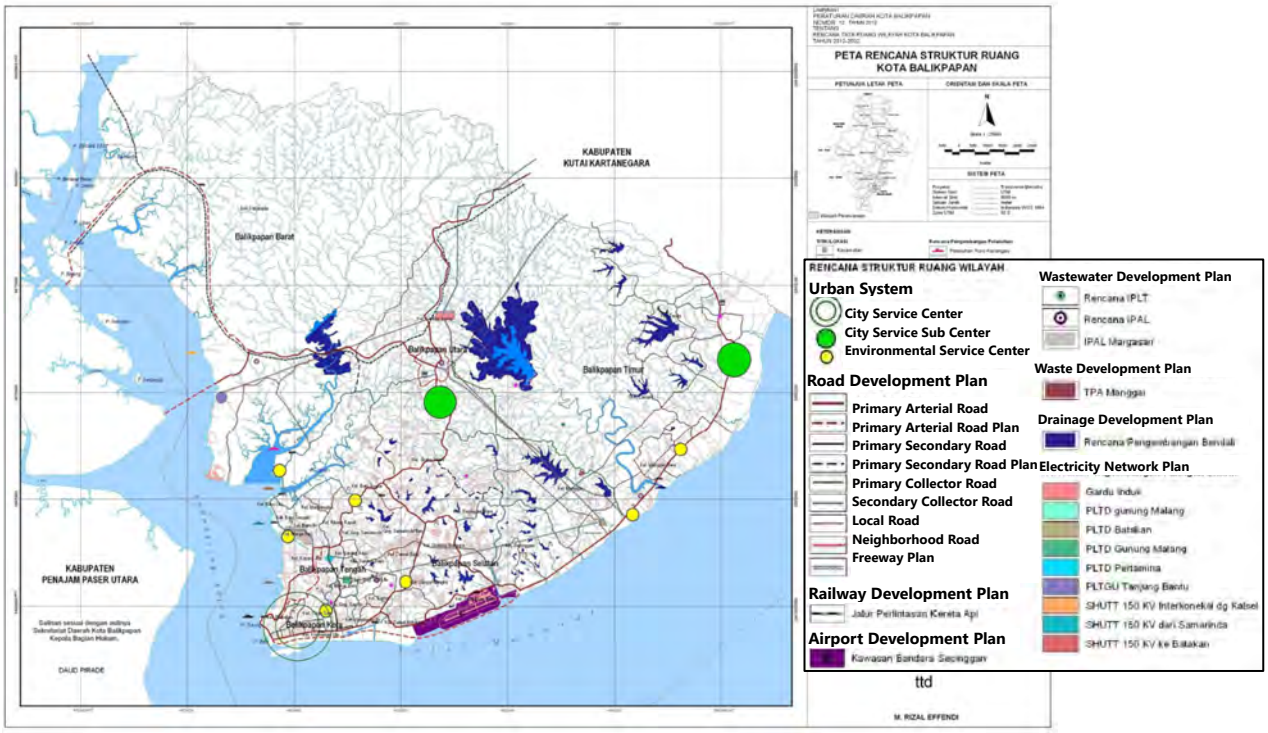
Source: Balikpapan City Regional Spatial Plan 2012-2032

In Chapter 3, the objective of this spatial plan is to make Balikpapan City a vibrant and harmonious green service city that functions as a national growth hub. The eight policy directions of the Spatial Plan include: strengthening service hub functions; improving inter-regional access; developing an integrated, equitable, and environmentally friendly infrastructure system; preserving protected areas; expanding green space throughout the city; promoting productive and environmentally friendly regional development; developing strategic areas; and strengthening national defense functions. This Spatial Plan then lists the following Spatial planning strategies are then organized by policy direction.

Chapter 4 provides an overview of the urban service center system and infrastructure network that comprise the regional spatial structure plan, including its components, applicable areas, and facilities. The urban service center system consists of urban service centers, suburban service centers, and neighborhood centers. The urban service centers are in Klandasan Ilir, Klandasan Ulu, and Balikpapan City's administrative, commercial, and urban service hub areas. The infrastructure network system is divided into major infrastructure network and other infrastructure network. Major infrastructure consists of land transportation network system (road, rail, river, and ferry transportation), marine transportation network system, and air network system. Other infrastructure networks are categorized as telecommunication infrastructure, water resources infrastructure, energy infrastructure, and urban infrastructure. The names of routes, facilities, etc. that correspond to each network system are also organized.

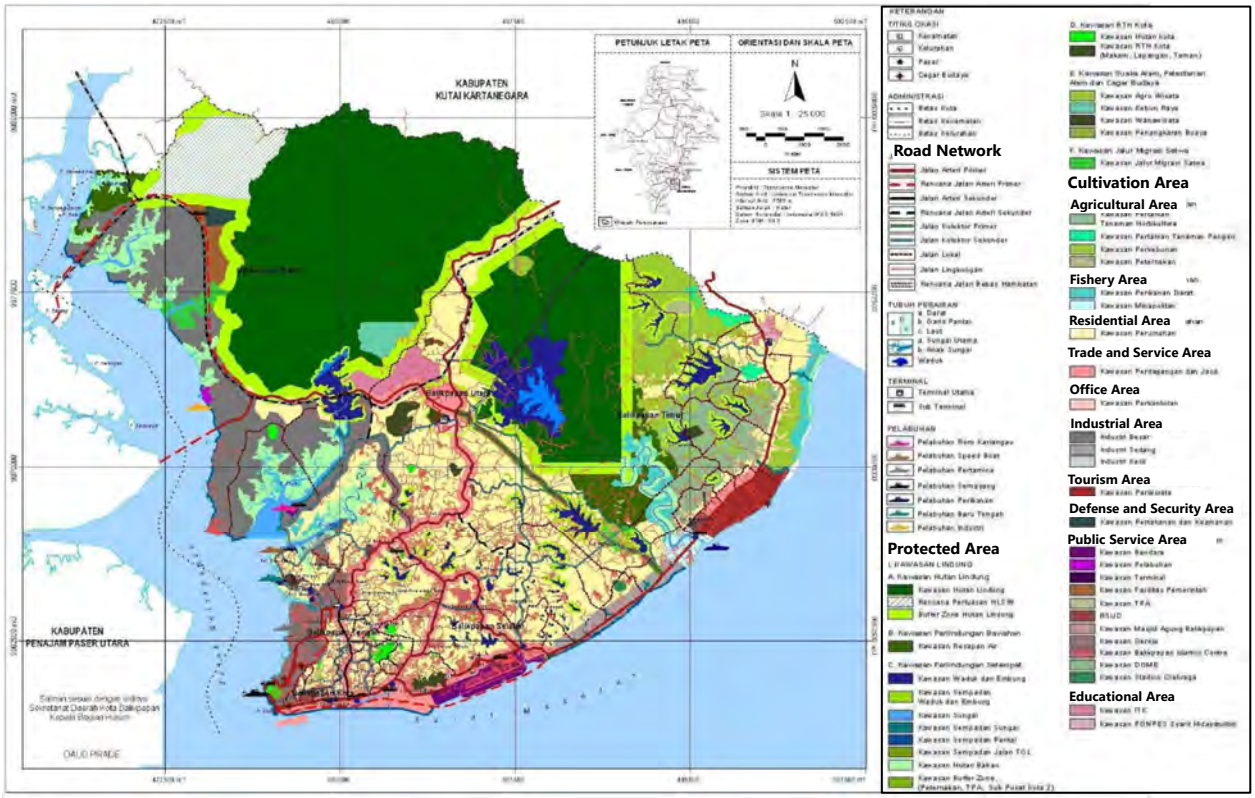
In Chapter 5, the spatial pattern planning is organized into a classification and overview of each land use in protected areas and developed areas. Protected areas are classified into protected forests, semi-protected areas, rural protected areas, green open spaces, natural and cultural heritage protection areas, disaster risk areas, marine and coastal conservation areas, and animal refuge areas. Development Regions, on the other hand, are classified into Agricultural Regions, Fishery Regions, Residential Regions, Service Commercial Regions, Office Regions, Industrial Regions, Tourist Regions, Non-Green Open Space Regions, Disaster Refuge Regions, National Defense and Security Regions, Public Service Regions, Informal Regions, and Educational Regions. The names of the regions that fall under each of these areas are then organized.

In Chapter 6, the strategic area plans of Balikpapan City urban development are classified into economic strategic areas, socio-cultural strategic areas, and environmental strategic areas, and the names of the relevant areas are given. The urban space program is organized as a list. The urban space programs are organized as a list, but while the framework of measures is provided, specific project names, etc. are not indicated.



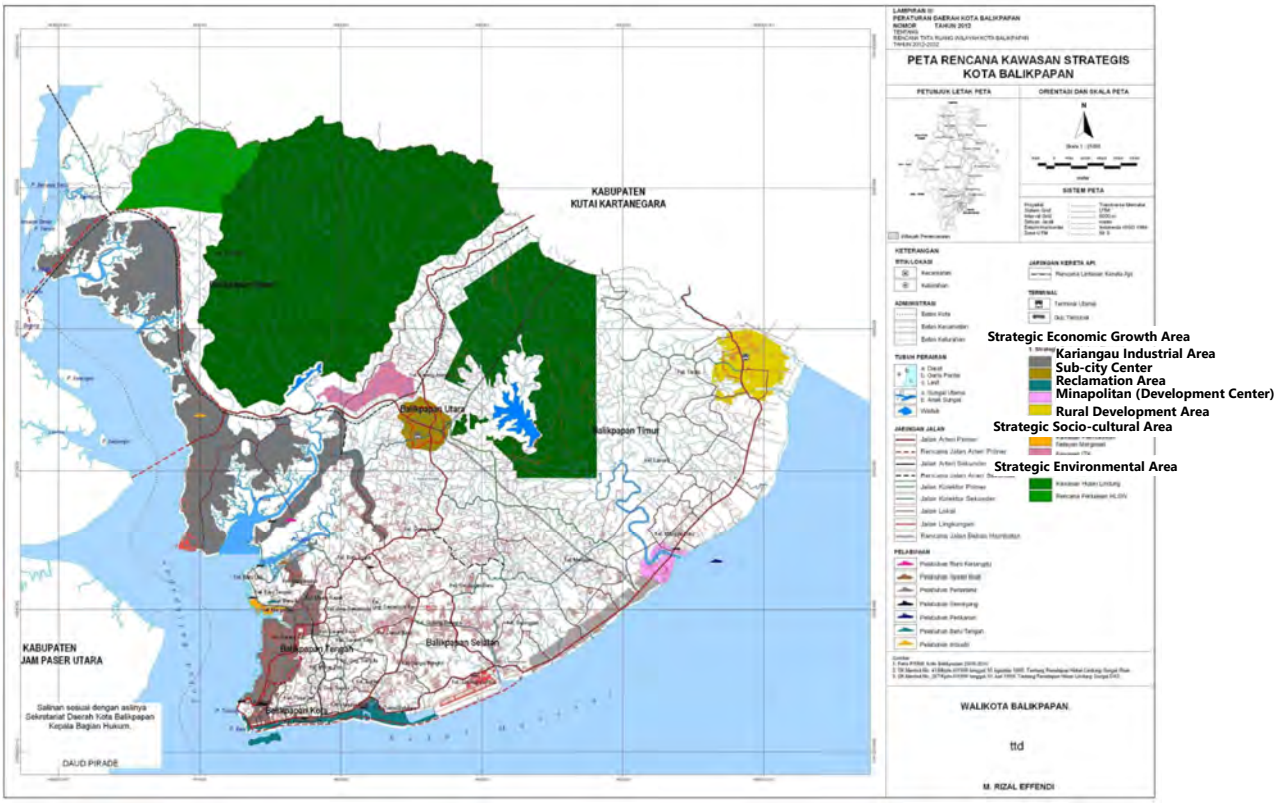
Source: Balikpapan City Regional Spatial Plan 2012-2032

Figure 2-109 Balikpapan City Spatial Structure Plan 2012-2032



Source: Balikpapan City Regional Spatial Plan 2012-2032

Figure 2-110 Balikpapan City Spatial Pattern Plan 2012-2032



Source: Balikpapan City Regional Spatial Plan 2012-2032

Figure 2-111 Balikpapan City Strategic Area Plan 2012-2032

(5) Revision of Balikpapan City Drainage Master Plan 2022

The Balikpapan City Revised Drainage Master Plan (2022) is a comprehensive drainage master plan that summarizes the current drainage situation in Balikpapan City, the occurrence of flooding and inundation, and the issues to be addressed.

In Chapter 2, the status of geographic and administrative conditions, topographic conditions, hydrologic and meteorological conditions, and land use are assessed, and previous studies on drainage are summarized. It also describes budget and land acquisition as factors that have prevented the implementation of responses to the various studies that have been conducted.

In Chapter 3, Bendali (dams and reservoirs) planning is organized from the perspective of availability based on the status of land acquisition and maintenance.

In Chapter 4, the Plan to solve the flooding problems that have already occurred is summarized by specifically listing the flooding locations and factors that cause flooding, and the measures to solve the problems.

Chapter 5 presents the basic concepts for a drainage master plan. It states that planning and development of urban drainage systems requires a combination of urban development, rural areas, and river basins (DAS), and that new development in urban areas must adapt existing or planned drainage system designs.

In addition, the four clusters of wastewater management are described using the acronym TRAP, which is an acronym for the Indonesian word for wastewater management.

Tampung: the control of drainage channels and river flows from overflowing by constructing reservoirs or playgrounds, whether at the household or watershed scale.

Resapkan: infiltration of water into the soil, which not only maintains groundwater strength, but also maintains and reduces runoff into storm drains and storm sewers.

Alirkan: refers to the flow of rainwater that flows into a drainage channel until it reaches the final receiving or discharge water body, such as a river, and flows into the ocean. It is said that drainage channels must be properly analyzed and calculated to determine the dimensions and capacity of the drainage channel in question.

Maintenance (Pelihara): regular and continuous maintenance of drainage channels.

In addition, along with the basic ideas, this masterplan summarizes drainage areas, the shape of drainage channels and other drainage facilities (existing and planned), plans for dams and regulating basins, drainage recommendations for new area development, and flooding coverage assumptions in flood modeling.

Finally, reference examples of standard drainage structure shapes and capacity designs for reservoirs and regulating basins are also included. (The example calculations assume a water storage capacity of 4% of the site area with a 1-year probability of 87 mm/hr and a 2-year probability of 119 mm/hr.)

Chapter 6 contains recommendations based on the Plan, including general technical recommendations, associated new area development, increased community participation, and recommendations for related agencies.

2.6 Sectoral Review of Plans and Policies in Balikpapan City

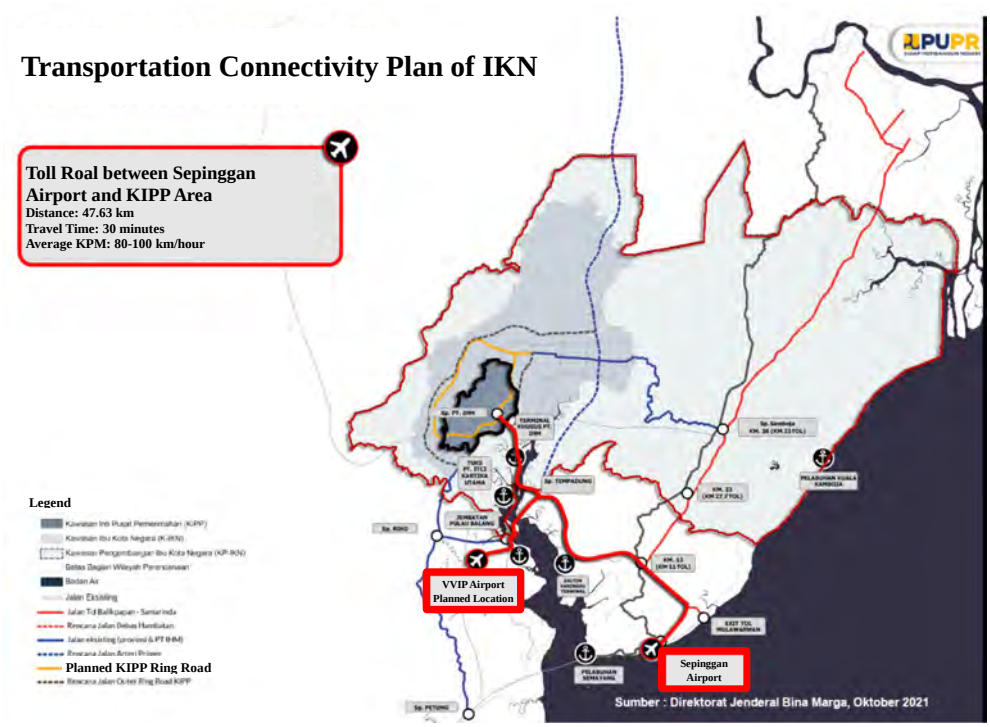
The result of the sectoral review on related plans and policies for Balikpapan City is shown as follows. The eight sectors for the review are connectivity, climate change, environmental management, industrial development and investment promotion, electricity and energy, urban management, living environment and diversity.

2.6.1 Connectivity (Transportation, ICT)

(1) Road

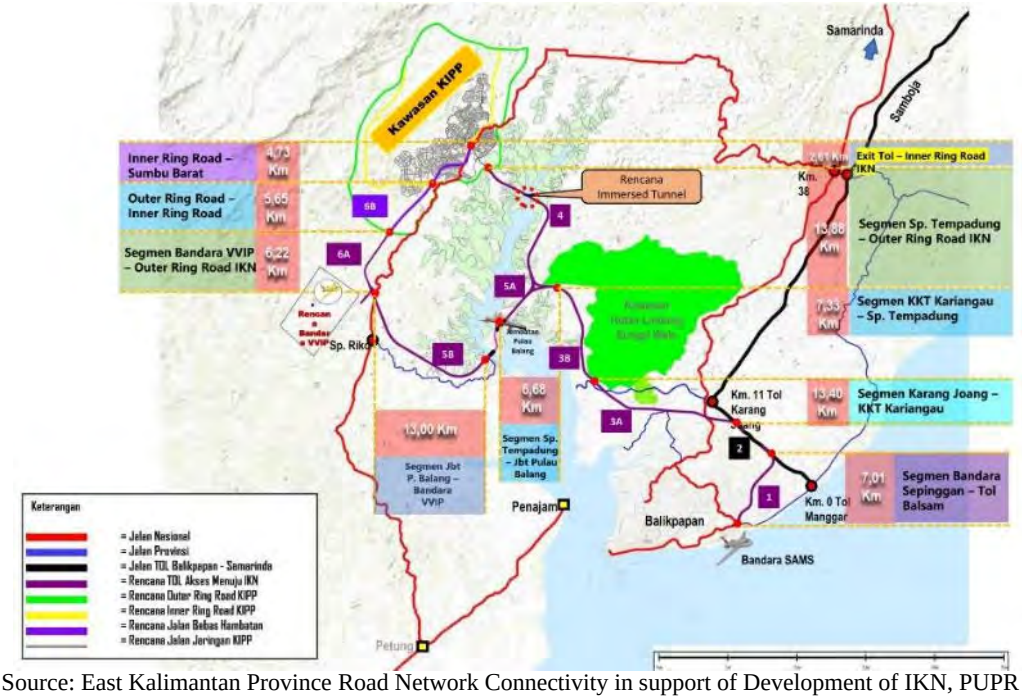
In the Balikpapan City Regional Spatial Plan 2012-2032, roads in the city are divided into primary arterial roads, secondary arterial roads, primary collector roads, secondary collector roads, and local road networks (see the Spatial Plan diagram for illustration). The major roads planned in the Plan include the Balikpapan City-Samarinda City toll road, the coastal road, and the road from the Kariangau area to IKN. Of these, the Balikpapan City-Samarinda City toll road section is the first expressway in Kalimantan which was completed and put into service in 2021.

According to the 2021 KIPP Development Plan, the Balikpapan City-KIPP Toll-Road is planned to be a high-standard road (47.63 km long) connecting KIPP and Sepinggan Airport in about 30 minutes, as shown in the figure below, and the northern section from the Kariangau industrial area is under construction with land expropriation in progress. On the other hand, there would be a land expropriation problem within the Balikpapan City urban area. In addition, the VIPP airport development project is underway which will be used by very important persons. The construction of Jembatan Pulau Bridge, which is on the route from Balikpapan City side, has already been completed.



Source: KIPP Development Plan, PUPR (2021)

Figure 2-112 IKN Transportation Connectivity Plan



Source: East Kalimantan Province Road Network Connectivity in support of Development of IKN, PUPR (2022)

Figure 2-113 Road plan around IKN

(2) Railway

MOT conducted a feasibility study (F/S) in 2023 for a railway between Balikpapan City and KIPP. Some other studies were conducted, and the results document were compiled in 2022. The figure below shows the MOT's study route for railways around IKN as of 2022. The three

sections under consideration are: 1) Semayang Station - Karangjoang Station (within the Balikpapan City urban area), 2) Karangjoang Station - KIPP (northern route via Samboja Station), and 3) KIPP - Karangjoang Station (southern route via Kariangau Station).

In F/S study by MOT, the Trans-Kalimantan Railway (e.g., the railway route to Samarinda City) was excluded from the study, and the priority is given to the development of the section around IKN. According to the study by MOT as of 2022 shows that the KIPP-Sepinggan Airport section will be in service in 2030. The study route as of 2021 shows that the section will pass through the Samboja area, but multiple options are being compared, including a route along the Toll-Road from Balikpapan City center to the west, a loop, the possibility of elevating the city center, and a station layout plan, etc. In the 2021 F/S study, the inter-regional traffic demand forecast for the area surrounding IKN was also studied.

The Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 outlines a policy of promoting the development of an urbanized railway system based on urban growth, demand, and regional development trends.



Component of Economic Feasibility Analysis

	Cost	Benefit
Kelayakan Ekonomi	▪ Biaya Prasarana (konstruksi & pemeliharaan) ▪ Sarana (operasi dan pemeliharaan)	Penghematan biaya operasi kendaraan dan nilai waktu - langsung dan tidak langsung
Kelayakan Finansial		Pendapatan Tiket

Infrastructure Construction Cost

No.	Segment/Route	Distance (km)	Construction and Design Cost (IDR)
1	Rute 1 - St. Semayang - TOD Karangjoang	28,04	27.820.253.595.600
2	Rute 2 - TOD Karangjoang - St. KIPP2	55,70	35.180.283.578.999
3	Rute 3 - St. KIPP2 - TOD Karangjoang	53,93	20.580.061.666.065

Development Phases

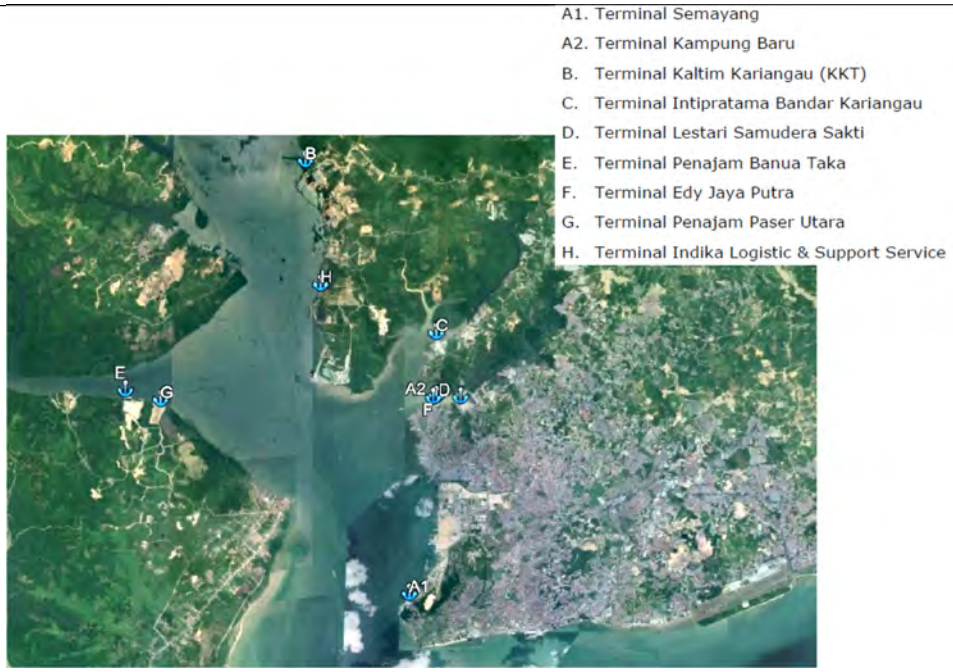
Route 1		Route 2		Route 3	
2022	FS	2022	FS	2022	FS
2031	amdal, larap, DED	2036	amdal, larap, DED	2047	amdal, larap, DED
2032	konstruksi + lahan	2037	konstruksi + lahan	2048	konstruksi + lahan
2033	konstruksi	2038	konstruksi	2049	konstruksi
2034	konstruksi	2039	Konstruksi	2050	mulai operasi rute 3
2035	mulai operasi rute 1	2040	mulai operasi rute 2		

Source: Feasibility Study of Railway Implementation in Support of IKN, MOT (2022)

Figure 2-114 Railway Plan around IKN: Overview of routes to be considered as of 2022

(3) Ports & Logistics

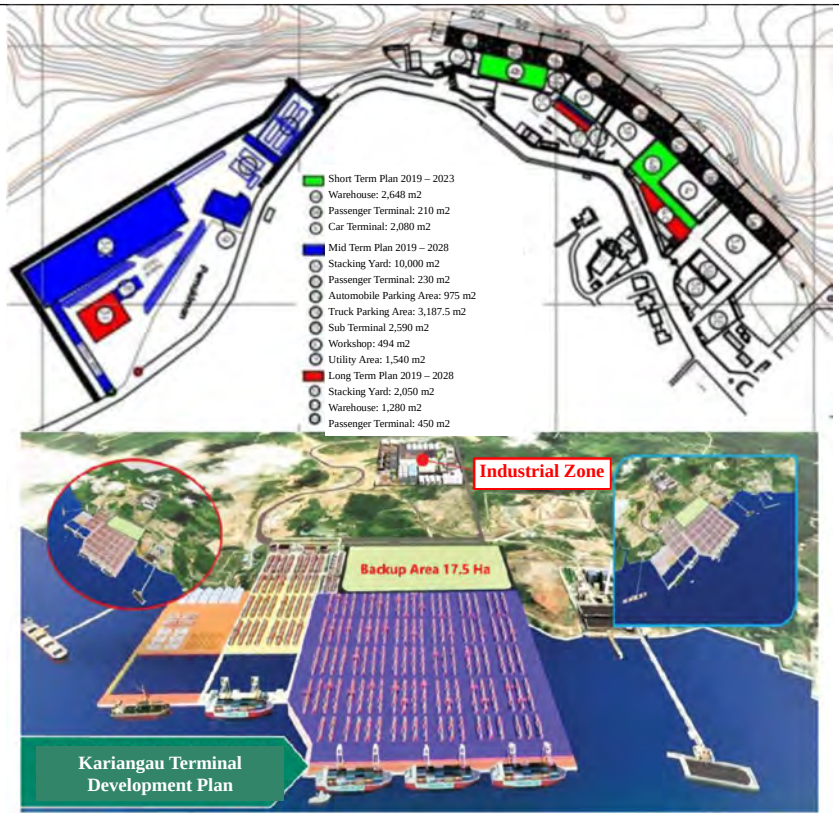
The Balikpapan City Port Master Plan (MOT, 2023) presents the current status of ports around Balikpapan City and future demand projections and development plans by port terminal. There are nine public port terminals around Balikpapan City Bay as shown in the figure below. The hinterland of these port facilities includes the provinces of East Kalimantan Province and North Kalimantan. Balikpapan City port facilities serve wide-area passenger and cargo flow. The import/export destinations of port cargoes include Suarabay (East Java), Cirebon (West Java), Jakarta, Baru City, Banjarmasin (South Kalimantan), Batam, Pare-pare, and Makkasar (South Sulawesi) in Indonesia, and Malaysia, Singapore, Thailand, Taiwan, China, Japan, Korea, South Africa, Belgium, the Netherlands, Suriname, and the United States outside the country.



Source: Balikpapan City Harbor Master Plan 2023, MOT

Figure 2-115 Location of Public Port Terminals in Balikpapan City Bay

In particular, Semayang Port and Kaltim Kariangau Terminal are import/export hubs. According to the Master Plan, general cargoes from Semayang Port are distributed to Singapore and China, while coal is exported to Malaysia, China, India, Japan, Taiwan, and other countries. Kaltim Kariangau Terminal is considered an export hub for plywood, shrimp, marine products, machine parts, etc., and an import hub for tires, iron, machinery, electronics, etc., and is also expected to operate direct shipping with other countries. As mentioned above, Semayang Port and Kaltim Kariangau Terminal are expected to contribute as port facilities to support IKN development. The Balikpapan City Transportation Master Plan Report (2021) shows a phased expansion and improvement plan for Semayang Port and Kaltim Kariangau Port until 2039 (expansion and improvement of wharf, warehouse, container yard, etc.) as shown in the figure below.

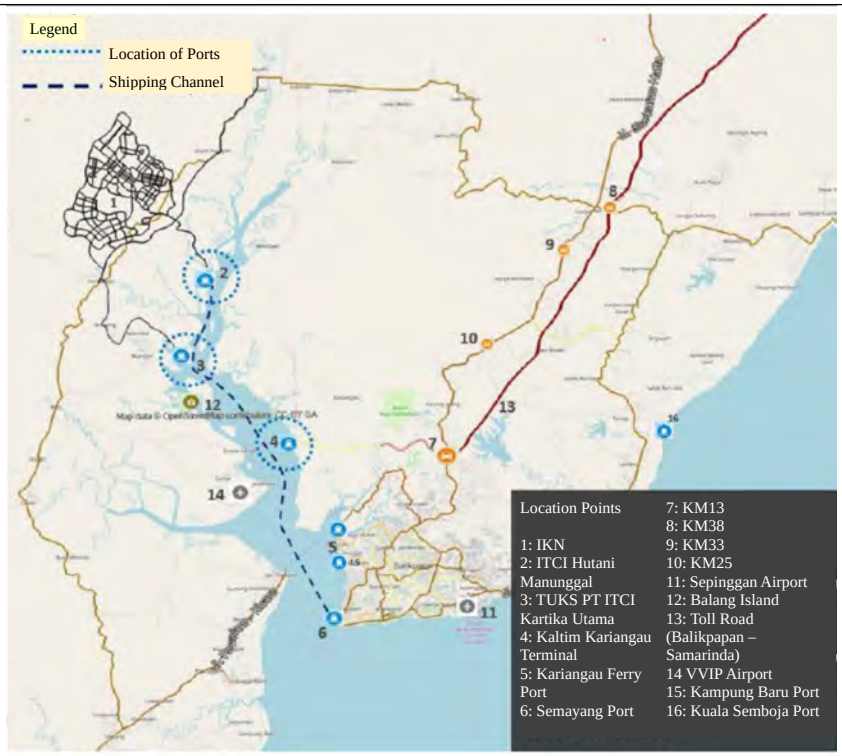


Source: Report of Balikpapan City Transport Master Plan 2021, Balikpapan City

Figure 2-116 Semayang Port Expansion Plan (top) and Kaltim Kariangau Port Expansion Plan (bottom)

The Balikpapan City Transportation Master Plan 2021 identifies three ports that will support IKN development: Kaltim Kariangau Terminal (No. 4 in the figure below), ITCI Hutani Manunggal (No. 2 in the figure below), and ITCI Karkita Utama (No. 3 in the figure below). Of these, ITCI is a temporary port for IKN development. The Kariangau terminal, on the other hand, is expected to become a logistics hub to support IKN development. The plan also mentions the role of the Semayang Port as a passenger port and the need to consider new port development to support IKN.

The Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 indicates that the city intends to promote the development of major ports, especially Semayang Port, which will support the formation of the economic hub of the three cities, while utilizing the national maritime transportation route (Indonesian Archipelago Sea Route).



Source: Report of Balikpapan City Transport Master Plan 2021, Balikpapan City

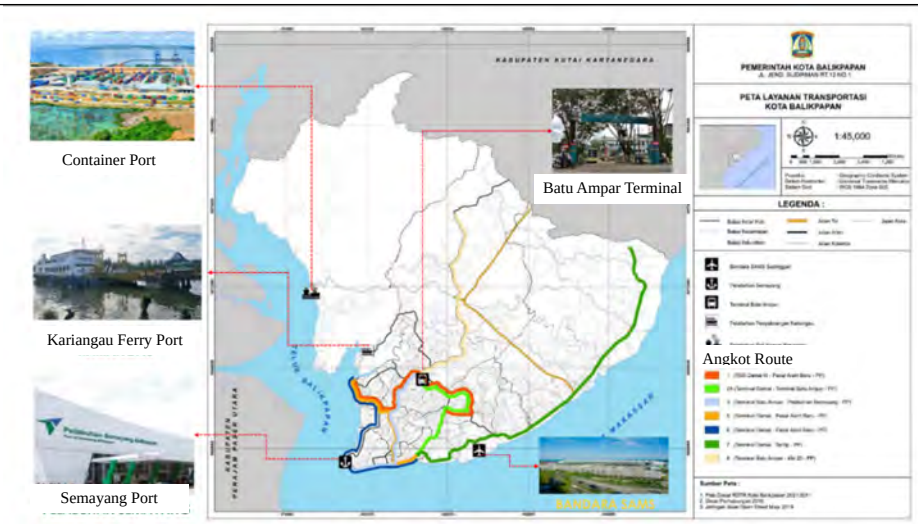
Figure 2-117 Location of IKN Supporting Ports

(4) Public Transportation

Intercity buses and Angkot, a van-type bus that operates within the city, provide land-based public transportation services. Intercity buses depart from and arrive at the Batu Ampar bus terminal in the northern part of the city, with 46 daily services to Samarinda City and 6 daily services to KIPP (as of June 2023). Approximately 20 private companies operate the service.

The Angkot in Balikpapan City have defined routes of operation, with seven routes shown in the figure below. According to city officials, 600 vehicles are in operation, however the number of public transportation users is declining. The Balikpapan City Transportation Master Plan 2021 also cites low public transportation ridership (35%) as an issue, and other issues include the lack of a clear timetable and low convenience, setting reasonable fares, and expanding service to newly developed areas.

The Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 outlines a policy to develop an Integrated Urban Mass Transit System, including a mass transit system.



Source: Balikpapan City

Figure 2-118 Intercity Bus Terminal Locations and Angkot Operating Routes



Source: JICA Study Team

Figure 2-119 Batu Ampar Bus Terminal (left) and Intercity Bus in Balikpapan City (right)



Source: JICA Study Team

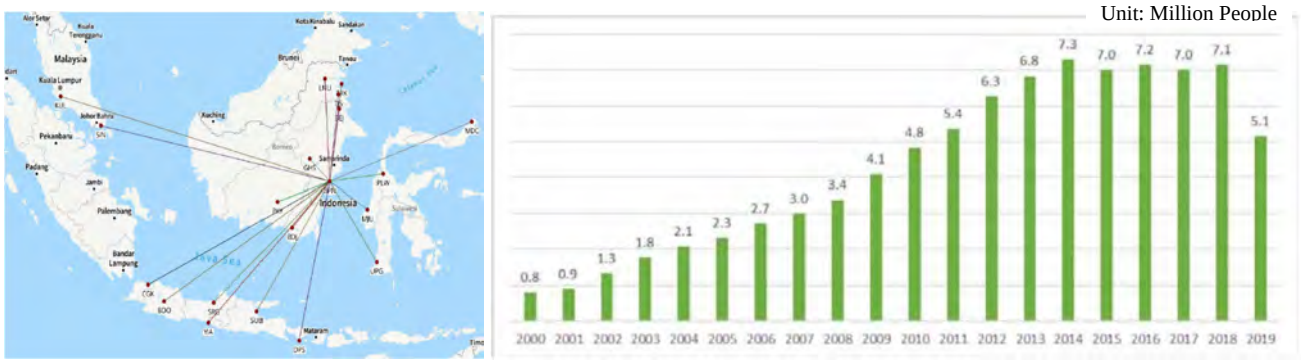
Figure 2-120 Demonstrative Operation of Trans Balikpapan City

(5) Airport

Sepinggan Airport (Bandara Sultan Aji Muhammad Sulaiman Sepinggan Airport) in Balikpapan City is the largest airport in East Kalimantan Province. The current air routes of Sepinggan Airport are shown in the figure below. The airport has international flights to Singapore and Malaysia, as well as to other parts of Indonesia. The annual passenger volume

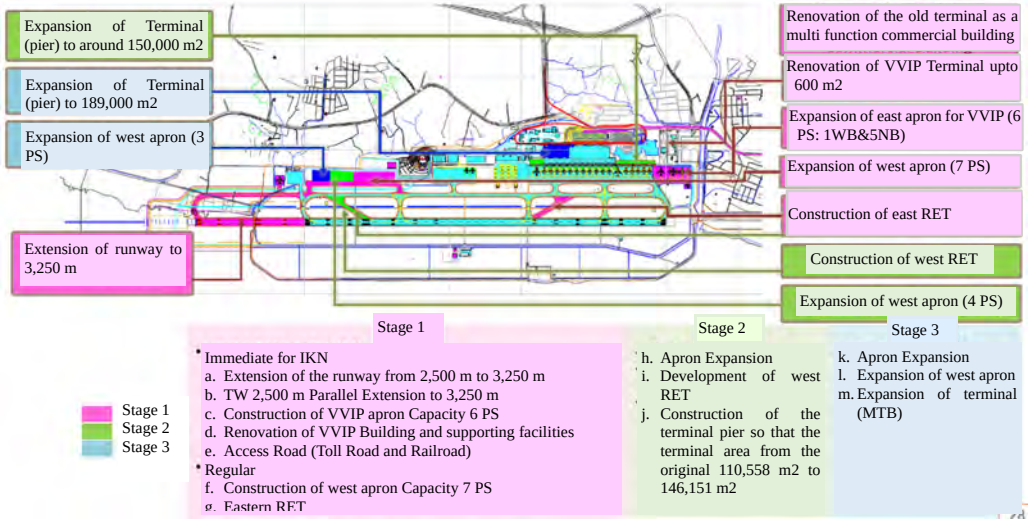
was more than 7 Million passengers around 2014, before the COVID-19 infection spread, and then it started to level off to decline due to the opening of APT Pranoto Airport in Samarinda City in 2018 and the Covid 19 caused a flat to declining trend (Balikpapan City Transportation Master Plan 2021).

MOT is considering expansion plans for Sepinggan Airport, including runway expansion and increased facility capacity, as shown in the figure below.



Sources: MOT (left), Report of Balikpapan City Transport Master Plan 2021, Balikpapan City (right)

Figure 2-121 Sepinggan Airport's Routes (left) and Annual Passenger Traffic (right)



Source: MOT

Figure 2-122 Sepinggan Airport Expansion and Development Plan

(6) Communication and Information

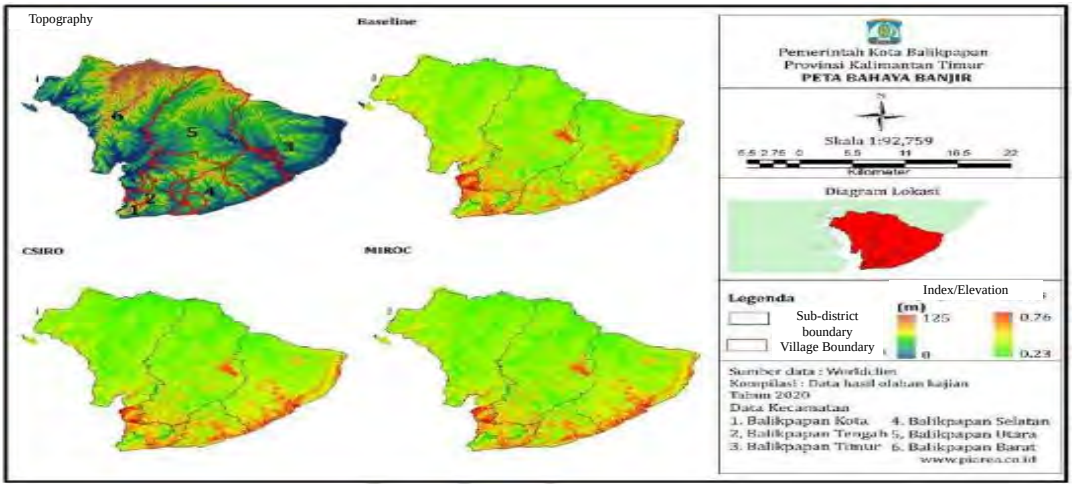
According to the East Kalimantan Province branch of the Indonesian Telecommunications Corporation (Telcom), fiber cables and communication towers have been developed as telecommunication infrastructure in Balikpapan City. On the other hand, coordination with the existing infrastructure was cited as an issue, as it will be affected by the construction of infrastructure and roads in connection with the development of the New Capital City. Regarding 5G and smart city development in the New Capital City, the Telecommunications Corporation is promoting it in cooperation with related government agencies, and no major problems or issues were cited at this time.

2.6.2 Climate Change Measures (Zero Emissions, Disaster Prevention)

According to the Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045, Balikpapan City is regarded as a disaster-prone area, with a particularly high risk of fire, flood, landslide, and drought.

According to the Balikpapan City Regional Middle-Term Development Plan 2021-2026, Balikpapan City has been experiencing frequent disasters such as floods, forest fires, and landslides, and the hazard of floods in particular is expected to worsen in the future. As shown in the following figure, the hazard index for floods is between 0.23 and 0.76, with relatively high flood hazard index in coastal areas and areas located in watersheds with high land occupancy, such as Central Balikpapan, South Balikpapan, and East Balikpapan, and in the future, its flood hazard is expected to worsen as the rainfall intensity in December, January, March, and April is expected to increase, especially in the northern part of the country.

The causes of flooding in Balikpapan City include uncontrolled green space reduction and reduced drainage capacity due to heavy rainfall.



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-123 Balikpapan City Topographic Map (Baseline 1991-2020 and Projected 2021-2050)

The mission to reduce disaster risk and damage includes the following items

- Development of Flood Control Infrastructure in the Ampar River Basin
- Facilitation of drainage system development in East Balikpapan City
- Improvement of drainage capacity throughout Balikpapan City

In terms of long-term strategies to mitigate disaster risk and damage, the Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 includes the following long-term development strategies to mitigate against climate change: decarbonization of key sectors, renewable energy investment in infrastructure, and incentivizing sustainable practices across industries.

According to the Balikpapan City Regional Middle-Term Development Plan 2021-2026, greenhouse gas (GHG) emissions from the energy and transportation sectors dominate in Balikpapan City. emissions from Balikpapan City as of 2010 were about 70% of the total emissions from PT Pertamina's Refinery Unit 4. In addition, automobile use is increasing, with the number of cars owned increasing by 4.7% between 2018 and 2019, accounting for

about 20% of total GHG emissions.

As a long-term strategy to reduce greenhouse gas emissions, the Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 calls for government agencies and other organizations to promote the use of environmentally friendly renewable energy resources, such as solar power.

2.6.3 Environmental Management, Waste Treatment, Waste Management

According to the Balikpapan City Regional Spatial Plan 2012-2032, the general spatial goals and policies of Balikpapan City are as follows. It can be read as promoting development and environmental protection while ensuring sustainability.

Table 2-90 Balikpapan City Spatial Goals and Policies

Space Planning Objectives	· An environmentally sustainable city that takes into account aspects of industry, trade, services, cultural tourism, and education
Urban Function Concept	· Balikpapan City as a dynamic, harmonious and green city of industry, trade and services.
Spatial Structure Policy	· Improved urban and rural services and a center for equitable economic growth · Improve the quality and scope of services of integrated and equitable transportation, communications, energy, and water resource infrastructure networks throughout the region.
Spatial Pattern Policy	· Expansion of environmentally friendly industrial parks · Development of commercial areas in new growth centers · Preservation and rehabilitation of man-made cultural heritage (architectural heritage) and nature (natural heritage) · Urban forestation for air purification and cooling · Zero waste · Water Supply Savings
Local Infrastructure Development Policy	· Accelerate infrastructure development to promote regional growth · Acceleration of infrastructure development considering environmental sustainability and sustainable development (ecological and sustainable)

Source: Balikpapan City Regional Spatial Plan 2012-2032

Additionally, the Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 compiled strategical issues in Balikpapan City, some that related to environmental management and waste management aspects are the development of sustainable and inclusive economic issue, the environmental management and disaster resiliency issue, integrated infrastructure and management of City's utilities issue, and smart and livable city issue.

In line with the previous Regional Long-Term Development Plan 2005-2025, as an addition to the environment and healthy livelihoods, the Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 also emphasizes the necessities of environmental consideration in both urban and economic development. Appropriate environmental organizing and disasters resiliency become main focuses arranging the direction to achieve the sustainable development goals. It has been acknowledged that the environmental management policy needs a comprehensive effort and not partial, hence the importance of the environmentally integrated urban development and resource utilization using the

collaborative approach among stakeholders. Oversight and improved management of pollution caused by residential activities are directions. Its implementation also takes into account the need to enhance the role of the entire community in environmental protection and to make the community aware that environmental protection and management is a shared responsibility. The sufficiency of clean water and sanitation (wastewater, waste, and drainage) services is still marginal, especially for low-income groups. Due to limited raw water capacity, the clean water supply rate through pipelines has reached 73%. Wastewater pipeline coverage is only 2%, and 98% of wastewater is still discharged into the ground or water bodies without prior treatment. As of 2022, penetration of waste treatment services has reached 99.1%, and waste generation is 514.7 tons/day, but community-based waste management (3R) is still low. Drainage is not expected to function optimally due to high sedimentation and waste, especially in residential areas, and although the number of drainage ditches has decreased from 87 in 2004/2005, as of 2011 there were still 12 floods with a flood height of 30 cm or higher due to blockage of drains. Thus, while it is important to consider the social and geographical attributes of the clean water supply, the untreated discharge of wastewater and the prevalence of waste services are particularly important from an environmental standpoint. In particular, it is important to address the issue of urban waste dumping, which can increase damage from disasters such as typhoons and torrential rains that are expected to become more frequent and severe due to climate change in the future. This is also pointed out as an important issue in the Balikpapan City Drainage Master Plan 2022. On the other hand, continuous maintenance of drainage systems is necessary, but the reality is that almost all cities in Indonesia have very limited budgets for maintenance.

Concerning the environmental impacts of human activities in Balikpapan City, following directions of environmental protection and management were established:

- Harmonization of Balikpapan City development and environmental capacity by using the 52:48 concept (52% protected area and 48% developed area)
- To achieve the 75.26 score of Environmental Quality Index (IKLH)
- Optimization and protection of raw water sources in Balikpapan City up to year 2049
- Achieving the waste management targets of 30% waste reduction and 70% waste managed by 2049
- Green house gases emission reduction up to 30% by 2049
- Food production optimization in Balikpapan City by 2049
- Balikpapan City as a disaster-resilience city in 2049
- Raising stakeholders' (public, private, government) environmental awareness to maintain environmental qualities.

As the Balikpapan City Regional Long-Term Development Plan 2025-2045 also highlighted the transformation plan on various aspects of the city, following policy directions of transformation that are related to environmental management aspect were established:

- Development of smart, green, and sustainable city
- Integrated and sustainable development of areas in the city
- Environmentally sound power generation facilities
- Forest rehabilitation and reduction of deforestation rate
- Landscape protection, wildlife diversity protection, and strengthening the ecosystem
- Protection of wildlife original habitat and connectivity of protected species

- Reformation of upstream-to-downstream integrated municipal solid waste management
- Provision of appropriate drinking water and sanitation service and infrastructure
- Optimization of integrated solid waste management
- Improvement of healthy sanitation habit

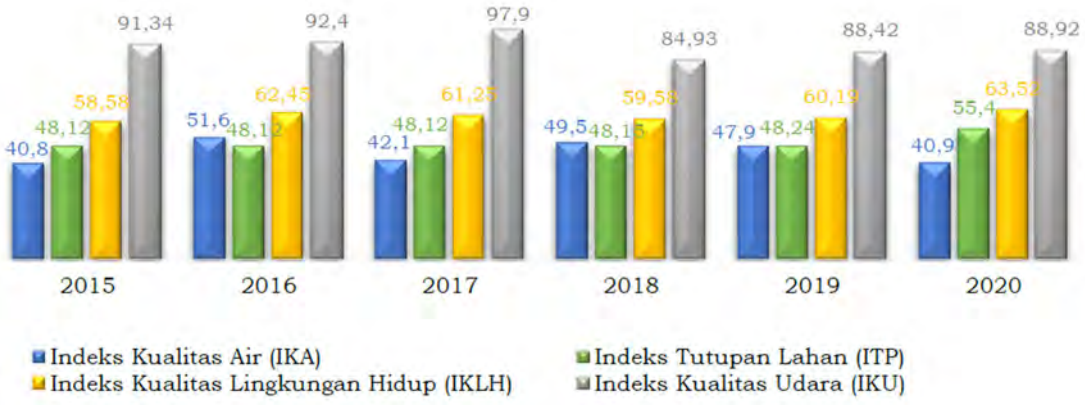
Table 2-91 Development direction, indicator, and targets in the Environment Sector in the Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045

Development direction	Main indicator	Baseline 2025	Target 2045
Implementation of green economy	Green Economy Index	East Kalimantan Province in 2021: 50.49	71.48
Quality environment	Regional biodiversity index	-	0.677
	Environmental Quality Index	**2022:** 63.96	87.18
	Household with safe sanitation access	**2022:** 5.33%	44.43%
	Percentage of treated waste	Reduction in 2022: 26% Treatment in 2022: 0.29%	58.64%
	Portion of household served by waste collection service	**2022:** 99.1%	100%
Resiliency towards natural disasters and climate change	Percentage of yearly green-house gas emission reduction	1.72%	42.79%

Source: Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

The Balikpapan City Regional Middle-Term Development Plan 2021-2026, a Middle-term plan formulated under the above direction, provides more detailed information on the current status and efforts regarding environmental measures and waste disposal.

The figure below shows the evolution of the environmental quality index and its composition in Balikpapan City. In recent years, the environment in Balikpapan City has been relatively good according to the environmental quality index (IKLH); IKLH is considered best at 70 or above, relatively good at 60 to 70, poor at 50 to 60, and very poor at 50 or below, but from 2016 to 2020, Balikpapan City's The average achievement of IKLH from 2016 to 2020 in Balikpapan City is near 60, which is considered to be a good enough classification.



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

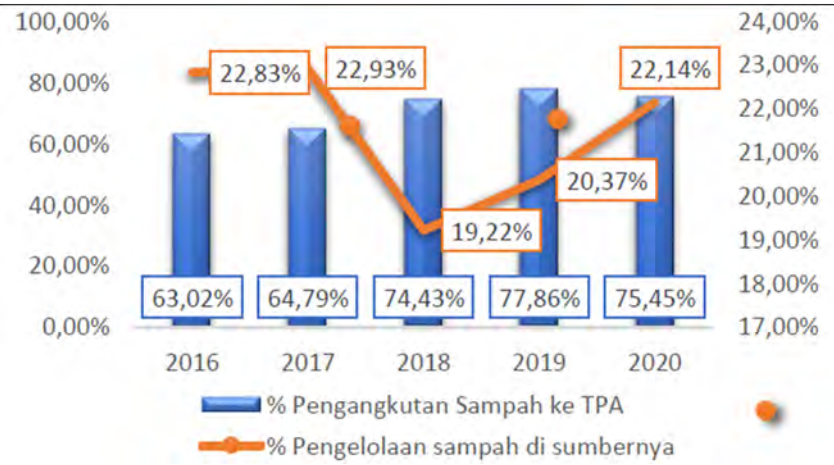
Figure 2-124 Changes in Various Environmental Indicators

On the other hand, the water quality index (IKA) of Balikpapan City is 40.9 by 2020, which is a trend of water quality degradation given that it is 49.5 in 2018 and 47.9 in 2019. The water pollution in Balikpapan City is mainly due to pollution from domestic and non-domestic wastewater and stormwater runoff that causes soil erosion. The increase in water pollution, especially in the watersheds located in the center of the city, the Kurandasan Besar and Kurandasan Kecil watersheds, is attributed to the increase in population density and high growth of commercial activities in the surrounding area. Despite the City's central location, public awareness of the importance of maintaining water quality is still low. Many commercial activities, especially small businesses such as restaurants, workshops, and boarding houses, treat wastewater with minimal equipment and infrastructure. This is due to a lack of awareness among small businesses of their wastewater management obligations. Furthermore, the cost of wastewater treatment is considered relatively high by some businesses. As for domestic wastewater, although toilets are treated in septic tanks, other wastewater (from bathing, washing, cooking, etc.) is discharged directly. On the other hand, the decline in water quality is said to have multiple causes, including an increase in household waste due to population growth and the presence of many industries that discharge wastewater directly into the City's rivers.

The Air Quality Index (IKU) has seen fluctuations in recent years: it was 97.9 in 2017, but decreased to 84.93 in 2018. This achievement rose again in 2019 to 88.42, and the achievement of the KPI rose again to 88.92 until 2020. The industrial sector and the trade and service industry sector were cited as influencing air pollution, and air pollution due to industrial expansion coupled with the rapid growth and development of Balikpapan City itself has become a problem. Greenhouse gas emissions also affect the air quality index. In this regard, the manufacturing industry is the largest contributor to emissions, accounting for 68.7% of the total. Other sectors are transportation (11.7%) and residential areas and businesses and organizations (8%), while oil refining activities at the Pertamina Refinery Unit 4, for example, also contribute considerable emissions. In addition, increased automobile use is cited as a distant cause of air pollution in transportation: in 2019, the number of automobiles owned was 616,626, an increase of 4.71% compared to 2018; in 2010, the transportation sector emitted 347,136 tons of CO2, or 11.74 % of the City's total emissions.

Land Quality Indicators (ITP) have shown a steady improvement with an increasing trend in the period 2016-2020; the number of activities contributing to decreased planting in 2019 decreased by 60.77% from 2018. To further increase planting, Balikpapan City plans to promote green open spaces in at least 30% of the City's area, as well as community participation.

In addition to these, waste is focused as an environmental issue in Balikpapan City. The following table shows the percentage of waste transported to landfills in Balikpapan City and the percentage of waste management at the source. The percentage of waste transported to landfills is relatively higher than the percentage of waste management; in 2016, waste collection was 63.02%. This figure continued to increase between 2017 and 2019, reaching 77.86%, before decreasing again to 75.45% in 2020.



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-125 Percentage of Waste Collection and Management in Balikpapan City

The problem of waste disposal has several causes, one of which is considered to be the lack of public awareness and interest in waste segregation and management. It is reported that waste segregation and disposal at the source has not been achieving the expected results, especially in coastal and riverine communities, where an estimated 8,000 tons of waste is still poorly managed.

According to the results of waste sampling from the Pandan Sari River, the estimated weight of waste is 182.88 tons, of which 63.03% is organic waste, 34.03% plastic, 2.19% other inert waste such as building materials and rocks, 0.22% glass, and 0.57% metal. These are considered to be potential marine debris and their sources are coastal settlements, especially those in the East, South, and West Balikpapan City sub-divisions. The dwellings in these settlements are wooden and float on water, making them vulnerable to fire, and in some areas, empty spaces have been created between houses as partitions and water sources in case of fire. As a result, the empty spaces are used not only as lanes but also as places to dispose of garbage, especially small trash such as plastic wrap and plastic bags.

Another challenge is that the number of waste recycling centers is still low. The Balikpapan City government does not yet have a recycling center (PDU) to reduce the amount of waste sent to landfill and to control the market price at the waste bank, making it important to establish one. In addition to PDUs, another program that could be improved is waste management through waste banks. The current utilization of waste banks is still not ideal. There are 126 waste banks in Balikpapan City, spread across all subdistricts. However, according to the results of a survey conducted in 2020, this number has decreased to 107 units. In addition to the number, the distribution of waste banks is also considered too skewed to reach all communities in Balikpapan City.

The increase in the volume of waste containing hazardous and toxic wastes (B3) will also be a challenge in the future, as B3 waste stands for “hazardous and toxic waste” (Limbah Bahan Berbahaya dan Beracun), which according to Article 1 of Decree No. 18 of 1999, is defined as any waste that, in its nature, concentration, and total quantity, contains hazardous and toxic materials It is defined as a residue that contains, and thereby directly and indirectly pollutes or destroys the environment or poses a hazard to the environment, health, and sustainable life of mankind and other living beings through its operations and activities. Thus, B3 wastes would include wastes containing hazardous substances generated by industrial, agricultural,

and household sectors. While business license holders can be supervised to manage B3 waste generated from business entities and/or business activities, hazardous waste from households with significant potential for environmental pollution is not being properly managed. Balikpapan City does not yet have a segregation and sorting area for hazardous waste, and data on the percentage of hazardous waste is not properly recorded. Management at the landfill is not optimal and household wastes are mixed. The average amount of B3 waste generated by households is estimated to be 0.0188 per person per day, and the lack of treatment causes serious harm to the environment and human health. This includes, for example, lead, mercury, arsenic, and cadmium in hazardous waste and electronic equipment, which are toxic in that they interfere with the body's metabolic system and are carcinogenic. From an institutional perspective, the management of household hazardous waste is also a challenge due to the lack of local regulations. Government Regulation No. 101/2014 on the Management of Hazardous and Toxic Wastes does not clearly regulate the management of hazardous and toxic wastes on a household scale, which also affects the difficulty for stakeholders to develop technical regulations in their regions.

The measures, tasks, and programs envisioned in accomplishing these tasks are listed below. Further specific actions were not identified in this plan. In particular, significant improvements in B3 waste management and other areas are expected.

Table 2-92 Policies, Operations, and Programs in the Environment Sector in the Balikpapan City Regional Middle-Term Development Plan 2021-2026

Operations and Programs	Performance Indicators	Initial Value	Exit Target
Water Resource Management Program	Percentage of water resources management in Balikpapan City	55,88% of	70,59% of
Water and Waste Management Development Program	Percentage of households with access to adequate sanitation services	96,79% of	97,53% of
Regional Waste Management System Development Program	Percentage of waste facilities maintained	97,82% of	98,36% of
Living Environment Planning Program	Availability of planning document data	31,25%	100%.
Residential Pollution and/or Damage Control Programs	Percentage of environmental pollution and damage control measures implemented	100%.	100%.
Biodiversity Management Program	Percentage of managed green space	10,57% of	10,65% of
Hazardous and Toxic Substances (B3) and Waste Management Programs	Percentage of operations/activities that generate hazardous waste that report waste	26,32%%	76,32% of
Guidance and supervision program for environmental permits and environmental protection management permits	Percentage of operations or activities with environmental permits	18,29%	34,15%
Programs to improve environmental education, training, and counseling for the community	Percentage of education, training, and counseling	100%.	100%.
Local Environmental Award Program	Percentage of local environmental awards implemented	100%.	100%.
Environmental Grievance Program	Percentage of complaints handled	100%.	100%.

Waste Management Program	Percentage of waste disposal	97,66% of	100%.

Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

2.6.4 Industrial Development and Investment Promotion

Regarding industrial development and investment promotion in Balikpapan City, the following report has been referenced, and the related content has been organized by theme.

The urban development and industrial structure of Balikpapan City are summarized in the "Balikpapan City Regional Middle-Term Development Plan 2021-2026." However, the future industrial development policies are outlined in the "Regional Government Work Plan for 2023 (Mayor's Regulation).

Additionally, the "Regional Development Plan and Arrangement in the Framework of Cooperation Between Surrounding Areas and the Development of IKN" discusses regional development collaboration with IKN, while the "General Overview of the Industrial, Tourism, and Investment Sectors of Balikpapan" outlines the investment environment. “Balikpapan City Chart 2023” is the latest statistical data collection. Additionally, the direction of the city's development, mindful of IKN development, is outlined in the "Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045.

(1) Socioeconomic Framework and Industry Overview

According to the "General Overview of the Industrial, Tourism, and Investment Sectors of Balikpapan," a presentation by the city, Balikpapan City has a population of 727,000, which has increased by 2.45% since 2021. In terms of land use, 52% is designated as conservation areas, while 42% is allocated for development.

As an industry, Balikpapan City is positioned as a hub for oil and gas refineries and is also recognized for its MICE functions. Key infrastructure includes the Kaltim Kariangau Container Port, Balikpapan Port, Sepinggan Airport, Balang Island Bridge, Manggar Landfill, and the regional transportation plan by IKN. The most significant impact is expected from the expressway connecting KIPP and Sepinggan Airport.

The city's economic growth has been around 5%, similar to the national average, both before and after COVID-19. As an incentive for investment in Balikpapan City, the city has adopted the Online Single Submission (OSS) for business permits, which was introduced at the national level in 2021. Additionally, the city is advancing digitalization related to investment consultations, business support for persons with disabilities and the elderly, and other related services. Domestic and foreign investment amounts have varied over the past five years, ranging from 2.8 Trillion to 19.5 Trillion IDR. The main sectors for investment are chemicals and pharmaceuticals, metals, and commerce and repair.

(2) Overview of the Industrial Sector

1) Gross Regional Domestic Product by Sector

As shown in Table below, the real Gross Regional Domestic Product (GRDP) of Balikpapan City showed an increasing trend from 2016 to 2019. In 2016, it was 73.22 Trillion IDR, but by 2019, it had increased to 83.68 Trillion IDR. However, in 2020, the real GRDP of Balikpapan City decreased to 83.09 Trillion IDR.

Table 2-93 Real Gross Regional Domestic Product by Sector in Balikpapan City 2016-2020 (Unit: Million IDR)

No	Sector	2016	2017	2018	2019	2020	2020 シェア
1	Agriculture, Forestry, and Fisheries	700,990	693,062	745,962	780,095	750,317	0.9%
2	Mining	35,052	35,263	35,530	35,934	35,327	0.0%
3	Processing Industry (Including Oil Refining)	42,157,062	43,657,281	45,450,065	47,482,417	47,129,973	56.7%
4	Power and Gas Procurement	66,075	66,170	69,496	76,027	81,902	0.1%
5	Water Procurement and Management Waste and Recycling	50,086	54,640	55,726	58,994	62,796	0.1%
6	Construction	8,665,559	8,943,483	9,510,131	10,281,792	10,685,554	12.9%
7	Commerce, Automobile and Vehicle Repair, Motorcycle Sales	5,848,554	6,155,721	6,561,792	6,946,741	6,907,784	8.3%
8	Transport and Warehousing	5,618,658	5,978,045	6,277,042	6,308,754	5,551,429	6.7%
9	Accommodation and Restaurants	1,018,544	1,108,886	1,240,280	1,343,771	1,201,374	1.4%
10	Information and Communication	2,449,620	2,644,529	2,780,445	2,974,061	3,199,783	3.9%
11	Financial and Insurance Services	2,399,326	2,394,776	2,517,791	2,612,608	2,670,179	3.2%
12	Real Estate	1,261,177	1,321,553	1,382,662	1,410,670	1,398,220	1.7%
13	Corporate Services	192,715	198,591	207,531	214,752	206,620	0.2%
14	Government, Defense, and Security Compulsory Society	995,911	894,679	940,397	1,000,207	940,657	1.1%
15	Educational Services	942,006	1,008,512	1,087,882	1,137,684	1,195,361	1.4%
16	Health & Activity Services, Welfare Services	361,390	385,003	409,278	431,696	537,250	0.6%
17	Other Services	458,738	491,885	535,099	582,565	543,365	0.7%
Total		73,221,462	76,032,079	79,807,109	83,678,768	83,097,891	100.0%

Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

2) GRDP Share by Sector

According to Table 2-94, the area of Balikpapan City is approximately 191 km². The GRDP of 2020 accounts for approximately 17% of the total GRDP of the province. The economic

growth rate from 2016 to 2021 has remained between 3% and 4%, except for 2020. In 2021, the sectoral distribution of regional production was as follows: the manufacturing industry, including oil refining, accounted for 56.7%, followed by construction at 12.9%, logistics at 6.7%, information at 3.9%, and finance at 3.2%. The number of small-scale manufacturers in the manufacturing industry was 169 companies in 2017, but it decreased to 138 companies by 2020.

3) Overview of Tourism and Agriculture

Tourism: The city has 66 tourist destinations, including 14 artificial attractions, 5 shopping centers, 11 religious sites, and 9 natural scenic spots. The Tourism Development Master Plan 2016-2026 exists. In 2021, the number of visitors was over 1.44 Million.

Agriculture: There are generally many small-scale farmers, and the agricultural land has continued to decrease since 2017. The area of upland rice decreased from 40 ha in 2017 to none in 2021, while the rice paddy area was 72 ha in 2021.

4) Characteristics of the industrial areas in the city

Regarding industrial development, as shown in the diagram below, the city consists of the central Balikpapan city and six districts located in the east, west, south, and north. Each district is expected to have potential industries identified as candidates.



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-126 Industrial Development in Six Areas of Balikpapan City and Directions for Regional Promotion

5) Basic data from the "Balikpapan City Chart 2023

- Number of businesses: In 2022, there were 53 small and medium-sized enterprises (SMEs) and 81 large enterprises.
- Agriculture: In 2022, the highest harvest quantities in agricultural production were for

grains, with cassava at 12,379 tons, fruits, with salacca at 34,103 tons, and vegetables, with Chinese cabbage at 5,675,400 tons. Livestock includes a large number of 1,343 cattle and 907 goats, while the fish catch in the maritime area was 4,251,214 tons.

- Electricity: The power generation in the two zones, North and South, in 2022 was 145,255 Million kW.
- Transportation: In 2022, the number of domestic flight passengers was 3.77 Million. The length of the provincial roads was 35 km, and local roads totaled 518 km. The airport, as the gateway to East Kalimantan, is of significant importance.
- Since 2017, the number of commercial facilities had been steadily increasing. By 2019, there were 264 facilities; however, this number declined to 214 in 2020.
- Tourism: In 2022, there were 76 tourist destinations within the province. The tourism industry is growing because of the presence of an international airport, with 39 hotels in the city center and 36 hotels within the city. Surrounded by the sea, the area features both beach resorts and mangrove forest resorts.
- Maritime transportation includes Balikpapan Port and the Kaltim Kariangau Port for container shipping.

(3) Industrial Location

6) Current Industrial Location

The Balikpapan City Regional Middle-Term Development Plan 2021-2026 highlights that approximately 40% of the city is designated as conservation areas, and the available land for development, including residential and agricultural areas, is very limited in the city's industrial development. Currently, the industrial land use area covers 5,107.86 ha, which accounts for approximately 6% of the total area of the city. The Kariangau Industrial Area (KPI), located upstream of Balikpapan Bay, is the main center of industrial development. However, the large refinery complex of the state-owned oil company, Pertamina, is situated downstream of Balikpapan Bay, closer to the city center. In addition, along the coastline, there are expectations for the promotion of fisheries, supported by abundant marine resources. However, there are also proposals to reclaim land along the coast for new urban development.

7) Industrial Land Use Area

As shown in Figure below, the Kariangau Industrial Area covers approximately 3,740 ha in West Balikpapan City. It holds potential as a hub for services, commerce, and mining, with opportunities to utilize its port location for ship docks, marine supplies, and supply bases. The Kariangau Industrial Area is located in the northwest of Balikpapan City, and due to its proximity to the IKN Toll Road, its opening date is yet to be determined. The Small and Medium Industry Centers (SIKM) are situated in Margoroulyu, Karang Joang, Teritip, covering a total area of approximately 660 ha, with small-scale food processing plants and other industries located there.

The Balikpapan City Regional Middle-Term Development Plan 2021-2026 references the development direction of strategic areas outlined in the Regional Spatial Plan for 2012-2032. From the perspective of economic growth, the city's strategic areas determined for

development are the Karang Joang new town, Kariangau Industrial Area (KPI), Minapolitan area, beach reclamation area, and Teritip new town. Developing these strategic areas from an economic benefit standpoint aligns with the mayor's vision and mission. The priority is to develop the Kariangau Industrial Area as a comprehensive industrial development zone that covers national and regional-scale production.

The Karang Joang new town is aimed at becoming a second central urban area, serving as a growth center for commerce, services, and tourism activities.

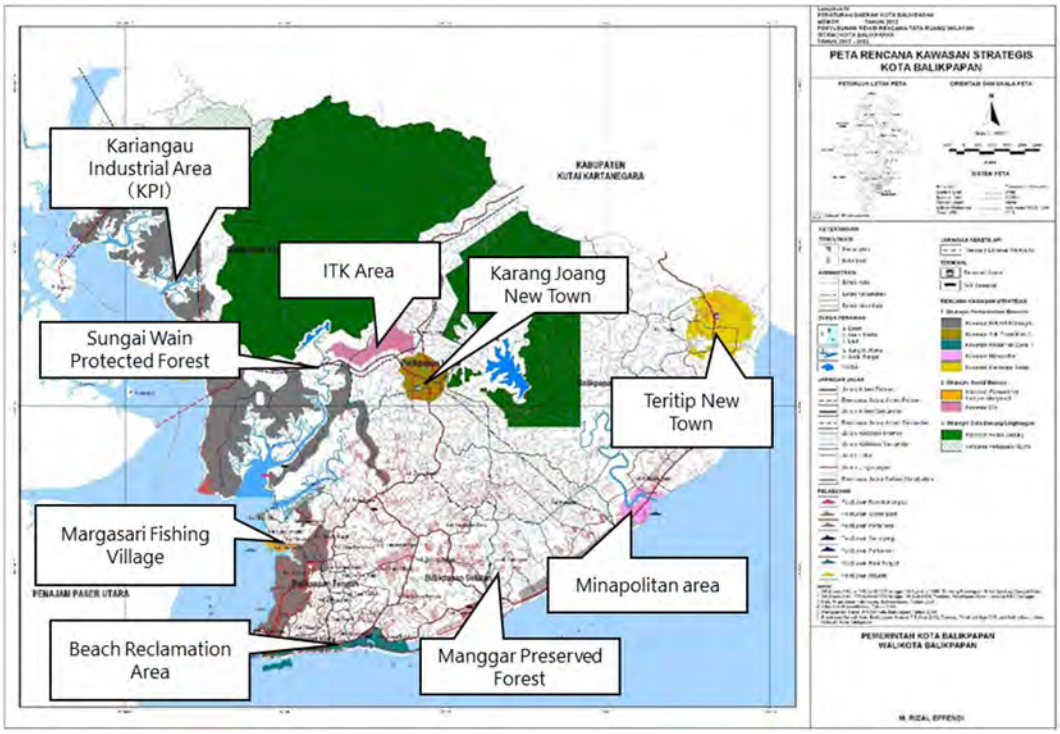
Support the development of the Kariangau Industrial Park within the Kariangau Industrial Area and provide transportation links connecting Balikpapan City with the planned capital in PPU Regency.

The Teritip new town is a growth center in the eastern part of Balikpapan City, planned to be a hub for commerce, tourism, services, and education.

8) Tourism Resources

The strategic areas for the sociocultural development of Balikpapan City are the Margasari fishing village area in West Balikpapan, located on the water, and the educational area near the Kalimantan Institute of Technology (ITK). The direction of programs and activities in these strategic areas is focused on the development of infrastructure in the fishing village area and the provision of infrastructure to support the functions of the educational area. The evaluation indicators for priority programs in this field include the acceleration of land acquisition and ITK development, the development of settlement facilities and infrastructure aimed at addressing slum housing and slum areas, and support for priority programs aimed at expanding access to education and healthcare facilities in West Balikpapan.

The environmental functions and support strategic areas of Balikpapan City are the Sungai Wain River Protected Forest Area and the Manggar Watershed Protected Forest Area. These areas play a crucial role in maintaining the environmental sustainability, biodiversity, and ecosystem stability of Balikpapan City. Furthermore, they also play a role in maintaining the primary water sources that supply more than 80% of the water needed by the communities in Balikpapan City. The direction of programs and activities in this strategic area focuses on the protection of natural resources and the development of tourism based on ecotourism.



Source: Prepared by the Study Team based Balikpapan City Regional Spatial Plan 2021-2032

Figure 2-127 Strategic Area Plan of Balikpapan City

(4) Issues and Challenges of Industrial Development

According to the Balikpapan City Regional Middle-Term Development Plan 2021-2026, issues such as governance, inadequate urban infrastructure services, safety and environmental concerns, economic disparities, and the insufficient transition from oil and gas to creative industries are being highlighted. Additionally, the Kariangau Industrial Estate (KIK) being promoted by the city covers an area of approximately 133 ha, with 80 ha allocated for the highway. As a result, only about 50 ha will remain for development, and the infrastructure work will commence after the completion of the highway, which will take several years.

(5) Goals and Plans for Industrial Development

According to the Balikpapan City Regional Middle-Term Development Plan 2021-2026, the city's mission includes achieving good governance, fostering high-quality human resources, providing adequate urban infrastructure, and developing the economy of creative individuals. Nine development priorities have been formulated. The goals include strengthening the government bureaucracy, improving the quality of healthcare and education services, reducing poverty, ensuring the supply of healthy and equitable drinking water, flood control measures, enhancing the quality of living environments and social conditions, developing Balikpapan City as a MICE and tourism hub, promoting Balikpapan City as a creative city, and revitalizing local businesses.

The industrial development-related aspects from the 2021-2026 Middle-term Development Strategy, Policy Guidelines, and Development Strategy are as follows.

- Improvement of coordination between regional development plans and their implementation.

- Improvement of basic infrastructure.
- Optimization of mitigation and adaptation measures for climate change.
- Enhancement of investment facilitation.
- Improvement of commercial distribution networks in goods and services sectors.
- Improvement of management in the tourism and creative industries.
- Improvement of regionally significant products.

The Balikpapan City Regional Government Implementation Plan for 2023 outlines the development activities of Balikpapan City, which were issued as a regulation in October 2022. It aims to focus on services, commerce, and the development of an industrial city.

The regional development goals are based on the city's Regional Middle-Term Development Plan 2021-2026. Moving forward, the plan aims to develop various sectors including manufacturing, commerce, services, tourism, education, and local culture, while also focusing on the growth of transportation infrastructure across land, sea, and air. As a central hub along the coastline, the Kariangau Industrial Area is positioned to serve as the region's industrial and investment hub. The plan includes promoting tourism, developing a technical education center, and establishing a new economic zone along the coast, with the intention of collaborating with the IKN.

(6) The impact of the development of the new capital on industrial development.

Regarding IKN, the plan aims to promote collaboration on policies and industrial development with IKN, based on the relocation of national staff, stakeholders, and their families by the Ministry of Public Works and Housing (PUPR) from 2021 to 2024. Regarding infrastructure, along with the regional transportation plan for IKN, transportation hubs and nodes for the Tri-City area are outlined. The plan suggests potential connections with the city's ports and airports, as well as the possibility of public transportation systems such as trams.

1) Balikpapan City Regional Long-Term Development Plan

The draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045 outlines the following vision and accompanying guidelines related to industrial development:

As a partner of IKN, the plan aims to strengthen the role of the new capital as a super hub for economic activities in the three cities, positioning it as a central hub for industry and services. This aims for Balikpapan City to play a key role as a center for future economic clusters and new economic development in Eastern Indonesia, particularly in East Kalimantan, and to become a central hub for economic growth in the region.

The following content is related:

Table 2-94 Summary of the Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

Level	Content
Vision	Comfortable Balikpapan 2045： A Super Hub of Advanced and Sustainable Industries and Services, Inheriting the Spirit of Madinatul Iman
Vision and Goals	Increase in Per Capita Income Per Capita GRDP (Million IDR): From the 2025 baseline of 225.95 to 492.47 in 2045 Indonesia Blue Economy Index (IBEI): From the 2025 baseline of 37.33 to 338.51 in 2045

	Contribution of the Manufacturing Sector to GRDP (%): From the 2025 baseline of 48.74 to 52.16 in 2045
Mission	Achieving Economic Transformation through the Building of a Creative and Inclusive Economy ・Achieving Modern, Integrated, and Sustainable Urban Development ・Achieving Integrated Environmentally Friendly Facilities and Infrastructure
Development Stages Policy Directions	The development themes are: Phase 1 - 'Strengthening the Foundation for Transformation', Phase 2 - 'Accelerating Transformation', Phase 3 - 'Balikpapan as an Excellent Sustainable City', and Phase 4 - 'Balikpapan as a Comfortable City for All'.

Source: Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

2) Development Direction of Balikpapan City

The development direction is aligned with the industrial development schedule of IKN, divided into four stages, with each stage lasting five years. The details are as follows in the table below, with the connection to IKN's six economic clusters added in the rightmost column. The related items within the table have been highlighted in bold.

Table 2-95 Development Directions of the Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045.

Development Direction				**6 Economic Clusters of IKN**
2025-2029	2030-2034	2035-2039	2040-2045	
Strengthening the Foundation for Transformation: Balikpapan Smart & Collaboration City	Accelerating Transformation: Balikpapan as a Competitive City	Balikpapan City of Excellence and Sustainability	Balikpapan is a Comfortable City for Everyone	
Strengthening the Core Economy of the Region **1. Enhancing Food Security Based on the Expansion of Cooperation** 2. Improvement of Labor Productivity **3. Optimization of Industrial Park and Industrial Center Development （Kariangau、Somber、Teritip）** **4. Strengthening the Green Investment Ecosystem (Green Economy)** **5. Improvement of the Tourism Ecosystem and Creative Economy** 6. Improving the Quality of Infrastructure Supporting the Economy 7. Strengthening the Economic Ecosystem and Digitalization	**Accelerating the Economic Transition from Oil and Gas Industry to Non-Oil and Gas Industry** **1. Enhancing Food Security Based on Agricultural Technology** 2. Improving Competitive Labor Productivity 3**. Improvement of the Green Investment Ecosystem (Regulations, Infrastructure, Raw Materials, Productivity)** 4**. Accelerated Development of Tourism Competitiveness** **5. Research and Innovation for Enhancing Economic Value Added** **6. Development of the Maritime Industry (Blue Economy)** **7. Strengthening the Digital Economy**	Sustainable Expansion of Key Products 1**. Strengthening Resilient Food Security** 2. Enhancing Competitive Labor Productivity **3. Expansion of Green Investment** **4. Expansion of Competitive Tourism Attraction** 5. Research for Enhancing Economic Value Addition and Innovation Industry Development **6. Expansion of the Digital Economy Supporting Green and Blue Economies**	Realization of a Sustainable and Inclusive Economy **1. Resilient and Sustainable Food Security** 2. Competitive Labor Productivity **3. Sustainable Green Investment** **4. Enhancement of Competitive and Sustainable Tourism Attractions** 5. Research and Innovation Sustainable Economy for Value Stabilization **6. Strengthening the Maritime Industry (Blue Economy)** **7. Strengthening the Digital Economy to Support Green and Blue Economies**	**1. Sustainable Agriculture** **3. Low-carbon Energy** **4. Eco-medical Tourism** **6. Sustainable Agriculture**

Source: Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

3) Direction of Transformation for Balikpapan City

In advancing the development of Balikpapan City, various directions and contents for

economic transformation have been considered, as outlined below.

Table 2-96 Directions of Transformation for Balikpapan City

Transformation Direction of Balikpapan City		
Transformation	Policy Direction	Content of the Transformation Direction
Economic Transformation	Development as a Partner Region Supporting an Economic Superhub that Promotes Advanced Economic Activities	By utilizing innovation and technology to support the smooth distribution of high-value products and services, the aim is to strengthen supply chains and value chains, thereby contributing to the development as a partner region of the economic superhub.
	Development of an excellent industrial region based on sustainable technologies.	Development of industrial zones for downstream processing of key products, and the advancement of high-tech and sustainable industries.
	Development of high-value-added and sustainable green industries.	Develop high-value-added and sustainable green industries such as food biochemicals, herbs, nutrition industries, advanced pharmaceutical industries, electric vehicle industries, and enhance the value of biotechnology.
	Acceleration of downstream development of sector-specific strategic industries based on the existing economy.	The acceleration of strategic industry development based on existing economic sectors will be carried out through the development of industries based on oil fat chemistry and petrochemicals.
	New energy and utilization of renewable energy.	The development of the renewable energy industry is crucial for driving the energy transition.
	Strengthening food reserves.	Strengthen food reserves through the development of urban agriculture and expand investment and technological innovation in this sector.
	Development of sustainable and competitive tourist destinations.	Development of potential tourist destinations involving local business actors, including eco-tourism, fitness tourism, urban tourism, and health tourism. Supported by competitive MICE venues.
	Improvement of domestic value chains supporting the global value chain.	Improvement of domestic value chains supporting the global value chain will be achieved through enhanced competitiveness, strengthened distribution channels, and the expansion of target markets.
	Provision of experienced, skilled, and excellent workforce.	Provision of skilled workers through reskilling and upskilling training, and the transition from education to employment.
	Smart, green, and sustainable urban development.	Smart, green, and sustainable urban development is implemented by applying smart environment, smart infrastructure, smart governance, smart economy, smart people, and smart living to all aspects of development.
	Comprehensive and sustainable urban development.	It takes into account integrated and sustainable urban development that leverages the unique characteristics of the region (Development of IKN).
	Technologization of Cooperatives	Downstream development of regional excellent products, strengthening of business processes and systems, and technologization of cooperatives through the introduction of technology.
	Strengthening the integration of MSMEs with domestic and global industry value chains.	Business partnerships that improve the entry of MSMEs into domestic and global industry value chains through enhanced access to productive resources (including financing and marketing) and the utilization of technology and skills.

Source: Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

4) Indicators of Progress in Industrial Development Transformation

To achieve the transformation of Balikpapan City, a more practical development agenda is required. This agenda is a game changer that will accelerate development in various sectors and is a top priority. Among the efforts for transformation, the priorities for economic transformation are as follows.

- Achieving economic transformation through the creation of a creative and inclusive economy.
- Supporting downstream industries based on excellent natural resources by developing the Kariangau Industrial Area with a focus on green industries and the development of oil and fat chemicals.

- Strengthening the MICE ecosystem and the creative economy.
- Completion of city land registration.

As indicators of progress in industrial development transformation, the target values are set in the following table. The items related to the six economic clusters of IKN in the table are highlighted in bold.

Table 2-97 Target Values for Industrial Development Transformation.

Main Goals	Development Direction	Key Development Indicators	Target Value	
			Baseline in 2025	Target in 2045
Achieving a Sustainable and Competitive Regional Economy	**4. Science, Technology, Innovation, and Economic Productivity**	11. Manufacturing GRDP Ratio (%)	2022: 47.20%	52.16%
		12. Tourism Development：		
		a. GRDP Share of Food and Beverage Services (%)	**2022: 1.73%**	**2.80%**
		b. Number of Foreign Tourist Overnight Stays (Starred Hotels) (Thousands)	**11.70%**	**23.41%**
		13. Percentage of Creative Economy in GRDP (%)	-	1.03%
		14. Productivity of Small and Medium Enterprises (SMEs), Cooperatives, and Regional Government-Owned Enterprises (BUMD)		
		a. Proportion of Non-Agricultural Small and Medium Enterprises (SMEs)	-	17.05%
		b. Proportion of Small and Medium Enterprises (SMEs) (%)	-	10.0%
		c. Regional Entrepreneurship Rate	-	7.22%
		d. Cooperative Business Volume to GRDP Ratio		7.5%
		Return on Assets (ROA) of eBUMD（%）	-	5.76%
		15. Open Unemployment Rate（TPT）	2023: 6.09%	2.17%
		16Female labor force participation rate	2022: 47.54%	56.48%
		17. Level of science and technology proficiency：		
		a. Share of the budget allocated to science, technology, and innovation（%）	-	8.0%
		b. Regional Innovation Index Ranking	2023: 78th out of 93 cities	Top 10
	5. Implementation of the Green Economy	**18. Green Economy Implementation Rate**		
		a. Green Economy Indicators	**East Kalimantan 2021：50.49**	**71.84**
		b. Proportion of renewable energy in the primary energy mix	**East Kalimantan 2023：10%**	**79%**
	6. Digital Transformation	19. Information and Communication Technology Development Index	-	8
	7. Domestic and Global Economic Integration	20. Inter-regional Price Variation Coefficient at the State Level	2022: 0.49%	4.68%
		21. Gross Fixed Capital Formation (as a percentage of GDP)	2022: 37.7%	48.20%
		22. Exports of Goods and Services (as a percentage of GRDP)	47.34%	59.77%

Source: Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

(7) Investment Environment in Balikpapan City

According to the overview of industrial, tourism, and investment opportunities in Balikpapan City, the investment projects in the city include the Kariangau Industrial Park, coastal reclamation development, water supply (PPP), Manggar landfill (PPP), housing development, hotels & MICE, and tourism within Balikpapan Bay.

In 2022, there were 954 registered businesses in the city, with the majority in agriculture, machinery and metal, transportation, and pulp and paper industries. The key areas for development include the Kariangau Industrial Area (KPI, 3,565 ha) and its sub-area, the Kariangau Industrial Park (KIK, 133.8 ha), as well as small and medium-sized enterprise zones in Somber and Territip, and coastal urban development.

The city has been focusing on tourism, with approximately 2.93 Million visitors in 2019, before COVID-19. However, in 2022, the number of visitors dropped to 1.76 Million, highlighting the need for the development of tourism resources.



Source: General Overview of the Industrial, Tourism, and Investment Sectors of Balikpapan

Figure 2-128 Examples of Investment Projects in Balikpapan City

2.6.5 Power & Energy

According to the Balikpapan City Regional Middle-Term Development Plan 2021-2026, the following issues related to electricity and energy in Balikpapan City have been identified

- Use of renewable energy sources such as wind, solar, and biogas is not being promoted
- Continued heavy reliance on non-renewable natural resources such as oil and natural gas, the use of which is not properly managed

The Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045 sets forth middle- and long-term goals for the development of reliable and environmentally friendly infrastructure and sustainable environmental management. However, no specific action plans were mentioned.

2.6.6 Urban Management

(8) Balikpapan City's Vision, Mission, Goals and Objectives

5) Vision

The Middle-Term Development Vision, Mission, Objectives and Goals detail the Mayor's vision and indicate the development priorities of Balikpapan City. The Middle-Term development vision (2021-2026) for Balikpapan City is considered as follows

"Advanced City"

Over the next five years, Balikpapan City aims to become an excellent region in the areas of industry, trade, services, tourism, education, and culture, to develop as a global city, and to be equipped with appropriate urban infrastructure. In addition, the City's standard of living will be improved through the development of land, sea, and air transportation infrastructure. Taking advantage of its strategic position as the main gateway to East Kalimantan Province, projects that are expected to have a direct and significant positive impact on the City's economic development include the development of the Karang Joang beach area, the development of the Karangau Industrial Zone as an industrial investment hub, the development of tourism and the community creative economy The development of a technical education center for all of Kalimantan (Kalimantan Institute of Technology), and other strategic infrastructure development plans.

"Comfortable and Livable City"

Continue to improve the urban infrastructure both quantitatively and qualitatively to make Balikpapan City an increasingly pleasant place to live for its residents.

"Modern and Prosperous City"

It aims to be a highly civilized city, meaning a city where spiritual values positively influence all activities of the city. Citizens will foster a progressive civilization, maintain high standards of welfare and education, live harmoniously in a multicultural social environment, support good governance, and develop based on their respective religious beliefs.

6) Mission

The mission statement for RPJMD 2021-2016 was developed in consideration of the external and internal factors affecting development in the region and the strengths, weaknesses, opportunities, and challenges in development. The mission identifies the steps or steps that will be taken to achieve the vision. The mission of the Government of Balikpapan City 2021-2026 is as follows:

a. Provision of good administration

Good public administration includes principles such as citizen participation, law enforcement, transparency, responsiveness, focus on citizens' interests, equal opportunity, efficiency, effectiveness, accountability, and strategic vision.

Administrative organization includes all the mechanisms, processes, and institutions by which citizens and social groups state their interests, exercise their legal rights, fulfill their obligations, and reconcile differences among them. The provision of good public administration requires cooperation that includes not only government but also the three domains: government, private business, and society.

The goal of the project is: improving the quality and competence of local government bureaucrats; strengthening cooperation to optimize the performance of public services; improving the well-being of citizens; promoting legal regulation and bureaucratic reform; and achieving a peaceful, orderly, secure, and stable region in a democratic polity based on the rule of law and the principle on the supremacy of human rights. These will be put in practice by improved management of local finances and increased implementation of administrative reforms.

b. Developing Highly Skilled Human Resources

The goal is to develop a high-quality, competitive workforce. Efforts to develop a highly skilled workforce will be made from early childhood through working age. The development of quality and equal education is necessary to produce a workforce that is independent, competitive, and capable of developing the local economy through entrepreneurship.

c. Adequate urban infrastructure

Urban infrastructure includes drainage systems, flood control, drinking water supply, waste disposal, street and public transportation networks, electricity, gas, and telecommunications, etc. The quantity and quality status of this infrastructure will support the daily activities of citizens and maintain and expand the city economy.

d. Realization of environmentally friendly and comfortable residential areas

Comfortable settlements are urban environments with appropriate infrastructure. It meets the basic needs of a sustainable city (adequate housing, sanitary water supply, electricity, environmental sanitation, a beautiful physical environment, religious, medical, and educational facilities), incorporates the concept of a “green city” that adapts to climate change and disasters, promotes integrated waste management (zero-waste), and provides for a city area with surely at least 30% green space and promote community participation.

e. Promoting the development of creative local economies

Creative industries and economies are a new source of economic growth that will achieve long-term development goals and have the potential to create a vibrant business environment. Development elements of the creative economy include

- Building an Indonesia that is economically independent, politically sovereign, and culturally distinct
- Promote sustainable economic growth
- Promoting a reduction in national income inequality
- Improving the efficiency of the domestic economy

As described above, the mission statement presented here is a meandering depiction of a very general matter and does not “articulate the steps or procedures to be undertaken to achieve the vision. Further in-depth study is warranted.

7) Goals

Goals are the highest priority strategic policies in a City’s development plan and are formulated based on an understanding of the potential and challenges to embody the government's vision and carry out its mission.

The vision and mission details of the Balikpapan City Regional Middle-Term Development Plan 2021-2026 consist of six goals and 18 targets. Based on these, the Middle-term development goals are set to be provided along with measurable performance indicators, which will serve as the basis for evaluating the success of the Mayor and Deputy Mayor. The Mayor's achievement of the performance indicators will support the local performance indicators (IKUs). Thus, development goals for the next five years will be clear and measurable.

The Middle-term development targets use macro development indicators such as the Bureaucratic Reform Index, Human Development Index, Infrastructure Service Satisfaction Index, Livable City Index, and Gini Coefficient. A brief description of Balikpapan City's 2021-2026 middle-term development objectives and targets is summarized below. The indicators belonging to each objective are omitted here.

Goal 1: Improve professionalism and transparency of the bureaucracy

One of the prerequisites for achieving regional development is the strengthening of the professionalism and transparency of government administration. Increased professionalism and transparency of government bureaucracy must be supported by improved or modified systems and procedures of organization, personnel management, and administrative services, making them more responsive and responsive to the interests of citizens.

The achievement of professionalism and transparency in the bureaucracy is measured by the Bureaucratic Reform Index. This index indicates progress in the process of creating a clean, effective, professional, and service-oriented bureaucracy in government agencies, which is aimed at providing prompt, appropriate, professional, and clean services that are free from corruption, corruption, and profiteering.

Goal 2: Foster talented, healthy, and competitive high-level human resources

The quality of human resources (SDM) has become one of the strategic issues for improving the development and economic quality of the region. The achievement of this goal is largely dependent on the extent to which the Balikpapan City Government is able to meet the degree of quality of the “Human Development Index (IPM)”.

The Human Development Index (IPM) indicates the extent to which residents have access to development outcomes to obtain income, health, education, etc. The IPM is composed of three basic dimensions: life expectancy and health, knowledge, and adequate living standards The following indicators are used to calculate the IPM

- Health dimension is life expectancy (AHH)
- Knowledge dimensions are average years of schooling (HLS) and average years of education (RLS)
- The appropriate standard of living dimension is adjusted per capita income

Goal 3: Improve performance of urban infrastructure services

Indicators of human quality of life and prosperity are not based solely on economic growth, but also on the level of commitment and effort local governments make to provide equal facilities and improve infrastructure services. The development and improvement of equal infrastructure services is an important factor in regional economic growth and competitiveness, and the provision of high-quality infrastructure services can reduce

transportation and logistics costs, improve product competitiveness, stimulate economic activity, and narrow development gaps among regions.

An indicator of the achievement of this goal is the improvement of the citizens' satisfaction index with local infrastructure services. The effectiveness of achieving this goal will only be realized if the different departments (OPDs) of the Balikpapan City Government are effectively cooperated and integrated. In addition to measuring citizen satisfaction, the study will also examine citizens' desires and expectations for infrastructure development. Infrastructure sectors evaluated in the Infrastructure Services Satisfaction Index include:

- Provide high quality roads and bridges
- Provide transportation services (land, sea, air)
- Provide high-quality water supply infrastructure
- Provide irrigation infrastructure
- Provide housing infrastructure

Goal 4: Achieve an inclusive and sustainable environment

The development process in Balikpapan City will consider sustainability and environmental protection. The development process will be harmonized with environmental protection efforts to provide environmentally sound infrastructure and achieve sustainable environmental management.

The goal set to address this strategic issue is “to create a sustainable and environmentally livable city. Toward this goal, the “Livable City Index” has been adopted as a common goal among the departments of the Balikpapan City Government. The Livable City Index is an annual index that indicates the comfort of the City’s citizens to live, stay, and work in various aspects of the city:

- Provision of basic necessities (housing, water, electricity)
- Provision of public facilities (transportation, city parks, religious facilities, medical care, education)
- Providing public space and interaction for citizens
- Safety
- Support economic, social, and cultural functions in the city
- Health

To support the achievement of this goal, efforts should be made to achieve the goal of improving the quality of the living environment.

Goal 5: Promote inclusive economic development to reduce disparities in local economies and citizen incomes

Comprehensive economic development efforts will be undertaken to promote economic growth and alleviate poverty issues, with the goal of increasing per capita income, welfare, and purchasing power of citizens in the future.

One target indicator, the Gini coefficient, is used to measure the achievement of this goal.

Efforts to improve the Gini coefficient include promoting the growth of small businesses, reducing unemployment, and decreasing the poverty rate.

Goal 6: Promote economic growth

The welfare of the local population cannot be separated from the development of economic activity in the area. Economic growth is an important factor that needs to be sustainably promoted to sustain people's livelihoods. One target indicator, economic growth, is used to measure the achievement of this goal. To sustainably improve economic growth, interventions will be made in different sectors and areas such as tourism, creative economy, trade, investment, and regional food sustainability.

So far, this section explores the vision, mission and goals of the Balikpapan City Regional Middle-Term Development Plan 2021-2026. While the Plan is consistent with the Balikpapan City Regional Middle-Term Development Plan 2021-2026, it seems to lack consideration of Balikpapan City's specific challenges and response strategies. For example, there is no definition of issues or discussion of strategies to deal with the ongoing suburbanization of the eastern part of the city and the resulting worsening of road traffic congestion. In addition, there is no significant discussion of efforts to improve housing for low-income residents in response to the expected rapid population influx into the city from the Capital Relocation Project. From the current foundation of consistency with national and state plans, further study is required to find solutions to the City's unique and pressing issues.

(9) Nine Development Priorities for 2021-2026

Nine development priorities have been developed for the 5 year period 2021-2026 for Balikpapan City, based on the process from the RPJMD bill development stage to the participatory process with residents. They are summarized below.

8) Strengthening of Administrative Offices

a. Strengthen administrative structures that are professional, transparent, and free from corruption

b. To build a high level of trust from the public:

- Strengthen administrative structures: a. Strengthen administrative structures that are professional, transparent, and free from corruption; b. Earn a high level of trust from citizens
- Fostering mutual trust within the city government
- Clarification of organizational goals
- Improved administrative systems and procedures
- Placing the right people in the right positions

9) Quality improvement of health and education services

a. Health Sector:

- BPJS premium subsidy for PBPU Class 3 participants
- Hospital development in areas of need

b. Education

- Tuition subsidies for private elementary and secondary schools
- Increased incentives for early childhood (PAUD), preschool (TK), elementary (SD), and middle school (SMP) teachers
- Building and expanding quality schools (quality of facilities, teachers, and educational processes)
- Optimization of the Learning Activity Center (SKB)

10) Poverty Reduction

a. Optimization of Vocational Training Centers (BLK)

b. Funding for small and medium enterprises

11) Healthy and equal drinking water supply

a. Accelerate improvements in drinking water supply and increase citizens' access to tap water

b. Increased water supply capacity: existing capacity of approximately 1200 liters/sec (Manggar and Teritip dams) to 2200 liters/sec; construction of Aji Raden reservoir, supplemented by 2000 liters/sec distribution from Sepaku Semoi dam

12) Flood Management

a. Accelerated improvement of wastewater treatment capacity in the Ampal River Basin

b. Accelerated construction of drainage facilities in the eastern area of Balikpapan City

c. Accelerated rehabilitation of drainage facilities throughout Balikpapan City

d. Accelerate construction of Bendali/Bozem in residential areas

13) Improvement of environmental quality and comfortable social conditions

a. Making the city suitable for children, people with disabilities, and the elderly

b. Healthy Citizens: Free from Drugs and HIV/AIDS

c. Reinstate religious rituals for all social strata.

14) Develop Balikpapan City into a MICE and Tourism City

a. Construction of commercial and economic centers

b. Balikpapan City Brand Enhancement

c. Regional, national, and international conference forum centers

d. Cooperation with all professional and business organizations for MICE events

e. Development of tourist attractions

f. Development of coastal and marine tourism in Balikpapan City

g. Construction of a cultural village

h. Provide dedicated transportation to tourist destinations

i. Quality Improvement in Hotels and Restaurants

15) Creation of Creative Cities

a. Promotion and marketing of creative products through the annual Creative Economy Week
b. Encouraging Balikpapan City youth to participate in the creative economy through education, training and creative activities
c. Establishment of professional training centers for creative industries and small and medium enterprises in various districts of the city
d. Participation in creative events outside the region and beyond

16) Revitalization of local public corporations (PERUSDA)

a. Restructuring of the organization and activities of the Rural Corporation to make a significant contribution to local revenues

(10) Strategic Areas in Spatial Plan

1) Strategic Areas of Balikpapan City

Regional development in Balikpapan City should be consistent with the Strategic Regional Development Policies as outlined in Balikpapan City 2032 Urban Plan. Balikpapan City's strategic areas are specific areas whose spatial arrangement is a priority because of their very important economic, socio-cultural, and/or environmental implications for the city as a whole. The identification of a City's strategic areas is guiding; detailed information on physical constraints is determined within the strategic area's land use plan. Based on their importance for the development of the city, three types of strategic urban areas (KSKs) have been established as follows

a) Strategic regions from an economic perspective

Strategic areas established from the perspective of the City's economic growth include the Karang Joang New Urban Area, the Kariangau Industrial Area (KPI), the Manggar and Manggar Baru minapolitan (aquaculture) areas, the Coastal Redevelopment Area, and the Teritip New Urban Area. The development of strategic areas in terms of economic benefits is consistent with the Mayor's vision and mission, particularly the integrated industrial development of the Kariangau Industrial Area, which aims to amplify productivity on a national and regional scale. The Karang Joang New Urban Area is set to support commercial, service, and government activities in the northern part of Balikpapan City, support the development of the Kariangau Industrial Area, and serve as the gateway to the National New Capital Plan for PPU Regency. The Teritip New Urban Area is also positioned as the center of growth in the eastern part of Balikpapan City and is designed as a commercial, tourism, service, and educational center.

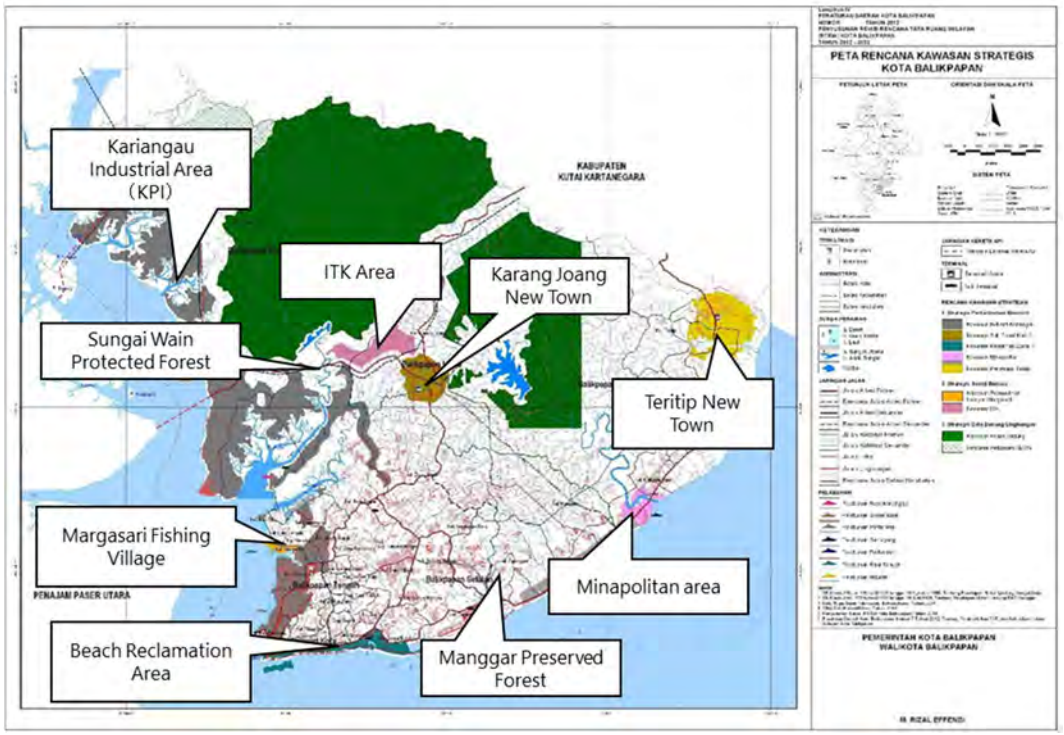
b) Strategic Regions from a Socio-Cultural Perspective

The strategic areas for socio-cultural benefit in Balikpapan City are the Margasari Fishermen's Community, a water-based community in Balikpapan City, and the local educational area of the Institute of Technology Kalimantan (ITK). For the programs and activities in this strategic area, the provision of infrastructure to support residential area infrastructure and educational functions will be implemented. Priority program indicators for this strategic area are the development of housing infrastructure aimed at combating and preventing slum and poor housing problems, rapid land expropriation for the construction of ITK, and facilitating priority programs to expand access to education and health facilities in western Balikpapan

City.

c) Strategic regions in terms of the function and supporting capacity of the environment

The strategic areas of Balikpapan City in terms of environmental function and support capacity are the Wine River Nature Reserve and the Manggar River Watershed Nature Reserve. These areas play an important role in maintaining the environment, ecological diversity, and stability of Balikpapan City. These areas also serve to protect the raw water sources that provide more than approximately 80% of the water supply for the citizens of Balikpapan City. Guiding programs and activities in this strategic area are the conservation of natural resources and the development of ecotourism-based tourism.



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-129 Balikpapan City Strategic District Plan Map

Thus far the compatibility between the Provincial Plans and Balikpapan City's Mid Term Plan and Spatial Plan were reviewed, and the City's existing plans to be in sync with the respective plans at the Provincial level were found. The task now is to consider the unique conditions and challenges and to formulate the practical solutions and strategies to the urgent development issues at the city.

2.6.7 Living Environment

(11) Population and Housing

According to the Balikpapan City Regional Long-Term Development Plan 2005-2025, the population of Balikpapan City in 2011 was 639,031. As the gateway and transit city of East

Kalimantan Province, Balikpapan City has a relatively high population growth rate compared to other regencies/cities in East Kalimantan Province: 1,221 persons/km^2 in Balikpapan City in 2010 and 1,269.68 persons/km^2 in 2011.

In some areas, settlements are developed without urban facilities and infrastructure, causing slums and urban social problems, degrading environmental quality and making residential areas environmentally unsound. It is the expectation of the government and society that environmentally sound housing, and settlements will be developed in accordance with the capacity of the community, and that the housing needs of the community will be equitably distributed to achieve a slum-free city.

Housing and residential conditions are expected to improve in the future, but their supply is still concentrated in urban areas. Efforts are made by the government to develop housing and settlements in developed areas by building Republic of Indonesia Employee Corps housing for Balikpapan City government officials, but there are still constraints due to limited electrical energy sources and clean water supply.

Most slums are located near rivers and coastal areas. The high demand for land for housing has resulted in unregulated land conversion, resulting in the emergence of potential slum areas and many squatters, as well as low access to communities to meet housing demands, especially for low-income residents. The Balikpapan City government continues to arrange and relocate with the construction of rental apartments spread throughout Balikpapan City.

Furthermore, sufficiency of clean water and sanitation (sewage, garbage, drainage) services is still lacking, especially for low-income groups. Due to limited raw water capacity, the clean water supply rate through pipelines has been only 73%. Sewage pipeline coverage is only 2%, and 98% of sewage is still discharged underground or into water bodies without prior treatment.

The mission of Balikpapan City Regional Long-Term Development Plan 2005-2025 is as follows

1） Achieving a competitive edge
2） Provide adequate urban infrastructure
3） Realization of environmentally friendly and livable cities
4） Developing an economy of creative people
5） Realization of Good Governance

In Mission 2 of “Provide adequate urban infrastructure”, the goal is to “increase the quality, quantity and distribution of clean water supplies” with the goal of “providing clean drinking water services.”

Specific policy directions include “developing raw water sources that meet long-term needs” and “improving clean water services to make drinking water accessible to all levels of society.

Furthermore, the goals of the project are to “create healthy and livable housing and living environments” and “improve the quality of the living environment” and “improve healthy sanitation.

Specific policy directions include “improving facilities and infrastructure to handle drainage network systems,” “improving basic infrastructure development for simple and healthy residential areas,” and “increasing the supply of land and housing for low-income residents and disaster-prone areas through relocation of settlements,” in order to “improve the quality

of living conditions and increase the supply of housing" are listed. The plan also includes "improve sanitation and infrastructure for both wastewater treatment and solid waste" and "develop healthy sanitation management (garbage, wastewater, and sewage)" to "improve healthy sanitation."

According to Balikpapan City Regional Middle-Term Development Plan 2021-2026, Balikpapan City Government recalculated the condition of housing and settlements in 2020 based on slum standards with consisting of seven indicators: building conditions, environmental road conditions, drinking water supply conditions, environmental drainage conditions, sewage management conditions, solid waste management conditions and fire protection conditions. As a result, there are 153.3 ha of housing and slum settlements located in six areas that are based on the Balikpapan City Mayor's Decree No.: 188.45-326/2020 on the Determination of Slum Housing and Slum Settlements in Balikpapan City.

Table 2-98 Location and Area of Residential and Slum Settlements

No.	Lokasi Location		Luas Kawasan (Ha) Area
	Kecamatan District	Kelurahan Sub District	2020
1	Balikpapan Barat	Baru Ilir	24.57
2	Balikpapan Tengah	Karang Jati	32.03
		Karanag Rejo	23.98
		Gunung Sari Ulu	56.93
3	Balikpapan Kota	Damai	5.4
		Klandasan Ilir	10.39
	Jumlah Total		153.3

Source: Balikpapan City Regional Middle-Term Development 2021-2026

The main results of the classification and analysis of the achieved or unachieved goals for utilities and housing in RPJMD as of 2020 are shown below.

1) Raw water capacity: not achieved (1,570 liter/sec<1,686 liter/sec)
2) Drinking water service coverage: achieved (81.37%>80.8%)
3) Sewer service coverage: achieved (94.25%>97%)
4) Percentage of length of properly functioning drainage channels: achieved (50.09 km > 47.86 km)
5) Area of slums: Achieved (153.3 ha < 257 ha)
6) Decrease in remaining housing supply: not achieved (92,556 units > 56,299 units)

Table 2-99 Results of Analysis of Regional Conditions regarding Goal Attainment in Balikpapan City

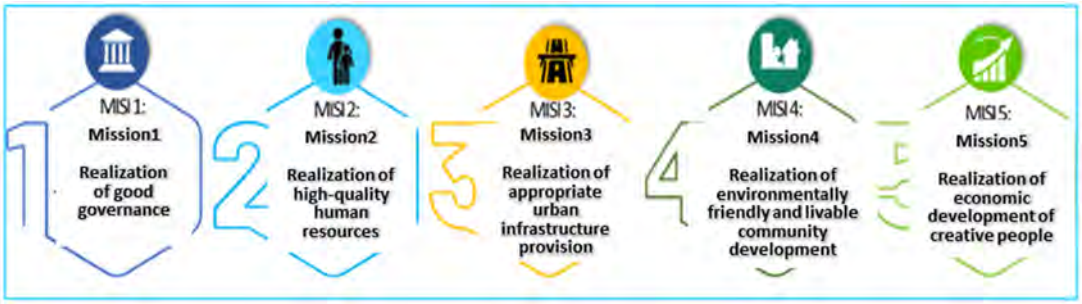
Aspects/Focus of Affairs/Performance Indicators of Regional Development	Tahun Year					Standard	Status of achivement	Sumber
	2016	2017	2018	2019	2020			
Angka Kejadian DBD per 100.000 penduduk	657,06/100.000 penduduk	78,3 / 100.000 penduduk	78,3 / 100.000 penduduk	240,65/100.000 penduduk	112,46/100.000 penduduk	250/100.000 penduduk	Tercapai	Dinkes, 2021
Prevelensi TBC	300,00/100.000 penduduk	199,5/100.000 penduduk	199,50/100.000 penduduk	272,29/100.000 penduduk	123,90/100.000 penduduk	140/100.000 penduduk	Tercapai	Dinkes, 2021
Persentase Puskesmas yang Terakreditasi Nasional	51, 85 %	81,81%	96,30%	96,30%	96,30%	90%	Tercapai	Dinkes, 2021
Persentase Ketersediaan Sarana dan Prasarana Rumah Sakit	60%	65%	70%	98,00%	98,15%	90%	Tercapai	Dinkes, 2021
Persentase Pemenuhan SDM RS	70,00%	70,00%	70,00%	52,00%	97,32%	90%	Tercapai	Dinkes, 2021
Pekerjaan Umum								
Indeks Kepuasan Layanan Infrastruktur Dasar		78,1	80,4	77,8	82,03	79	Tercapai	Bappedalitbang, 2021
Perda Tata Ruang (1 RTRW, 1 RDTR, 1 Insentif & Disentif)		0,06	0,1	2	2	Perda Tata Ruang (1 RTRW, 1 RDTR, 1 insentif&Disentif)	Tercapai	DPPR, 2021
Kapasitas Air Baku (Raw Water Capacity)	1.265	1.265	1.615	1.525	1.570	1.686	Unachieved	PDAM Kota Balikpapan
Cakupan Layanan (Clear water service area)	76,5	76,56	79,05	79,6	81,37	80,8	Achieved	PDAM Kota Balikpapan
Cakupan Layanan (Waste water service area)			81,74	95	94,25	97	Ahieved	DPU, 2021
Menurunnya Titik Banjir	36	35	34	30	88	35	Tidak Tercapai	DPU, 2021
Persentase penertiban pemanfaatan ruang		0	0	98,3	98,58	98,5	Tercapai	DPPR, 2021
Indeks Aksesibilitas Kawasan Perkotaan		1,45	1,427	1,43	1,475	1,49	Tidak Tercapai	DPU, 2021
Persentase panjang saluran (Drainage length) berfungsi dengan baik		44,97	46,43	48,88	50,09	47,86	Ahieved	DPU, 2021
Kantor pemerintah dalam kondisi baik		72,58	78,08	84,8	85	90,32	Tidak tercapai	DPU, 2021
Persentase panjang trotoar yang telah memenuhi standar		10,58	12,73	14,98	14,98	10,04	Tercapai	DPU, 2021
Persentase kemantapan jalan		96,86	83,76	84,06	86,79	81,14	Tercapai	DPU, 2021
Perumahan								
Penurunan Luasan (Reduction of Slum Areas)	282,2 Ha	224,86Ha	58,58 Ha	0 Ha	153,3 Ha	257 Ha	Ahieved	Disperkim, 2021
Menurunnya Backlog Perumahan (Decreasing Housing)	33.849	49.806	49.806	87.782	92.556	56.299	Unachieved	Disperkim, 2021
Ketenteraman dan Ketertiban Umum serta Perlindungan Masyarakat								

Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

The five missions of Balikpapan City in the Balikpapan City Regional Middle-Term Development Plan 2021-2026 are as follows.

Among these, in “Mission 3: Realization of appropriate urban infrastructure provision” and “Mission 4: Realization of environmentally friendly livable community developmeet,” reference is made to the basic needs of urban communities, including basic infrastructure (including clean water and sewage) and housing, which are important elements for the realization of the mission.

1） Realization of good governance
2） Realization of high-quality human resources
3） Realization of appropriate urban infrastructure provision
4） Realization of environmentally friendly and livable community development
5） Realization of economic development of creative people



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-130 Five Missions of Balikpapan City

(12) Water Supply

According to the Balikpapan City Regional Long-Term Development Plan 2005-2025, drinking water is secured from several sources, including pipeline networks managed by

certain residential areas, public water supplies managed by PDAM, private tank trucks, deep wells, shallow wells and rainwater.

Currently, the raw water source is heavily dependent on the Manggar Reservoir, which supplies the entire city, and the Pertamina Reservoir in the Sungai Wain Protected Forest area to meet the operational needs of the refinery and PT Pertamina's housing.

The current water supply coverage by PDAM is 72.15%, or about 77,708 households, with a PDAM production capacity of 1,108 liter/sec and an average annual water loss of 30.69%; the average raw water demand in 2025 is 2,179 liter/sec, while the current raw water capacity is only 1,140 liter/sec. To meet these raw water demands, construction of the Teritip and Wayne reservoirs must be accelerated, and once the two reservoirs are built, they will produce 420 liter/sec of raw water.

Both short-term (2011-2015) and long-term (2016-2020) raw and purified water supply programs, especially those managed by PDAM, will be developed according to the PDAM Balikpapan City Water Supply System Master Plan 2005-2020 Revision.

Access to undrained groundwater remains an option for those without clean water supplies. The pipeline network system in Balikpapan City is maintained and managed by PDAM, and once the capacity expansion is completed, the competitiveness of the water supply will be further enhanced. In Balikpapan City, the percentage of households with drinking water facilities was 63.33% in 2005 and 69.70% in 2009. It continued to increase the following year, reaching 73% in 2011.

Balikpapan City's drinking water service is provided by PDAM Balikpapan City, which was able to provide drinking water service to 60,613 persons (65% of Balikpapan City residents) in 2005. It currently supplies approximately 73% of the population of Balikpapan City, or 80,600 households, and currently operates six water treatment plants supplied by surface water and groundwater to meet the needs of the Balikpapan City community.

The main source of raw water is the Manggar Reservoir in the North Balikpapan City area, which can supply 900 liter/sec of raw water and has a storage capacity of 16 Million m^3, which can last for 6 months without rain. All water treatment plants have an installed production capacity of 1,115 liter/sec and use a complete management system for current raw water quality. Some IPAs use a combination of surface and groundwater raw water.

Balikpapan City currently has only 1,104 liter/sec of raw water available, while raw water demand has reached 1,206 liter/sec and raw water shortage is 102 liter/sec. Balikpapan City's goal by 2016 is to have 1,400 liter/sec of raw water available, but the proposed development of Teritip and Wayne reservoirs is constrained by land acquisition until 2012, affecting the delay in the dam certification process so that the physical work of dam construction itself is hampered.

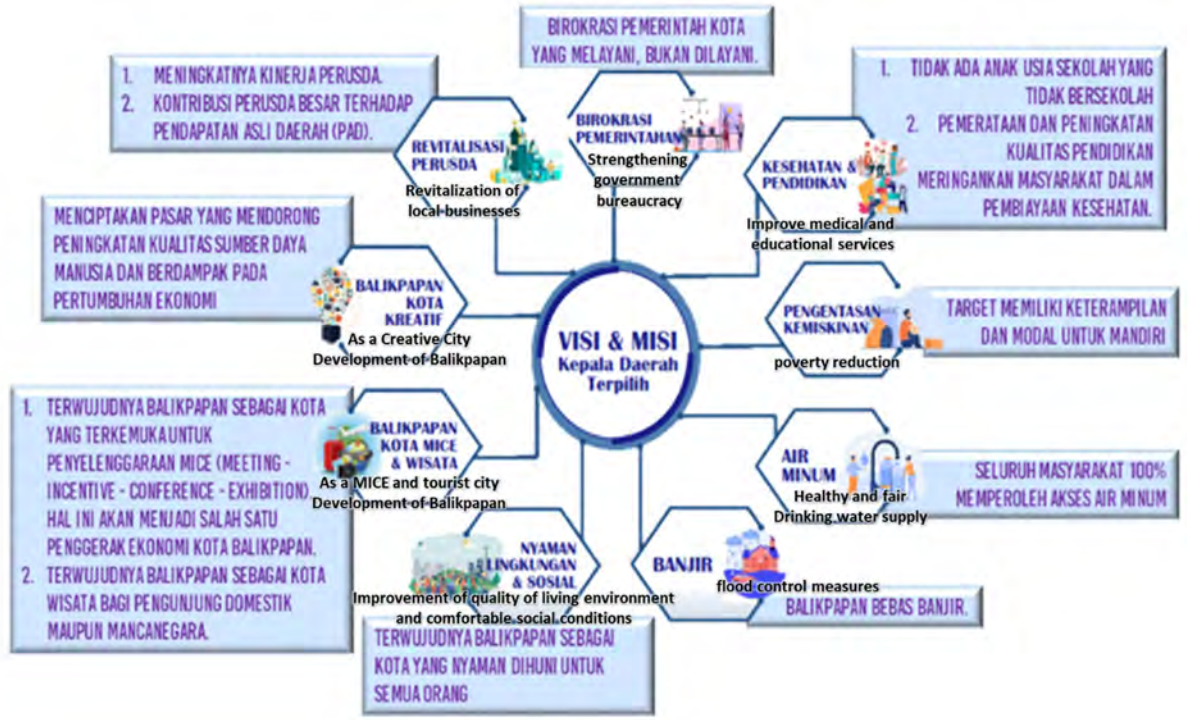
Another important initiative being undertaken by the Balikpapan City government is the replacement of the pipes. The pipes were constructed in the 1980s and need to be replaced because they have developed leaks and are not technically functioning optimally.

The nine priority development issues for Balikpapan City for the period 2021-2026 are listed below.

In particular, regarding drinking water supply, “Accelerate the improvement of raw water supply and make it easier for communities to access drinking water facilities,” and “Currently,

the amount of available raw water supplied from Manggar and Teritip reservoirs is 1,200 liter/sec, while the total demand is 2,200 liter/sec. The shortfall will be covered by the construction of the Aji Laden Reservoir and the supply of 2,000 liter/sec through a pipeline from the Sepaku Semoi Reservoir to meet Balikpapan City's raw water needs for the next few years".

1) Strengthening government bureaucracy
2) Improvement of medical and educational services
3) Poverty reduction
4) Healthy and equitable drinking water supply
5) Flood control measures
6) Improvement of quality of living environment and comfortable social conditions
7) Development of Balikpapan City as a MICE and tourism city
8) Balikpapan City's development as a Creative City
9) Revitalization of local businesses



Source: Balikpapan City Regional Middle-Term Development Plan 2021-2026

Figure 2-131 Nine Priority Development Issues for Balikpapan City

Balikpapan City Regional Spatial Plan 2012-2032 shows a water resource infrastructure network system.

Water resource infrastructure network system includes River Area (WS), Groundwater Basin (CAT), Trans-Municipal Water Resources Network System, Irrigation Network, Raw Water Network for Clean Water, Flood Protection System, and Coastal Security System. Furthermore, regarding the river Area, initiatives for existing and planned reservoirs are shown in addition to the Ajiladen, Mangal, Sober, and Wayne basins as Mahakam National Strategic Basins.

Existing reservoirs:

1. Improvement of the Wayne Weir with an area of about 365 ha
2. The Manggar Reservoir with an area of approximately 5,000 ha
3. Development of the Teritip Reservoir with an area of approximately 38.80 ha

Planned reservoirs

1. Development of a reservoir in the Wayne watershed with an area of approximately 511 ha
2. Development of a reservoir in the Manggar watershed with an area of approximately 213 ha.
3. Development of a reservoir with an area of approximately 371 ha in the Sombor watershed.
4. Development of a reservoir in the Lamar basin with an area of approximately 211 ha.
5. Development of a reservoir with an area of approximately 137 ha in the Ampar watershed.
6. Development of a reservoir with an area of approximately 82 ha in the Sepinggan watershed.
7. Development of a reservoir with an area of approximately 20 ha in the Pandansari watershed.
8. Development of a reservoir of approximately 21 ha in the Crandasan Kecil watershed.

The trans-municipal water resource network system

a. Sepaku System, PPU Regency
b. Samboja System, Kutai Kartanegara Regency

The raw water network for water supply

1. Manggar reservoirs in Karang Joang and Lamaru villages.
2. Development of the Wayne Reservoir in the village of Kariangau.
3. Development of the Terlitip Reservoir in the village of Terlitip.
4. Development of the Sepaku Reservoir in Punajam Pasur Utara province.
5. Development of the Samboja reservoir in Kutai Kartanegara province.
6. Deep well groundwater in Gunung Sari Ilir, Teraga Sari, Prapatan, Gunung Sari Ulu, Gunung Bahagia, Teritip and Bal Ulu villages.

The urban infrastructure network system.

Municipal drinking water supply systems, municipal sewage management systems, municipal solid waste systems, municipal wastewater systems

The urban drinking water supply systems

a. Piping network system
b. Non-piping network system

Balikpapan City Regional Spatial Plan 2012-2032 presents the following for the pipeline network system: eight existing IPAs and three planned IPAs are described.

a. Water purification plants and water treatment facilities (IPA)

1. IPA Kampung Damai in Damai Village, 400 liter/sec capacity
2. IPA Gunung Sari in Gunung Sari Ilir Village, 100 liter/sec capacity

3. IPA Batu Ampar in Batu Ampar village, 500 liter/sec capacity
4. IPA Gunung chute in Teritip village, 10 liter/sec capacity
5. IPA in Manggar village, 50 liter/sec capacity
6. IPA Manggar Reservoir, Manggar Village, 25 liter/sec capacity
7. IPA Prapatan in Prapatan Village, 50 liter/sec capacity
8. IPA Waduk Wayne in Kariangau village, 350 liter/sec capacity.
9. Development of IPA Sepinggan airport with 50 liter/sec.
10. Development of IPA Sumayan port with 50 liter/sec.
11. Development of the IPA Kariangau industrial port with 150 liter/sec.

b. Introduction of deep groundwater treatment

1. Gunung Sari Ilir Subdistrict, Tlaga Sari Subdistrict, Prapatan Subdistrict, Gunung Sari Ulu Subdistrict, Gunung Bahagia Subdistrict, Teritip Subdistrict
2. Planning for the Baru-Ur sub-district

c. Pipeline network for water supply

1. Manggar Reservoir Route - IPA Batu Ampar via Karang Joan Village
2. Manggar Reservoir Route - IPA Kampung Damai via Karang Joang Village, Batu Ampar District, Gunung Samarinda City District, Gunung Bahagia District, Damai District
3. Terlitip Reservoir Route - via Terlitip Village, IPA Terlitip
4. Ayne Reservoir Route - IPA Kariangau via Karang Joan Village, Batu Ampar Village and Kariangau Village
5. Samboja Reservoir Route - Teritip Village, via Samboja District, IPA Teritip
6. Sepaku Semoi Dam Route - IPA Batu Ampar via Kariangau Sub District, Batu Ampar Sub District, Karanjoang Sub District, PPU District

d. Water distribution network

1. Distribution pipelines that deliver clean water to reservoirs in service areas scattered throughout the city
2. Water pipeline network installed in most of the public roads and settlements spread across the urban villages of Balikpapan City
3. Reservoirs have been constructed scattered in many subdivisions of Balikpapan City.
4. The constructed booster pumps are scattered in many subdivisions of Balikpapan City.

The non-piped network system also includes service by public fire hydrants, public faucets, and tank trucks.

According to Balikpapan City's “PPP Preliminary Study 2023 for Sepaku Semoi SPAM Development”, there are five out of eight IPAs that use well water, and the future plan is to reduce the use of well water. On the other hand, the supply capacity is still insufficient for the demand, and there is no assumption that water demand will decrease in the future. (374.52 liter/sec shortfall)

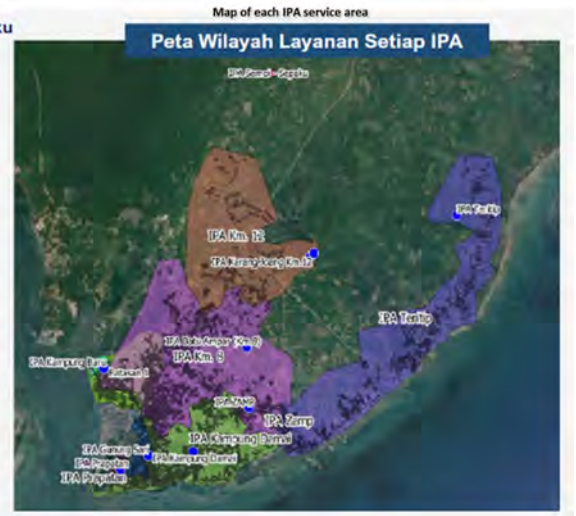
The source and location of each IPA and its service area are shown in the following figure.

Data on the distribution of water purification plants (IPAs) and raw water sources

Data Intalasi Pengolahan Air (IPA) dan Distribusi Sumber Air Baku

No	Nama SPAM SPAMName	Waduk Teritip Teritip Dam L/s	Waduk Manggar L/s	Air Sumur L/s	Total L/s
1	IPA Karang Joang	-	87 Mangar dam.	well water -	87
2	IPA Batu Ampar	-	534	-	534
3	IPA Gunung Sari	-	-	142	142
4	IPA Prapatan	-	-	50	50
5	IPA Kampung Damai	-	500	47	547
6	IPA Teritip	196	-	-	196
7	IPA ZAMP	-	-	11	11
8	IPA Kampung Baru	-	-	23	23
TOTAL (L/DT)		196	1,120	272	1,588

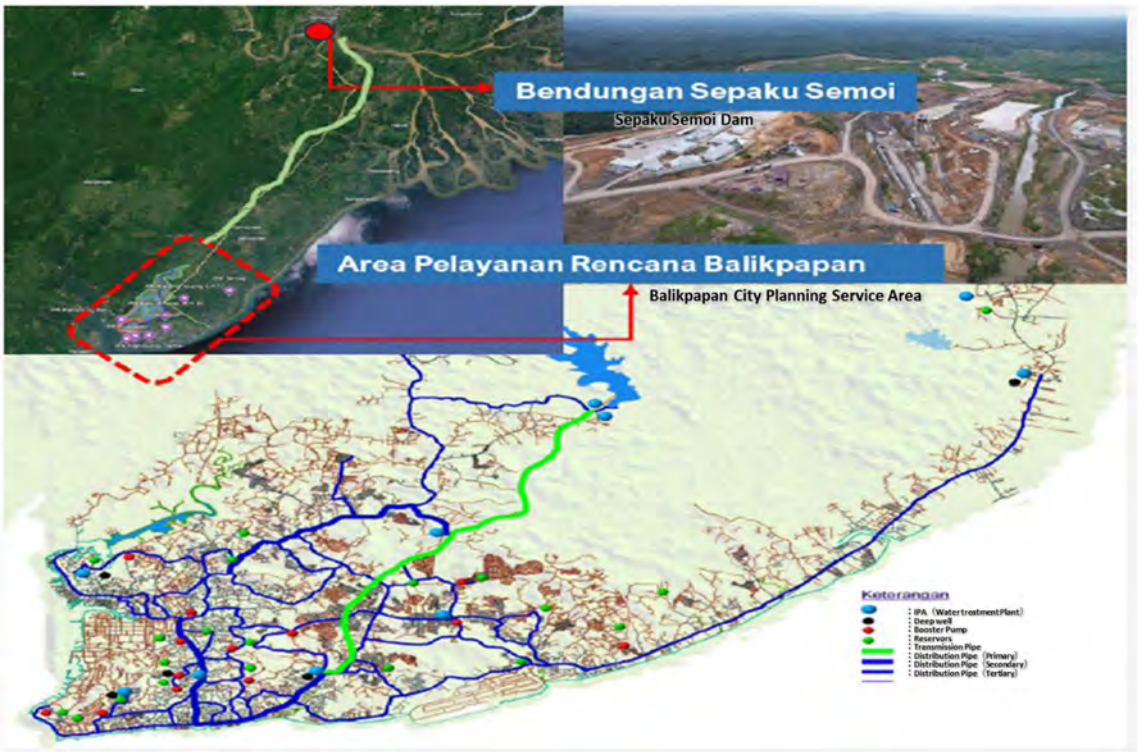
Of the eight IPAs for water supply in Balikpapan City,there are five IPAs that use well water, and future plans call for reducing the use of well water. There is still 20 Litter/det of available capacity in the Teritip Dam, but the IPA capacity of 200Litter/det has reached its maximum production capacity



Source: Sepaku Semoi Preliminary PPP Study for SPAM Development 2023 Balikpapan City

Figure 2-132 Service Map for Each IPA

SPAM Sepaku Semoi is expected to be a new source of raw water. The dam is located about 50 km from Balikpapan City, and a request has been submitted to Balikpapan City for a planned capacity of 1,000 liter/sec. With these 1,000 liter/sec allocations, it is proposed that demand can be met until about 2030, after which time demand and supply will be balanced through future optimization.



Source: Sepaku Semoi Preliminary PPP Study for SPAM Development 2023 Balikpapan City

Figure 2-133 Location of Sepaku Semoi Dam and Balikpapan City and piping route

It should be noted that the proposal by Balikpapan City to allocate 1,000 liter/sec from Sepaku Semoi Dam was considered on the assumption that the supply location to IKN could be from

Batu Lepek Dam.

According to a presentation by the Tirta Manuntun Regional Corporation, the main raw water sources in Balikpapan City are surface water derived from the Manggar and Teritip reservoirs and deep wells.

The Manggar Reservoir has an intake of 1,100 liter/sec and sends 500 liter/sec to the Baku Ampar KM8 water treatment plant, 460 liter/sec to the KP Damai water treatment plant, and 100 liter/sec to the Karang Joang water treatment plant for distribution to households.

The Teritip reservoir is currently 220 liter/sec from the Teritip intake site, but the Plan calls for 150 liter/sec to be taken from the Aji Raden intake site (planned) for a total capacity of 2 x 200 liter/sec.

The following figure shows the location and depth of Manggar Reservoir.



Source: Regional Corporation Presentation Materials

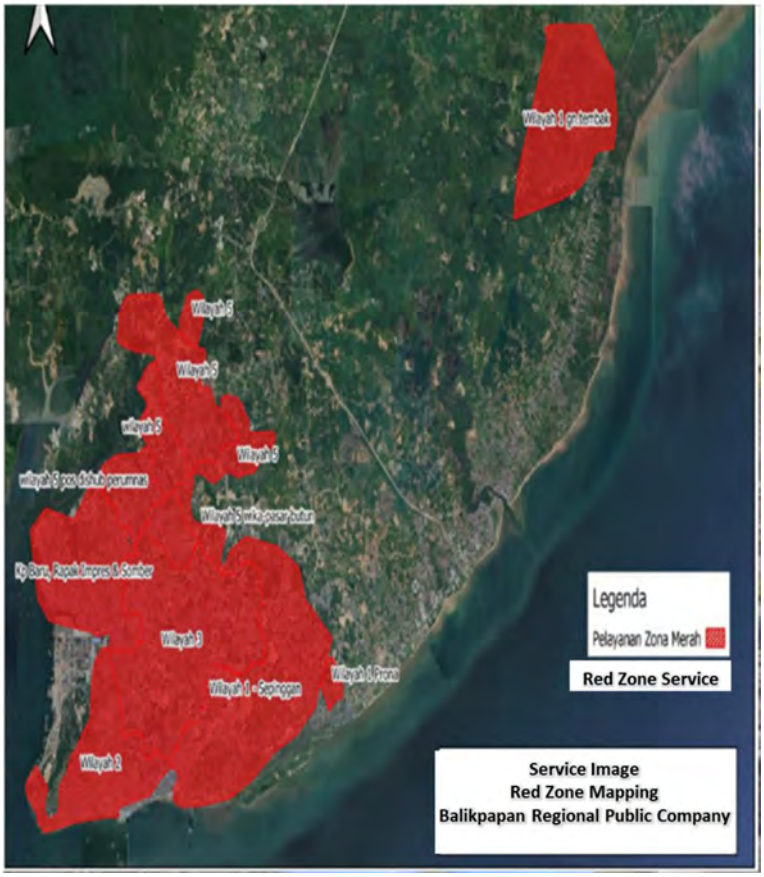
Figure 2-134 Location and depth of Manggar Reservoir

There are a total of 20 deep well raw water sources, with an average of 239.52 liter/sec withdrawn in 2021.

The Tirta Manuntung Regional Corporation operates eight IPAs with an operational performance of 1,444.14 liter/day against a capacity of 1,510 liter/day.

Balikpapan City is currently experiencing high water loss. Water loss can be caused by various reasons such as broken water distribution pipes, broken water meters, theft and so on. Therefore, efforts are being made to reduce water loss through maintenance and management.

In addition, there are red zones in central Balikpapan City and other areas where additional supply is not available due to lack of distribution pipes and IPA capacity. The locations of the red zones are shown below.



Source: Regional Corporation Presentation Materials

Figure 2-135 Scope of Red Zone Services

(13) Sewage and Drainage

According to the Balikpapan City Regional Long-Term Development Plan 2005-2025, the largest Margasari WWTP service started operation in September 2002, with an operating time of 24 hours/day and a sewage inflow rate of 450 m^3/hr. The service area of the sewage treatment system, including the pipeline and WWTP, is 98.9 ha. As of present, the Margasari WWTP service serves 1,308 households.

- The Balikpapan City Joint WWTP service is not only owned by the Balikpapan City Government, but also by housing estates managed by foreign companies. Namely, the joint IPAL in Chevron housing, the joint IPAL in Vilaveta housing, and the joint IPAL in Total housing. The IPAL communal in Chevron housing has been built from 1973 to the present. The number of connections to the housing is 50 households. On the other hand, the communal WWTP in Vilaveta Housing serves 70 households and the communal WWTP in Total Housing serves 48 residents.
- On the other hand, joint IPALs owned by the Balikpapan City Government are

generally managed through community self-help groups (KSM: Kelompok Swadaya Masyarakat). The joint IPAL locations are spread over several areas of Balikpapan City, including community self-help groups, and are maintained as follows.

- Kelurahan Damai RT 19 is jointly managed with Sumber Damai, and IPAL users are connected to 70 houses in 62 households.
- Kelurahan Mulyo RT 40 is jointly managed with Mangrove Mandiri, with IPAL users connected to 80 houses in 106 households.
- Kelurahan Sepinggan RT 61 is jointly managed with Beriman, and IPAL users are connected to 50 houses in 50 households.
- Klandasan llir Subdistrict RT 32 with KSM Al - Co-managed with Hikmah, IPAL has 108 users, connecting 62 families.
- Kelurahan Margo Mulyo RT 18 is jointly managed with Maju Bersama and serves 88 families and 70 houses to IPAL.

· Balikpapan City Government has set up public toilets in the following areas

- Margo Mulyo RT 26 is co-managed with Tirta Guna and served by 83 households.
- Kelurahan Margo Mulyo RT 25 is jointly managed with Sendang Makmur and serves 70 households.

Stormwater drainage is a primary artificial drainage channel that was developed to discharge stormwater and other water from urban areas, and all existing major drainage channels are natural flow to accommodate drainage demands.

There are 86 waterways and rivers that flow directly into Balikpapan City Bay and Makassar Strait. The drainage in Balikpapan City is divided into six watersheds, and a summary of the rivers and facilities is provided below.

- West Balikpapan City area: total river length is 22,341 meters
- South Balikpapan City area: a small river flows and discharges directly into the Makassar Strait with a drainage extension of 110,869 meters
- East Balikpapan City area: 23,981 meters of drainage facility extension
- Wayne area: 23,428 meters of drainage facility extension
- Sompul area: 36,022 meters of drainage facility extension
- Manggar area: 9,232 meters of drainage facility extension

Typical drainage conditions include trash and sediment deposits that often clog certain areas, resulting in flooding and overflowing due to rainfall.

Two existing and two planned facilities are described for wastewater management systems.

a. 450 m^3/hr wastewater treatment plant in Margasari Village, West Balikpapan City District
b. Development of 2,500 m^3/hr industrial wastewater treatment plant in Kariangau Village, West Balikpapan City District

c. Development of a 2,000 m^3/hr wastewater treatment plant in Sepinggan Village, South Balikpapan City District

d. Sludge treatment plant with a capacity of 40,000 m^3/hr in Manggar Village, East Balikpapan City District

The Municipal Waste Management System Development Plan is presented below.

a. Individual domestic sewage treatment systems serve low-density residential areas in the North Balikpapan City, East Balikpapan City and West districts.

b. The communal domestic wastewater treatment system serves the high-density residential areas of Balikpapan City Central District, Balikpapan City South District, and Balikpapan City District.

Balikpapan City Regional spatial plan shows canals and pipelines for the urban drainage system.

According to the Drainage Master Plan 2022, the four clusters of drainage management in Chapter 5 Drainage Planning are described using the acronym TRAP, which is an acronym for the Indonesian word.

Retention (Tampung): the control of drainage channels and river flows from overflowing by constructing reservoirs or playgrounds, whether at the household or watershed scale.

Penetration (Resapkan): infiltration of water into the soil, which not only maintains groundwater strength, but also maintains and reduces runoff into storm drains and storm sewers.

Flowing down (Alirkan): refers to the flow of rainwater that flows into a drainage channel until it reaches the final receiving or discharge water body, such as a river, and flows into the ocean. It is said that drainage channels must be properly analyzed and calculated to determine the dimensions and capacity of the drainage channel in question.

Maintenance (Pelihara): regular and continuous maintenance of drainage channels.

In the Plan, the dimensions of the drainage channels (planned dimensions relative to runoff volume) and the area of the dam and reservoir are organized.

In addition, the following was compiled as drainage recommendations for new area development.

- No new development in areas in the valley because the valley is a stormwater corridor.
- Regulate the clearing of hillsides for residential and built-up areas, etc.
- Cleared hillsides should not be left unattended for long periods of time, especially during the rainy season. This will avoid erosion of the hillside by rainwater runoff.
- In newly developed areas under construction, drainage channels should be provided in advance to ensure that stormwater flows through them, and that groundwater does not flow freely into low-lying areas.
- Prevent sediment from eroding land from entering drainage channels.
- The developer will need to provide a regulating reservoir to compensate for the increased flow due to the change from land that absorbs water to land that absorbs less water. As an example, the developer can either build a detention/retention basin

covering 5% of the developed land, or the developer can participate in the construction of a drainage facility for a waterway that receives flows from the developed area.

- When applying for a permit, developers are required to submit a drainage study not only for the development area, but also for the surrounding areas affected by development in the new area.

2.6.8 Diversity

(14) Regional Regulation of Balikpapan City No.6/2021 on the Balikpapan City Regional Middle-Term Development Plan 2019-2026

2) Diversity Aspect in the General Overview of the Regional Condition in Balikpapan City

a) Demographic Condition

In the year 2020, the population in Balikpapan City, based on age and gender, was dominated by the productive age group compared to the toddler and elderly groups, accounting for 88% of the total population in Balikpapan City in 2020. In terms of gender, Balikpapan City was dominated by males compared to females.

b) Poverty

The percentage of the poor population in Balikpapan City over the last 5 years has tended to decrease. In 2017, there were 2.82% or about 17.86 Thousand persons living in poverty, and this decreased from 2018 to 2019. However, in 2020, the number of poor people increased by 0.15% to 17.02 Thousand persons. If averaged over the period from 2017 to 2020, the percentage of the poor population in Balikpapan City is 2.61%. In 2020, when compared to all cities in East Kalimantan Province, the percentage of the poor population in Balikpapan City is the smallest and is below the provincial figure of 2.57%.

c) Regional Inequality

In 2017 and 2018, the Gini index for Balikpapan City was 0.32, indicating a relatively low income inequality. Subsequently, in 2019, the Gini index decreased to 0.302. However, it experienced an increase in 2020, reaching 0.3111. When compared to East Kalimantan Province and the National Gini indices, Balikpapan City's Gini index is still below the provincial and national levels. In 2020, the Gini index for the province was 0.328, and the national index was 0.381, both higher than Balikpapan City's Gini index.

d) Social Welfare

Generally, the Human Development Index (HDI) of Balikpapan City has shown progress during the period from 2016 to 2019. In 2020, as a result of the COVID-19 pandemic, Balikpapan City's HDI experienced a decrease of 0.10 percent, reaching 80.01. This decrease did not change the status of Balikpapan City's Human Development Index, which remains classified as “Very High,” along with 36 other districts/cities across Indonesia. In 2020, Balikpapan City's HDI ranked third-highest, below Samarinda City with an HDI of 80.11 and Bontang City with an HDI of 80.02, while surpassing the provincial figure of 76.24.

e) Employment

The number of registered job seekers in Balikpapan City, based on data from the Balikpapan City Human Resource Office in 2020, was 4,312 job seekers, and 937 job seekers were placed

according to the classification of needs. With this situation, there are still 3,375 job seekers in Balikpapan City who have not been placed or employed. The largest proportion of these registered job seekers is those with high school education (SMA/K), accounting for 59.14%, or 2,550 individuals. The second-largest group of registered job seekers is those with a bachelor's degree (S1), comprising 28.87%.

With the continuously increasing number of job seekers, the Labor Force Participation Rate (TPAK) from 2017 to 2019 also increased. In 2017, Balikpapan City's TPAK was 63.38%. This figure increased to 64.33% in 2018 and further to 65.14% in 2019. In the same year, there was a decrease in the Unemployment Rate (TPT) in Balikpapan City, which was initially 10.39% in 2017, becoming 7.29% in 2019. However, in 2020, Balikpapan City's TPAK experienced a decrease of 2.24% to 62.9%. Similarly, the TPT in Balikpapan City also increased to 9.00% in 2020.

f) Empowerment of Women and Protection of Children

The Gender Development Index (IPG) of Balikpapan City experienced a decline from 2018 to 2020. In 2018, Balikpapan City's IPG was at 89.76, the same as the IPG in 2017. In 2019, Balikpapan City's IPG touched 89.71 and continued to decrease to 89.65 in 2020. These achievements still did not meet the final target of the Balikpapan City Regional Middle-Term Development Plan (RPJMD) for IPG, which is 92. However, the IPG in Balikpapan City has a figure that surpasses the achievement of the IPG of East Kalimantan Province.

The Gender Empowerment Index (IDG) in the context of women's involvement in parliament increased from 17.78% in 2017 to 20% in 2019, and this figure remained unchanged until 2020. Similarly, the contribution of women's income continued to increase from 2017 to 2020. In 2017, the contribution of women's income was only 25.71%, and this figure continued to rise to 26.75% in 2020. As for the achievement of the indicator of women as professional workers, it increased from 42.39% in 2017 to 2019 but experienced a decrease to 41.76% in 2020.

3) Aspect of Diversity in the Formulation of Vision, Mission, Objectives, Targets, and Indicators of the Balikpapan City Regional Middle-Term Development Plan (RPJMD)

The Diversity aspect in the formulation of Vision, Mission, Goals, Targets, and Indicators of the Balikpapan City Regional Middle-Term Development Plan (RPJMD) can be seen in the following table.

Table 2-100 Mission for Diversity in Balikpapan City RPJMD, etc.

Goals related to the aspect of diversity	Indicators related to the goals of the aspect of diversity	Targets related to the aspect of diversity	Indicators related to the targets associated with the aspect of diversity.
Strategic Goal 2: Achieving a Highly Qualified Human Resources			
Enhancing human resources that are excellent, healthy, and competitive.	HDI	Improving the quality and accessibility of education	Education Index
		Improving the quality of public health	Health Index
		Increasing the quality of community literacy.	Community Literacy Development Index
		Increasing the quality of youth	Competitiveness and Youth Sports Index

		Increasing the sustainability of local cultural heritage.	Cultural Heritage Index
		Improving the quality of gender-responsive development.	Percentage of Gender-Responsive Budget (GRB)
Strategic Goal 5: Developing a Creative People's Economy			
Improving local economic equality and community income through inclusive economic development.	The Gini index	Increasing Growth of Micro Enterprises in the Region, Decrease in Unemployment Rate, and Reduction in Poverty Rate	Percentage Growth of Micro, Small, and Middle Enterprises
			Open Unemployment Rate
			Poverty Rate

Source: Regional Regulation of Balikpapan City No.6/2021 on the Regional Middle-Term Development Plan 2019-2026

(15) Draft of the Balikpapan City Regional Long-Term Development Plan 2025-2045

4) Diversity Aspect in the General Overview of the Regional Condition in Balikpapan City

a) Demographic Condition

Balikpapan City had a population of 703,611 in 2022. This number represents an increase of 39.99 percent compared to the early implementation of the Balikpapan City Regional Long-Term Development Plan 2005-2025, when the population was only 500,406. The productive age population in Balikpapan City is 70.28 percent, with 51.07 percent being male and 48.93 percent female. The non-productive age population is dominated by the 0-14 year age group, which accounts for 24.15 percent, while the elderly non-productive age group is only 5.62 percent. This indicates that Balikpapan City is currently experiencing a demographic bonus, where the number of people in the productive age group is higher than in the non-productive age group. A demographic bonus suggests the potential for optimizing human resources for the development of Balikpapan City.

b) Poverty

The poverty rate in Balikpapan City is relatively low, ranking as the second-lowest among districts/cities in Indonesia in 2022. The poverty rate in Balikpapan City is significantly lower compared to the provincial and national levels. During the period from 2005 to 2022, Balikpapan City’s poverty rate averaged around 3.15 percent per year, with the lowest rate achieved in 2022. The percentage of poor residents in Balikpapan City decreased by 15.22 percent compared to 2021. The decline in the poverty rate in 2022 was driven by the strengthening of Balikpapan City’s economy, which was accompanied by a decrease in the unemployment rate from 8.94 percent to 6.90 percent.

c) Regional Inequality

The Gini ratio in Balikpapan City is generally lower compared to East Kalimantan Province and the national level. However, Balikpapan City’s Gini ratio has shown fluctuating movements with a tendency to increase over time. In 2022, Balikpapan City’s Gini ratio reached 0.334, which is 0.017 points higher than that of East Kalimantan Province. This indicates that while the economy has grown, the benefits have not been evenly distributed across all segments of society.

d) Social Welfare

The Human Development Index (HDI) of Balikpapan City has shown an upward trend from

2013 to 2022. Over the past ten years, the HDI of Balikpapan City has increased by 3.6 percent. This indicates an improvement in the quality of human development in Balikpapan City, particularly in the areas of education, health, and the community's economy.

e) Employment

The involvement of residents in economic activities can be measured by the number of people absorbed into the labor market. One of the indicators used to assess the labor absorption rate in an area is the Labor Force Participation Rate (LFPR). This indicator reflects the proportion of the workforce engaged in production activities, either in the form of goods or services, over a certain period. The Labor Force Participation Rate (LFPR) in Balikpapan City has shown a fluctuating yet generally increasing trend from 2015 to 2022. Over the span of 7 years, Balikpapan City's LFPR increased by 3.08 points. However, there is still room for improvement as Balikpapan City's LFPR remains lower than that of several other districts in East Kalimantan Province. The less-than-optimal LFPR suggests that the working-age population in Balikpapan City has not been fully absorbed into the labor market.

f) Empowerment of Women and Protection of Children

During the period from 2018 to 2022, Balikpapan City's Gender Inequality Index (GII) consistently remained below the average for East Kalimantan Province. This indicates that gender inequality in Balikpapan City is lower than the provincial average. This correlates with the City's Gender Development Index (GDI), which has been steadily increasing, reaching 89.65 in 2022. However, the trend in Balikpapan City's Gender Inequality Index (GII) has been somewhat fluctuating and shows an upward tendency. In 2022, the GII of Balikpapan City reached its highest level at 0.344.

5) Aspect of Diversity in the Formulation of Vision, Mission, Objectives, Targets, and Indicators of the Draft of the Balikpapan City Regional Long-Term Development Plan (RPJPD) 2025-2045

Table 2-101 Mission for Diversity in Balikpapan City RPJMD

Goals related to the aspect of diversity	Development directions related to the goals of the aspect of diversity	Indicators related to the targets associated with the aspect of diversity.
Goal 1: Enhanced Competitive and Prosperous Human Resources	Development Direction 3: Adaptive Social Protection	Poverty rate
		Coverage of social security employment participation
		Percentage of persons with disabilities employed in the formal sector
Goal 7: Improved Religious Harmony and Advanced Culture	Development Direction 13: Beneficial Religious Practices and Advanced Culture	Cultural Development Index (IPK)
		Religious Harmony Index (IKUB)
Goal 8: Achieving an Inclusive, Gender-Equal Society with Quality Families	Development Direction 14: Quality Families, Gender Equality, and Inclusive Society	Family Quality Development Index
		Gender Inequality Index (GII)

Source: Draft of Balikpapan City Regional Long-Term Development Plan 2025-2045

(16) Regional Regulation of Balikpapan City Number 12 of 2012 2023 on the Balikpapan City Regional Spatial Plan 2012-2032

In the Balikpapan City Regional Spatial Plan (RTRW) of, there is no discussion about the diversity aspect. This is because the RTRW of Balikpapan City focuses on spatial planning regulations and land use at the urban scale.

2.7 Overview of Existing Plans and Related Policies of Samarinda City

To understand the potential of Tri-City, a sector-by-sector survey of relevant plans in Samarinda City, one of the target cities, was conducted. The table below summarizes the Plans and policies reviewed.

Table 2-102 Review of Relevant Policies and Plans for Samarinda City

Year	Name of Material	Summary	Related Field
2021	Samarinda City Regional Long-Term Development Plan 2005-2025	Samarinda City's Regional Long Range Development Plan includes not only a vision, mission, and Long-Term development direction, but also reference indicators to help evaluate how far the implemented development has progressed in meeting its expected goals.	✓ Connectivity ✓ Climate change measures ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban management ✓ One's living environment ✓ Diversity
2024	Draft of Samarinda City Regional Long-Term Development Plan 2025-2045	The updated version of long-term development in Samarinda City encompassing the capital relocation issue	✓ Connectivity ✓ Climate change measures ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban management ✓ Living environment ✓ Diversity
2015	Samarinda City Regional Middle-Term Development Plan 2021-2026	Samarinda Citys Regional Middle-Term Development Plan is the mayor’s vision and mi It is a planning document that includes a mission, goals and objectives, strategies and policy directions, development programs, and funds that will serve as indicators of development achievement.	✓ Connectivity ✓ Climate change measures ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban management ✓ One's living environment ✓ Diversity
2014	Samarinda City Regional Spatial Plan 2014-2034	Samarinda City's Spatial Plan aims to realize Samarinda City as a progressive, environmentally friendly, competitive city based on trade, services, and industry, and to improve the welfare of the community.	✓ Connectivity ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban management ✓ One's living environment
2023	Draft of Samarinda City Regional Spatial Plan 2022-2042	Samarinda City is conducting a review of its Regional Spatial Plan, and this plan was prepared as a draft.	✓ connectivity ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban management ✓ One's living environment
2021	Samarinda City Regional Disaster Management Plan 2022-2026	Samarinda City's Regional Disaster Management Plan is positioned as a strategic plan to ensure that disaster management	✓ Connectivity ✓ Climate change measures ✓ Power & Energy ✓ urban management

		practices are systematic, planned, and measurable to reduce the risk of disasters.	✓ One's living environment ✓ Diversity
2024	Samarinda City Master Plan for the Development and Arrangement of Prioritized Cities	Development masterplan of Samarinda City as one of the 23 prioritized cities with aim to provide a recommendation of development and spatial arrangement in Samarinda City, particularly related to the Tri-City strategies supporting the New Capital City	✓ Connectivity ✓ Climate change measures ✓ Environmental and Waste Management ✓ Industrial Development and Investment Promotion ✓ Power & Energy ✓ Urban management ✓ Living environment ✓ Diversity

Source: Compiled by JICA Study Team from various sources.

(1) Samarinda City Regional Long-Term Development Plan 2005-2025

This plan was developed by Samarinda City in 2015 in accordance with the Law of the Republic of Indonesia No.25/2004 on the National Planning System, as the basis for a five-year Middle-term development plan and as a long-term policy plan for Samarinda City. And was regulated in the Regional Regulation of Samarinda City No.4/2015. Despite the delay in formulation, it is stated that Samarinda City will promote community development based on the policies of this plan for the period 2015-2025. The structure of this plan is shown in the figure below.

Chapter 1. Introduction
Chapter 2. Overview of Regional Conditions
Chapter 3. Analysis of Strategic Issues
Chapter 4. Regional Vision and Mission
Chapter 5. Goals and Policy Direction
Chapter 6. Implementation Rules

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

Figure 2-136 Structure of the Samarinda City Long-Term Development Plan 2005-2025

Chapter 1 presents the framework and legal basis of the regional development plan and its relationship with other plans, including the regional middle-term development plan and the regional spatial plan, etc. Chapter 2 provides an overview of Samarinda City's topography and social trends, climate and disaster risk areas, community welfare, public services related to education, insurance, infrastructure, housing, slums, environment, etc., industry trends, and economic investment in Samarinda City.

Issues related to community development in Chapter 3 include 1) inadequate quality of life and social equity, 2) lack of a strong local economic base, 3) the need for development that considers environmental and public health concerns, and 4) insufficiently planned land use and river utilization management. The strategic issues study is organized based on the review of the national and state higher-level development plans and their relationship to Samarinda City. The strategic issues for Samarinda City include sustainable economic development, flood management, relocation of administrative centers, administrative transparency, public transportation, development as a smart city, gender-sensitive development, addressing social issues arising from population growth, and developing a competitive workforce.

In Chapter 4, the long-term development vision for Samarinda City is referred to as “Realization of Samarinda City as the Leading Edge City in Kalimantan”. In Chapter 4, the long-term development vision for Samarinda City is referred to as “Realization of Samarinda City as the Leading Edge City in Kalimantan”. “. The mission also includes 1) achieving robust economic development based on leading sectors in the region, 2) ensuring competitive and quality human resources based on law system enforcement, and 3) creating a healthy and beautiful environment. In Chapter 5, development themes are set by five-year time frame, along with policy direction and goals. The policy is to develop a major infrastructure network system. Regarding the policy, the major infrastructure network system is organized by sector, such as transportation infrastructure (road transportation, river transportation, rail network, marine transportation, and aviation), energy network, telecommunications, and water resources management, but specific project names are not given. As for programs, the contents of Samarinda City Regional Spatial Plan 2013-2034 are cited, listing major development programs by district within the city. This plan has been in existence for nearly 10 years and needs to be updated to consider the impact of the IKN Development and relocation of the Capital City.

(2) Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

This plan is the update for the previous Samarinda City Regional Long-Term Development Plan 2005-2025 fulfilling the needs of update due to year of expiration and the capital relocation issue. This document was set as the basis for a five-year middle-term development plan and as a long-term policy plan for Samarinda City. The structure of this plan is shown in the figure below.

Chapter 1. Introduction
Chapter 2. Overview of Regional Conditions
Chapter 3. Analysis of Strategic Issues
Chapter 4. Regional Vision and Mission
Chapter 5. Goals and Policy Direction
Chapter 6. Closing

Source: Samarinda City Regional Long-Term Development Plan 2025-2045

Figure 2-137 Structure of the Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

Chapter 1 presents the background, framework and legal basis of the regional development plan and its relationship with other plans, including the regional middle-term development plan and the regional spatial plan, etc.

Chapter 2 provides an overview of Samarinda City which includes topography and social trends, public welfare, public service, and regional competitiveness. This Chapter also provides information related to the evaluation of previous Samarinda City Long-Term Development Plan 2005-2025, demographical trend, infrastructure needs, and the development central growth regions.

Chapter 3 discusses strategical issues which later will become bases for the City’s development direction. The strategic issues study is organized based on the review of the national and state higher-level development plans and their relationship to Samarinda City.

The strategic issues for Samarinda City in a long-term development period (2025-2045) include 1) strengthening the competitiveness of Samarinda City's human resource, 2) inclusive and sustainable economic development, 3) interregional connectivity and accessibility within the Samarinda City; 4) Samarinda City's role as the capital of East Kalimantan Province and neighboring region of IKN, 5) strengthening the socio-cultural aspect for development, 6) overall reformation of bureaucracy, 7) sustainable environmental management, and 8) Samarinda City towards the future civilization with the Tri-City development.

In Chapter 4, the vision and missions of Samarinda City is provided. The long-term development vision for Samarinda City is referred to as "Samarinda City as the Center of an Advanced and Sustainable Trade and Service-Based Civilization". The mission also includes 1) social transformation to realize competitive human resources, 2) resilient economic transformation based on regional leading economic sectors, 3) achieving the transformation of good governance, 4) realizing healthy and good environment, and 5) strengthening the capacity of basic and strategical infrastructures.

In Chapter 5, development themes are set by five-year time frame/ phase, along with policy direction and goals. The policy direction of Samarinda City for 2025-2045 focusing on the transformation. Each of time frame/ phase has its own theme related to transformation, which are strengthening the foundation of transformation (phase 1), acceleration of transformation (phase 2), stabilization of transformation (phase 3), and achieving the vision (phase 4). This Chapter also lists goals respective to missions and phases established previously.

(3) Samarinda City Regional Middle-Term Development Plan 2021-2026

This Plan is a regional development plan covering the period from 2021 to 2026 for Samarinda City and was developed in 2021 in accordance with the Law of the Republic of Indonesia No.25/2025 regarding National Development Planning System. The plan itself is regulated under the Regional Regulation of Samarinda City No.2/2021. This plan provides policies and basic measures for the promotion of regional development in Samarinda City, and the table of contents is organized as shown in the figure below.

Chapter 1. Introduction
Chapter 2. Overview of Regional Conditions
Chapter 3. Regional Financial Overview
Chapter 4. Regional Problems and Strategic Issues
Chapter 5. Vision, Mission, Goals and Objectives
Chapter 6. Strategy, Direction, Policy, and Program
Chapter 7. Funding Framework and Regional Basic/Apparatus Program
Chapter 8. Role of Regional Government
Chapter 9. Closing

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

Figure 2-138 Structure of the Samarinda City Regional Middle-Term Development Plan 2021-2026

Chapter 1 of the Plan describes the planning framework, including the underlying law, and summarizes its relationship to other planning plans and policy documents, and mentions Samarinda City Regional Long-Term Development Plan.

Chapter 2 provides an overview of the current situation in Samarinda City, including geographic characteristics, social trends, community welfare, public services, and competitiveness. It also provides an overview of disaster risk areas. A summary of the implementation of nuclear policies, e.g., for drainage system development, over the past five years is summarized, evaluated, and analyzed. The section on regional development potential suggests the potential for population growth due to the impact of the IKN Development and the relocation of the Capital City, with a population of 872,768 in 2019, compared to 1,684,836 in 2039, almost doubling in 20 years. The spatial structure plan and spatial pattern plan for the city are outlined in the figure cited in the Urban Spatial Structure Plan of Samarinda City 2021-2041. In particular, the following are listed as major infrastructure plans for Samarinda City in support of IKN as shown in the Spatial Structure Plan. The spatial structure plan and spatial pattern plan for the city are outlined in the figure cited in the Urban Spatial Structure Plan of Samarinda City 2021-2041. In particular, the following are listed as major infrastructure plans for Samarinda City in support of IKN as shown in the Spatial Structure Plan.

- APT. Balikpapan City-Samarinda City-Bontan toll road also linked to Pranoto Airport
- Maintain and improve the arterial road network
- APR. rail network and stations also linked to Pranoto Airport
- APT. Pranoto Airport as an aviation hub
- Development of the Port of Palaran as a port hub
- Development of landfill disposal sites in the Palaran area

Chapter 3 organizes the fiscal situation of the region, analyzing and discussing the past five years' actual results and forecasts for 2022-2026, including the status of revenue and expenditures by sector.

In Chapter 4, the following 16 strategic issues related to the development of the Samarinda City Region are organized, based in part on the development plans of the country, the East Kalimantan Province, and the surrounding region. The strategic issues are: 1) Improving administrative systems and strengthening human resource development; 2) Equitable and gender sensitive development; 3) Rapid population growth as a result of IKN development; 4) Environmental management and international environmental issues; 5) Stabilizing food security; 6) Growth of SMEs and self-employment and improving the investment climate; 7) Tourism resource development, 8) increasing municipal revenues, 9) flood control, 10) provision of related infrastructure and facilities for water, wastewater, and drainage, 11) slum improvement, 12) municipal development as a smart city, 13) the poor and unemployed, 14) infrastructure and transportation, 15) Covid-19 measures, 16) disaster prevention and mitigation, and IKN is mentioned in the section on dealing with population growth, but is not associated and organized in many strategic issues.

Chapter 5 presents the vision, mission, and goals. The vision is described as “the realization of Samarinda City as the center of a civilized society.” The five missions to realize the vision are: 1) to create a faithful, cultured, and prosperous urban community; 2) to create a progressive, independent, and equitable urban economy; 3) to create a professional, transparent, accountable, and corruption-free government; 4) to create a stable and modern infrastructure; and 5) to create a safe, comfortable, harmonious, and sustainable urban

environment. The development goals are then organized.

In Chapter 6, strategies are presented to provide program direction to realize the vision and mission, and furthermore, a list of measures and directions are listed and presented. Regarding infrastructure development, this Development Plan lists the development of roads and bridges, the development of land and river transportation systems, and the development of rail transportation. In addition, key programs related to urban development and infrastructure development are listed as the Flood Management and Drainage System Improvement Program, the Mass Transit System Improvement Program, the Smart City Program, and the Green Open Space Improvement Program. The programs are also organized in a tabular format by mission and goal, along with indicators and target values. This Development Plan also divides Samarinda City's neighborhoods into City Center, Sub-City Center, and Neighborhood Center according to the urban functions they should have, lists the names of the corresponding neighborhoods, and describes the direction of their development.

Chapter 7 sets investment budgets and targets for each program based on a five-year budget assumption. In Chapter 8, sectoral evaluation indicators and target values are organized.

This Development Plan mentions that the development of IKN and the relocation of the Capital City are considered in the study of the future population and mentions the importance of developing the New Capital City as a neighborhood city in the Plan. It is important to consider the latest plan for IKN development and its socioeconomic impact, including quantitative forecasting and analysis.

(4) Samarinda City Regional Spatial Plan 2014-2034

Samarinda City Regional Spatial Plan 2014-2034 was developed by Samarinda City in 2014 and regulated under the Regional Regulation of Samarinda City No.2/2014. The structure of the Plan is shown below.

Chapter 1. General Provisions
Chapter 2. Objectives, Policies and Strategies of Spatial Planning
Chapter 3. City Spatial Structure Plan
Chapter 4. City Spatial Pattern Plan
Chapter 5. City Strategic Area Development Plan
Chapter 6. Direction of Regional Space Utilization
Chapter 7. Provision of Space Utilization Control
Chapter 8. Rights, Obligations and Role of the Community
Chapter 9. Institutionalization
Chapter 10. Investigation
Chapter 11. Miscellaneous Provisions
Chapter 12. Transitional Provisions
Chapter 13. Closing

Source: Samarinda City Regional Spatial Plan 2014-2034

Figure 2-139 Structure of the Samarinda City Regional Spatial Plan 2014-2034

The planning map included in Samarinda City Regional Spatial Plan 2014-2034 is shown in the table below.

Table 2-103 Planning Diagrams shown in the Samarinda City Regional Spatial Plan 2014-2034

No.	Graphic Novel (esp. One Created Between the 12th and 19th Centuries)	Summary
1	Spatial Structure Plan Map	・ Integrated map of major residential areas, transportation facility network, various infrastructure facility network plans, etc.
2	Spatial Pattern Plan Map	・ Land Use Plan Map of Conservation Areas and Developed Areas
3	Strategic Area Plan Map	・ Location map of strategic areas related to environment, economic growth, and socio-cultural

Source: Samarinda City Regional Spatial Plan 2014-2034

Chapter 2 describes the policies of the urban spatial planning strategy, including a) improving access to urban and regional services and economic growth centers; b) developing urban service centers for the development of regional functions; c) achieving high-quality, integrated, and equitable urban infrastructure services; d) strengthening the role of edge cities to support industrial, agricultural, fishing, commercial, and tourism activities, etc. City's role, e) strengthening the sustainability of protected areas to promote sustainable urban development, f) promoting development toward an environmentally friendly green city, and g) strengthening national defense and security functions. For each of these policies, strategies are also organized to provide direction for the measures. For example, with regard to the above policy a), it includes the establishment of national-level activity centers (PKN), urban service centers (PPK), suburban service centers (Sub PPK), and urban environmental services (PL), and the development of infrastructure and competitiveness for the development of service centers and growth centers.

Chapter 3 describes urban structural and spatial planning, consisting of urban service centers, major infrastructure networks, and other infrastructure networks. The major infrastructure network includes roads, railways, marine transportation, and aviation, while other infrastructure includes energy and electricity, telecommunications, water resources management (including water supply, drainage, and evacuation routes), and waste management. For example, for roads and railways, the names of newly developed road segments are also listed.

In Chapter 4, the spatial pattern plan is divided into protected areas and developed areas, and the definitions of the zone classifications that apply to each and the names of the applicable areas are organized. Protected areas are classified into catchment areas, rural protected areas, green open spaces, and disaster risk areas, which are further subdivided according to the names of their constituent areas and cases. Development areas are classified into residential areas, service and commercial areas, office areas, industrial areas, tourist areas, non-green open space areas, informal areas, disaster evacuation areas, and other areas (agriculture, fishing, mining, defense and security, and public services).

Chapter 5 outlines the strategic area plans for urban development in Samarinda City, which are categorized into economic growth strategic areas, socio-cultural strategic areas, and environmental strategic areas. In Chapter 6, the main programs related to urban spatial planning and spatial pattern planning are listed, with their names, locations, costs, budget holders, implementing agencies, and implementation periods listed in the Appendix. The names, locations, costs, budget holders, implementing agencies, and implementation periods

are listed in the Appendix.

Although it has been almost 10 years since this plan was developed, Samarinda City has prepared a draft updated Regional Spatial Plan that also takes into account the impact of the IKN Development and the relocation of the Capital City, which is outlined in the next section.

(5) Draft of Samarinda City Regional Spatial Plan 2022-2042

Samarinda City is in the process of developing a Regional Spatial Plan 2022-2042 in light of recent changes in socioeconomic conditions, and a review of a draft of this plan was conducted. In addition, a separate Fact Analysis Report on current conditions and issues related to policies, topography, land use, facility infrastructure, and industry in Samarinda City (Fact Analysis Report) has been prepared, and an update to the Plan is being considered based on the results of those analyses. The table of contents structure of the draft plan is shown in the figure below.

Chapter 1. Introduction
Chapter 2. Objectives, Policies and Strategies of Spatial Planning
Chapter 3. City Spatial Structure Plan
Chapter 4. City Spatial Pattern Plan
Chapter 5. City Strategic Area Development Plan
Chapter 6. Direction of Regional Space Utilization
Chapter 7. Provision of Space Utilization Control

Source: Draft of Samarinda City Regional Spatial Plan (RTRW) 2022-2042

Figure 2-140 Draft of Samarinda City Regional Spatial Plan 2022-2042

The following table shows the figures included in Samarinda City Regional Spatial Plan 2022-2042.

Table 2-104 Planning Diagrams from the Draft of Samarinda City Regional Spatial Plan 2022-2042

No.	Graphic Novel (esp. One Created Between the 12th and 19th Centuries)	Summary
1	Scope of Samarinda City	Map of Administrative Districts in Samarinda City
2	Geology Map	Diagram showing geological conditions
3	Soil Types Map	Figure showing soil conditions by classification.
4	Hydrology Map	Diagram showing the water system in the city
5	Rainfall Map	Map of zones by precipitation in the city
6	Land Use (Land Cover) Map	Current map of land use (land cover)
7	Spatial Structure Plan Map (Figure 2-141)	Integrated map of major residential areas, transportation facility network, various infrastructure facility network plans, etc.
8	Transport Network System Plan	Plan of transportation facilities and networks including roads, railways, ports/river ports, airports, etc.
9	Energy Network System Plan	Plan of energy network system (electricity/oil/gas)
10	Telecommunication Network System	Communication network system planning diagram
11	Water Resource Network System	Water Resources Management and Flood Management Facility Network Map
12	Urban Infrastructure System	Other infrastructure network diagram (water and sewage facilities, waste disposal facilities, evacuation routes, etc.)
13	Spatial Pattern Plan Map (Figure 2-142)	Land Use Plan Map of Conservation Areas and Developed Areas

14	Potential Green Open Space	Map of planned green open space and other areas in the conservation area
15	Strategic Area Plan Map (Figure 2-143)	Location map of strategic areas related to environment, economic growth, and socio-cultural
16	Aviation Operation Safety Area	Location map of air traffic control safety areas
17	Sustainable Food Agriculture Area	Sustainable food and agriculture region
18	Disaster Prone Area	Location map of areas at high risk of disaster
19	Water Infiltration Area	Location map of water retention areas
20	Riparian Area	Location map of coastal areas
21	Mineral and Coal Mining Area	Location map of mineral and coal mining sites
22	Defense and Security Area	Diagram of Defense and Security Areas
23	Inner Earth Space Area	Location map of underground space utilization

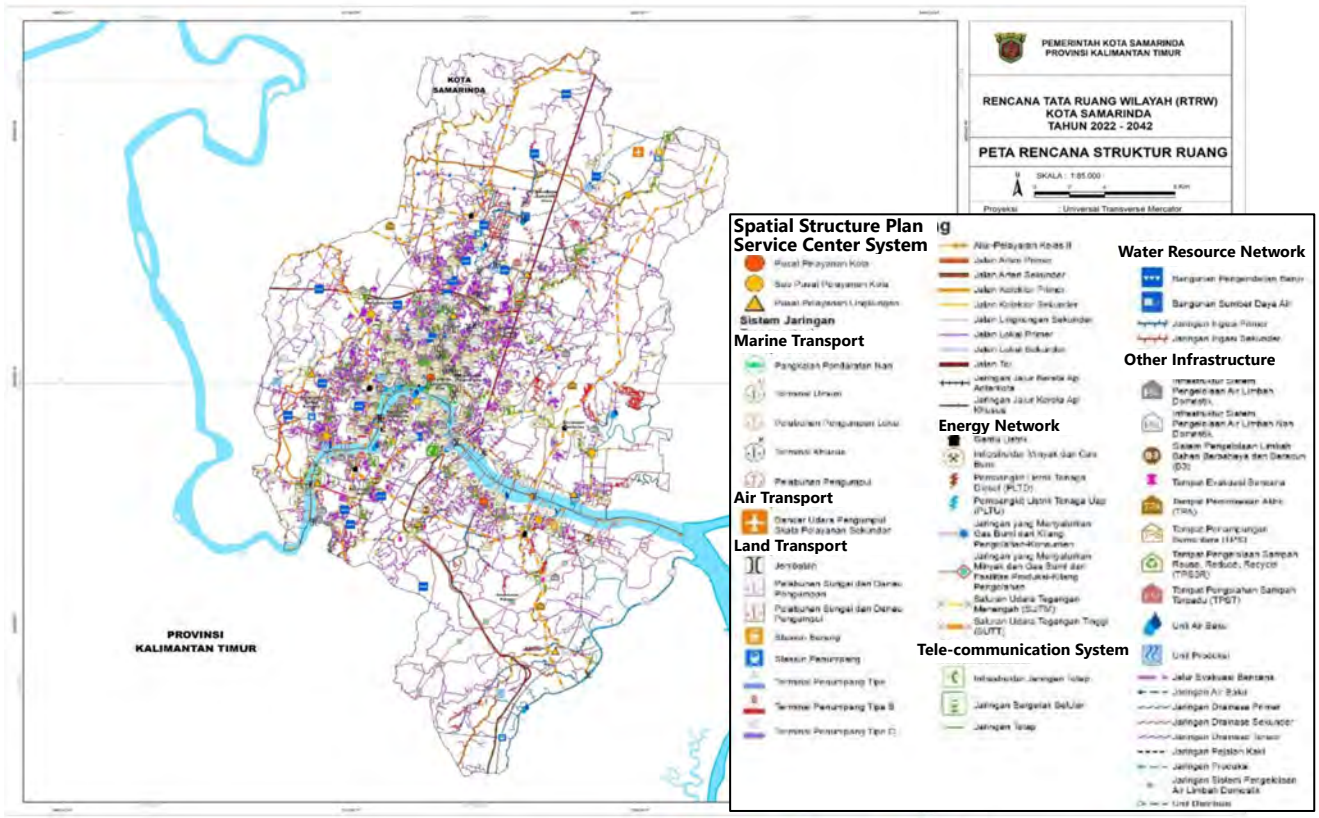
Source: Draft of Samarinda City Regional Spatial Plan (RTRW) 2022-2042

In Chapter 1, strategic issues include the need to develop IKN as a suburban city (Buffer City) and the need to strengthen urban functions in industrial and economic development areas. Geographically, the region is divided into lowland plains and hilly areas, with nearly 50% of the area below 18 meters in elevation.

Chapter 2 presents the objectives and policies of regional spatial planning. Chapter 3 presents the Urban Spatial Structure Plan, Chapter 4 presents the Urban Spatial Pattern Plan, and Chapter 5 presents the Urban Strategic Areas, with definitions of each component and plan content. The Urban Spatial Structure Plan, Urban Spatial Pattern Plan, and Urban Strategic Areas are described below.

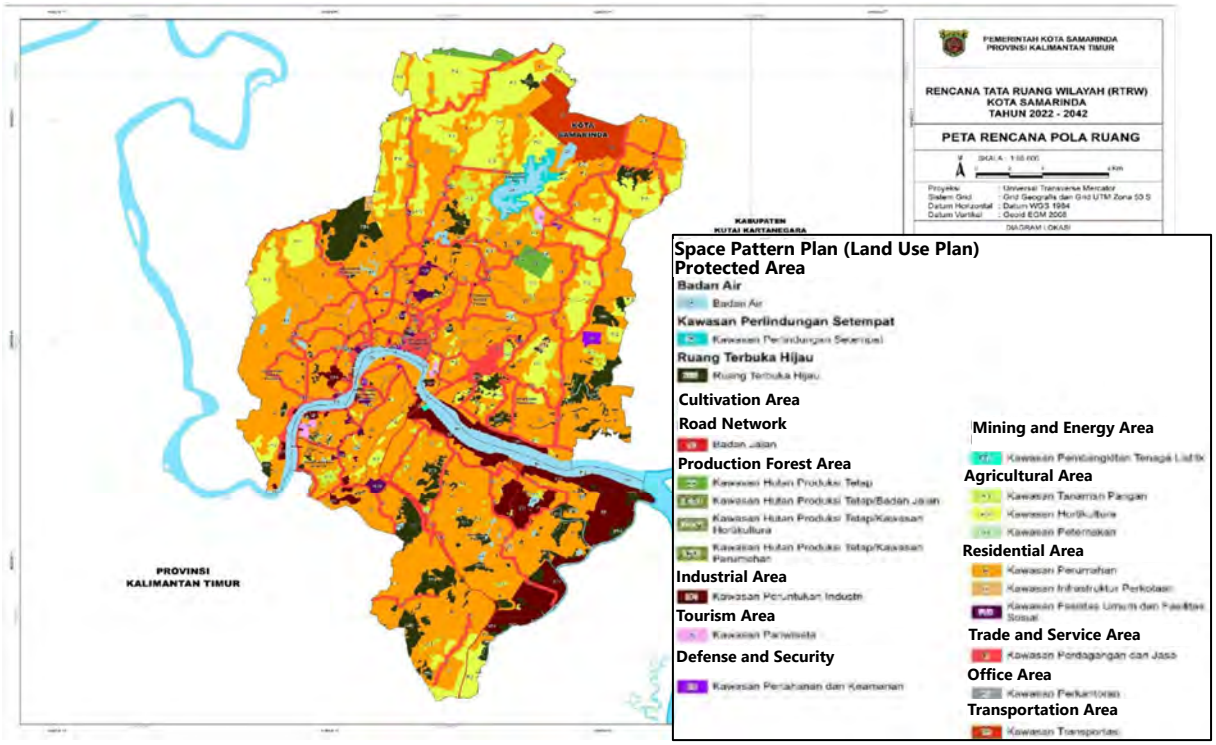
The urban spatial pattern map shows that most of the flatlands are either residential (orange) or commercial (dark orange), while the Mahakam Riverfront and the Palaran area are planned as industrial areas (brown). The area around the airport in the northern part of the city is designated as an agricultural area (yellow). In addition, the Urban Strategic Area Plan identifies the Palaran Industrial and Port Development Area and the Citra Niaga Commercial Area on the north side of the Mactan River as strategic areas for economic growth. In Chapter 6, the direction of measures and major program plans for the formation of service centers and each infrastructure network for the realization of the spatial plan are listed; in Chapter 7, regulations and incentives related to zoning are organized; in Chapter 8, the zoning regulations and incentives for the formation of the infrastructure network are listed; and in Chapter 9, the zoning regulations and incentives for the formation of the infrastructure network are listed.

Regarding the New Capital City-related issues, while the need to develop Samarinda City as one of IKN's buffer cities is mentioned, no specific measures, etc., are associated with it.



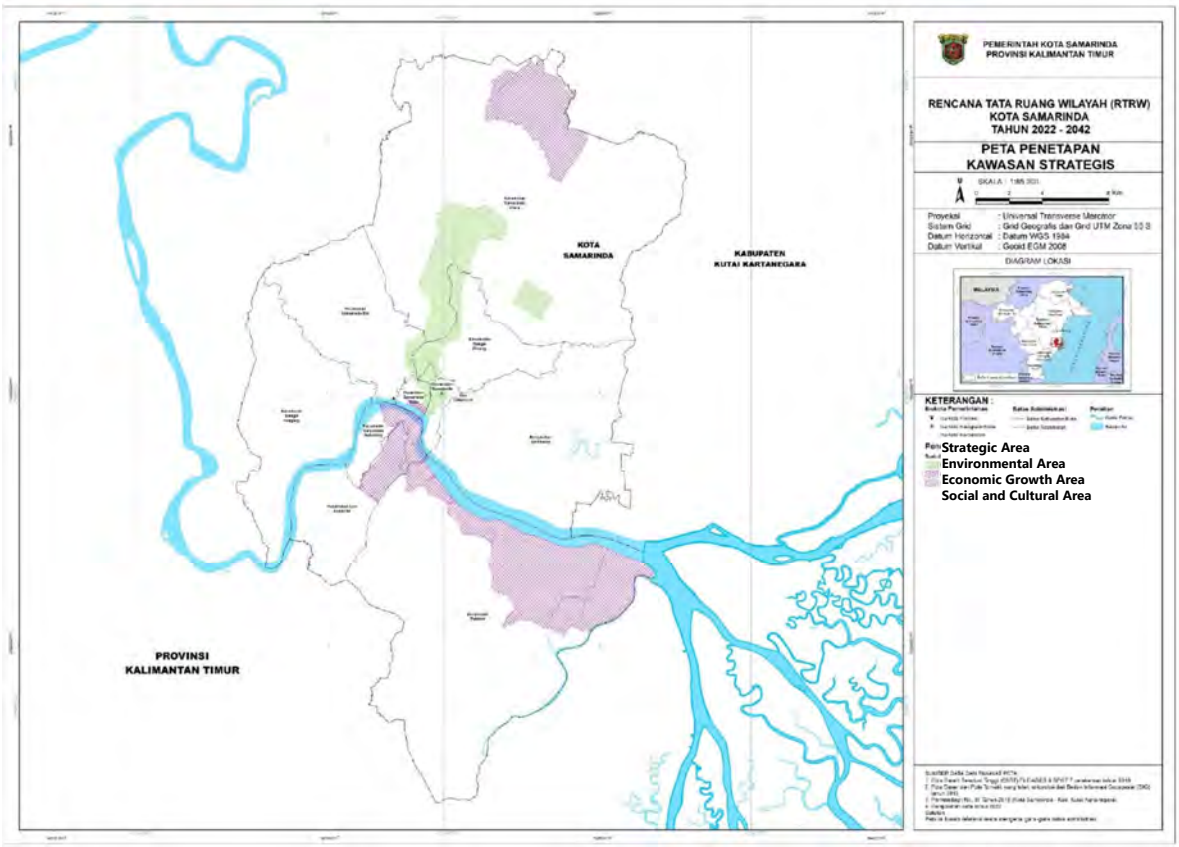
Source: Draft of Samarinda City Regional Spatial Plan (RTRW) 2022-2042

Figure 2-141 Draft of Samarinda City Spatial Structure Plan 2022-2042



Source: Draft of Samarinda City Regional Spatial Plan (RTRW) 2022-2042

Figure 2-142 Draft of Samarinda City Spatial Pattern Plan 2022-2042



Source: Draft of Samarinda City Regional Spatial Plan (RTRW) 2022-2042

Figure 2-143 Draft of Samarinda City Strategic Area Plan 2022-2042

(6) Samarinda City Regional Disaster Management Plan 2022-2026

The Samarinda City Regional Disaster Management Plan was developed in 2021 with the target year of 2021-2026 as a plan to provide direction for disaster management in Samarinda City. The table of contents is organized as shown in the figure below. After identifying the characteristics and challenges of disasters, the Plan provides an organizational framework, strategy and policy direction, and action plan for disaster response.

Chapter 1. Introduction
1.1 Background
1.2 Purpose
1.3 Positioning of this Plan
1.4 Laws and Regulations
1.5 Scope of Application
Chapter 2. Characteristics of Regional Disasters and Strategic Issues
2.1 Characteristics of Samarinda City
2.2 Characteristics of Local Disasters
2.3 Local Disaster Risk
2.4 Priority of disasters
2.5 Key Issues
2.6 Strategic Issues
Chapter 3. Organizational Response Policies for Disaster Management
3.1 National Disaster Management Policy
3.2 Regional Disaster Prevention Policies
3.3 Framework for Disaster Management Implementation
3.4 Financing for Disaster Management Implementation
Chapter 4. Goals, Objectives, Strategies, Policy Directions and Programs
4.1 Goals and Objectives
4.2 Strategies and Policy Directions
4.3 Program List
Chapter 5. Action Plan for Disaster Risk Reduction
5.1 Action Plan Development
5.2 Role of each stakeholder
5.3 Relevance to other plans
Chapter 6. Stakeholder Coordination, Monitoring and Evaluation
6.1 Coordination of Parties Involved
6.2 Monitoring
6.3 Evaluation

Source: Samarinda City Regional Disaster Management Plan 2022-2026

Figure 2-144 Structure of the Samarinda City Regional Disaster Management Plan 2022-2026

Chapter 2 of this plan presents the disaster risks in Samarinda City. Floods, landslides, extreme weather events, droughts, forest and land fires, infectious diseases, industrial accidents, and social conflicts are listed as major disasters, with the main causes and risk maps for each. Samarinda City's Disaster Tendency Index (IRBI) is considered moderate in East Kalimantan Province, which is low compared to the surrounding areas such as Balikpapan City, but a certain level of disasters is still occurring and need to be addressed.

The various types of disasters are being organized by the National Disaster Management Agency and the Regional Disaster Management Agency of Samarinda City by 2019, and a summary of the damage is also provided. Among these disasters, flooding and landslides are defined as priority disasters to be addressed.

Three major challenges in disaster management have been identified

- Severe damage due to topography and land use, especially in floods and landslides.
- No specific plan for emergency response, evacuation, and recovery in the event of a disaster
- Inconsistencies between plans related to disaster management and related regional development plans, etc.

Chapter 3 presents the organizational response policy for disaster management. It states that

in the event of a disaster, a rapid response to activities for evacuation of residents and early restoration of infrastructure should be taken, while in normal times, a planned response for disaster prevention should be implemented. Actions to be taken before and after individual disasters are also organized. As an example, the matters listed as actions to be taken before flooding are illustrated below.

- Rehabilitation of pumping stations and maintenance of water storage facilities
- Identification of the latest inundation area
- Rehabilitate and clean waterways in areas at high risk of flooding
- Dissemination of disaster knowledge and evacuation sites to local residents

In addition, with regard to funding, there are two ways: national and local government budgets in the home country and aid from international organizations, both of which should be transparent in their management, as stated in the revised Ministerial Regulation of the Ministry of Home Affairs No.21/2011 regarding Regional Financial Management Guidelines.

Chapter 4 describes goals, strategies, and policy directions related to disaster management planning. The description of policy directions for strategic issues is summarized below.

Table 2-105 Goals and Policy Directions for Strategic Issues

Strategic Issue	Target	Policy Direction
Inadequate policies and institutions related to disaster management	1. Strengthen policies to support implementation of disaster management response	Prepare regulations for disaster management organizations in each region.
	2. Strengthen the functions of disaster management institutions in the region	Clarify the functions of disaster management organizations in the region
	3. Strengthen inter-organizational collaboration in the implementation of disaster management in the region	Establishment of the Emir's Regulations on Cooperation with Relevant Agencies
		Establishment of a platform for inter-organizational collaboration
2. Need to strengthen local disaster information system	4. Strengthen information systems of disaster management organizations	Establish an information sharing system in cooperation with the central government
3. Lack of understanding of residents about disasters	5. Strengthen mechanisms for disseminating local disaster information	Increased involvement of communities, businesses, and other government agencies in disaster management
		Improve methods of informing the public about disaster risks
		Improved public accessibility to up-to-date disaster-related information
		Provide training on disaster prevention and preparedness for local government officials and the community
	6. Increase in the number of facilities that are safe in the event of a disaster	Improve functioning of schools, hospitals, health centers, etc. in times of disaster
	7. Improve disaster preparedness in residential areas	Implementing Responses to Improve Disaster Resilience in High-Risk Villages
4. Land use change due to regional development plans that do not consider disaster management	8. Realization of regional development plans that take disaster management into account	Organize information on disaster management and reflect it in development plans
	9. Watershed Protection	Various measures for watershed conservation
5. Lack of facilities and infrastructure for disaster prevention and emergency management	10. Provide guidelines on various types of disaster preparedness	Organize and provide information on disaster prevention and pre-disaster preparedness
	11. Development of early warning systems	Promotion through collaboration among a wide range of related organizations

Source: Samarinda City Regional Disaster Management Plan 2022-2026

In Chapter 5, example of action plans for disaster risk reduction and the roles of each relevant organization are organized. One of the actions plans listed is to strengthen resilience in high-risk areas in the first four years, and in the fifth year, to promote resilience in cooperation with neighboring areas.

Although this plan outlines the risks of various disasters and policy directions, there is little description of priority areas and project locations, and not much reference to specific project plans, etc. Therefore, the current status of issues and strategies in specific areas will need to be reorganized in light of changing socioeconomic conditions and IKN development.

(7) Samarinda City Master Plan for the Development and Arrangement of Prioritized Cities

The Master Plan for the Development and Arrangement of Prioritized Cities was developed in 2023 to address issues respective to each prioritized city. Samarinda City was classified into one of the 23 prioritized cities due to its status as one of supporting regions of IKN. In general, the masterplan was developed to cover three main aspects: 1) evaluation of existing plans, 2) recommendation on planning concept of areas in the prioritized city, and 3) recommendation on indications of prioritized development projects. The structure of the document is shown by the figure below.

Chapter 1. Introduction
Chapter 2. Synthesize of Regional Development Policies and Strategical Issues
Chapter 3. Conception and Planning Direction
Chapter 4. Plan of Regional Development and Arrangement
Chapter 5. Indications of Regional Development and Arrangement Programs
Chapter 6. Urban Design Guidelines and Visual Illustration of Prioritized Areas
Chapter 7. Implementation Guidelines
Chapter 8. Input for Adjusting Development and Spatial Plan

Source: Samarinda City Master Plan for the Development and Arrangement of Prioritized Cities

Figure 2-145 Samarinda City Structure of the Master Plan for the Development and Arrangement of Prioritized Cities

Chapter 1 of the masterplan provides the introduction part covering background, objectives, targets, scope of work, connection between this masterplan and other planning documents, and overview of the entire Masterplan.

Chapter 2 discusses items related to the determination of areas that will be developed in Samarinda City and strategical issues that need to be addressed. The total developed sub-regions/ areas were determined to be 25,732.15 ha, classified into 5 sub-region/ areas in which 4 areas are discussed in this document followed by priority aspect on each sub-region/ areas as follows; 1) sub-region A as a waterfront area, 2) sub-region B as settlement and existing facility area, 3) sub-region C as a new area (expansion) for the city; and 4) sub-region D as the industrial area. Following the development plan, strategical issues of Samarinda City were identified and listed into following 7 issues; 1) strengthening the role of Samarinda City for IKN during the construction phase, 2) deconcentrating of central activities areas of Samarinda City, 3) management of urban settlements, 4) existence of Mahakam River as the face of the

city, regional connectivity, and water supply, 5) development of mass public transportation system, 6) improvement of city-scale public facility to improve the future public welfare, and 7) provision of new economic spaces and central of commercial activities.

Chapter 3 provides information related to the conception and direction of sub-regions development. It includes the concept of the development, city branding, vision and missions of the development, key performance indicators, policy and strategy for the sub-regions' development, and phasing scenario. The concept of the development is as mentioned on the previous Chapter, Samarinda City is classified into 5 sub-regions that each has its own focused aspect of the development. The city is branded using the slogan "Spirit of Mahakam" with vision "A new city with character and integrated infrastructure that promotes sustainable economic growth". This vision was then translated into 7 development missions; 1) realizing the development and arrangement of new city, 2) developing and managing Mahakam River as the face of Samarinda City and public space, 3) conserving the local culture and norms to encourage multi-stakeholder partnership, 4) improving City's infrastructures that support the sustainable urban development and connectivity, 5) encouraging the inclusive economic through public empowerment, 6) development of local tourism destination by reserving local culture and environment, as well as providing equal economic opportunity to local residents, and 7) realizing the environmental friendly urban development that protects Mahakam River environment and its surrounding.

Chapter 4 covers the details of sub-regions development and arrangement plan. Points of discussion including detail plans on each sub-regions, environmental management plan, public infrastructure development plan (including transport, water resource management, water supply, domestic wastewater, solid waste management, and drainage), economic sector development plan (including shift share analysis, tourism aspect, retail, restaurant, industrial, and fisheries sectors), impact mitigation plan, and plan for institution, social, and economic.

Chapter 5 details the 7 missions set up in previous Chapter. To achieve those missions, the development plan was set to be carried out in 20 years, divided into 4 phases: the consolidation phase (2024-2029), the development phase (2030-2034), the stabilization phase (2035-2039), and the expansion phase (2040-2044). The 7 missions were tabulated and broken down into a total of 11 policies, 26 strategies, and 64 programs to be achieved within 20 years.

Chapter 6 contains the detail design and visual illustration of 4 sub-regions which is prioritized to be developed. The utilization and detailed design of each sub-region were classified into several blocks as follow; 1) sub-region A covers Samarinda City Terrace – Old Town zone block, riverside tourism block, riverside mixed-function block, and culinary tourism block, 2) sub-region B covers sports leisure, 3) sub-region C covers government center, and 4) sub-region D covers warehouse zone.

Chapter 7 encompasses the guidelines and regulations on how to achieve the missions, strategies, and programs set in the previous Chapter. The regulatory framework regulates aspects regarding environmental protection, natural resource utilization, infrastructure construction, public welfare, economic empowerment, conflict mitigation and law enforcement, spatial planning, disasters resiliency, and research and innovations. Further, this Chapter also covers the framework of implementation, funding, and monitoring and evaluation.

Chapter 8 shows the recommendation by this masterplan on how other development document can adjust to plans set in this masterplan. The recommendations are directed towards national

scale plans (Middle-term development plan, long-term development plan, national spatial plan, and sectoral plan), provincial scale (regional Middle-term development plan of East Kalimantan Province, regional long-term development plan of East Kalimantan Province, regional spatial plan of East Kalimantan Province, and sectoral plan), and city scale (Regional Development Plan of Samarinda City, Spatial Plan of Samarinda City, and sectoral plan).

2.8 Sectoral Review of Plans and Policies in Samarinda City

The result of the sectoral review on related plans and policies for Samarinda City by eight sectors: connectivity, climate change, environmental management, industrial development and investment promotion, electricity and energy, urban management, living environment and diversity, is shown as follows.

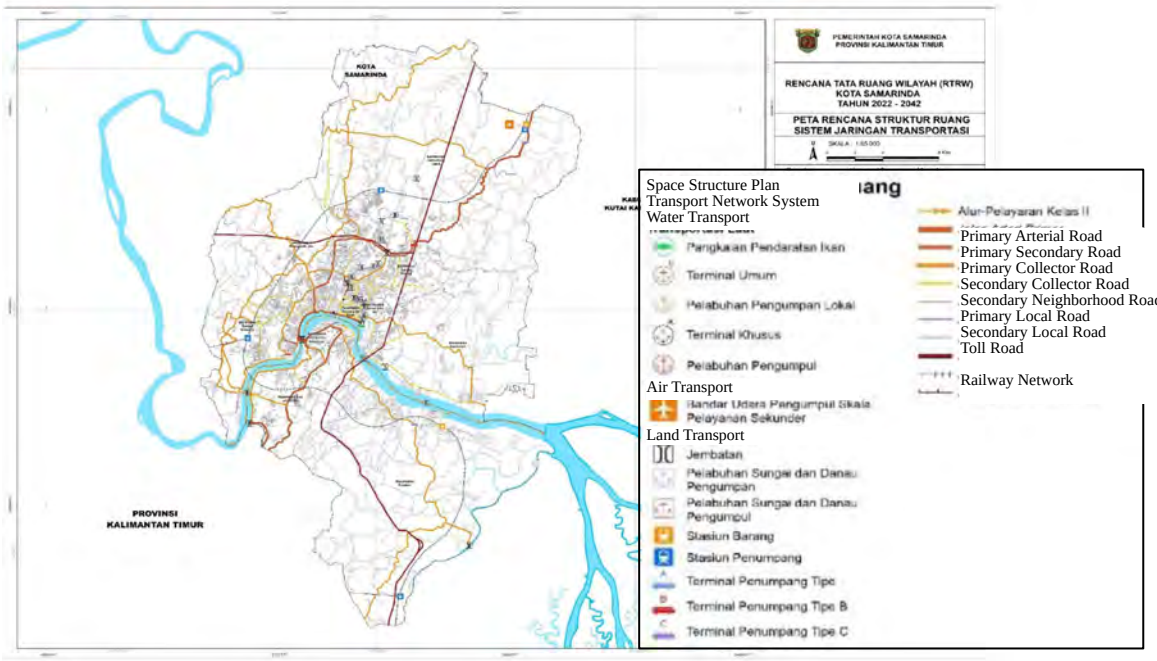
2.8.1 Connectivity (Transportation, ICT)

(1) Road

With regard to roads in Samarinda City, the East Kalimantan Province Regional Spatial Plan 2023-2042 shows a route that runs from North Kalimantan through East Kalimantan Province to South Kalimantan as a Toll-Road. The Toll-Road is also shown as a planned route in the Samarinda City Regional Spatial Plan draft 2022-2042. Currently, only the section between Balikpapan City and Samarinda City has been constructed and is in service, and it is cut off before the Mahakam River in Samarinda City. The plan for the Toll-Road north of the Mahakam River has not been clarified.

The East Kalimantan Province Regional Spatial Plan 2023-2042 shows a plan for a secondary collector road leading to Samarinda City-KIPP, however the current status and its development plan were not mentioned in the stakeholder consultations, and it seems to be currently undeveloped.

The Samarinda City has been focusing on projects to develop and improve the ring road that surrounds the urban area.



Source: Draft of Samarinda City Regional Spatial Plan 2022-2042

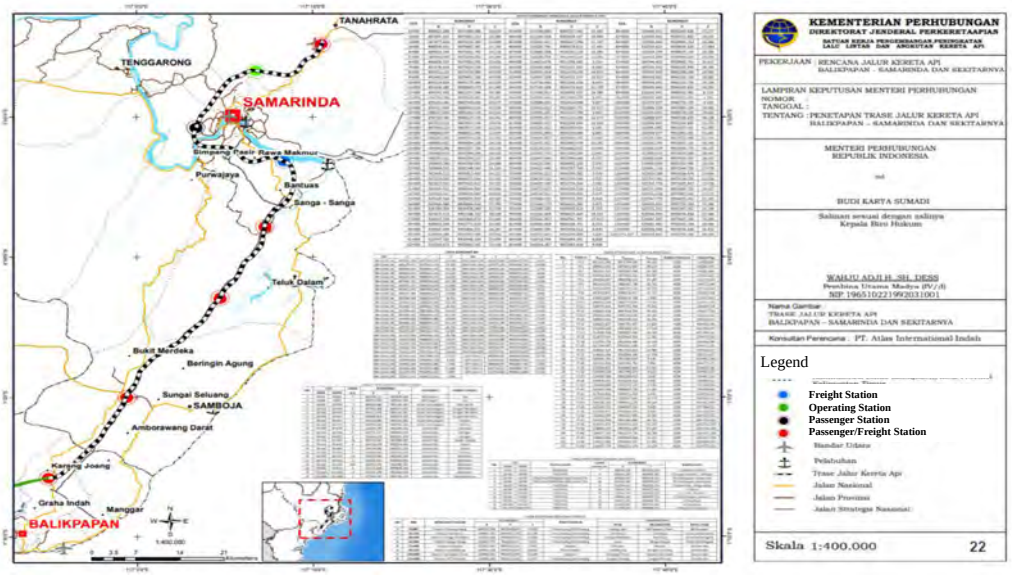
Figure 2-146 Samarinda City Transportation Network Plan

(2) Railway

The Trans-Kalimantan Railway is planned in the National Railway Master Plan 2020 and the East Kalimantan Province Regional Spatial Plan draft 2023-2042 draft. As shown in the transportation network planning diagram in the previous section, the proposed regional spatial planning shows a railway route from the border with Kutai Kartanegara Regency via APT Pranoto Airport, around the urban area north of the Mahakam River from north to west, across the Mahakam River, through the Palaran area to the south. The route is as shown as follows.

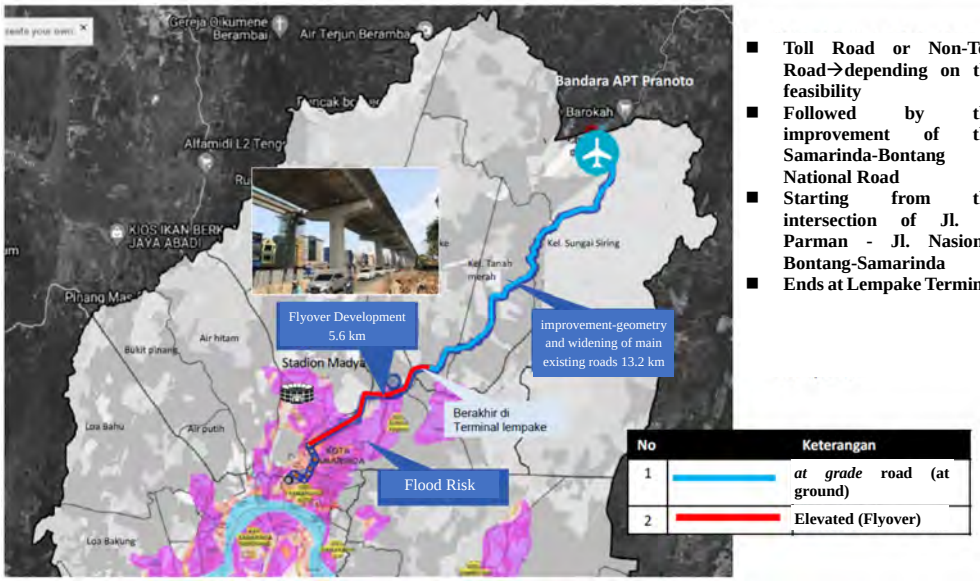
The Samarinda City is studying the feasibility of constructing an elevated Sky Train from APT Pranoto Airport to the city center that would contribute to mitigate traffic congestion and avoid flood damage. The Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045 outlines policies aimed at enhancing intercity rail development, based on regional development and demand trends.

As mentioned above, the MOT is currently conducting a F/S with priority given to the development of an access railway between KIPP and Balikpapan City. The Samarinda City-Balikpapan City route would be considered gradually thereafter.



Source: Samarinda City (2023)

Figure 2-147 Rail Network Plan of Samarinda City



Source: Preliminary Study on APT Pranoto Airport Sky Train in Samarinda City (2021)

Figure 2-148 APT Pranoto Airport Skytrain Plan (Draft Study)

(3) Ports & Logistics

In the East Kalimantan Province Regional Spatial Plan 2023-2042, the port of Samarinda City is listed as a Collecting Port. In Balikpapan City, river water transportation is conducted using the Mahakam River (Table 2-106). In addition, Samarinda City Port in Palaran area is listed as a Collecting River Port in the Samarinda City Regional Spatial Plan draft 2023-2042. Similarly, Sungai Kunjang Pier Port in Sungai Kunjang area is identified as a Feeder River Port. Besides, Samarinda City Port in Palaran area is considered a Hub Port as a shipping port. A Collecting Port is defined as a port that serves as a hub of the country's shipping network and provides intermediate containerized cargo volume and services for imports, exports, and transfers. A Feeder Port that serves as a regional logistics hub for shipping is the Mahakam Hulu Port in Sungai Kunjang area. The public terminals are the Sarana Abadi Lestari Public Terminal in Palaran area and the Palaran Public Terminal. In addition, there are several special terminals that are used exclusively for specific purposes and businesses.

According to the Samarinda City, the main destinations of the Samarinda City Port are Kutai Kartanegara Regency, Kutai Timur Regency, Kutai Barat Regency, Balikpapan City, and Bontang City.

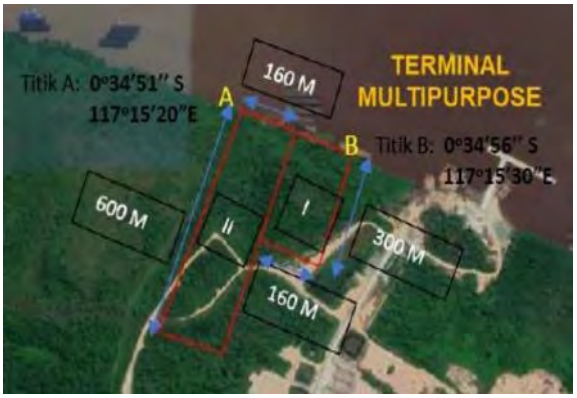
Samarinda City is considering a plan to expand and improve the port in the Palaran area as a multifunctional terminal with enhanced passenger vessel functions in addition to cargo and container. The MOT is also considering updating the Samarinda City Port Master Plan. The Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045 outlines a policy to promote the development of the Samarinda City port as a major port that will support the formation of an economic hub for the three cities (Figure 2-149).

Table 2-106 Cargo Handling at Samarinda City Port

(Data) Item	2015	2016	2017	2018	2019	2020	2023	2025
Cargo Handled (tons)	985,273	824,342	723,639	951,729	862,924	827,590	1,000,000	1,100,000

Number of Vessels	652	391	353	604	550	517	600	625
Average Vessel Size (DWT)	1,510	2,109	2,052	1,576	1,568	1,602	1,667	1,760

Source: Samarinda City (2023, 2025 are projections by Samarinda City)



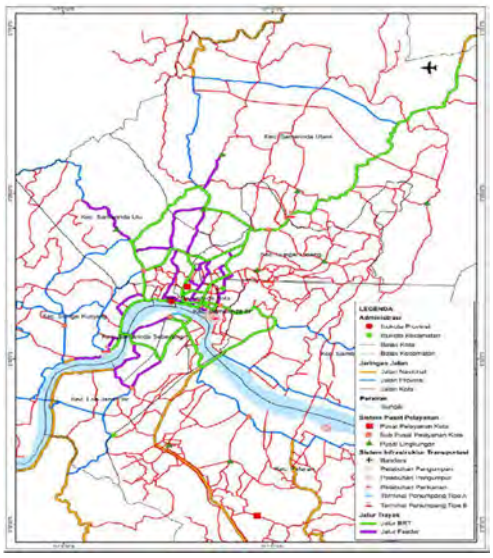
Source: Samarinda City (2023)

Figure 2-149 Expansion Plan of Samarinda City Port in Palaran Area

(4) Public Transportation

According to the Samarinda City, wagon-type angkot and buses are in operation as a means of daily transportation for citizens. At one time there were about 1,500 registered angkot, however currently only about 150 are in operation.

According to the Samarinda City Transportation Master Plan Study Report 2021 and the document provided by the Samarinda City, the introduction of a BRT (Bus Rapid Transit) system linked to an app service called BTS (Buy The Service) is being considered for seven routes. The aim is to make public transportation safer and more comfortable with less waiting time (Figure 2-150). The Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045 outlines a policy of promoting the development of an Integrated Urban Mass Transit Transportation system, including mass transit.



Source: Preparation Report of Smarinda City Transport Master Plan 2021, Samarinda City

Figure 2-150 BRT and Feeder Public Transit Route Plan in Samarinda City



Source: JICA Study Team

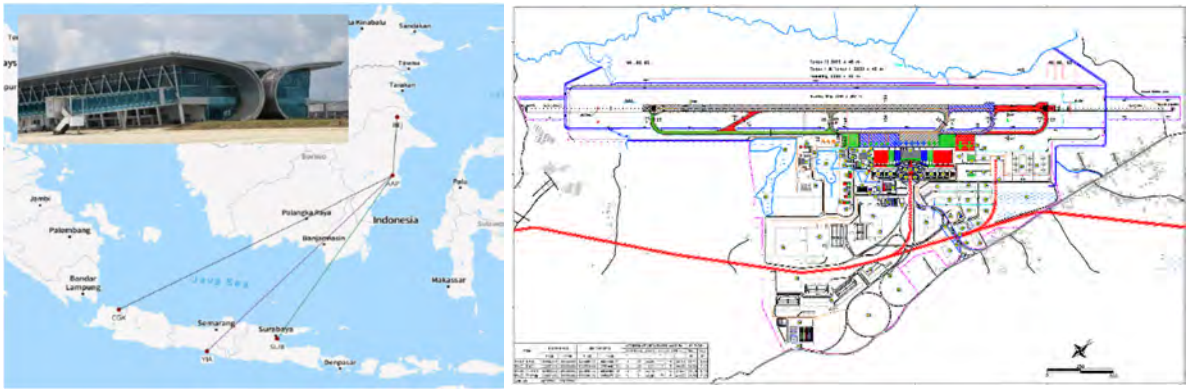
Figure 2-151 Angkot (left) and Seberang Bus Terminal (right) in Samarinda City

There are two main intercity bus terminals: the Sungai Kunjang Bus Terminal near the Big Mall on the north side of the Mahakam River, and the Seberang Bus Terminal completed in 2022 on the south side of the Mahakamu River in Samarinda City. The Sungai Kunjang Bus Terminal operates buses mainly within the province of East Kalimantan Province, while the Seberang Bus Terminal operates inter-city buses over a wide area. Buses to Balikpapan City run approximately every 30 minutes, and the fare for private buses is 430,000 IDR.

(5) Airport

APT Pranoto Airport (Aji Pangeran Tumenggung Pranoto Airport) in Samarinda City is one of the main airports in the East Kalimantan Province, opened in 2018. Although there is no international flight, domestic flights are as shown in the figure below (Jakarta, Yogyakarta, Surabaya, Tanjung Redeb). According to the Samarinda City Transportation Master Plan, the annual passenger volume in 2019 was 551,411 with 5,510 takeoffs and landings.

MOT has been working on a project to improve the airport, and it is envisioned that the airport will continue to promote phased expansion and improvement, and in the future, the airport in Samarinda City will have a capacity of 8 Million passengers per year and a 3,000 meters runway. The Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045 also indicates that the city intends to promote the expansion and improvement of APT Pranoto Airport in order to strengthen interregional connectivity.



Source: MOT

Figure 2-152 Air Traffic Routes (left) and Expansion Plan (right) of APT Pranoto Airport

2.8.2 Climate Change Measures (Zero Emissions, Disaster Prevention)

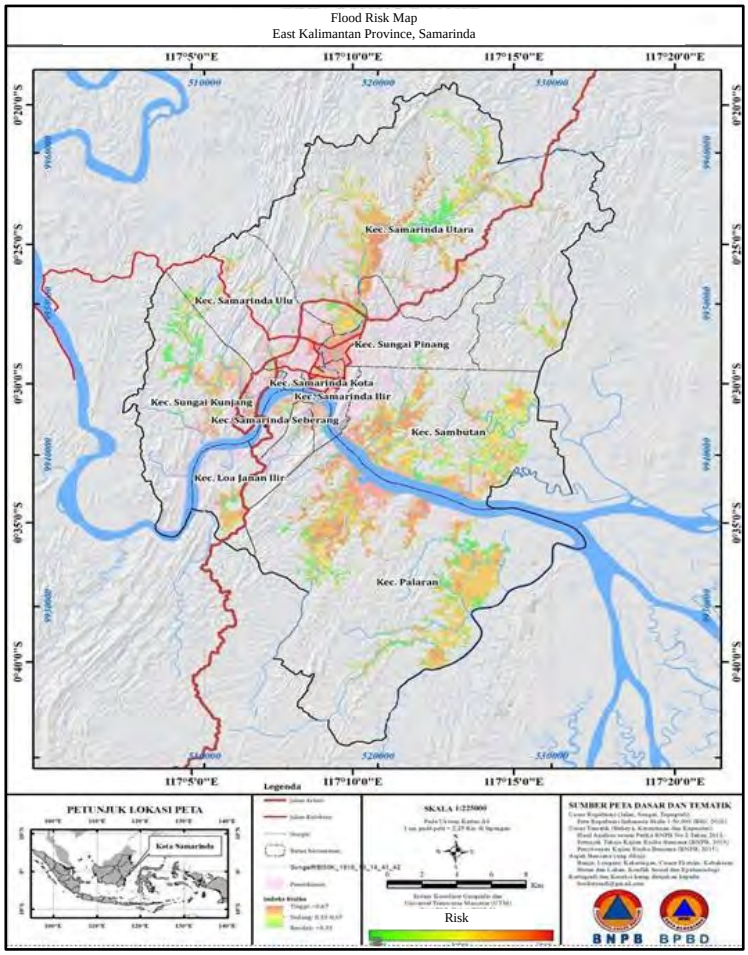
According to the Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045 and the Samarinda City Regional Disaster Management Plan 2022-2026, disasters such as flooding, landslides and droughts occur frequently, and the hazard index for flooding and extreme weather is particularly high in Samarinda City. However, compared to other cities in East Kalimantan Province, Samarinda City is considered to have a middle level of disaster propensity index (IRBI) as of 2019, and is less prone to disasters than cities such as Balikpapan City, which is considered to have a high level (refer to the following table).

Table 2-107 Major Hazard Classes in Samarinda City

No.	Disaster Name	Hazard Level
1	flood	High
2	abnormal weather	High
3	diphtheria	Low
4	Infectious diseases, etc.	Low
5	Forest fires, etc.	Low
6	drought	Middle
7	social strife	Middle
8	landslide	Middle

Source: Samarinda City Regional Disaster Management Plan 2022-2026

As shown in the following figure, the causes of flooding in Samarinda City include reduced water retention capacity due to prolonged rainfall and soil erosion, and reduced channel flow capacity due to illegal dumping of waste materials.



Source: Samarinda City Regional Disaster Management Plan 2022-2026

Figure 2-153 Flood Hazard Risk Map for Samarinda City

In the Master Plan for Flood Control in Samarinda City, scenarios have been developed for the period from 2016 to 2035, which also take into account the effects of climate change. The activities stipulated in the Plan include the following.

- Rationalization of storm drainage system and extension of drainage canals: a total of 286.55 km of new and repaired drainage canals throughout Samarinda City
- Construction of retention ponds: 31 retention ponds to be constructed within Samarinda City within 20 years
- Installation of pumping equipment: within 20 years, procurement of 54 pumping units and 679 mud catching units to capture mud during flood disasters.
- Flood management plan in the Karang Mums River (SKM) sub-basin: rehabilitation of levees and normalization of channel flow capacity, construction of sluice gates and pumping stations

The need for an early warning system (EWS) was also mentioned, but no specific plans were described.

The mission to reduce disaster risk and damage includes the following items

- Improvement of the quality of the environment, disaster risk and climate change mitigation based on the fact that the area is residential and in the vicinity of IKN
- Implementation of flood prevention measures

In Samarinda City, greenhouse gas (GHG) emissions from the energy, transportation, and agriculture sectors are considered dominant. Therefore, the following strategies have been identified to reduce GHG emissions.

- Renewable energy development through the use of solar power, hydroelectric power, bioenergy, etc.
- Reduce fuel use by car through the use of public transportation
- Reduction of emissions from the agricultural sector through the use of organic fertilizers

2.8.3 Environmental Management, Waste Treatment, Waste Management

According to the Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045, under the vision of “Samarinda City as the Center of an Advanced and Sustainable Trade and Service-Based Civilization”, two missions are connected to environmental management and waste management aspect, the “realization of healthy and good environment” and “strengthening the capacity of basic and strategical infrastructures”.

With the consideration to achieve sustainable development goals and its status as partner of the New Capital City, the long-term development plan of Samarinda City focuses on transformation to accelerate the achievement of both aspects. It argues that social, economic, and governance transformation should maintain a healthy, beautiful, and comfortable environment in the city by also considering the sustainability and equality. All elements involved in the development of Samarinda City must be inclusive and committed, and that there must be consistency in the application and implementation of development programs and activity plans that are environmentally sound. In other words, it speaks to the importance of balancing development in the economic sphere with development in the environmental sphere, and thus the need to convert an economy based on non-renewable resources to renewable resources and the importance of achieving a balance between economic, environmental, and social aspects of development planning for a green economy.

Following are policy directions which are related to environmental management:

- Development of sustainable green industries
- Development of ecotourism and local-based potential world-class tourism destination
- Construction of smart, green, and sustainable city
- Development of integrated and sustainable City’s regions
- Provision of smart and environmentally sound power generation
- Environmentally friendly spatial planning
- Reformation of integrated upstream-downstream solid waste management system
- Ecological-based spatial management

- Sustainable water resource management

The Samarinda City Regional Long-Term Development Plan 2005-2025 identifies the following issues in environmental management.

Table 2-108 Environmental Challenges in Samarinda City

Issue	Root Cause
Samarinda City's high natural hazard vulnerability to flooding and landslides	➢ Integrated flood management systems are not fully utilized. ➢ People's habit to dispose waste to drainage system ➢ Increasing sediments in dam and drainage channels reducing the infrastructures' capacity ➢ Increasing number of flood hotspot in 36 spots in 2022
Waste disposal that does not meet standards	➢ Both the number and feasibility of waste collection vehicles are lacking ➢ The 3Rs (Reuse, Recycle, Reduce) are not implemented to the maximum extent ➢ The waste collection stations' capacity is lower compared to 2018
Environmental management not in accordance with regulations	➢ Negative uncontrollable effects of active mining, quarrying, and manufacturing industries ➢ Lack of management of mining waste disposal ➢ Unoptimized monitoring to companies that required to conduct Environmental Impact Assessment (EIA)

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

According to the Environmental Quality Index (IKLH), Samarinda City has experienced an improvement for all of its environmental quality component, improving its IKLH score from 56.03 in 2022 into 59.9 in 2023 with details shown in the table below.

Table 2-109 Environmental Quality Index of Samarinda City in 2022 and 2023

Component	2022	2023
Water Quality Index (IKA)	45.81	50
Air Quality Index (IKU)	81.81	85.31
Land Quality Index (IKL)	25.90	29.92
Environmental Quality Index (IKLH)	56.03	59.9

Source: Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

However, it is also imperative to understand that Samarinda City has experienced several critical environmental degradations as covered by the previous Samarinda City Regional Long-Term Development Plan 2005-2025. In Indonesia, the Ministry of Environment and Forestry has been implementing an annual initiative to give an award called Adipura to municipalities that have been successful in maintaining cleanliness and managing the urban environment. Samarinda City was last nominated in 1995, but in 2015 Samarinda City passed the first stage of the Adipura evaluation with a score of 72.3. And while the city has achieved accomplishments such as being nominated among the top 5 cities in East Kalimantan Province, it still has low scores in some areas, such as settlements, markets, stores, offices, schools, hospitals, urban forests, urban parks, terminals, ports, landfills, and waste treatment facilities. For this reason, Samarinda City has set the Adipura score as an indicator leading to the achievement of the above mission, with the goal of raising the score from 70.90 in 2013 to 74.90 in 2025.

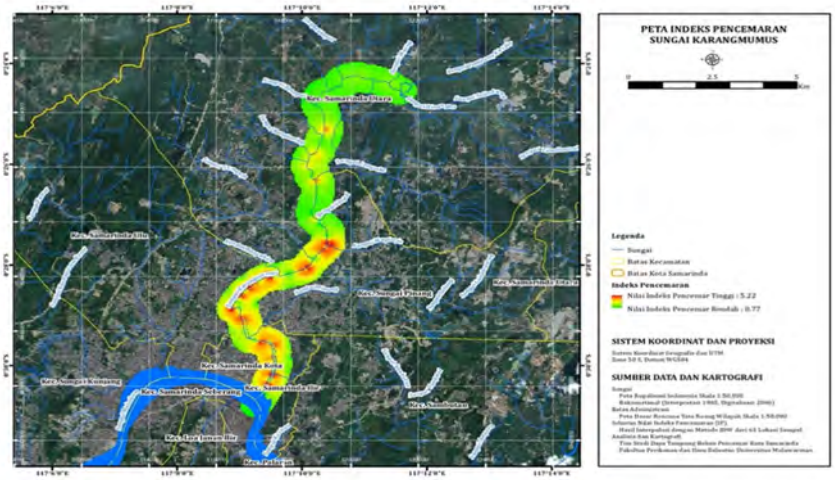
Referring to the previous Samarinda City Regional Long-Term Development Plan 2005-2025 with respect to water quality, environmental data for the Samarinda City through 2014 is shown in the table below. All of the rivers listed in the table show significant degradation of water quality.

Table 2-110 Environmental Data for Samarinda City

Subject (of Taxation, etc.)	2010	2011	2012	2013	2014
Water quality conditions in the Samarinda City section of the Mahakam River	high pollution	high pollution	high pollution	high pollution	high pollution
Water quality status of the Karang Muk River	high pollution	high pollution	high pollution	high pollution	high pollution
Water quality status of the Karang Asam River	high pollution	high pollution	high pollution	high pollution	high pollution
Number of environmental complaints handled		16	31	33	50
Adipura Award Judging	61,41	61,45	65,11	70,90	

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

Additionally, the Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045 also highlighted pollution index in Karang Mumus River as shown by the figure below. According to this Development Plan, there are several segments of Karang Mumus River which are highly polluted with pollution index is as high as 5.22.



Source: Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

Figure 2-154 Map of Pollution Index in Karang Mumus River

The Samarinda City Regional Middle-Term Development Plan 2021-2026 organizes the current status, issues, and measures based on the long-term plans up to the above.

Regarding the current status of the river, in terms of pollution sources, the largest source of pollution in the Mahakam River in Samarinda City is household waste (55%), followed by fishing activities (16%), livestock (13%), and industry (9%). Waste is also considered a cause of clogging of waterways due to dumping into waterways and rivers, and contributes to the increase in damage caused by flooding.

The increase in waste was attributed to the increase in population in Samarinda City. As of

2022, there are 824,167.63 m^3 waste generated in Samarinda City and only 80.14% (660,521.97 m^3) of them can be managed. This infers that there are 19.86% (163,679.69 m^3) waste not handled properly (burned or disposed to environment).

Table 2-111 Percentage of Waste Management in Samarinda City

Indicator	2017	2018	2019	2020	2021	2022
Waste generated (m^3)	963.600	843.812	857.404	873.582	816,588.45	824,167.63
Total amount of waste processed (m^3)	835.307	654.453	652.932	639.982	616,739.80	660,521.97
Control rate (%)	86,99	77,56	76,15	73,26	81.04	80.14

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

The table below also shows the capacity ratio of temporary collection stations (TPS) to the population of Samarinda City: in 2017, the population reached 769,632 and the capacity of TPS was 1,429 m^3; in 2020, the population is 889,095 and the capacity is only 1,215 m^3. This situation necessitates an increase in the number of TPSs without disrupting the livelihood of the community.

Table 2-112 Temporary Waste Storage Sites (TPS) as a Percentage of Population in Samarinda City

Indicator	2017	2018	2019	2020
Total TPS capacity (m^3)	1.429	1.570	1.564	1.215
Total Population (Population)	769.632	858.931	872.768	889.095
TPS capacity ratio per 1,000 population (m^3)	1,86	1,83	1,79	1,37

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

The measures, tasks, and programs envisioned in accomplishing these tasks are listed below. Further specific actions were not identified in this plan. As far as the total volume of managed waste is concerned, the amount of waste generated is also expected to increase by a considerable amount in the future.

Table 2-113 Policies, Operations, and Programs in the Environmental Sector in the Samarinda City Regional Middle-Term Development Plan 2021-2026

Operations and Programs	Performance Indicators	Initial Value	Exit Target
Water Resource Management Program	Percentage of flood-prone residential areas protected by flood protection infrastructure	16.81%	55.00%
	Percentage of irrigated area under District jurisdiction / Percentage of irrigated area served by irrigation network	66.88%	100%.
Regional Waste Management System Development Program	Rate of construction of waste infrastructure	25%.	100%.
Wastewater System Management and Development Program	Percentage of households receiving wastewater treatment services	0.89%	1.8%
Wastewater system management and development planning	Percentage of drainage infrastructure in good condition without blockages	65.00%	70.00%

Environmental Planning Program	Percentage of environmental planning documents	15%.	100%.
Environmental pollution and/or damage control programs	Percentage of pollution control monitoring of permitted activities	15%.	15%.
	Percentage of environmental monitoring conducted	-	100%.
Biodiversity Management Program	Percentage of biodiversity management	5%	10%
Hazardous and Toxic Substances (B3) and Waste Management Programs	Compliance rate for hazardous waste management	37%.	100%.
Guidance and supervision program for environmental permits and environmental protection management permits	Percentage of compliance by persons responsible for operations and/or activities with environmental permits issued by Samarinda City government.	50%	27%
Environmental education, training, and counseling programs for the community	Number of environmental education/counseling sessions conducted in schools and communities	5	70
Local Environmental Award Program	Number of local environmental awards received	2	10
Environmental Grievance Program	Number of environmental permits issued by Samarinda City government, PPLH permits, PPU LH, and complaints filed regarding establishments and their impacts in Samarinda City	100%.	100%.
Waste Management Program	Total amount of managed waste (tons)	195,944.40	1,216,738

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

The Samarinda City Regional Spatial Plan 2014-2034 shows the waste treatment facilities under the jurisdiction of the city, which include five landfills: Bukit Pinang Landfill (10.5 ha), Palaran Landfill (10 ha), Sambutan Landfill (30 ha), Samarinda City Utara Landfill (30 ha), and Loa Janan Ilirm Subdistrict Landfill (75 ha). The landfills that use the sanitary landfill method are the Sambutan landfill, the Samarinda City Utara landfill, and the Loa Janan Ilirm subdistrict landfill (75 ha).

2.8.4 Industrial Development and Investment Promotion

Regarding the industrial development and investment promotion in Samarinda City, the following report has been referenced, and the related content has been organized by theme. The Samarinda City Regional Long-Term Development Plan 2005-2025 outlines the issues related to the city's industries, considering the changes over time, and presents the future direction for development. The Samarinda City Regional Middle-Term Development Plan 2021-2026 provides an overview of the current status of various industries and outlines the middle-term industrial development strategies.

Regarding investment promotion, the "Plan Setup and Development of Samarinda City" organizes the key projects. Additionally, the direction of the city's development, taking into account the IKN development, is outlined in the "Draft of Samarinda City Regional Long-Term Development Plan 2025-2045."

(1) Socioeconomic Framework and Business Activities

The socioeconomic framework according to the Samarinda City Regional Middle-Term

Development Plan 2021-2026 is as follows:

1) Population and Workforce

The population in 2020 was estimated at 192,000, based on ID card holders. Since the COVID-19 pandemic caused several industrial sectors, such as tourism and commerce, to shrink in 2020, the working population has decreased, making skills development for reemployment of displaced workers an important issue. In particular, hotels, restaurants, and commerce temporarily declined, and store closures due to a decrease in employees led to a decline in purchasing power, which affected other industries, such as a decrease in the production of sales goods, but is now recovering.

2) Cooperatives and Micro, Small and Medium Enterprises (MSMEs)

Samarinda City is known as a city of services and commerce, and the development of cooperatives and Micro, Small and Medium Enterprises that support these is positioned as a priority area. The population growth of Samarinda City is supported by the development of economic activity through the growth of cooperatives and MSMEs, and cooperatives and MSMEs are accepted by the local community because they are stable and profits are easily returned to individual capital. When considering the expansion of Japanese companies, we believe that there is a possibility of collaboration with these MSMEs depending on the sector.

3) Micro, Small, and Medium Enterprises (MSMEs) Development

Samarinda City Regional Middle-Term Development Plan 2021-2026 states that micro, small and medium-sized enterprises (MSMEs) have an easy environment to start a business due to the increase in startup opportunities and the spread of social media. The number of MSMEs in Samarinda City increased by nearly 6,000 (about 7%) from 83,712 to 89,799 between 2017 and 2019, with 25,084 small enterprises and 3,514 medium-sized enterprises. Micro-enterprises showed the highest growth rate in 2019 at 4.20%, far exceeding the 2.09% growth rate of small enterprises and 1.36% growth rate of large enterprises. The most popular sectors for MSMEs are categorized as cooking, fashion, automobiles, education, agribusiness, internet technology, and others.

(2) GRDP by Industrial Sector

The current status of industrial sectors in the Samarinda City Regional Middle-Term Development Plan 2021-2026 is outlined below.

1) GRDP of Samarinda City

From 2017 to 2019, the nominal GRDP showed a high growth rate of 6-11% annually. However, in 2020, due to the impact of COVID-19, there was negative growth.

Table 2-114 GRDP Values and GRDP Growth Rates of Samarinda City from 2017 to 2020

No.	Oil and gas-related industries	2017	2018	2019	2020
1	ADHB[2] （Million IDR）	58,443,749	63,564,687	67,701,782	66,542,455
	Growth rate （%）	11.01	8.76	6.51	-1.71
2	ADHK[3] （Million IDR）	41,274,972	43,323,569	45,485,738	45,000,473
	Growth rate （%）	3.85	4.96	4.99	-1.07

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

2) GRDP by Sector and Growth Rate

a) GRDP Share by Sector

In 2020, despite the impact of COVID-19, construction had the highest GRDP share at 21.23%, followed by commerce (wholesale and retail) at 17.09% and mining and quarrying at 10.94%. In the past, from 2011 to 2012, mining and quarrying had the highest share, but fell to second place from 2013 to 2014, and has fallen to third place since 2015. This situation indicates that Samarinda City's industry dependence on mining is beginning to shift to construction and commerce.

Table 2-115 Sector-wise Nominal GRDP Composition Ratios of Samarinda City from 2017 to 2020 (%)

Symbol	Sector	2017	2018	2019	2020
A	Agriculture, Forestry, and Fisheries	1.82	1.82	1.76	1.84
B	Mining and Quarrying	13.90	13.48	12.66	10.94
C	Manufacturing industry	8.08	7.87	7.70	7.75
D	Power and Gas Procurement	0.13	0.14	0.14	0.17
E	Water Supply and Waste Management	0.15	0.15	0.15	0.16
F	Construction industry	20.23	21.05	21.81	21.23
G	Commerce (Wholesale and Retail Trade)	16.02	16.03	16.37	17.09
H	Transportation and Warehousing	6.88	6.91	7.01	7.06
I	Accommodation and Food Services	3.86	3.95	4.07	4.03
J	Information and Communication	3.43	3.34	3.33	3.65
K	Financial Services and Insurance	7.28	7.16	6.99	7.31
L	Real Estate	2.49	2.43	2.39	2.48
M/N	Business Services	0.86	0.85	0.82	0.81
O	Public Administration, Defense, Security, and Social Security	6.57	6.43	6.31	6.28
P	Educational Services	4.10	4.07	4.12	4.55
Q	Health and Social Services	1.39	1.40	1.40	1.71
R/S/T/U	Health and Social Services	2.81	2.92	2.97	2.94
	Total	100.00	100.00	100.00	100.00

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

b) GRDP Growth Rate by Sector

[2]Nominal GRDP
[3]Real GRDP

As shown in Table below, Samarinda City's nominal GRDP growth rate, which had an average growth rate of 4-5% before COVID-19, reversed to the minus 1% range in 2020. Among these, sectors that saw extremely large declines of around 10 percentage points between 2019 and 2020 include accommodation and food services (-11.58), mining and quarrying (-9.73), manufacturing (-8.11), construction (-9.11), public administration, defense, security and social security (-8.59), and other services (-10.92). On the other hand, sectors that saw increases were health and social services (+11.8), electricity and gas procurement (+5.8), and water supply and waste management (+3.17), clearly showing the impact of COVID-19.

Table 2-116 Nominal GRDP Growth Rate by Industry Sector in Samarinda City from 2017 to 2020 (%)

Symbol	Industrial sectors	2017	2018	2019	2020
A	Agriculture, Forestry, and Fisheries	4.75	5.47	1.22	0.68
B	Mining and Quarrying	-2.10	1.37	5.75	-3.98
C	Manufacturing industry	1.83	3.11	4.27	-3.84
D	Power and Gas Procurement	9.87	12.76	8.75	14.55
E	Water Supply and Waste Management	9.21	7.02	3.77	6.94
F	Construction industry	6.78	6.15	4.72	-4.39
G	Commerce (Wholesale and Retail Trade)	7.50	5.65	5.07	1.84
H	Transportation and Warehousing	4.24	6.40	5.99	-0.90
I	Accommodation and Food Services	8.43	8.50	7.66	-3.92
J	Information and Communication	9.88	5.45	6.39	7.31
K	Financial Services and Insurance	-3.43	3.35	2.52	2.74
L	Real Estate	3.29	4.16	3.12	1.85
M/N	Business Services	4.26	4.67	1.99	-3.76
O	Public Administration, Defense, Security, and Social Security	-0.81	3.65	4.36	-4.23
P	Educational Services	8.77	7.88	4.87	1.64
Q	Health and Social Services	7.93	6.65	6.40	18.20
R/S/T/U	Health and Social Services	7.89	9.59	7.94	-2.98
	Total	3.85	4.94	4.97	-1.07

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

3) Investment Situation

The Samarinda Regional Middle-Term Development Plan 2021-2026 focuses on the population, which brings demand for goods and services, in the industrial development of Samarinda City. In order to meet the growing population, investments have been made in the development of urban infrastructure to provide comfort to local residents, and it is said that the city has been successful in improving its livability, but in reality, there are still many urban challenges, such as flood control measures in the city and the development of public transportation.

Both foreign direct investment (PMA) and domestic direct investment (PMDN) are moving into Samarinda City with various investments ranging from shopping centers, education, healthcare, services and many other industrial sectors. The large investments are expected to bring many job opportunities and absorb a large amount of the local workforce.

In 2019, domestic direct investment reached 233.47 Trillion IDR, the highest figure in the

2017-2021 period. Domestic direct investment was driven by the tertiary sector (services), and the service-dominated economy has been able to maintain positive growth even during the COVID-19 period. Meanwhile, foreign direct investment in 2019 fell to 913.61 Million IDR, the lowest figure in the 2017-2021 period.

4) Tourism Situation

The Samarinda Regional Middle-Term Development Plan 2021-2026 states that the tourism sector is recognized as an industry that provides high added value, and that it is time to gradually switch the region's dependence on non-renewable fossil fuels to sustainable tourism. In 2019, the number of visitors to Samarinda City was 1,251,575, and the reasons for the visits were investment projects in the commercial sector, visits to the East Kalimantan Provincial Government Center, and use of educational services. In the future, it is believed that efforts in the Tri-City to promote tourism will be important from the perspective of how to attract visitors from the IKN development.

5) Commercial Situation

Of the top three sectors that dominate Samarinda City's economy, trade ranks third after construction and mining. As shown in Table below, from 2017 to 2020, trade's share of GRDP continues to increase year by year, from 16.02% in 2017 to 17.09% in 2020. The growth rate is also high, from 7.50% in 2017, 5.65% in 2018, and 1.84% in 2020. The increase in trade's contribution with high growth rate further emphasizes that Samarinda City is a city of services and commerce. Samarinda City is also promoting the development of commercial facilities, and as of 2020, there are 15,750 trading facilities consisting of 25 traditional markets, 17 supermarkets, 7 hypermarkets, 3 wholesale markets, 6 mall plazas, and 15,692 stores and stalls.

6) Manufacturing Situation

As seen in table below, the city is concerned that the share of manufacturing in Samarinda has been declining in recent years. In 2017, the share of manufacturing was 8.08%, but in 2020 it was 7.75%. Manufacturing is now the fourth largest sector in terms of GRDP share for Samarinda, and this decline is due to a decline in demand for metals, machinery, engineering, electronics, and forestry resources, which were Samarinda's main industries. It is analyzed that the share of manufacturing has declined as people's interest has shifted from industry to micro, small and medium-sized enterprises (MSMEs), and it has been replaced by an increase in MSMEs and the share of commerce.

Unlike the GRDP share, the share of manufacturing in the number of companies in Samarinda has been increasing. In 2017, the number of companies reached 1,300 and the number of employees reached 13,505, and in 2020, the number increased to 2,372 and 16,629. Of this, the metals, machinery, engineering and electronics industries accounted for 46.3%.The reason for the decline in the share of GRDP despite an increase in employment is that the manufacturing sector has not been able to increase the added value of the products it produces, and so is facing challenges in identifying and producing superior goods that are in high demand in the local community.

(3) Industrial Location

In Samarinda, as a complement to the new capital, a container port is being developed in the Palaran area along the southern side of the Mahakam River, and a new industrial core is under development.



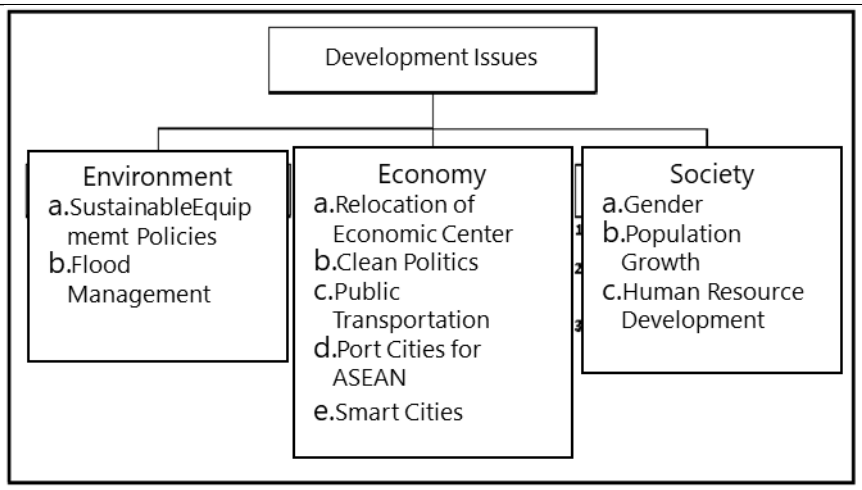
Source: Development Plan Formulation for Samarinda City

Figure 2-155 Development Concept Map of the Palaran Area, Samarinda City

(4) Issues and Challenges of Industrial Development

The Samarinda City Regional Long-Term Development Plan 2005-2025 outlines the issues and future directions of Samarinda City's industries, based on the passage of time. As shown in the diagram below, these are discussed as the strategic challenges of Samarinda City.

- Coordination with the Sustainable Economic Development of East Kalimantan Province
- Flood Management in Samarinda City
- The relocation of the Samarintha City Government Center (to a location closer to IKN).
- Strengthening the role of public transportation to support Samarinda's functions as the provincial capital city.
- Smart city development of Samarinda.



Source: Prepared by the Study Team based on the Samarinda City Regional Long-Term Development Plan 2005-2025

Figure 2-156 Strategic Issues of Samarinda City

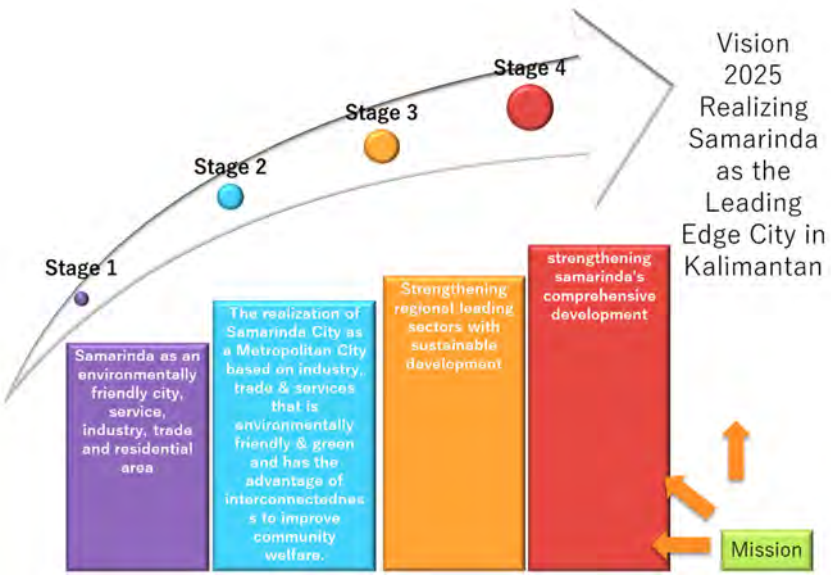
(5) Goals and Plans for Industrial Development

1) Long-Term Development Goals of the Region According to the Samarinda City Regional Long-Term Development Plan 2005-2025

a) Overall Policy and Four Phase Stages

The development goals of the mentioned plan are to improve the quality of human resources, expand economic growth, and enhance environmental quality. It is stated that economic development contributes to the expansion of economic growth.

The 20 years of the long-term development goals are divided into four phases as shown in the diagram below, with key themes, development challenges, and priorities set for each phase. From this, relevant items related to industrial development were extracted, and themes were added with underlining applied to those directly related to industrial development. It is evident that industrial development emphasizes human resource development and infrastructure development.



Source: Samarinda City Regional Long-Term Development Plan 2005-2025

Figure 2-157 Long-term Development Goals and Priorities

b) Direction of Development Policy (Regional Middle-term Development Plan) Phase I

- Theme: 'Transforming Samarinda City into an Environmentally Friendly City for Services, Industry, Commerce, and Residential Areas'
- Development of Productive Businesses to Revitalize the Local Economy (Industrial Development)
- Acceleration of Economic Growth in Key Sectors (Industrial Development)
- Preparation of Workforce Ready for the Labor Market (Human Resource Development)
- Capacity Building and Facility Management (Human Resource Development)
- Improvement of access to support key sectors and residential areas (Infrastructure Development)

c) Direction of Development Policies (Regional Middle-Term Development Plan) Phase II

Theme: To transform Samarinda City into a large urban area based on environmentally friendly and competitive industries, commerce, and services, while improving the welfare of the local community.

- Attract investors and establish fair investment regulations in industrial sectors for the benefit of the region. (Industrial Development)
- Accelerate the development of urban management facilities and infrastructure that can create added value and increase local revenues (local taxes, local fees, profits from locally owned enterprises, etc., PAD). (Industrial Development)
- Acceleration of annual economic growth. (Industrial Development)
- Accelerate economic growth through investment cooperation and the utilization of capital markets, explore development funding sources from the private sector, and make efforts to utilize other resources, particularly oil and gas resources and marginal wells. (Industrial Development)
- Improve the balance between the industrial, agricultural, and small and medium-sized enterprise sectors through the enhancement of infrastructure and facilities for capital, training, and product marketing. (Industrial Development)
- Development of spatial management systems, environmental conservation (particularly mine reclamation), and urban beautification management. (Industrial Development)
- Support the impoverished and promote employment. (Human Resource Development)
- Accelerate the development and maintenance of infrastructure, including basic infrastructure planned in spatial policies such as electricity, clean water, housing, and street paving. (Infrastructure Development)

d) Direction of Development Policies (Regional Middle-Term Development Plan) Phase III

Theme: Strengthening the region's leading sectors through sustainable development

- Growth of regional commercial products. (Industrial Development)
- Implementation of the concept and strategies for environmentally friendly and sustainable economic development (Green Economy). (Industrial Development)
- Increase in exports of high-quality products. (Industrial Development)
- Improvement of the quality of local financial management. (Human Resource Development)
- Empowerment for business independence in underprivileged communities. (Human Resource Development)
- Preparation for government infrastructure development in Samarinda Seberang, Sungai Siring, and Makroman. (Infrastructure Development)
- Sustainable utilization of water resources in Samarinda City. (Infrastructure Development)
- Realization of the waterfront city concept through river infrastructure development. (Urban Development)

e) Direction of Development Policies (Regional Middle-Term Development Plan) Phase IV

Theme: Strengthening the comprehensive development of Samarinda

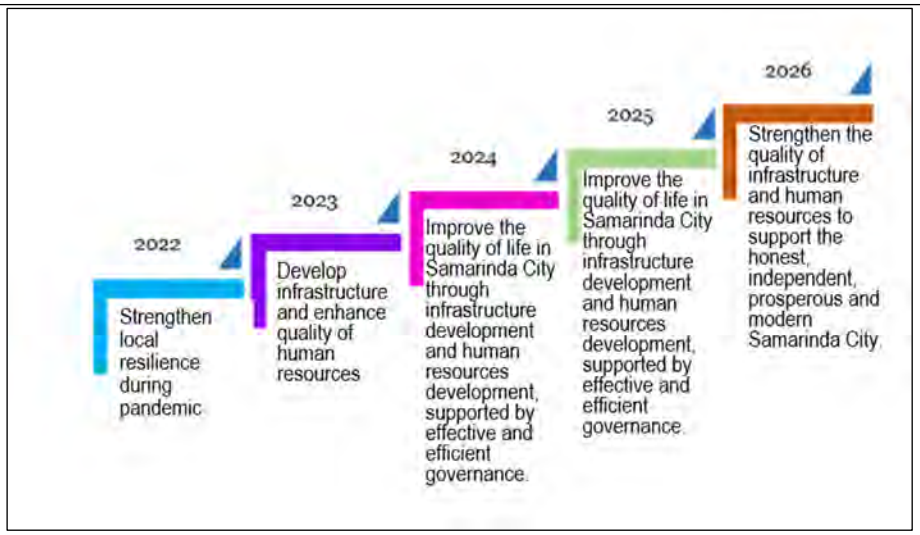
- Concept for environmentally friendly and sustainable economic development (Green Economy)
- Preparation of infrastructure to support the government center in Samarinda Seberang. (Infrastructure Development)
- Relocation of the Samarinda City Government Center to Samarinda Seberang, Sungai Siring, or Makroman. (Urban Development)
- Realization of the waterfront city concept through river infrastructure development. (Urban Development)

2) Regional Development Goals according to the Samarinda City Regional Middle-Term Development Plan 2021-2026

The Middle-Term development strategies and policy directions outlined in the Samarinda City Regional Middle-Term Development Plan 2021-2026 become annual development priorities, making them strategic in nature. The annual development priority issues are shown in the diagram below. The focus is on infrastructure development, improving access to and quality of education and healthcare services, economic empowerment of local communities, and good governance. Industrial development goals are set with an emphasis on the community.

a) Annual Plan Based on the Regional Middle-Term Development

Based on the above policy directions, the Samarinda City Government is expected to provide clear guidelines for achieving the annual middle-term development goals. The goals for the 2022-2026 plan are shown in the diagram below.



Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

Figure 2-158 Goals of the Regional Middle-Term Development Plan 2021-2026

Furthermore, based on the annual development goals of Samarinda City for 2021-2026, an analysis of the implementation evaluation results of the Annual Local Government Implementation Plan (RKPD), the identification of strategic issues, and consideration of urgent issues at the regional and national levels, the 'focus on development priority issues' has been formulated. The themes and priorities for each year are as follows, but in terms of industrial development, the focus in 2022 is only on increasing food production and improving the added value and competitiveness of key products. Continuous measures remain a challenge.

Table 2-117 Annual Themes and Priorities of the Local Government Implementation Plan

Strengthening Regional Resilience During the Pandemic in 2022	Infrastructure Development and Quality Improvement of Human Resources in 2023
1) Improvement of Human Resources and Basic Services	1) Improvement of Intercity and Intracity Accessibility
2) Increased Food Production	2) Increase in Livable Housing and Residential Areas for Residents
3) Infrastructure Development	3) Integration of Water Resource Infrastructure
4) Improvement of the National Economy	4) Improvement of Public Health Conditions
5) Enhancement of the Added Value and Competitiveness of Key Products	5) Improvement of Access to and Quality of Education
6) Improvement of Public Services and Governance	

"In 2024, Enhancing the Quality of Life in Samarinda City through Infrastructure Development and Human Resource Training Supported by Effective and Efficient Governance."	"In 2025, Strengthening the Quality of Life in Samarinda City through Infrastructure Development and Human Resource Training Supported by Effective and Efficient Governance."
1) Enhancement of Convenient and High-Quality Cities	1) Enhancement of Convenient and High-Quality Cities
2) Improvement of Urban Cleanliness	2) Improvement of Urban Cleanliness
3) Improvement of Environmental Quality	3) Improvement of Environmental Quality
4) Disaster Risk Reduction and Climate Change	4) Integration of Water Resource Infrastructure
5) Integration of Water Resource Infrastructure	5) Improvement of Intercity and Intracity Access
6) Improvement of Intercity and Intracity Access	6) Improvement of Public Health Conditions
7) Improvement of Access to and Quality of Education	7) Improvement of Access to and Quality of Education
8) Improvement of Excellent Services to the Community	8) Improvement of Accountable Services
9) Improvement of Accountable Services	
10) Increase in Youth and Sports Achievements	

In 2026, Stabilizing the Quality of Infrastructure and Human Resources to Support an Honest, Independent, Prosperous, and Modern Samarinda City.
1) Improvement of Intercity and Intracity Access
2) Improvement of Access to and Quality of Education
3) Youth and Sports Performance Improvement
4) Improving Access and Quality of Life, Protecting Women and Children, Gender Equality
5) Improvement of Protection, Development, and Utilization of Regional Culture

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

(6) The Impact of the Development of the New Capital on Industrial Development

1) Incorporation of IKN in the Draft of Samarinda City Long-Term Development Plan 2025-2045

The plan clearly positions Samarinda City as a partner of IKN, and envisions collaboration with IKN from the perspectives of economic industries, logistics, employment, environmental protection, tourism, energy, agriculture and food, and natural resource management. Administrative functions are also planned to be relocated to areas closer to IKN, with more than 70,000 ha of land designated for residential, commercial, and industrial purposes as complementary land for the New Capital.

a) The Impact of IKN Development on the Long-Term Vision for Industrial Development

The draft outlines the following vision and accompanying guidelines for industrial development, based on the premise of IKN development, as shown in the table below. At the level of policy direction (bolded items in the table below), the items related to renewable energy manufacturing, eco-tourism, and low-carbon energy are considered to be part of the six economic clusters of IKN.

Table 2-118 Long-Term Vision for Industrial Development in Samarinda City

Level	Content
Vision	Samarinda is a hub of advanced and sustainable commerce and service civilization.
Vision Goals	1. Increase in per capita income a. Per capita GRDP (Million IDR): From a baseline of 118.41 Million IDR in 2025 to 334.56 million IDR in 2045. b. Contribution of the manufacturing sector to GDP (%): From a baseline of 7% in 2025 to 14% in 2025, and 10.45% in 2045. 3. Improvement of regional economy and competitiveness a. Economic growth rate (%): From a baseline of 8%–8.64% in 2025 to 7.33%–5.83% in 2045. b. Regional competitiveness index: From a baseline of 3.83 in 2025 to 4.25 in 2045.
Mission	1. Social transformation to develop a competitive workforce 2. Achieving resilient economic transformation through region-led industries 3. Achieving good governance transformation 4. Achieving a healthy and beautiful environment 5. Strengthening basic and strategic infrastructure capabilities
Stage of development Policy direction	Economic transformation ・Strengthen support for the construction and development of the IKN Economy Super Hub and partner regions to promote advanced and competitive economic activities. ・Development of high-tech and sustainable industrial areas based on excellent products. **・Development of high value-added and sustainable green industries.** **・Utilization of new and renewable energy.** **・Development of new economic sectors based on innovation.** **・Development of potential tourist destinations based on populism and world-class ecotourism.** **・Improvement of domestic value chains to support global value chains.**

Source: Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

b) Four Phases of Industrial Development

According to the draft, the development direction is divided into four phases until 2045, which is the industrial development stage of IKN, and is organized in the table below. The content mainly lists general items based on the six economic clusters of IKN and related industries, highlighted in bold in the table. The relevant IKN economic clusters are added in the far-right column. As adjustments with IKN and the Tri-City are forthcoming, it is believed that the realistic plans for Samarinda City will be left to future coordination.

Table 2-119 Directions of Industrial Development Policy for Samarinda City

Transformation Agenda and Mission	Policy Direction				Related IKN6 economic clusters
	2025-2029	2030-2034	2035-2039	2040-2045	
Realizing a resilient economic transformation based on the region's leading sectors	Strengthen support for the development of IKN Economic Superhubs and partner regions that promote advanced and competitive economic activities.	Accelerate support for the development of IKN Economic Superhubs and partner regions that promote advanced and competitive economic activities.	Strengthen support for the development of IKN Economy Superhubs and partner regions that promote advanced and competitive economic activities.	Strengthen support for the construction and development of IKN Economic Superhubs and partner regions that promote advanced and competitive economic activities.	All sectors
	Developing new economic sectors based on innovation	**Accelerating the development of new, innovation-based economic sectors**	**Strengthening new innovation-based economic sectors**	**Strengthening new innovation-based economic sectors**	**Integrated Medicine Advanced Chemistry**

Development of potential tourist destinations based on populism and world-class ecotourism	**Accelerate the development of a potential tourist destination based on populism and world-class ecotourism**	**Strengthening potential destinations based on populism and world-class ecotourism**	**Strengthening potential destinations based on populism and world-class ecotourism**	**Eco-Medical Tourism**
Preparing for industrialization of cooperatives	Cooperatives accelerate industrialization	Strengthening cooperative industrialization	Strengthening industrialization of cooperatives	
Strengthening linkages between Micro, Small and Medium Enterprises (MSMEs) and domestic industry value chains	Strengthening linkages between MSMEs and domestic industry value chains	Strengthening connectivity of MSMEs to domestic and global industrial value chains	Optimizing the linkage of MSMEs into national and global industrial value chains	
Improving Productivity in Regional Public Enterprises (BUMD)	Strengthening BUMD Productivity	Strengthening BUMD Productivity	Optimizing BUMD Productivity	
Development of high-tech and sustainable industrial areas based on superior products	**Accelerate the development of high-tech and sustainable industrial regions based on quality products.**	**Strengthen the development of high-tech and sustainable industrial sectors based on quality products.**	**Strengthen the development of high-tech and sustainable industrial sectors based on quality products.**	**Renewable Energy Manufacturing**
Developing high-added-value, sustainable and green industries	**Accelerate the development of high-value-added, sustainable green industries**	**Strengthening the development of high-added-value, sustainable green industries**	**Strengthening the development of high-added-value, sustainable green industries**	
Use of new and renewable energy	**Expanding the use of new and renewable energy**	**Promoting the use of new and renewable energy**	**Strengthening the use of new and renewable energy**	**Low Carbon Energy**
Improving domestic value chains	**Accelerating the upgrading of domestic value chains**	**Strengthening domestic value chains to support global value chains**	**Strengthening domestic value chains to support global value chains**	**Renewable Energy Manufacturing**
Providing a skilled and experienced workforce	**Accelerating the supply of skilled and experienced labor**	**Strengthening the labour supply with skilled and experienced personnel**	**Strengthening the labour supply with skilled and experienced personnel**	**21 Century Education**
Improving public safety to reduce local and cross-border crime rates	Strengthening security to reduce local and cross-border crime rates	Strengthening security to reduce local and cross-border crime rates	Providing security to reduce domestic and cross-border crime rates	
Controlling regional inflation	Accelerating regional inflation containment	Strengthening control of regional inflation	Stabilizing regional inflation control	
Development of Islamic economy and finance to support regional economic development	Accelerating the development of Islamic economy and finance in support of regional economic development	Strengthening Islamic economy and finance to support regional economic development	Strengthening Islamic economy and finance to support regional economic development	
Improving local financial capacity	Accelerating improvement of local government financial capacity	Strengthening local financial capacity	Optimizing local financial capacity	

	Providing smart, reliable and environmentally friendly electricity networks and services	**Providing smart, reliable and environmentally friendly electricity networks and services**	**Providing smart, reliable and environmentally friendly electricity networks and services**	**Providing smart, reliable and environmentally friendly electricity networks and services**	Smart City
	Developing the digital ecosystem	**Accelerating digital ecosystem development**	**Strengthening the digital ecosystem**	**Expanding and stabilizing the digital ecosystem**	Smart City
	Smart, Green and Sustainable Urban Development	**Accelerating smart, green and sustainable urban development**	**Strengthening smart, green and sustainable urban development**	**Strengthening smart, green and sustainable urban development**	Smart City
	Integrated and sustainable urban planning	Integrated and sustainable development of urban areas	Accelerating integrated and sustainable urban development	Strengthening the development of integrated and sustainable urban areas	
	Improving land reform implementation	**Accelerating the implementation of land reform**	**Strengthening the implementation of land reform**	**Strengthening the implementation of land reform**	**Sustainable Agriculture**

Source: Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

c) Directions for Transformation in Industrial Development of Samarinda City

According to the draft, the directions for future transformation in industrial development outlined in the plan are shown in the table below. Here, as the direction of industrial development policy, the details of the IKN industrial development plan are comprehensively incorporated. In the future, the role of Samarinda City will likely be defined through its division of responsibilities with IKN, Balikpapan City, and surrounding municipalities under the Tri-City concept. As in the previous table, the related items of the six economic clusters of IKN are displayed in bold.

Table 2-120 Direction of Change related to the Industrial Development in Samarinda City

Direction of Samarinda City's Change		6 Economic clusters related to IKN
Industrial Development Policy Direction	Explanation of the direction of change	
Strengthening support for the construction and development of IKN Economic Superhubs and partner regions that promote advanced and competitive economic activities	Strengthening support to the development and advancement of IKN Economy Superhubs and partner regions that promote advanced and competitive economic activities will be implemented by strengthening supply and value chains. This will ensure a smooth flow of goods and services from production centers to industrial parks and retail outlets, optimize added value through downstreaming, and enhancing sustainable economic structures, efficiency, innovation and equitable development.	All
Development of high-tech and sustainable industrial areas based on superior products	The development of high-tech, sustainable industrial areas based on superior products is being advanced by a collaboration with IKN Economy Superhub, which includes Kariangau Industrial Park, Buluminung Industrial Park and Maloy Special Economic Zone.	Integrated Medicine Advanced Chemistry
Developing high value-added and sustainable green industries	The development of high value-added and sustainable green industries is taking place through the advancement of food and biochemical industry, bioprospecting/bioeconomy, herbs, nutrition, advanced pharmaceutical industry, electric vehicle industry and biotechnology, increasing the value-	Low Carbon Energy

	added and industrial complexity supported by the availability of suitable raw materials.	
Use of new and renewable energy	The use of new and renewable energy sources will be undertaken through the development of adaptive technologies and the growth of the renewable energy industry in order to accelerate the energy transition to clean and affordable energy.	Renewable Energy Manufacturing
Developing new economic sectors based on innovation	Potential new economic sectors based on innovation are being explored through the development of biosimilars, vaccines, plant-based proteins, renewable energy, and biofuels.	Integrated Medicine
Development of potential tourist destinations based on populism and world-class ecotourism.	The development of the tourist destination will be guided by the East Kalimantan Regional Development Master Plan through environmental conservation, training, skills development, incentives, tourism infrastructure investment, tourism marketing, and collaboration between the public sector, private sector, and non-governmental organizations.	Eco-Medical Tourism
Improving domestic value chains that support global value chains	Domestic value chains that support global value chains will be improved through the optimization of industrial parks and by leveraging regional cooperation schemes with the East Asia and Pacific region to improve the competitiveness of superior regional products.	Renewable Energy Manufacturing
Providing a skilled and experienced workforce	Supplying skilled and experienced manpower to the work force is carried out through retraining and upskilling education, as well as the transition from school to the workplace as efforts to strengthen the connection between the education sector and the business and industrial sectors (DUDI), in line with the region's outstanding needs and potential.	Education in the 21st Century
Smart, green and sustainable urban Development	Smart, green and sustainable urban development is implemented through the application of smart environment, smart infrastructure, smart governance, smart economy, smart people and smart living in all aspects of urban development.	Smart City
Integrated and sustainable development of urban areas	The development of an integrated and sustainable urban area will be implemented by strengthening the inter-regional connectivity among the three cities (IKN, Balikpapan, and Samarinda) based on regional characteristics and considering carrying capacity and environmental capacity.	
Industrialization of cooperatives	The industrialization of cooperatives will take place through downstreaming of local superior products, strengthening business processes and institutions, and introducing technology.	
Strengthening linkages between MSMEs and value chains of domestic and global industries	Improving the integration of MSMEs to value chains of domestic and global industries will be achieved through increased access to productive resources (including financing and marketing), application of technology and expansion of business partnerships.	
Improving BUMD Productivity	Improving BUMDes productivity will be achieved through improved regulation, strengthening managerial capacity, access to financing and optimizing participation opportunities.	
Strengthening Islamic economy and finance to support regional economic development	Strengthening Islamic economy and finance to support the regional economic development will be carried out through strengthening the Halal industry ecosystem, reinforcing the Halal industry value chain, enhancing entrepreneurship and Halal industry MSMEs, and expanding Islamic economy and financial infrastructure.	
Providing smart, reliable and environmentally friendly	The provision of smart, reliable and environmentally friendly electricity networks and services will be implemented through the development of digital	Smart City

electricity networks and services	technologies that help improve reliability and decarbonize the electricity supply, and through the development of interconnection systems that improve the stability and reliability of the electricity supply.	
Developing the digital ecosystem	The development of a digital ecosystem is carried out through the completion and enhancement of information and communication technology (ICT) infrastructure (expansion of broadband networks to reach every corner), the expansion of ICT utilization and application in various priority areas (increased digitalization in strategic fields), and the increase of support facilities for digital transformation (improvement of digital literacy in communities, information and cybersecurity, and the creation of digital talent or digital skills).	Smart City

Source: Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

d) Priority Issues and Progress Indicators for Industrial Development Efforts

The priority issues for economic transformation in the efforts of Samarinda City's transformation are as follows.

- Building and developing the IKN Economic Super Hub and partner regions to promote advanced and competitive economic activities.
- Implemented through strengthening the supply chain and value chain, ensuring the smooth flow of goods/services from production centers to industrial estates and retail outlets, optimizing added value through downstream product development, and enhancing a sustainable economic structure, efficiency, innovation, and equitable development.

Additionally, the following target values have been set as indicators of progress in industrial development transformation, with more than half of the indicators being related to industrial development. The items related to the six economic clusters of IKN have been highlighted in bold, with many of the items being interconnected.

Table 2-121 The Progress Indicators and Goals for the Industrial Development Transformation of Samarinda City.

Main Goals	Development direction	Key development indicators	Target	
			Baseline 2025	2045 target
Expanding application of science and technology, innovation, and improving economic productivity	**Scientific and technological innovation and improved economic productivity**	**11. Manufacturing industry GRDP ratio (%)**	**6.92%**	**7%**
		12. Tourism Development		
		a) Food and beverage provision as a percentage of GDP (%)	**4.03%**	**4.5%**
		b) Number of foreign tourists staying at star-rated hotels (persons)	**6,795 people**	**7,134 people**
		13. Creative economy share of GRDP (%)	**The goal will be decided at a later date.**	
		14. Productivity of Small and Medium Enterprises, Cooperatives and BUMD	**The goal will be decided at a later date.**	
		a) Percentage of non-agricultural small and medium enterprises at the urban level	**The goal will be decided at a later date.**	
		b) Percentage of small and medium-sized enterprises at city level	**The goal will be decided at a later date.**	
		c) Local entrepreneurship rate (%)	**3.25%**	**5.25%**
		d) Percentage of active cooperatives	**26.32%**	**34.21%**
		e) Return on assets (ROA) BUMD (%)	**The goal will be decided at a later date.**	

		15. Open Unemployment Rate (%)	**5.34%**	**4.04%**
		16. Female labor force participation rate (%)	**47.50%**	**53.19%**
		17. Regional Innovation Index	**60.09%**	**69.10%**
Expanding the implementation of the green economy	**Implementing a Green Economy**	**18. Green economy implementation rate**	**The goal will be decided at a later date.**	
		a) Regional Green Economy Index	**The goal will be decided at a later date.**	
		b) Percentage of renewable energy in the primary energy mix	**The goal will be decided at a later date.**	
Increasing domestic and global economic integration	**Domestic and Global Economic Integration**	**20. State-level inter-regional price variation coefficient**	**The goal will be decided at a later date.**	
		21.Gross Fixed Capital Formation (% GRDP) (ADHB)[4]	**47.01**	**47.48**
		22.Net exports of goods and services (% of GRDP)	**-11.04%**	**-11.15%**
Improving local resilience and contribution	**Community resilience and contribution**	**35. Regional Competitiveness Index**	**3.83**	**4.25**
		36.Number of crimes/penal law offenses (cases)	1032	722
Macroeconomic stability	Macroeconomic stability	31. Local taxes as a percentage of GRDP		
		32. Inflation rate (%)	3.14%	2.51%
		33. Financial Sector Deepening/Intermediation	The goal will be decided at a later date.	
		a) Total third-party funding/GDP (%)	The goal will be decided at a later date.	
		b) Pension fund assets/GDP (%)	The goal will be decided at a later date.	
		c) State-by-state stock trading volume, averaged over the course of a year	The goal will be decided at a later date.	
		d) Total credit/Gross domestic product (%)	The goal will be decided at a later date.	
		34. Financial Inclusion (%)	The goal will be decided at a later date.	
Enabling digital transformation	Digital Transformation	19. Information and Communications Technology Development Index	The goal will be decided at a later date.	
Realizing cities as centers of economic growth	Cities as centres of economic growth	23. Advanced, inclusive and sustainable cities		
		a) Contribution of Kota Samarinda's GRDP to East Kalimantan's GRDP (%)	9.18%	10.71%
		b) Percentage of households with access to adequate, affordable and sustainable housing	The goal will be decided at a later date.	

Source: Draft of Samarinda City Regional Long-Term Development Plan 2025-2045

(7) Investment Environment in Samarinda City

1) Samarinda City's expectations and preparations for external investment

According to the Samarinda City Regional Middle-Term Development Plan 2021-2026, domestic and foreign investment in Samarinda City is one of the important indicators for the national and regional economy. Investment creates jobs and purchasing power, improves social welfare, and reduces unemployment and poverty. In order to attract investment, the city is working to improve the business environment in the region, including reducing crime rates and making it easier to do business by shortening the time required for permit and license procedures.

2) Overview and Examples of Investment Projects in Samarinda City

a) Regional Issues Necessary for Industrial Development

[4]Nominal GRDB

According to the Samarinda City Development Plan, regional issues necessary for industrial development in Samarinda City include flood control measures through a modern urban drainage system, environmentally friendly public transport policies, smart city policies, and policies to foster 10,000 entrepreneurs. Issues to be linked to IKN include the development of a logistics network base and distribution network for IKN, collaboration in education and vocational training, conservation of the Mahakam River, support for ecotourism in the areas of nature, religion, products, and cuisine, mutual cooperation in electricity infrastructure and gas supply, food cooperation through agricultural production, and cooperation in water resource management.

b) Urban Development and Infrastructure-Related Projects

In the plan, the regional development and infrastructure-related investment projects related to IKN include the development of residential, commercial and industrial land in the Kungang, Seberang, Lao and Plaran districts along the Mahakam River. In addition, the city's infrastructure development projects include an elevated railway connecting the airport to the city government and Balikpapan City as a transportation system, the development of a cargo port in Palaran, waste disposal, water supply and flood control. Other urban development projects include the regeneration of slum areas, promotion of the shipbuilding industry, terrace cities on the waterfront, redevelopment of the central city area, and an integrated economic development zone including agriculture and ecotourism in North Samarinda.



Source: Formulation of Samarinda City Development Plan

Figure 2-159 Redevelopment Plan for the Central Urban Area of Samarinda City

2.8.5 Power & Energy

In the Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045, strategic issues in Samarinda City include improving the resilience of infrastructure in the event of disasters and the sustainable supply of electrical energy in the city. It also states that the goal is to transform the current mining and oil and gas sectors in order to achieve a low-carbon and sustainable energy sector. However, no specific action plans, etc. for this were mentioned.

2.8.6 Urban Management

(1) Development Agenda for Samarinda City

The City's strategic development agenda was developed based on a review of international strategic development agenda, national strategic agenda, and East Kalimantan Province's strategic agenda, and applying those to the unique local conditions and characteristics.

1) Reforming the Bureaucracy and Strengthening Human Resources at Local Government

Bureaucratic reform is one of the efforts to implement fundamental reforms and changes in the administrative system, especially with regard to institutional, administrative and human resources pertaining to the organization. The objective is to create a professional government bureaucracy that is adaptable, honest, high performing, clean, free of corruption, able to serve the public, neutral, prosperous, committed, and able to uphold the fundamental values and ethical codes of the state apparatus.

2) Buffering the Rapid Population Growth by IKN Development

The New Capital City (IKN) will be located in part of PPU Regency and part of Kutai Kartanegara Regency and must be supported by the preparation of surrounding buffer cities to share the urban burden. The capital relocation project will attract many construction workers to the area, followed by other migrants. Population growth rates without adequate urban infrastructure and facilities are likely to lead to social problems such as slums, poverty, and crime. Therefore, all measures and developments undertaken by the Samarinda City municipal government must be controlled.

3) Improving Environmental Management to Reduce Global Warming

Converting the use of fossil energy to new renewable energy sources will reduce greenhouse gas (GHG) emissions. Options for developing new renewable energy sources in Samarinda City include the use of solar, hydroelectric, and bioenergy. A modal shift to the use of public transportation would also reduce emissions. Additionally, the use of organic fertilizers is an important alternative to reduce emissions from the agricultural sector.

4) Stabilizing Food Security

The issue of food security consists of achieving a balance between three pillars: resilience, supply and price, and stability. Resilience can be met through both domestic and foreign production. Reasonable prices can be seen in terms of the food supply that is physically close to the consumer and the consumer's economic ability to afford it. The stability pillar, on the other hand, consists of the continuity of supply and price stability that households can expect at all times. Samarinda City, which is not a major agricultural producer, is in a situation where food security stability must be maintained given the increasingly high population growth expected.

5) Improving the Investment Climate to Promote Growth and Development of MSMEs, Domestic Industries, and SMEs

Development always requires economic, human, and social capital. This capital is not provided solely by the government, but also requires support from the private sector in the form of investment. The Samarinda City municipal government is actively encouraging the attraction of private investment with regard to IKN projects. Expected investment is not limited to physical investment, but may also take the form of easy access to capital and capacity building so that home-grown industries and SMEs can upgrade their skills. The

government seeks to facilitate the granting of investment permits and to promote the growth and development of micro, small, and medium enterprises, home industries, and SMEs as drivers of the tertiary sector (service sector).

6) Developing New Tourist Attractions Utilizing Natural and Cultural Resources

The tourism industry is supported by a variety of facilities and services provided by local communities, entrepreneurs, governments, and local authorities, and the capacity of facilities, infrastructure, and human resources must be enhanced to meet the demands of tourists. Tourist comfort has a positive impact on the development of tourist destinations, and tourism is the socioeconomic foundation. Proper tourism development and management will improve the economy of the local community and impact the financial capacity of Samarinda City.

7) Increasing Local Revenue

An important step that local governments should take to increase local revenues is to calculate the actual potential of the locality's original revenues. PAD is a measure of a region's level of fiscal strength and level of regional independence; a higher PAD indicates a higher level of regional fiscal strength and regional independence. A systematic and reasonable method for calculating PAD potential is needed.

8) Optimizing Flood Management

Samarinda City's flooding issues need to be comprehensively identified by mapping the problem to a response plan. Samarinda City already has a Flood Management Master Plan, but this document needs to be improved and thoroughly implemented by involving stakeholders.

The current poor drainage system is one of the causes of flooding in Samarinda City. Improving the drainage system, including conducting a participatory review of the urban drainage master plan, is an important issue. Existing problems associated with the drainage system include 1) inadequate drainage of flood flows, 2) unknown volume of water flow from upstream to downstream, 3) lack of linkage between environmental drainage and urban drainage, and 4) need for climate resilient infrastructure development. Samarinda City also needs an integrated flood early warning system, and it is essential to develop flood early warning system tools that include risk maps, hazard monitoring and early warning services, communications media, and improved community response capacity. Urgent development of a community-based flood early warning system (EWS) integrated with the Disaster Resilient Villages Program and the Village Program on Climate Change.

9) Providing Basic Service Facilities and Infrastructure for Potable Water, Sewage, Solid Wastes and Environmental Drainage

The enhancement of basic drinking water services and sanitation (wastewater, solid waste, and environmental drainage) is critical because it directly affects the quality of human life and the environment. Meeting the need for adequate and safe drinking water improves the standard of living and health of the community, and proper sanitation prevents environmental contamination, especially contamination of raw water sources that can reduce the level of public health itself. Efforts to increase access to adequate drinking water include increasing drinking water production capacity, expanding coverage of drinking water services by water systems, and reducing leakage. In addition, efforts to increase access to wastewater services are also needed. This includes installation and repair of standardized septic tanks in homes

and residential areas and optimization of SPALD-T services. Efforts to increase access to waste management services would also include implementing waste reduction at the source.

10) Alleviating Slum Area Problems

Slum areas are generally associated with high levels of poverty and unemployment. Uncontrolled construction of buildings, high density, uninhabitable buildings and low quality of alms and infrastructure characterize slum areas. In some cases, eviction efforts simply move slums to new locations. Livable, productive, and sustainable urban settlements are conditions that the Samarinda City municipal government must achieve, and future steps include increasing access to infrastructure and basic services in urban slums and preventing the emergence of new slums.

11) Strengthening the City as a Smart City

A smart city is a city that utilizes human resources, social capital, and modern ICT infrastructure to achieve sustainable economic growth and quality of life through wise resource management by the government based on community participation. The application of the smart city concept under development in Samarinda City is expected to improve data management capabilities (map and database integration) as a basis for development, train human resources for a smart society, and become a controlled and integrated city. Support infrastructure connectivity between cities.

12) Overcoming Poverty and Unemployment

Poverty is one of the critical issues in Samarinda City, with 4.59% of Samarinda City residents classified as poor in 2019. Poverty can be caused by a lack of employment opportunities, financial strain on families, limited access to capital, and low levels of education. The open unemployment and underemployment rates in Samarinda City continue to increase, especially after the pandemic of the novel coronavirus infection.

13) Infrastructure and Transportation

Infrastructure development drives the economy, especially in the long-term. When addressing public transportation issues, it is important to pay attention to traffic issues. Many of the roads in Samarinda City are in an unrepaired condition, and efforts to maintain suitable roads are needed to ensure smooth traffic.

14) Managing Coronavirus Infections

Samarinda City has implemented a variety of policies to address the pandemic of novel coronavirus infection, including the following

a. Reform the management of hospitals and health centers for patients with new coronavirus infection
b. RT-based PPKM implementation
c. Overcoming novel coronavirus infection through social assistance
d. Development of integrated database for social assistance, integration with poverty data (social reform and economic recovery)
e. Online administrative service system (patient registration, land affairs registration, licensing, population, etc.)

15) Disaster Prevention and Management

Samarinda City has already prepared a Disaster Risk Assessment (KRB) document for 2018-2022, but has not updated its disaster management plan document. According to the KRB, after flooding, extreme weather events, landslides, droughts, and social conflicts are the next most common risks. There are 50 flood hazard sites in Samarinda City, spread across nine sub-districts. The highest number of flood hazard sites reached 9 in the Palaran area, followed by 7 each in Samarinda Ilir and Northern Samarinda City. The frequency and magnitude of flooding at each flood location has worsened over the years, and now almost all rainfall conditions cause immediate flood damage. In addition to flooding, landslides occur frequently in Samarinda City, and the National Disaster Management Agency (BNPB) reported that a total of 41 landslide incidents occurred in the city, killing three people, injuring two, and injuring 422 others.

(2) Samarinda City's Vision and Missions

The vision for the development of Samarinda City from 2021 to 2026 is as follows:

"Samarinda City as a Center of Civilization"

Samarinda City as a center of civilization consists of three foundations:

a. Reflection of national identity based on the four pillars of the state (NKRI, Panchasila, UUD 1945, and Binneka Tungal Ika). The concept of urban development is based on urban form and function, consisting of participation and mutual cooperation.

b. Realization of cities that are socially adaptable, economically productive, and environmentally friendly.

c. Aiming to create compact, information systems-based, SDGs-based cities that are smart and modern, with an emphasis on inclusive infrastructure, public transportation, and labor productivity in the broadest sense.

Based on these development visions, the development mission for Samarinda City from 2021 to 2026 was identified as:

a. Creation of a religious and culturally superior urban society.

b. A progressive, self-sustaining, democratic, and fair urban economy.

c. Achieve a government that is professional, transparent, accountable, and free of corruption.

d. Build a stable and up-to-date infrastructure.

e. Creation of a safe, comfortable, harmonious and sustainable urban environment.

The description of each mission is as follows:

Mission 1: Create a religious and culturally superior urban community.

It is expected to practice good religion with piety and obedience, produce quality human resources and integrity through educational development and community empowerment, and have talented people drive economic development, self-reliance, and welfare. The cultural community has a high spirit of unity and mutual cooperation. Mission 1 is to achieve a competitive quality of human resources in Samarinda City. Samarinda City will improve the health status of its people; improve access to and quality of education; improve youth and

sports performance; improve access and quality of life; protect women and children and gender equality; and enhance the protection, development and utilization of the local population.

Mission 2: Create a progressive, independent, democratic and just urban economy

Mission 2 aims not only to reduce poverty and unemployment, but also to achieve economic growth and economic equality. In achieving a progressive, independent, democratic, and equitable urban economy, Samarinda City will develop a tertiary industry, increase new entrepreneurship, increase investment and investment value, improve local fiscal independence, strengthen food security toward food independence, and enhance social welfare and employment opportunities.

Mission 3: Create a professional, transparent, accountable, and corruption-free government

Mission 3 aims to build a bureaucracy that is transparent, accountable, responsive, and effective. The government will promote improvements in the civil service system, bureaucratic reform, strengthen government governance, and enhance the capacity for social order, peace, and protection.

Mission 4: Create a stable, modern infrastructure

Mission 4 aims to create a strategic and integrated transportation system, supported by the stable use of roads, bridges, and land and river transportation system infrastructure. And it is the goal of Samarinda City to make rail transportation a public service.

Mission 5: Creation of a safe, comfortable, harmonious and sustainable urban environment

Mission 5 is to create strong and sustainable cities. A good city provides comfort and safety to its inhabitants. Samarinda City will be developed as a place of residence and as a buffer zone for IKN, creating a safe, comfortable, harmonious and sustainable urban environment. Strategies will be implemented to improve comfort and quality of the city, improve sanitation, enhance the quality of living conditions, reduce disaster and climate change risks, achieve and maintain livable housing and settlements, and integrate water resources infrastructure.

(3) Scenario for the Spatial Development of City of Samarinda City

Based on Samarinda City's condition as a buffer zone for IKN (the Capital City), the Samarinda City planning area is divided into three zones: northern, central, and southern. The regional scenarios to be implemented in each of these zones are presented below.

a. In the southern region, population growth is projected to be linear, limiting the rate at which large areas can be built.

b. Regional and national service centers will be developed in the Central region.

c. In the northern region, the population is projected to grow linearly, and development will proceed while maintaining priority on environmental functions.

16) Development of an activity center in Samarinda City

Spatial structure planning will focus on the hierarchical arrangement of residential and service centers and major infrastructure systems with a focus on linkages between centers. In dividing

the spatial structure pattern, a multi-level and multi-nuclear central structure pattern will be applied, taking into account the following points

a. The concept of stratification of bases more appropriately controls and distributes the excessive concentration of functions in urban centers.
b. The base hierarchy that is formed works to maximize base functionality, especially at the lowest levels.
c. Equitable development is evenly distributed down to the lowest level.
d. Lower-tier service centers can maximize their potential and minimize their dependence on higher-tier service centers.

The service centers are tiered to support key functions of Samarinda City as follows

a. National Activity Centers (PKN) are urban areas with the ability to offer international, national, or some statewide activities.
b. A city service center (PPK) is an economic, social, or administrative service center serving the entire city and the entire regional area.
c. An urban service subcenter (sub-PPK) is an economic, social, or administrative service center serving an urban subregion.
d. Environmental centers are centers of economic, social, or administrative services in urban residential settings.

Samarinda City is a national activity center (PKN) that develops and improves urban development functions as a center for the mineral processing industry and as a center for national growth. In the development of Samarinda City, the needs of the regional scale must be addressed. In addition, Samarinda City is an international gateway located in a border region. The national scale infrastructure includes sea and air transportation networks, and the APT Planoto Airport exists as a secondary scale collective airport development. PKN's activities are supported by a national scale distribution center for goods and services, and industrial processed products, located in the Samarinda City-Ur district, more precisely in Java Located in the village, PKN serves as the center of the provincial government.

17) City Center

The City's service center will have a regional service function, serving community needs and supporting community-scale activities at the upper levels. Existing development in Samarinda City is concentrated in the northern part of the city and requires a new urban service center for equitable distribution of services.

a) Urban Service Center 1

In the existing Samarinda City Municipal District, an activity center is located in the village of Bugis as a hub for government activities and municipal public services.

b) Urban Service Center 2

In the Palaran area, an activity center will be located in the village of Handil Bhakti as an urban-scale government center, and will serve as an office base and municipal government center.

c) Urban Services Sub-Center

The Urban Services Sub-Center provides the following urban service scale urban environmental facilities.

a. Trade and Service Facilities
b. Educational Facilities
c. Medical Facilities
d. Worship Facilities
e. Public Service Facilities

In order to support the city service centers, distribute activities evenly, and reduce the burden on the city center area, the City Service Sub-Centers (Sub PPKs) are divided into seven

Urban Services Subcenter 1 is located in Lapak Dalam in the Roa Janan Ilir district and will house activity centers including

f. City-Scale Trade Services
g. Office
h. Nationwide industry

Urban Services Subcenter 2 is located in Bantuas and Rawa Makmur in the Palaran District and will house activity centers including

i. Trade Services (Warehouse)
j. Nationwide industry
k. Regional transportation (ports and cargo/industrial terminals)

Urban Services Subcenter 3 is located in the Samarinda City Severán area and has an activity center in Baca Village as a hub for city-scale trade services.

The Urban Services Sub-Center 4 is located in the village of Air Putih in the Samarinda City Ulu district and will house activity centers including:

l. State government
m. Regional-scale trade services
n. Community-scale health services
o. Office
p. City-Scale Industries

The Urban Services Sub-Center 5 is located in the village of Macroman, Sambutan District, and will house activity centers including

q. City Hall Center
r. City-Scale Trade Services
s. Office

The Urban Services Sub-Center 6 is located in the village of Loa Bakun, Sungai Kunjan District and will house activity centers including

t. City-Scale Trade Services

u. Office

v. City-Scale Industries

Urban Services Sub-Center 7 is located in Gunung Rinangai Village, Sungai Pinang District, and will house activity centers including

w. City-Scale Trade in Services

x. Office

y. plantation agriculture

Urban Services Subcenter 8 is located in the village of Sungai Dama in the Samarinda City Ilir district and has a major activity center for urban-scale trade services.

18) Environment Center

Samarinda City has five environmental centers (PLs). Their service scale is smaller than the two service centers in the city. The Environmental Centers (PLs) are the environmental economic, social, and administrative service centers of the city. Samarinda City's environmental centers include the following.

a. Environmental Center 1 in Palaran District is the villages of Bantuas, Handil Bakti, Rawa Makmur, and Simpang Pasir.

b. Environmental Center 2 is in Bukit Pinang Village, Samarinda City Ulu District.

c. Environmental Center 3 is located in Lempaque, South Sempaja, and North Sempaja villages in the Northern Samarinda City district.

d. Environmental Center 4 is in Roa Bakun Village, Sungai Kunjan District.

e. Environmental Center 5 is located in Mugilejo Village and Sungai Pinang Dalam Village in Sungai Pinang District.

Thus far the compatibility between the Provincial Plans and Samarinda City Regional Middle-Term Development Plan and Spatial Plan were reviewed, and the City’s existing plans to be in sync with the respective plans at the Provincial level were found. The task now is to consider the unique conditions and challenges and to formulate the practical solutions and strategies to the urgent development issues at the city.

2.8.7 Living Environment

(1) Population and Housing

According to Samarinda City Regional Long-Term Development Plan 2005-2025, slum areas in Samarinda City are generally caused by increased trade and service activities around the riverbank. The arrangement of buildings in this area is irregular, and important river functions are lost in the area. In addition, building masses are lined up in proximity and do not meet residential comfort standards and basic health requirements.

The result is a variety of health problems, fire hazards, land issues and other unpleasant living conditions. The location and extent of slum areas in the mayor’s decree are shown below.

Table 2-122 Location and Extent of Slum Areas by Mayoral Decree

No.	Lokasi Location	Luasan(Ha) Area	Keterangan Description
(1)	(2)	(3)	(4)
1	Bantaran Sungai Karang Mumus(A1)Jl. Abdul Muthalib Jembatan S. Parman	90.62	Kumuh Slum
2	Sungai Karang Mumus(A2)Jl. S. Parman -Jl. PM Noor	202.25	Cukup Kumuh Quite Slum
3	Bantaran Sungai Karang Asam Kecil(B) Kel. Teluk Lerong	30.24	Cukup Kumuh Quite Slum
4	Bantran Sungai Karang Asem Besar©	50.20	Cukup Kumuh Quite Slum
5	Sistem Folder H Kecamatan Samarinda Ulu	2.50 13.05 25.88	Cukup Kumuh Quite Slum
6	Bantaran Sungai Mahakam(D) Kecamatan Samarinda Seberang	10.36	Cukup Kumuh Quite Slum
7	Lambung Mangkurat - Bandara Temindung(F) Kelurahan Pelita	30.70	Cukup Kumuh Quite Slum
8	Bantaran Sungai Mahakam Palaran (G) Kawasan Pengembangan Baru	51.36	Cukup Kumuh Quite Slum
9	Bantran Sungai Mahakam Selili€	32.02	Cukup Kumuh Quite Slum
	Total	539.18	

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

According to Samarinda City Regional Middle-Term Development Plan 2021-2026, the Samarinda City Government is implementing programs/activities to make slums and uninhabitable housing livable, with the aim of achieving clean water access and reduce the area of slums and uninhabitable housing.

Slum improvement programs continue to be promoted through both Samarinda City, East Kalimantan Province and the central government. This is evidenced by the announcement of Indonesia's National Plan “100% People's Access to Water Supply, 0% Urban Slum Areas, 100% People's Access to Sanitation”.

According to data from the Samarinda City Municipal Housing and Resettlement Office, there are eight slum areas that are the focus of settlement by the Samarinda City Government, especially on state-owned land and areas that legally violate spatial planning. Although the national target has not yet been reached, the program implemented by the Samarinda City government has shown significant results, as evidenced by the reduction of the slum area from 539.17 ha in 2016 to 38.22 ha in 2020. Therefore, the slum management programs that have been implemented to make Samarinda City a livable city are still being maintained.

Table 2-123 Area of Slum Settlement Areas 2017-2020

No.	Lokasi Location	2017 (ha)	2018 (ha)	2019 (ha)	2020 (ha)
1	Karang Mumus I	28.77	28.77	17.83	8.72
2	Karang Mumus II	25.79	25.79	22.00	10.23
3	Muara	5.97	5.97	0.84	1.02
4	Karang Asam	7.68	7.68	5.90	2.33
5	Keledang	3.50	3.50	0.52	0.00
6	Sungai Kapih	9.09	9.09	9.09	10.19
7	Mesjid	34.14	34.14	13.47	5.73
8	Kawasan Pengembangan Permukiman	18.39	18.39	0.00	0.00
	Total	133.33	133.33	69.65	38.22

Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

Uninhabitable housing is based on the inability to provide basic infrastructure that is suitable for human habitation. Slum management cannot be separated from the treatment of uninhabitable houses. Although various government such as from the central government to the Samarinda City government programs have been implemented to reduce the percentage of uninhabitable houses, as shown in the following table, records from the Samarinda City Housing and Settlement Office indicate that the number of uninhabitable houses has reached 15.94%.

Table 2-124 Percentage of Uninhabitable Housing 2017-2020

No.	Uraian Description	2017	2018	2019	2020	2021
1	Rumah tidak layak huni Uninhabitable house (%)	-	16.97	16.42	15.94	15.94

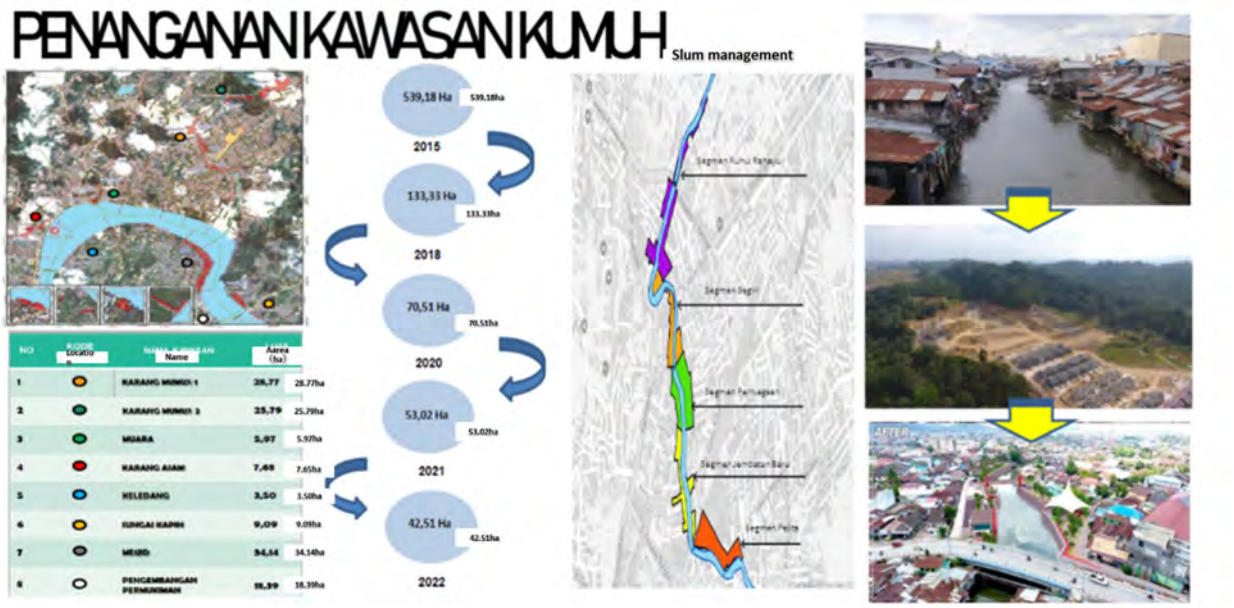
Source: Samarinda City Regional Middle-Term Development Plan 2021-2026

Regarding the provision of basic service facilities and infrastructure for the supply of drinking water, sewage, waste, and environmental drainage, the performance of drinking water services and sanitation (sewage, solid waste, and environmental drainage) is great important in this era because it directly affects the quality of human life and the environment. Meeting the need for important and safe drinking water improves the standard of living and the level of public health. In addition, good sanitation prevents environmental contamination, especially raw water sources, and can improve the level of public health itself. Efforts to improve access to safe drinking water include increasing drinking water production capacity, increasing drinking water pipeline coverage and reducing leakage. In addition, efforts to improve access to safe sewage should be undertaken as well. This includes the construction and repair of standardized septic tanks in residential areas and settlements and the optimization of SPALD-T services.

Slum is an area of a city that is densely populated and generally inhabited by the poor, and generally have high levels of poverty and unemployment. Irregular buildings, high density, buildings that do not meet requirements and the quality of facilities and infrastructure are characteristic of slum areas. Eviction efforts sometimes simply move slums to new locations. Livable, productive and sustainable urban settlements are conditions that the Samarinda City government must achieve. Future steps include improving access to basic infrastructure and

services in urban slums and preventing the emergence of new slums.

As shown in the following figure, according to a presentation by Samarinda City, slum areas are decreasing due to planned measures.



Source: Samarinda City presentation materials

Figure 2-160 Handling of Slums

(2) Water Supply

According to the Samarinda City Regional Long-Term Development Plan 2005-2025, a table of percentages for access to clean water on a population basis is also presented below. The population-based figure is also above 99%.

Table 2-125 Percentage of Population with Access to Clean Drinking Water (2009-2014)

No.	Uraian Description	2009	2010	2011	2012	2013	2014
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Jumlah penduduk yang mendapatkan akses air bersih Number of people with access to clean water	573,159	705,093	730,165	769,310	798,195	825,840
2	Jumlah penduduk Total population	607,675	727,500	755,630	781,184	805,688	830,676
3	Persentase penduduk berakses air bersih (%) Percentage of available clean water	94.32	96.92	96.63	98.48	99.07	99.42

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

A table of percentages on a household basis is also presented below. The figure for the household base also exceeds 99%.

Table 2-126 Percentage of Households with Access to Clean Drinking Water (2009-2014)

No.	Sumber Air Bersih Clean Water Supply	2009	2010	2011	2012	2013	2014
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Total Jumlah Rumah Tangga yang menggunakan air bersih Total number of households using water supply	145,131	178,608	178,669	190,913	204,477	218,859
2	Jumlah Rumah Tangga Total Number of Households	154	184,284	184,900	193,860	206,396	219,050
3	Persentase Rumah Tangga yang menggunakan air bersih (%) Percentage of available clean water	94.32	96.92	96.63	98.48	99.07	99.91

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

Development Policy Direction Phase III and Phase IV specify “sustainable use of water resources” and “urban drainage system development” and “provision of clean water to households”.

Sustainable use of water resources is considered important to conserve watersheds so that degradation due to lack of management does not occur. In particular, reforestation can conserve watersheds and reduce water pollution in rivers.

It is stated that the provision of clean water to households will ensure water distribution to areas where it is difficult to secure clean water at this time. It is also stated that the quality of basic infrastructure will be improved by ensuring that each household has equitable access to clean water.

According to the Samarinda City Regional Middle-Term Development Plan 2021-2026, access to clean water is a very important and major program in all regions, including Samarinda City. Samarinda City has a very large population, the largest in East Kalimantan Province, and the Samarinda City government must quickly and expeditiously provide access to clean water that is evenly distributed throughout the region.

With the increase in population and investment, the Samarinda City government has increased the number of networks through the Regional Water Company (PDAM: Perusahaan Daerah Air Minum) until 2020. As shown in the following table, as of 2017, the total network reached 1,387,254 units (SR: Sambungan Rumah) and the number of units reached 1,452,366 units after that. The increase in the network aims to expand the coverage of community water company services, reflected in the percentage of households with access to potable water: In 2017, the percentage of households with access to clean water reached 97.96% and in 2019 it reached 99.85%. The program was implemented to provide clean water services evenly throughout the region, considering that there are still some areas that are not continuously served by the regional water company.

Table 2-127 Percentage of Households with Access to Adequate Drinking Water 2017-2020

No.	Sumber Air Bersih Clean Water Supply	2017	2018	2019	2020	Satuan Unit
1	Jumlah instalasi PDAM(unit) Number of PDAMs	15	14	14	14	Unit
2	Jumlah Jaringan (SR) Number of Networks	1,387,254	1,400,808	1,436,685	1,452,366	Meter
3	Jumlah Rumah Tangga yang berakses Air Minum Layak Number of households with access to decent drinking water	149,397	156,278	159,497	159,614	Number of Networks
4	Persentase Rumah Tangga Percentage of households	97.96	98.63	99.85		Number of Networks

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

Documentation in Samarinda City: Environmental Carrying Capacity and Treatment Capacity (DDDTLH: Daya Dukung dan Daya Tampung Lingkungan Hidup) shows that water supply capacity exceeds environmental carrying capacity in most locations in Samarinda City when water is distributed by the regional water company and groundwater is the source.

According to Samarinda City Regional Spatial Plan 2014-2034, urban infrastructure includes the following items

a. Potable water supply system
b. Waste system
c. Sewage management system
d. Provision and utilization of infrastructure and facilities for pedestrian network
e. Drainage system
f. Fire protection system
g. Evacuation routes during disasters.

Regarding drinking water supply systems, piped network systems/non-piped networks and development plans include

a. Develop a citywide piped water system plan
b. Increase coverage of drinking water distribution service areas citywide
c. Improve the operation and maintenance of the water utility by incrementally upgrading the water pipeline network
d. Increase community and business/private world participation in the implementation of the development of clean water systems for drinking water.
e. Improve the management capacity and quality of clean water.

Drinking water supply system plans include

a. Benklin II IPA in Sempaja Selatan district, capacity 60 liter/sec.
b. IPA unit Pulau Atas in the Atas Island area, capacity 20 liter/sec.
c. Cendana Unit I IPA in Teluk Lerong Ulu village, capacity 300 liter/sec.
d. Tirta Kencana Unit II IPA in Bugis Village, capacity 50 liter/sec.
e. IPA Unit II Samarinda City Severan (Baqa Village), capacity 25 liter /sec.
f. IPA Unit II Palaran in Simpang Pasir Village, capacity 15 liter/sec.
g. Lempake IPA unit in Lempake Village, capacity 6 liter/sec.

h. Seriri IPA unit in Seriri Village, capacity 125 liter/sec.
i. Bendang I IPA unit in Loa Buah village, capacity 400 liter/sec.
j. Gunung Lipan IPA unit in Harapan Baru village, capacity 200 liter/sec.
k. IPA Sungai Kapi Unit located in Sungai Kapi Village, capacity 250 liter/sec.

The planned potable water supply by the final year will be approximately 9,118 liter/sec, enough to supply approximately 5,539,415 residents.

According to Samarinda City presentation materials, the City's strategic issues include: "2. Increasing the availability of livable housing and residential neighborhoods" and "5. Improving public health levels".

The 17 water treatment plants, each production capacity, and idle capacity in the Samarinda City are listed below. Although many of the locations have excess capacity, the following issues have been identified as water supply conditions, including the following

- PLN Basic electricity rate increase
- Rising prices of chemicals
- Hill/mountain topographic conditions affecting water distribution
- Very high equipment maintenance costs due to old equipment (pipe network and water meters over 25 years old)
- NRW (non-revenue water)/non-revenue water is highly valuable
- Customer delinquencies remain significant
- There are still many areas that the pipe network has not yet reached.
- Boosters are still missing to increase pressure into low pressure areas.
- Human resources are not yet optimal.
- Saltwater intrusion that occurs annually
- Out-of-procedure water use/illegal consumption remains high

Table 2-128 IPAs and Surplus Capacity in Samarinda City

No.	NAMA IPA Name of Water Purification Plant	IPA TERPASANG(L/S) IPA in Operation	PRODUKSI(L/S) Production Capacity	DISTRIBUS(L/S) Water Distribution	IDLE CAPACITY(L/S) Excess Capacity
1	Cendana	820	760.04	641.67	59.96
2	Tirta Kencana	290	287.40	258.44	2.60
3	Samarinda Seberang	125	122.00	120.47	3.00
4	Palaran	40	59.05	57.92	-19.05
5	Selili	125	120.08	113.71	4.92
6	Bengkuring	120	93.22	88.90	26.78
7	Pulau Atas	30	36.75	26.60	-6.75
8	Gunung Lipan	250	288.13	283.32	-38.13
9	Loa Bakung	300	311.46	258.03	-11.46
10	Gunung Lingai	150	161.11	159.40	-11.11
11	Bendang	400	411.25	407.07	-11.25
12	Bantuas	15	5.22	5.17	9.78
13	Pampang	10	8.27	8.07	1.73
14	Makroman	50	34.81	32.00	15.19
15	Sungai Kapih	200	119.73	117.70	80.27
16	Bukuan	10	10	6	4
17	Kalhol	250	250	130	120

Source: Samarinda City presentation materials

(3) Sewage and Drainage

According to the Samarinda City Regional Long-Term Development Plan 2005-2025, the development of urban drainage systems is part of the Smart City Principles on Smart Development, which include: normalizing the flow of major rivers; improving the dimensions of complementary. It can be done by improving the cross-sectional dimensions of structures, preparing drainage systems and infiltration wells in new private and locally managed residential areas, increasing community, business and private participation in the development of drainage systems and increasing the capacity and quality of drainage systems, and by addressing them, quality of river water in Samarinda City will be maintained as well.

As shown in the following table, Samarinda City continues to develop the percentage of its population that has access to clean drinking water and septic toilets.

As for toilets with septic tanks, the number increased 10.01% from 85.35% in 2009 to 95.36% in five years. It is projected to continue to increase in 2014 to 96.62%, an increase of 1.26% from 2013, for an average increase of 1.88% per year over the six-year period.

Similarly, the percentage of clean drinking water has continued to increase over the past five years, from 94.32% in 2009 data to 99.07% in 2013, which is an increase of 4.75%. The use of clean drinking water is projected to increase to 99.42% in 2014 and 0.35% from 2013, for an average increase of 0.5%/year over the six-year period.

Table 2-129 Percentage of Sanitized Housing in Samarinda City (2009-2014)

No.	Uraian Description	2009	2010	2011	2012	2013	2014
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Air minum bersih Clean Drinking Water	94.32	96.92	96.63	98.48	99.07	99.91
2	Jamban dengan tanki septik Toilet with Septic Tank	85.35	91.92	89.06	95.70	95.36	96.62

Source: Samarinda City Regional Long-Term Development Plan 2005-2025

According to the Samarinda City Regional Middle-Term Development Plan 2021-2026, the strategic challenge for Samarinda City is to optimize flood management by mapping response measures to flooding problems that have been solved only by improving drainage. Samarinda City already has a Flood Management Master Plan document, but this document needs to be improved and thoroughly implemented with the involvement of all stakeholders.

Drainage system improvements are one of the causes of flooding in Samarinda City. Improvements of the drainage system are essential, in part because of the participatory review of the City's drainage master plan. Existing problems associated with the drainage system include the inability to drain floodwaters, unawareness of upstream to downstream water flow, municipal drainage that is not connected to neighborhood drainage, and the need for climate resilient infrastructure. Referring to the problem of frequent urban flooding each year, Samarinda City needs a comprehensive flood early warning system (Flood early warning system tools including risk mapping, disaster monitoring, early warning services, communication media and community response capacity/capacity building). A community-based flood early warning system (EWS) should be developed and integrated with the Disaster Resilient Village Program and the Climate Village Program. In addition, awareness among citizens should be raised not to dump garbage directly into the river because this will lead to

increase in the amount of garbage disposed in the river.

According to Samarinda City Regional Spatial Plan 2014-2034 for sewage management systems included in urban infrastructure

a. Industrial and commercial sewage treatment systems
b. Individual and communal domestic sewage treatment systems

Industrial and commercial sewage treatment system plans include

a. Integrated IPAL Management in Palaran Industrial Area, Palaran District, Samarinda City Severan District, and Roa Janan Ilir District
b. Development of sewage treatment plant systems (IPAL) for trade and service activities in urban service centers and urban service sub-centers
c. Organize the development of sewage systems that increase participation of the community and the business/private world.
d. Improve the capacity and quality of sewage management.

Plans for individual and communal domestic sewage treatment systems include

a. The use of centralized sanitation treatment systems (off-site sanitation) for high-density or very high-density areas in the Samarinda City-Ur District.
b. The use of individual domestic sewage treatment systems shall be targeted to lowdensity residential areas in the Palaran, Roa Janan Ilir, Sambutan, and Northern Samarinda City districts.
c. Improvement of Waste Management Services, including the Jelawat Waste Disposal Facility (IPAL) and IPAL in the village of Karan Mumus, Samarinda City Ilir District
d. Improvement of the Fecal Waste Management Service (IPLT) with a treatment capacity of about 6 m^3/day in the village of Bukit Pinang, Samarinda City Ulu District.
e. Improvements in sewage management services include planning and management of sewage in densely populated areas in the villages of Rawa Makmur, Simpang Tiga, and Lower Janan Ilir in Palarang district; Sindang Sari in Sambutan district; and Mesjid in Samarinda City Seberang district.

The drainage network system consists of primary, secondary, and tertiary pathways at each level of the hierarchy.

The primary main channel is the main channel that passes through the waterway system that is directly connected and empties into the river in Samarinda City, i.e. JI.Cermai, Jl.

Secondary channels are a form of channel system in the form of ditches that are developed according to the road network system and pour into primary drainage channels.

Tertiary channels are a form of tertiary drainage network system consisting of ditches, small channels in residential areas including arterial street side channels.

Development and improvement of the drainage network system will be carried out by

a. Normalize the flow of major streams. This is done by creating a diversion channel/channel with side spillways and gates downstream to eliminate waste.

b. Improved cross-sectional dimensions for complementary buildings such as bridges and culverts.

c. New residential areas that are private or managed on a large scale should be prepared with drainage systems and infiltration wells.

d. Increase community and business/private sector participation in the implementation of wastewater system development.

e. Improve the capacity and quality of wastewater management.

Programs for the realization of the water resources network system include the following

a. Clean Water Master Plan Development Program

b. Maximize the use of the water resource network as a source of clean water supply for the community

c. Rehabilitation programs for existing water purification systems

d. Potential raw water source and spring conservation programs

e. Deep Groundwater Utilization Management Program

f. Mahakam as an effort to conserve program water resources to increase the effectiveness of watershed management

g. Protection and conservation of surface water resources and realization of cooperation on the use of water resources with various stakeholders

Program indicators for the realization of urban infrastructure development include

a. A program to expand integrated drinking water facilities and infrastructure services through the development of a master plan and water network map, with priority given to meeting the needs of households, services and industry, health, etc.

b. A phased restoration program for the drinking water pipe network and improved management of OP services.

c. Revise the drinking water network master plan and develop an integrated drinking water network system covering all areas of the city.

d. Programs to improve the functionality of IPAL and IPLT.

e. Separate domestic and out-of-home sewage management system development programs.

f. Develop a development plan for the urban drainage system in accordance with the Urban Drainage Master Plan

g. Plan for improvement of drainage systems in flood-prone areas through a phased and integrated system

h. A program to remove other utility networks that interfere with the City's drainage functions

2.8.8 Diversity

(1) Regional Regulation of Samarinda City No.2/2021 on the Samarinda City Regional Middle-Term Development Plan 2019-2026

19) Diversity Aspects in the Overview of Regional Condition in Samarinda City

a) Demographic Condition

Based on the results of the 2020 Population Census by BPS, the population of Samarinda City in 2020 reached 827,994 persons with a density of 1,153.19 persons/km^2. The population of Samarinda City has experienced rapid growth from year to year. The total female population is 405,370, and the male population is 422,624, dominated by the age group of 15-19 years. The number of productive-age population (15-64 years) in 2020 is 585,697, and the number of non-productive-age population (0-15 years and 65 years and above) is 242,297. This data provides an overview of the potential in Samarinda City, especially in improving regional productivity, as a higher productive age means more people involved in the production of goods and services, thereby increasing regional productivity.

b) Poverty

The poverty rate in Samarinda City has slightly decreased over the years, from 4.77% in 2017 to 4.76% in 2020.

Table 2-130 Poverty Rate Trends in Samarinda City

No	Uraian	2017	2018	2019	2020
1	Garis Kemiskinan (Rp/Kapita/bulan)	594.645	616.365	658.307	719.710
2	Indeks Kedalaman Kemiskinan (P1) (%)	0,68	0,49	0,57	0,72
3	Indeks Keparahan Kemiskinan (P2) (%)	0,13	0,09	0,11	0,21
4	Jumlah penduduk miskin (ribu orang)	40,01	39,23	39,80	41,92
5	Persentase penduduk di atas garis kemiskinan	95,23	95,41	95,41	95,24
6	Persentase penduduk miskin	4,77	4,59	4,59	4,76

Source: Regional Regulation of Samarinda City No.6/2021 on the Samarinda City Regional Middle-Term Development Plan 2019-2026

c) Human Development Index (HDI)

The Human Development Index (IPM) of Samarinda City is the highest in East Kalimantan Province (Kaltim), indicating that the quality of life in the capital is the best in the province. However, in 2020, the IPM of Samarinda City experienced a slight decrease, from 80.20 in 2019 to 80.11. This decrease also occurred in the overall IPM of East Kalimantan Province, which went from 76.61 in 2019 to 76.24 in 2020. When observed by gender, the IPM for males is higher than that for females.

d) Employment Opportunity

The development of the working population from 2017 to 2019 showed positive growth, but there was a decline in 2020. The trade sector was able to absorb the most labor, reaching

140,507 persons or equivalent to 35.69%. On average, each year, the trade sector could absorb 28-35 percent of the workforce in Samarinda City compared to 8 other job fields. The open unemployment rate in Samarinda City in 2020 reached 8.26, ranking as the third highest in East Kalimantan Province after Bontang City and Balikpapan City.

In terms of the Labor Force Participation Rate (TPAK), Samarinda City still stands at 63.16%, and in 2020, it increased to 65.16%, meaning that 65.16% of the population aged 15 and above in Samarinda City is economically active. This condition is excellent for supporting the investment climate, as over 50% of the productive age group in Samarinda City is actively involved in producing goods and services to support the regional economy.

20) Diversity Aspect in the Formulation of Vision, Mission, Goals, Targets, and Indicators of the Samarinda City Regional Middle-Term Development Plan 2019-2026

The aspect of Diversity in the Formulation of Vision, Mission, Goals, Targets, and Indicators of the Samarinda City Regional Middle-Term Development Plan 2019-2026 can be seen in the following table.

Table 2-131 Diversity Goals and Indicators in the Samarinda City Regional Middle-Term Development Plan 2019-2026

The goal/target related to the Diversity Aspect	Indicators of Goals related to Diversity Aspect
The realization of human resources quality in Samarinda City that has competitiveness.	IPM
Improved access and quality of life, protection for women and children, and gender equality.	IPG
Enhancing protection, development, and utilization of local culture.	Cultural Development Index.
Reducing poverty and unemployment.	poverty rate.
Increasing job opportunities.	The open unemployment rate.

Source: Regional Regulation of Samarinda City No.6/2021 on Samarinda City Regional Middle-Term Development Plan 2019-2026

(2) Regional Regulation of Samarinda City No.4/2015 on the Samarinda City Regional Long-Term Development Plan 2005-2025

21) Diversity Aspects in the Overview of Regional Condition in Samarinda City

a) Demographic Condition

According to the Central Statistics Agency of Samarinda City, the population in 2014 was 830,676 persons with a density of 1,157 persons/km². From the population recapitulation for the years 2006-2014, the highest population growth occurred in 2010, reaching 19.72 percent from 2009 when it was still 607,675 persons and increased to 727,500 persons. The population composition in Samarinda City is still dominated by males, as seen in the gender ratio in Samarinda City which reaches 107.27.

b) Poverty

Samarinda City experienced a decrease in the poverty rate from 5.21 percent (38,000 targeted households) in 2010 to 4.31 percent (32,900 targeted households) in 2011, showing a decrease of about 0.9 percent. In 2012, the poverty rate further decreased to 4.18 percent (32,800 targeted households). However, due to the increasing poverty line, reaching 460,975, it had a significant impact on the poverty rate, increasing by approximately 0.45 percent to 4.63 percent.

c) Employment Opportunity

In 2013, a total of 325,514 residents of Samarinda City were employed, with the majority falling in the age group of 30 to 44 years, reaching 58,257 individuals, and the age group of 25 to 29 years, reaching 44,143 individuals. Meanwhile, the age group of 60 to 64 years had the smallest minority employed, totaling 3,923 individuals.

Looking at the sectors of their employment, in 2013, the majority of residents worked in the trade, hotel, and restaurant sector, reaching 94,130 individuals. This is positively correlated with the high contribution of this sector in shaping Samarinda City's economic structure. Additionally, a significant portion of the population also worked in the services sector, totaling 74,356 individuals.

Unemployment in Samarinda City is relatively high, where, over the last five years from 2009 to 2013, the lowest open unemployment rate was in 2013, reaching 8.57 percent. The highest unemployment rate was in 2011, reaching 10.90 percent. In Samarinda City, the employment rate, when compared to the labor force, was 91.43 percent, with the majority being male workers, totaling 224,602 individuals out of 325,513 employed residents. The unemployment rate in Samarinda City, when compared to the unemployment rate in East Kalimantan Province, is slightly above it.

22) Regional Diversity Aspect in the Formulation of Vision, Mission, Goals, Targets, and Indicators of the Samarinda City RPJPD

The aspect of Diversity in the formulation of the Vision, Mission, Objectives, Targets, and Indicators of the Samarinda City Regional Middle-Term Development Plan 2019-2026 for is stated in the first Mission, which is “Realizing the Quality of Human Resources in Samarinda City Competitively Based on Law Enforcement.” This is reflected in the target to improve the quality of human resources with the indicator of increasing the Human Development Index (HDI) from 77.05 to 81.88. The quality of human resources reflects the welfare of the community by raising the standard of living, creating conditions for a quality life through human resource development.

(3) Draft of the Samarinda City Regional Long-Term Development Plan 2025-2045

1) Diversity Aspects in the Overview of Regional Condition in Samarinda City

a) Demographic Condition

Based on data from BPS (Statistics Indonesia), the population of Samarinda City in 2023 was recorded at 861,878 persons, with a population density of 1,200.39 persons per square kilometer. The population pyramid of Samarinda City is cone-shaped, with a wide middle section and a tapering top. This indicates that the population structure in Samarinda City is productive, with the 15-24 age group being more numerous than other age groups.

b) Regional Inequality

The Gini Ratio of Samarinda City experienced fluctuations from 2018 to 2023. In 2018, Samarinda City's Gini Ratio was 0.317, and it increased in 2019 to 0.341. However, in the following years until 2021, it continued to decrease, reaching 0.322. Although the Gini Ratio rose again in 2022, it dropped once more in 2023 to 0.323. The Gini Ratio in 2023 was below the national Gini Ratio of 0.388 but above the Gini Ratio of East Kalimantan Province, which was only 0.322.

c) Poverty

The poverty rate increased in 2019 from 4.59 percent to 4.76 percent in 2020, and it rose again in 2021 to 4.99 percent. However, the economic recovery since 2021 led to increased economic activity, creating more job opportunities and higher incomes for the community. As a result, the poverty rate decreased by 0.14 percent to 4.85 percent in 2022, and it further declined in 2023 to 4.81 percent, a drop of 0.04 percent compared to 2022.

d) Employment

The workforce in Samarinda City in 2023 totaled 428,519 persons, while 225,843 others were not part of the workforce. This results in a Labor Force Participation Rate (TPAK) of 65.49 percent for Samarinda City in 2023, meaning that nearly 65 percent of the population aged 15 and above in Samarinda City is economically active. This situation is highly favorable for supporting the investment climate, as more than 50 percent of the productive-age population in Samarinda City is actively involved in producing goods and services, contributing to the local economy.

The number of employed people in Samarinda City increased from 368,943 in 2018 to 395,479 in 2022. However, the unemployment rate also rose from 6.16 percent in 2018 to 6.78 percent in 2022. The largest employment sector was wholesale and retail trade, restaurants, and hotels, which employed 128,802 persons in 2022, accounting for 32.57 percent of the workforce.

e) Gender Inequality Index

Based on the above figure, the Gender Inequality Index (GII) of Samarinda City consistently decreased from 2018 to 2022, dropping from 0.41 in 2018 to just 0.20 in 2022. During this period, the GII of Samarinda City was always below the GII of East Kalimantan Province. Regarding female involvement in government institutions, there was a decline in the number of female government workers from 4,425 in 2018 to 4,173 in 2022.

2) Regional Diversity Aspect in the Formulation of Vision, Mission, Goals, Targets, and Indicators of the Samarinda City Regional Middle-Term Development Plan 2019-2026

The aspect of diversity in the formulation of the Vision, Mission, Objectives, Targets, and Indicators of the Samarinda City Regional Middle-Term Development Plan 2019-2026 for is emphasized in the first Mission, which is “Social transformation to create competitive Human Resources.” This mission is reflected in three key targets:

1) Realization of Adaptive Social Protection, with indicators including the Poverty Rate, Coverage of Employment Social Security Participation, and the Percentage of People with Disabilities Employed in the Formal Sector.
2) Realization of Beneficial Religious Life and Advanced Cultural Development, with indicators such as the Cultural Development Index and the Religious Harmony Index (IKUB).
3) Realization of Quality Families, Gender Equality, and an Inclusive Society, with indicators including the Family Development Index (iBANGGA) and the Gender Inequality Index (IKG).

(4) Regional Regulation of Samarinda City No.2/2014 on the Samarinda City Regional Spatial Plan 2014-2034 and Regional Regulation of Samarinda City No.7/2023 on the Samarinda City Regional Spatial Plan 2023-2042

In the Regional Spatial Plan of Samarinda City (RTRW) on both documents, there are no discussion regarding the aspect of diversity. This is because the Spatial Plan of Samarinda City focuses on spatial planning and land use regulations at the urban scale.

(5) Master Plan for the Development and Arrangement of Prioritized Cities: Samarinda City by BAPPENAS

The aspect of diversity in the "Master Plan for the Development and Arrangement of Prioritized Cities: Samarinda City" is embodied in the fifth mission, which is "Developing and enhancing the Mahakam River as a space for community activities and the face of Samarinda City." This is particularly emphasized in the second policy direction, which focuses on the development of institutional networks and community participation. More detailed information can be found in the following table.

Table 2-132 Diversity Aspect in the Master Plan for the Development and Arrangement of Prioritized Cities: Samarinda City by BAPPENAS

Strategy	Program	Activities
Preparing a skilled and qualified workforce through training, education, and capacity building in the creative economy	Enhancing the competencies and capacities of local workers	Training for increasing innovative and creative abilities
		Provision of training facilities in existing residential areas
Encouraging community participation through guidance and empowerment of community groups via a Community Action Plan supported by local government funding and corporate social responsibility (CSR)	Empowerment and increased community participation	Formation of cross-ethnic forums, village governments, and community leaders
		Training for SMEs and development of tourism villages

Source: Master Plan for the Development and Arrangement of Prioritized Cities: Samarinda City

CHAPTER3 Collecting and Analyzing Information on Legal Framework and Finances of Relevant Ministries and Agencies in Study Area

3.1 Laws on Capital Relocation and Existing Laws Related to New Capital's Surrounding Area

3.1.1 Review of Related Laws

The laws related to capital relocation and existing legal framework related to surrounding area of the New Capital City were reviewed. The followings show the outline of related laws and regulations.

Table 3-1 Summary of Relevant Laws and Regulations of IKN

No.	Related Law and Regulation	Year	Summary
1	Law No.3/2022 concerning National Capital City/ Undang-Undang Repbulik Indonesia Nomor 3 Tahun 2022 tentang Ibu Kota Negara	2022	Law regulating the formation of the capital of Nusantara, the specialization, location and scope of the region, as well as the master plan.
2	Law No.21/2023 concerning amendment to Law No.3/2022 / Undang-Undang Republik Indonesia Nomor 21 Tahun 2023 tentang Perubahan atas Undang-Undang Nomor 3 Tahun 2022 tentang Ibu Kota Negara	2023	This law stipulates the amendment of several provisions and/or explanations in Law No.3/2022 concerning the State Capital. The amendments regulated in this law include the expansion of land and sea areas, the authority of OIKN, spatial planning of IKN, funding, and budget management.
3	Government Regulation No.12/ 2023 concerning Business Licenses, Ease of Doing Business and Investment Facilities for Business Actors in the National Capital City / Peraturan Pemerintah Republik Indonesia Nomor 12 Tahun 2023 tentang Pemberian Perizinan Berusaha, Kemudahan Berusaha, dan Fasilitas Penanaman Modal bagi Pelaku Usaha di Ibu Kota Negara	2023	Government regulation aims to provide certainty and opportunity to business actors for accelerating the development of IKN.
4	Government Regulation No.17/2022 concerning Funding and Budget Management in the Framework of Preparation, Development and Relocation of the National Capital and the administration of the special regional government of the capital of Nusantara / Peraturan Pmerintah Republik Indonesia Nomor 17 Tahun 2022 tentang Pendanaan dan Pengeloaan Anggaran dalam Rangka Perisiapkan, Pembangunan, dan Pemindahan Ibu Kota Negara serta Penyelenggaraan Pemerintahan Daerah Khusus Ibu Kota Nusantara	2022	Government regulation describing the sources of funding and financial plans for the preparation, development, relocation, and the operation of IKN.
5	Presidential Regulation No.31/2023 on the Acceleration of the Development and Operation of Very Very Important Person Airport to Support the Capital City of Nusantara / Peraturan Presiden Republik Indonesia Nomor 31 Tahun 2023 tentang Percepatan Pembangunan dan Pengoperasian Bandar Udara Very Very Important Person untuk Mendukung Ibu Kota Nusantara	2023	Regulations describing the development of aviation infrastructure and the acceleration of the construction and operation of VVIP Airport to support the connectivity of IKN.
6	Presidential Regulation No.62/2022 concerning Nusantara Capital Authority / Peraturan Presiden Republik Indonesia Nomor 62 Tahun 2022 tentang Otorita Ibu Kota Nusantara	2022	Presidential Regulation stipulating the establishment of OIKN which is a ministry-level agency responsible for the preparation, development, and relocation of the capital.
7	Presidential Regulation No.63/2022 concerning the details of the master plan of the Capital City of Nusantara / Peraturan Presiden Republik Indonesia Nomor 63 Tahun 2022 tentang Perincian Rencana Induk Ibu Kota Nusantara	2022	Presidential Regulation that would be guidelines for all stakeholders in establishing policies to support the preparation, development, and relocation of the capital, preparing work plans, financing plans, and management of IKN.
8	Presidential Regulation No.64/ 2022 concerning the national strategic plan for the capital of Nusantara for 2022-2042 / Peraturan Presiden Republik Indonesia Nomor 64 Tahun 2022 tentang Rencana Tata Ruang Kawasan Strategis Nasional Ibu Kota Nusantara Tahun 2022-2042	2022	Presidential Regulation related to spatial planning for IKN Strategic Areas.

No.	Related Law and Regulation	Year	Summary
9	Presidential Regulation No.65/2022 concerning land acquisition and land management in the Capital City of Nusantara / Peraturan Presiden Republik Indonesia Nomor 65 Tahun 2022 tentang Perolehan Tanah dan Pengelolaan Pertanahan di Ibu Kota Nusantara	2022	Presidential Regulation describing methods of land acquisition and management of lands in IKN.
10	Regulation of the Head of the Nusantara Capital Authority No.12/2023 concerning Procedures for Land Administration in the Nusantara Capital / Peraturan Presiden Republik Indonesia Nomor 65 Tahun 2022 tentang Perolehan Tanah dan Pengelolaan Pertanahan di Ibu Kota Nusantara	2023	This regulation is designed to govern land administration in IKN, encompassing land acquisition, transfer of land rights, and land management including the associated sanctions.
11	Law No.17/2007 concerning National Long-Term Development Plan 2005-2025 / Undang-Undang Republik Indonesia Nomor 17 Tahun 2007 tentang Rencana Pembangunan Jangka Panjang Nasional Tahun 2005-2025	2007	The law stipulates National Long-Term Development Plan 2005-2025 that would be guidelines to realize national ideals and goals.
12	Government Regulation No.13/2017 concerning Amendments to Government Regulation No.13/2008 concerning National Spatial Plan / Peratran Pemerintah Republik Indonesia Nomor 13 Tahun 2017 tentang Perubahan atas Peraturan Pmerintah Nomor 26 Tahun 2008 tentang Rencana Tata Ruang Wilayah Nasional	2017	This regulation stipulates the National Spatial Plan, which contains policy directions and strategies for spatial development at the national level. It includes spatial planning and structural planning, determination of national strategic areas, guidelines for the use of space, and development strategies.
13	Presidential Regulation No.18/2020 concerning the National Medium-Term Development Plan 2020-2024 / Peraturan Presiden Indonesia Nomor 18 Tahun 2020 tentang Rencana Pembangunan Jangka Menengah Nasional Tahun 2020 – 2024	2020	This Presidential Regulation stipulates the National Medium-Term Development Plan (RPJMN) for the five-year period 2020-2024. It includes a national development strategy, general policies, strategic priority projects, inter-ministerial and inter-agency programs, regional development directions, and development priorities, as well as a macroeconomic framework that includes financial policy directions, including the regulatory framework and financing framework.
14	Presidential Regulation No.3/2012 concerning Kalimantan Island Spatial Plan / Peraturan Presiden Republik Indonesia Nomor 3 Tahun 2012 tetang Rencana Tata Ruang Pulau Kalimantan	2012	Presidential regulation related to the Kalimantan Island Spatial Plan which serves as an operational tool for RTRWN as well as a tool for coordinating and synchronizing development programs in Kalimantan Island. It includes spatial planning objectives, policies, strategies, spatial structure plans, spatial land use plans, spatial use strategies and directions, development management guidelines, coordination and supervision, and community participation for the development of the entire island of Kalimantan.
15	Regional Regulation of East Kalimantan Province No.1/2023 concerning East Kalimantan Province Regional Spatial Plan 2023-2042 / Peraturan Daerah Provinsi Kalimantan Timur Nomor 1 Tahun 2023 tentang Rencana Tata Ruang Wilayah Provinsi Kalimantan Timur Tahun 2023-2042	2023	This regulation stipulates East Kalimantan Province Regional Spatial Plan. It includes objectives of the plan, policies, provincial spatial planning strategy, spatial structure plan, spatial pattern plan, strategic area, spatial use strategy, and development management guidelines.
16	Regional Regulation of East Kalimantan Province No.15/2008 concerning East Kalimantan Province Regional Long-Term Development Plan 2005-2025 / Peraturan Daerah Provinsi Kalimantan Timur Nomor 15 Tahun 2008 tentang Rencana Pembangunan Jangka Panjang Daerah Provinsi Kalimantan Timur Tahun 2005-2025	2008	Provincial regulation that stipulates East Kalimantan Province Regional Long-Term Development Plan 2005-2025. It outlines the province's vision, mission, and strategic development directions for the next 20 years. It will serve as a foundational guideline for the formulation of East Kalimantan Regional Medium-Term Development Plan, which operates on a five-year planning cycle.
17	Regional Regulation of East Kalimantan Province No.8/2021 concerning the Amendments to Regional Regulation of East Kalimantan Province No.2/2019 concerning the East Kalimantan Province Regional Medium-Term Development Plan 2019-2023 / Peraturan Daerah Provinsi Klimantan Timur Nomor 8 Tahun 2021 tentang Perubahan atas Peraturan Daerah Nomor 2 Tahun 2019 tentang Rencana Pembangunan	2021	As for East Kalimantan Province Regional Medium-Term Development Plan 2019-2023, this regulation stipulates amendment of the plan because of changes of policies and economic priorities due to COVID 19.

No.	Related Law and Regulation	Year	Summary
	Jangka Menengah Daerah Provinsi Kalimantan Timur Tahun 2019-2023		
18	Presidential Regulation No.25/2024 concerning the Task Force for Accelerating Investment in the Nusantara Capital City / Keputusan Presiden Republik Indonesia Nomor 25 Tahun 2024 tentag Satuan Tugas Percepatain Investasi Di Ibu Kota Nusantara Degan Rahmat Tuhan Yang Maha Esa Presiden Republik Indonesia	2024	This Presidential Regulation establishes the Task Force for accelerating investment in the Nusantara Capital City. The Task Force is established to speed up the preparation, construction, relocation, and development of Nusantara as both the center of governance and a hub for Indonesia-centric economic growth. It is designed to meet the needs of business actors by simplifying the process for obtaining business licenses, facilitating ease of doing business, and offering investment facilities that span various sectors and authorities.
19	Government Regulation No.29/2024 concerning Amendments to Government Regulation No.12/2023 concerning the Granting of Business Licenses, Ease of Doing Business, and Investment Facilities for Business Actors in the Nusantara Capital City / Peraturan Pemerintah Republik Indonesia Nomor 29 Tahun 2024 tentang Perubahan Atas Peraturan Pemerintah Nomor 12 Tahun 2023 tentang Pemberian Perizinan Berusaha, Kemudahan Berusaha, Dan Fasilitas Penanaman Nodal Bagi Pelaku Usaha Di Ibu Kota Nusantara	2024	This Regulation introduces several changes on Government Regulation No.12/2023. The main points of changes include special regional taxes and levies in the capital, procedures for establishing business environment, expanding regulations on the foreign labor, providing incentives for businesses that satisfy conditions, and setting criteria for land use in terms of evaluation, rights, obligations, prohibitions, and transition within IKN.

Source: JICA Study Team

(1) Law No.3/2022 concerning National Capital City

Law No.3/2022 concerning the National Capital City sets out the regulatory framework for the IKN, including a comprehensive master plan encompassing its establishment, specialization, positioning, territorial scope and government administration. On 15 February 2022, the President approved this law, establishing the legal framework for IKN development in East Kalimantan. This law includes the contents to strengthen the governance of the National Capital and to realize national goals and the governance of the capital. It stipulates the content of plans to create a safe, modern and sustainable capital city.

(2) Law No.21/2023 concerning Amendment to Law No.3/2022

This law was enacted in Jakarta on 31 October 2023 by the President. This Act provides for the amendment of several provisions of Law No.3/2022. Amendments made by this law include changes to the scope of land and sea areas, the powers of the OIKN, spatial planning of the capital, funding and management of the revenue and expenditure budget. The OIKN is given special powers over central and local government affairs relating to the preparation, construction and relocation of the capital, as well as the operation of the Nusantara Capital Special Local Government. Funding for the preparation, construction and relocation of the capital city and the operation of the Nusantara Capital Special Local Government comes from a) the national budget, b) the Nusantara Capital Budget, and/or c) other legal sources in accordance with the provisions of the law.

(3) Government Regulation No.12/ 2023 concerning Business Licenses, Ease of Doing Business and Investment Facilities for Business Actors in the National Capital City

Government Regulation No.12/2023 was promulgated by the President in Jakarta on 6 March 2023. The regulation was prepared with due regard to the establishment of the IKN based on

the need to promote the development and growth of the capital city which is a priority initiative with strategic importance to the national economy. As a result, it provides for the introduction of specific policies on business licenses, ease of doing business and investment facilitation for companies engaged in financing investment, economic activities and the development and growth of the capital and partner regions. It also encompasses five regulatory scopes: business licenses, ease of doing business, facilities for capital investment, supervision, and evaluation. In addition, the regulation also provides for a 0% final income tax incentive on certain gross incomes for micro, small and medium enterprises (SMEs) in the capital, indicating the priority given to supporting SMEs, which constitute one of the pillars of the Indonesian economy. The implementation of the provisions of this regulation will be subject to periodic assessment by the OIKN every five years or as required, which will be coordinated by the OIKN with relevant ministries and agencies.

(4) Government Regulation No.17/2022 concerning Funding and Budget Management in the Framework of Preparation, Development and Relocation of the National Capital and the administration of the special regional government of the capital of Nusantara

This regulation was promulgated by the President in Jakarta on 18 April 2022. It was prepared for the implementation of the tasks stipulated in Law No.3/2022, which requires the enactment of regulations on the budget management for the preparation, development and relocation of the Capital and the management of the IKN. This regulation includes the following matters relating to the preparation, development and relocation of the capital city and the administration of OIKN.

1. Financial resources and financial planning for the preparation, development, relocation, and operation of IKN
2. Operational plans and budgets of OIKN, including revenue and expenditure plans according to the budget cycle
3. Execution of the budget and accountability of OIKN, including the execution of revenue, the execution of expenditure and accountability
4. Management of state-owned goods, including budgetary needs planning, procurement, acquisition, use, security, maintenance, evaluation, transfer, disposal, asset management, supervision and control from locally owned goods and assets
5. Asset management, planning, allocation, use, security, maintenance, disposal, asset management, supervision and control by OIKN

(5) Presidential Regulation No.31/2023 on Acceleration of Development and Operation of VVIP Airport to Support the Capital City of Nusantara

Presidential Regulation No.31/2023 on the Acceleration of the Development and Operation of the Very Very Important Person（VVIP）Airport to Support the National Capital was enacted in Jakarta by the central government on June 6. This presidential regulation is prepared with the consideration that expediting the development and operation of the VVIP Airport is essential to support the growth of the National Capital and enhance its connectivity. The objective of this regulation is to serve as a guideline for the implementation of the construction and operation of the VVIP Airport, thereby contributing to the development of infrastructure and connectivity in the National Capital. Within this Presidential Regulation, President also assigns the Minister of PUPR and the Minister of Transportation to accelerate the development and operation of the VVIP Airport. The execution of this development assignment

encompasses technical planning, land acquisition, construction implementation, operation, maintenance, and funding. The development assignment consists of four facilities, namely, the first being safety and security facilities, the second involving airside facilities such as runways, runway strips, runway end safety area, stop-way, clearway, taxiways, and parking aprons. The third encompasses landside facilities, including roads within the area, and the fourth involves access roads leading to the VVIP airport.

(6) Presidential Regulation No.62/2022 concerning Nusantara Capital Authority

This presidential regulation was ratified on April 18, 2022, by the President of the Republic of Indonesia. The formulation of this presidential regulation aligns with the mandate of Law N0.3/2022 regarding the national capital. It specifically stipulates the establishment and role of OIKN. The OIKN is an institution equivalent to a ministry, tasked with responsibilities related to the preparation, development, and relocation of the National Capital, as well as the administration of the Special Administrative Region of the National Capital.

(7) Presidential Regulation No.63/2022 concerning the details of the master plan of the Capital City of Nusantara

This presidential regulation was enacted on April 18, 2022, by the President of the Republic of Indonesia, and officially promulgated on the same date by the Minister of Law and Human Rights. This presidential regulation specifically stipulates detail Master plan for IKN. in Article 7 paragraph (4), aligning with the mandate of Law No.3/2022. This regulation serves as a guideline for all relevant parties in establishing policies, developing work plans, and financial plans that support the preparation, development, and relocation of the National Capital City, as well as the administration of the Special Region of the Nusantara Capital.

(8) Presidential Regulation No.64/ 2022 concerning the national strategic plan for the capital of Nusantara for 2022-2042

Presidential Regulation No.63/2022 aligns with the mandate of Law No.3/ 2022 regarding the national capital. It specifically stipulates in Article 15 paragraph (2) on necessitating the establishment of a presidential regulation for Spatial Planning for IKN 2022-2042. This regulation addresses the following:

- Coverage of the national strategic area of the IKN.
- Roles and functions of the spatial planning plan for the National Strategic Area of the IKN.
- Objectives, policies, and spatial planning strategies for the National Strategic Area of the IKN.
- Structural spatial plans for the National Strategic Area of the IKN.
- Spatial pattern plans for the National Strategic Area of the IKN.
- Strategic areas within the National Strategic Area of the IKN.
- Guidelines for spatial utilization in the National Strategic Area of the IKN.
- Guidelines for controlling spatial utilization in the National Strategic Area of the IKN.
- Management of the National Strategic Area of the IKN.
- The role of the community in spatial planning for the National Strategic Area of the IKN.
- Timeframe and review of the National Strategic Area of the IKN.

(9) Presidential Regulation No.65/2022 concerning land acquisition and land management in the Capital City of Nusantara

Presidential Regulation No.65/2022 was enacted on April 18, 2022, by the President, and officially promulgated on the same date by the Minister of Law and Human Rights of the Republic of Indonesia. This regulation stipulates necessary condition on land acquisition and land management taking into consideration the following aspects:

1. In the context of executing preparations for the development and relocation of the National Capital, as well as the administration of the Special Administrative Region of the National Capital, it is essential to regulate land acquisition and land management.
2. Regulations regarding land acquisition and land management in the National Capital should consider the interests of land rights for the community in the National Capital region.
3. Provisions concerning land acquisition and land management in the National Capital, as stipulated in Law No.3/2022, need to precisely regulate their conditions to ensure effective, efficient, and accountable implementation.

(10) Regulation of the Head of the Nusantara Capital Authority No.12/2023 concerning Procedures for Land Administration in the Nusantara Capital

This regulation was enacted in Jakarta on August 28, 2023, by the Head of OIKN, and promulgated in Jakarta on September 11, 2023, by the Ministry of Law and Human Rights of the Republic of Indonesia.

This regulation is designed to govern land administration in the Nusantara Capital, encompassing land acquisition, transfer of land rights, and land management, including the associated sanctions. Additionally, this regulation is formulated with the consideration of providing legal certainty and supporting ease of investment in the acquisition, maintenance, management, transfer, supervision, and control of land rights in the Nusantara Capital area. This regulation includes specific provisions on:

1. Land Acquisition: Detailing the processes and requirements for acquiring land within the Nusantara Capital, ensuring that all procedures are transparent and equitable.
2. Transfer of Land Rights (HAT): Outlining the legal mechanisms for transferring land rights, including conditions under which land rights can be transferred and the documentation required to facilitate such transfers.
3. Land Management: Providing guidelines for the effective management of land resources, including sustainable land use practices and the responsibilities of landholders.
4. Sanctions: Specifying penalties and corrective measures for non-compliance with land administration regulations, ensuring adherence to the established procedures and policies.

The regulation also aims to enhance investment facilitation by:

- Streamlining Procedures: Simplifying the steps involved in land acquisition and management to attract domestic and international investors.
- Providing Legal Certainty: Offering clear and consistent legal frameworks to protect the rights of investors and landholders.
- Promoting Sustainable Development: Ensuring that land use within the Nusantara Capital aligns with environmental sustainability goals and supports long-term urban planning strategies.

By implementing these comprehensive measures, the regulation seeks to create a stable and attractive environment for investment, fostering economic growth and development in the Nusantara Capital.

(11) Law No.17/2007 concerning National Long-Term Development Plan 2005-2025

The National Long-Term Development Plan was prepared by BAPPENAS and ratified into law by the President of the Republic of Indonesia on February 5, 2007. The plan is an articulation of the objectives behind the establishment of the Indonesian State Government, as outlined in the Preamble of the 1945 Constitution of the Republic of Indonesia. These objectives include safeguarding the entire nation and the entire Indonesian bloodline, advancing general welfare, enlightening the life of the nation, and contributing to the global order based on independence, eternal peace, and social justice. It constitutes a formulation of the vision, mission, and direction of National Development. Furthermore, the plan is a macro-political planning document with a 20-year perspective, encapsulating the vision, mission, and long-term development direction. It subsequently serves as a guide for the formulation of Regional Medium-Term Development Plans every five years, Government Work Plans, or as a reference for preparing the Revenue and Expenditure Budget of the State for the first year of the subsequent President's term.

Additionally, the plan is established with the intention of providing guidance and serving as a reference for all components of the nation (government, society, and business sector) in realizing national aspirations and objectives. This is in alignment with the collectively agreed-upon vision, mission, and development direction, ensuring that all development efforts are synergistic, coordinated, and mutually reinforcing within a unified framework of attitudes and actions.

(12) Government Regulation No.13/2017 concerning Amendments to Government Regulation No.13/2008 concerning National Spatial Plan

Government Regulation No.13/2017 was formulated by the Government of the Republic of Indonesia, then approved by President on April 7, 2017. It was subsequently promulgated into law as a government regulation by the Minister of Law and Human Rights of the Republic of Indonesia on April 12, 2017. This regulation was prepared to amend Government Regulation No.26/2008 concerning the national spatial plan. The need for this amendment arose due to shifts in national policies and the dynamics of national development, which have influenced the spatial arrangement of the national territory, necessitating a reevaluation of the national spatial plan. The amendment involves the modification of at least 44 articles, the addition of 4 new articles, and the removal of 4 articles. Additionally, changes are observed in the annex, primarily affecting alterations to the Spatial Structure, Land Use Plan, designation of National Strategic Areas, and indications of the Five-Year Main Program.

(13) Presidential Regulation No.18/2020 concerning the National Medium-Term Development Plan 2020-2024

Presidential Regulation No.18/2020 was formulated by the Government of the Republic of Indonesia, then officially endorsed by President on January 17, 2020. It was subsequently promulgated into law as a presidential regulation by the Minister of Law and Human Rights on January 20, 2020.

This presidential regulation on the National Medium-Term Development Plan is an

elaboration and continuation of the mandate outlined in Law No.17/2007 regarding the national long-term development plan for the years 2005-2025. It serves as an implementation of the vision, mission, and programs of the President resulting from the 2019 General Election.

The National Medium-Term Development Plan encompasses national development strategies, general policies, Strategic Priority Projects, programs of Ministries/Agencies, cross-Ministry/Agency initiatives, directions for regional and cross-regional development, Development Priorities, and a macroeconomic framework providing a comprehensive overview of the economy, including fiscal policy directions in the form of regulatory and funding frameworks that are indicative in nature. Moreover, the plan functions to:

- Serve as a guide for Ministries/Agencies in formulating their Strategic Plans
- Provide material for the preparation and adjustment of Regional Medium-Term Development Plans, considering the tasks and functions of local governments in achieving National targets outlined in the National Medium-Term Development Plan;
- Serve as a guide for the Government in formulating the Government Work Plan;
- Serve as a fundamental reference for monitoring and evaluating the implementation of the National Medium-Term Development Plan;
- Act as a reference for the public to participate in the implementation of national development.

(14) Presidential Regulation No.3/2012 concerning Kalimantan Island Spatial Plan

This Presidential Regulation No.3/2012 was endorsed on January 5, 2012. It was formulated based on Article 21 paragraph (1) of Law No.26 of 2007 regarding spatial planning and the provisions of Article 123 paragraph (4) of Government Regulation No.26 of 2008 concerning the National Spatial Plan. It necessitates the establishment of a Presidential Regulation regarding the Kalimantan Island Spatial Plan. The Kalimantan Island Spatial Plan functions as an operational tool of the National Spatial Plan and a means of coordinating and synchronizing development programs in the Kalimantan Island region. Furthermore, this Kalimantan Island Spatial Plan serves as the basis for the formulation of provincial, regency, and city spatial plans within the Kalimantan Island.

(15) Regional Regulation of East Kalimantan Province No.1/2023 concerning East Kalimantan Province Regional Spatial Plan 2023-2042

Regional Regulation of East Kalimantan Province No.1/2023 was drafted by the Government of East Kalimantan Province, formally approved by the Governor of East Kalimantan on April 28, 2023. This regional regulation is formulated considering changes in national and regional policies, and the dynamics of national and regional development have influenced the spatial planning of the provincial area. Hence, a review and revision of the previous provincial spatial plan, which was established as Regional Regulation No.1/2016 concerning the East Kalimantan Province Regional Spatial Plan 2016-2036, is deemed necessary. Additionally, the Coastal and Small Islands Zoning Plan needs to be integrated into the Provincial Spatial Plan, following the mandate of Law No.6/2023 concerning Job Creation. The objective of this regional regulation is to create an advanced, safe, comfortable, sustainable, and environmentally friendly space to establish a center for Green Industry, agriculture, marine and fisheries, mining, and the development of the National Capital Integrated Coastal Area (IKN). Furthermore, this regulation can serve as the basis for the formulation of regency and city spatial plans and other detailed planning in East Kalimantan Province.

(16) Regional Regulation of East Kalimantan Province No.15/2008 concerning East Kalimantan Province Regional Long-Term Development Plan 2005-2025

This Regional Regulation was approved by the acting Governor of East Kalimantan on October 29, 2008. This regional regulation is formulated as the basis for the preparation of the East Kalimantan Provincial Medium-Term Development Plan 2005-2025, considering Law No.17/2007 concerning the National Long-Term Development Plan 2005-2025. According to the regulation, the plan needs to be a guidance in determining the comprehensive direction and development priorities, which will be implemented gradually to achieve a just and prosperous society. The plan details the vision, mission of development, strategies, and policy directions along with scenarios and stages of regional development in East Kalimantan Province. Furthermore, the plan serves as the basis for the preparation of the Regional Medium-Term Development Plan and the Regional Government Work Plan for regencies and cities in the province.

(17) Regional Regulation of East Kalimantan Province No.8/2021 concerning the Amendments to Regional Regulation of East Kalimantan Province No.2/2019 concerning the East Kalimantan Province Regional Medium-Term Development Plan 2019-2023

This Regional Regulation was formulated by the Regional Government of East Kalimantan Province and approved by the Governor of East Kalimantan on December 27, 2021. This regional regulation replaces the previous regulation, namely Regional Regulation No.2/2019 concerning the East Kalimantan Province Regional Medium-Term Development Plan 2019-2023, due to three main reasons:

1. Changes in national policies, particularly the issuance of Presidential Regulation No.18 of 2020 concerning the National Medium-Term Development Plan (RPJMN) for the years 2020-2024, which includes the decision to relocate the national capital to East Kalimantan.
2. The issuance of the Ministry of Home Affairs Regulation No.90 of 2019 concerning Clarification, Codification, and Nomenclature of regional development and finance planning, effective from 2021.
3. COVID-19 pandemic caused changes in economic priorities as well as social changes that have implications for the well-being of the community.

(18) Presidential Regulation No.25/2024 concerning the Task Force for Accelerating Investment in the Nusantara Capital City

Presidential Regulation No.25/2024 was enacted aiming for the strategic acceleration of investment in the IKN. It reflects a concerted effort to foster economic growth and streamline governance in this major national project. The regulation describes the establishment the Task Force responsible for driving investment and ensuring smooth coordination across sectors and regulatory bodies. This task force is pivotal in facilitating the transition and development processes in Nusantara, aligning with Indonesia's broader goals of sustainable and inclusive economic progress. This regulation focuses on speeding up the preparation, construction, relocation, and development of Nusantara as Indonesia’s New Capital, serving as both a center of governance and a hub for Indonesia-centric economic growth. It aims to address the needs

of businesses by streamlining the process for obtaining permits, facilitating ease of doing business, and providing investment incentives that span multiple sectors and authorities.

(19) Government Regulation No.29/2024 concerning Amendments to Government Regulation No.12/2023 concerning the Granting of Business Licenses, Ease of Doing Business, and Investment Facilities for Business Actors in the Nusantara Capital City

Government Regulation No.29/2024 revises several provisions on incentives of investment from Government Regulation No.12/2023. Among the key amendments are the simplification of the business license application process, aimed at reducing bureaucratic hurdles and accelerating approval timelines for investors. The regulation also introduces incentives, including financial aid and tax benefits, to attract both local and international investments. Furthermore, it highlights the necessity of cross-sectoral coordination among government agencies to ensure a unified approach in supporting businesses. It aims to create a more conducive environment for business activities in IKN, fostering economic growth and infrastructure development. By tackling regulatory challenges and enhancing support for entrepreneurs, this regulation seeks to facilitate the successful establishment of Nusantara as a dynamic capital city.

3.1.2 Analysis of Challenges on Regulations related Capital Relocation and Surrounding Areas

Based on reviews of the regulations above, consistency and challenges on regulations regarding the development of IKN and surrounding areas were considered from the viewpoints of regional development, spatial planning, and land acquisition and management.

(1) Analysis of Challenges on Regional Development Direction

According to the instructions stated in the IKN planning, there is a need for synergy regarding the strategic functions of each TriCity region at the regional level. For instance, according to Presidential Regulation No.63/2022 on the Detailed Masterplan of Nusantara Capital City, Samarinda City is intended to be a hub for low-carbon energy, sustainable energy, sustainable mining, coal gasification, as well as tourism. However, Samarinda City is listed as being covered by the "Special Provisions on Spatial Planning for Mineral and Coal Mining" in Regional Regulation No.1/2023 on the East Kalimantan Spatial Plan 2023-2042, which gives holders of mining permits full access to conduct explorations, feasibility studies, and mining operations. While this is going on, in the urban planning and development presentation by Samarinda City, the city is envisioned to play a role as a Partner City of IKN, serving as a regional trade center, residential area, tourism zone, and industrial and national-scale warehousing and logistics.

Balikpapan City, on the other hand, will improve its position as an economic superhub in inter- and intra-regional trade flows as it is classified in the Law No.3/2022 as a logistics hub and provider of shipping services for import- and export-oriented sectors. A petrochemical cluster will be developed in Balikpapan City, helping to broaden the range of products available, from upstream oil and gas to diverse downstream petrochemical derivatives. However, according to the city's own plans, in addition to oil and gas, Balikpapan City is also envisioned as an

industrial metropolis, covering activity in the agricultural, construction, wood, and transportation industries. Therefore, it is crucial to coordinate the planning and development efforts in these three cities. Through the division of duties among the federal government, the provinces, the regencies/cities, and OIKN, this is a crucial component in achieving coordination and effective service delivery. All parties involved in this integrated planning and development process must work together to achieve higher results and impacts, particularly in terms of high economic growth.

(2) Analysis of Challenges on Regional Development Plan and Spatial Plan

According to the regulations and legislation pertaining to IKN, all spatial plans for the areas surrounding IKN are required to be updated and aligned with reference to the IKN spatial planning. On the other hand, it was found that existing plans have not sufficiently reflected the contents of IKN development plans based on the review of existing regulations, policies and plans in Chapter 2, 3, and 4. As of September 2024, East Kalimantan Province, Balikpapan City, and Samarinda City are updating the Regional Long-Term and Medium-Term Development Plans. It would be essential to appropriately reflect the contents of IKN development plans into those regional development plans as well as spatial plans for related municipalities.

(3) Analysis of Challenges on Land Acquisition and Land Management

The government of Indonesia has been considering the positioning and functions of OIKN. It would be needed to be continuously develop legislations on land acquisition and land control in IKN, according to the positioning of OIKN. If the OIKN will take a role of local municipality, the consideration and elaboration of legal framework and implementation structure on land control in IKN will be essential. Based on Presidential Regulation No.65/2022 concerning land acquisition and land management in the IKN, land acquisition must still consider the land rights of the community and indigenous peoples. It requires synergy between local governments and the authority regarding land control to prevent social conflicts.

3.2 Review of Data on Environmental and Social Considerations

Based on IKN Strategic Environmental Assessment document (Kajian Lingkungan Hidup Strategis/KLHS), the environmental and social challenges that can be identified are as follows.

3.2.1 Issues of Forest Degradation and Threats to Biodiversity

(1) Land Type and Forest Area in IKN

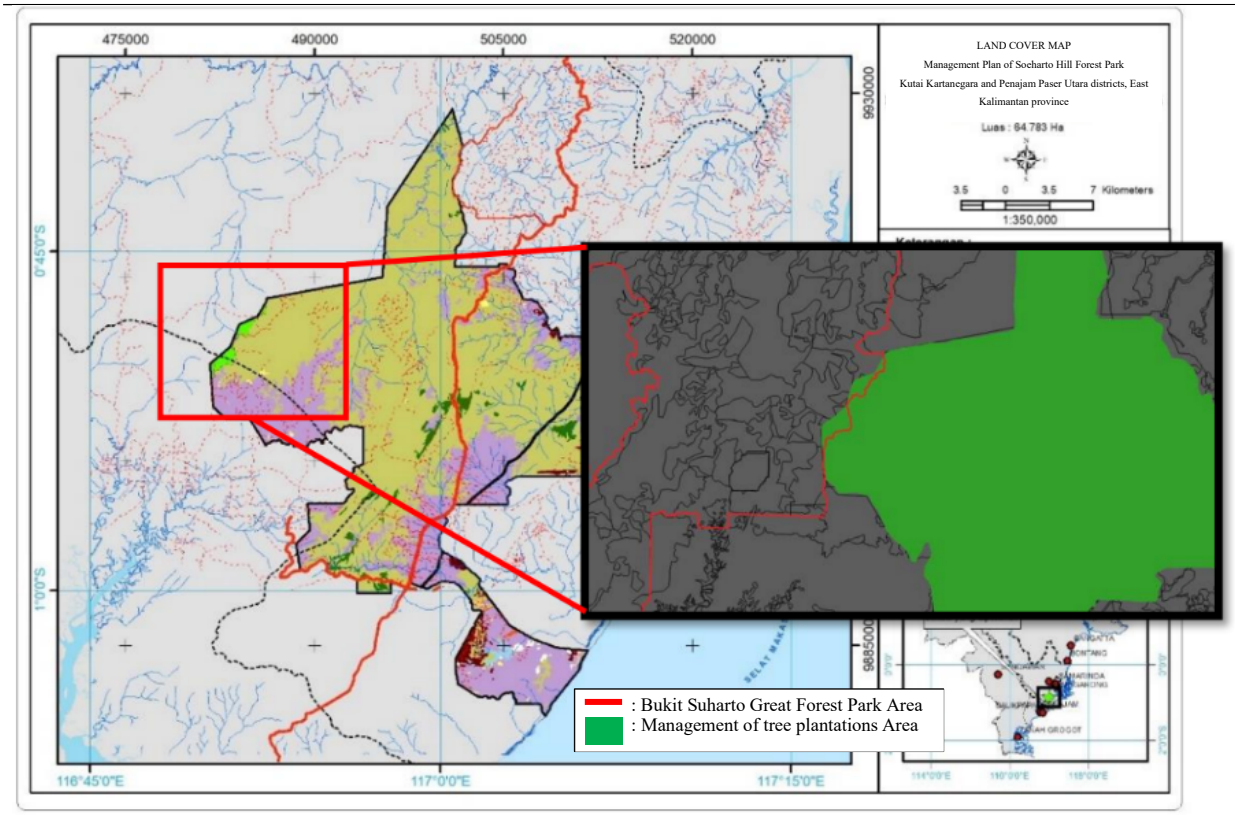
Kalimantan's tropical forests are distinctive and include several types of ecosystems. In general, natural tropical forests in Kalimantan include lowland rainforests, wetlands, heath forests, karst landscapes, coastal forests, intertidal wetland forests, mangrove forests, and ecosystems between mangrove and wetland forests. Of these various types of ecosystems that make up tropical forests, lowland rainforests are the richest in terms of plant species diversity.

(2) Forest Degradation in IKN

The IKN area includes production forests, protected forests, and other land use areas. There are several permits and overlapping permits in the context of mining areas and between different permits. Some mining permit areas and areas open for mining activities encroach into the Bukit Soeharto Great Forest Park, a protected forest area within IKN. Similarly, with respect to human settlements, several residential areas and even village halls are located within the forest area.

Within Bukit Soeharto Great Forest Park, there are vacant lots and abandoned mining sites that have been left without proper reclamation. In addition, formal legal permits have been granted without adequate consideration of environmental factors. For example, mining permits have been issued in production forests under the Forest Borrowing System for Coal Mining.

There are also several illegal mining activities that have escaped attention and legal action. Duplication of forestry permits is also a concern, as the industrial plantation forest permit overlaps with the Bukit Soeharto Great Forest Park. This situation raises concerns about potential environmental impacts and the need for appropriate environmental assessment and mitigation measures in such areas. The following figure shows an example of overlapping forest use permits for the Bukit Soeharto Great Forest Park and for the management of tree plantations.



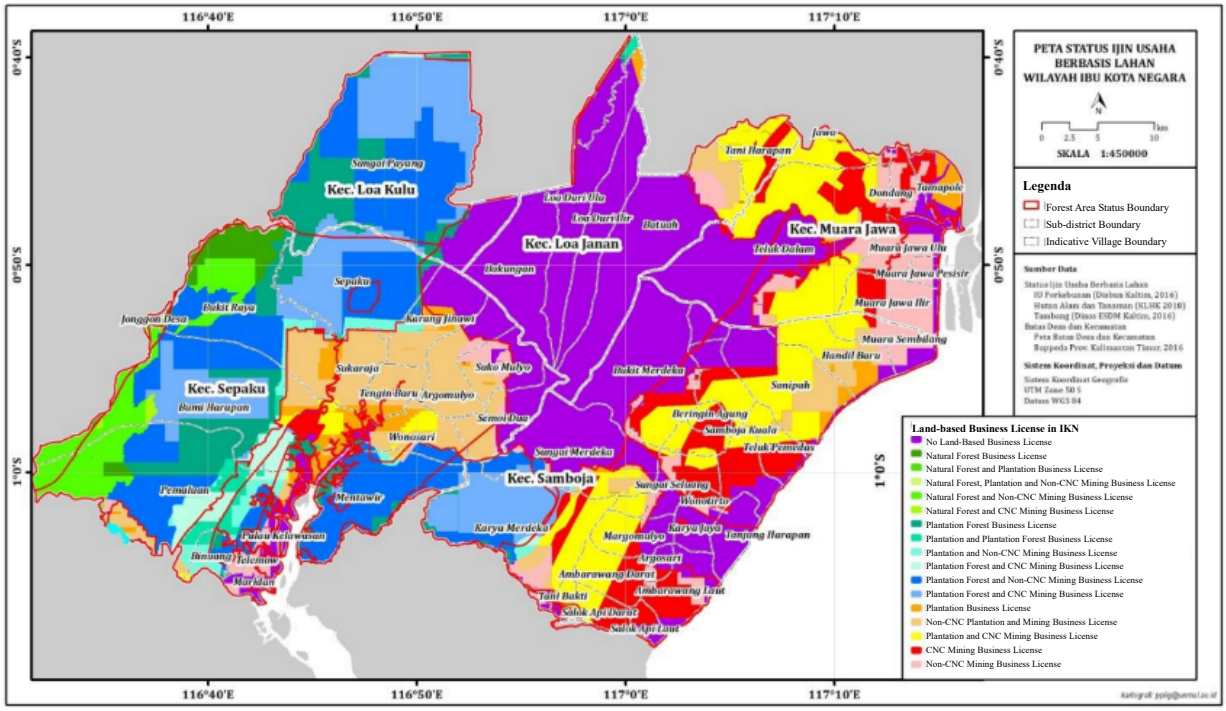
Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-1 Map of Overlapping Forest Use Permits for Bukit Soeharto Great Forest Park and Plantation Forest Management

This situation is certainly unfavorable from many perspectives. Currently, forest area management capacity needs to be improved, both in terms of commitment to and knowledge of area management. Current problems in the field include permits that overlap with other permits and permits in areas where they should not be granted. Therefore, a reorganization of permits in the IKN area is needed.

The development of Samarinda City and Balikpapan City, coupled with the numerous mining concessions in the area since the early 2000s and the opening of access to the forest area, has put the area under increasing pressure due to population occupation. The figure below shows the status of land-based business licenses in the IKN region. With easier access, the Bukit Soeharto Great Forest Park was opened up and its management subsequently weakened. As a result, people were free to clear land, plant cash crops, and take control of large tracts of land. This can be widely observed in the eastern part of Bukit Soeharto Great Forest Park.

The main threats to the various types of lowland rainforest ecosystems within the IKN boundaries include forest fires, illegal logging, land occupation by both communities and companies for small-scale agriculture and palm oil plantations, and mining concessions.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-2 Land Business Licensing Status in IKN

(3) Threats of Biodiversity

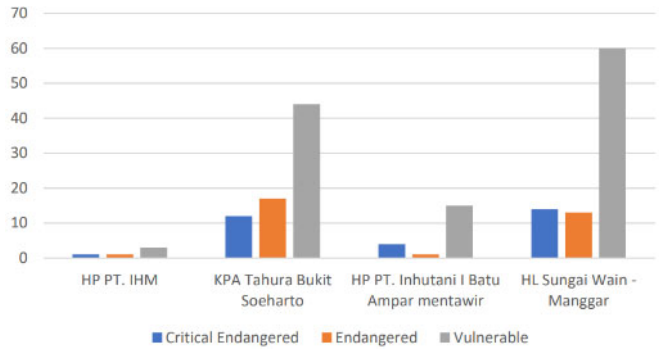
1) Biodiversity of ecosystems

The diversity of ecosystems in and around IKN consists of marine ecosystems, limestone ecosystems, semi-terrestrial ecosystems, and terrestrial ecosystems. Specifically, semi-terrestrial ecosystem diversity includes mangrove ecosystems and riparian ecosystems, while terrestrial ecosystem diversity includes lowland ecosystems and submontane ecosystems. The lowland Dipterocarpus rainforest ecosystem is the dominant vegetation type in the IKN area. Additionally, coastal and riparian vegetation is still found in the IKN area, although it covers less than 1% of the total area.

2) Plant

Biodiversity of tree species in and around IKN is distributed in several areas such as Tahura Bukit Soeharto, PT. IHM Production Forest, PT. Inhutani I Batu Ampar Mentawir Production Forest, Sungai Wain-Manggar Protected Forest, Teluk Balikpapan region. The species are distributed in several regions such as the Mahakam Delta. The diversity of plant species is based on the characteristic vegetation of the Kalimantan ecoregion. These vegetations include mangrove vegetation. Protected plant species in and around IKN under the Minister of Environment and Forestry Regulation No.106/2018 include Castanopsis argentea and Vatica javanica. Based on the threat status according to the IUCN Red List, the Tahra Bukit Soeharto Conservation Area has the highest number of endangered species, and the Sungai Wine-

Manggar Protected Forest has the highest number of vulnerable species(See figure below).

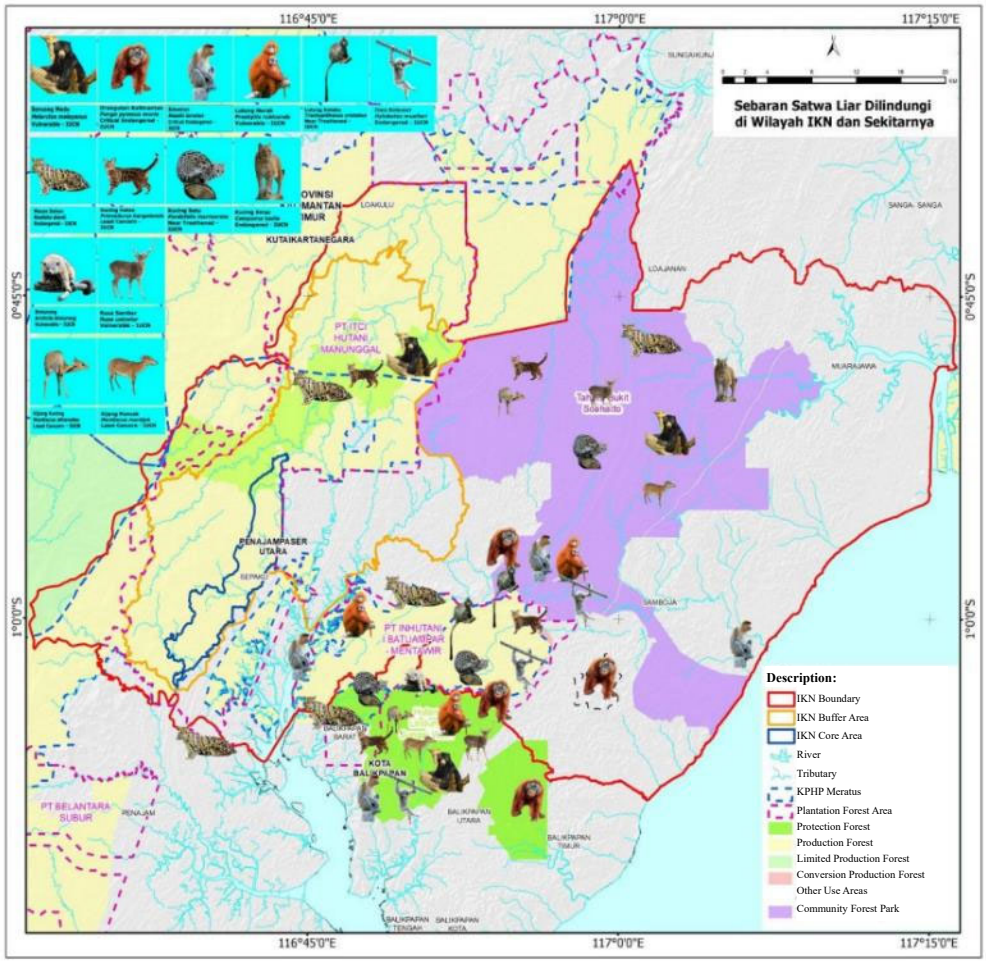


Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-3 Number of Endangered Plant Species in IKN and Surrounding Forested Areas

3) Wild Animal

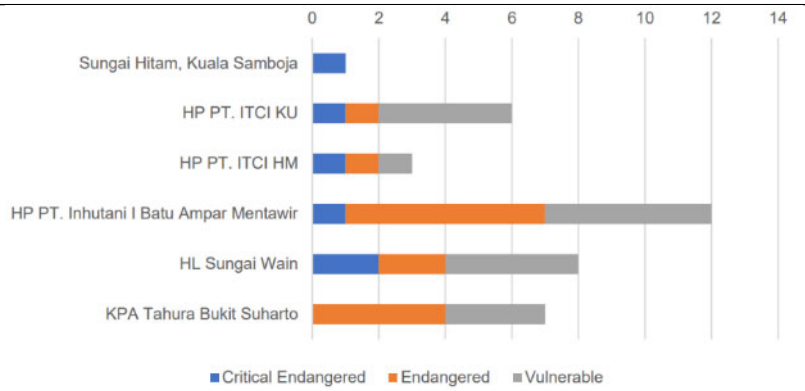
In general, wildlife means wild animals whose habitat is natural vegetation communities. The wildlife species diversity in the Samboja Bukit Soeharto KDHTK area includes 29 species of mammals, 44 species of birds, and 8 species of reptiles. A total of 94 mammal species, 251 bird species (including 9 hornbills), 17 amphibian species, and 23 reptile species have been found in the Sungai Wane Protected Forest. PT. Inhutani I Batu Ampar-Mentawir area has 60 mammal species, 113 bird species, 13 amphibian species, 2 reptile. In the mangrove forest of Teluk Balikpapan in Mentawir village, 16 mammal species, 40 bird species, 1 reptile species, and 3 amphibian species have been identified. According to the data, Balikpapan City, which includes Sungai Wane Protected Forest, is home to endemic wildlife, including 32 bird species and 18 mammal species. The figure below shows the distribution of typical wildlife.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-4 Distribution of Protected Wildlife in and around the IKN Region

According to the IKN Strategic Environmental Assessment document (Kajian Lingkungan Hidup Strategis/KLHS), a total of 23 species are listed as highly protected or endangered (critically endangered, endangered, or endangered) in and around the IKN region. In the production forest area, PT. ITCI KU is a timber concession (HPH), while PT. ITCI HM and PT. Inhutani I Batu Ampar Mentawir are industrial timber plantation (HTI) concessions, and endangered wildlife within their concessions still habitat within the concession. In addition, these species can also be found in protected forests with low levels of disturbance. The map below shows that endangered wildlife still lives within the concession area. Specifically, the PT. Inhutani I Batu Ampar Mentawir HP area includes the Bukit Bangkirai area, which has a high tree density of secondary forest that provides habitat for many wildlife species with high IUCN conservation status. At least 12 species have been identified in the area.

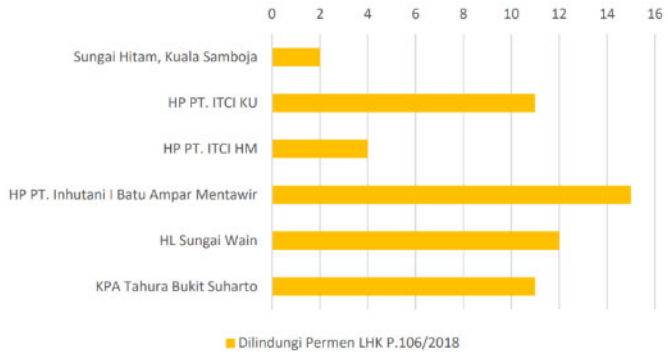


Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-5 IUCN Red List of Threatened Species in and around the IKN Region Number of wildlife species

According to the Indonesian regulation on wildlife protection under the Minister of Environment and Forestry Regulation No.106/2018, at least 33 protected wildlife species have been identified in and around IKN. These species include the Tahura Bukit Soeharto Protected Area, Sungai Wain Protected Forest, PT. ITCI HM Production Forest, PT. ITCI KU, PT. Inhutani I Batu Ampar Mentawir, and coastal and riparian areas in Kuala Samboja.

The figure below shows the number of threatened wildlife species by region. The production forests of PT. Inhutani I Batu Ampar Mentawir have the highest number of protected species. This is due to the presence of NKT 1 Bukit Bangkirai area, a natural habitat with high tree density. 2 protected wildlife species were identified in Sungai Hitam Kuala Samboja area. In the PT. ITCI HM Timber Concession area, wildlife species are found in NKT 1 and 3. At least four protected species have been identified in these areas; at least 11 protected species have been identified in the Natural Forest Management License area of PT. ITCI KU Timber Concession.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-6 Number of Endangered Wildlife Species on IUCN Red List

4) High Conservation Value

Currently, areas of high biodiversity value in the IKN are scattered and not interconnected. These areas are found in Tahua Soeharto Forest Park, Sungai Wain-Manggar Protected Forest, mangrove forest areas, and production forests. Ideally, areas of high biodiversity value should be interconnected to ensure the sustainability of both plant and wildlife genetic resources. In

addition, this connectivity can maintain ecological interactions, increase the potential for ecosystem services, and establish high quality natural resource management.

In order to achieve sustainable management of the IKN, biodiversity aspects need to be incorporated into High Conservation Value (HCV) or Nilai Konservasi Tinggi (NKTs) 1, 2, and 3. These areas are of particular concern for various aspects of biodiversity found within natural landscapes and small areas. The table below shows the distribution of protected wildlife in high conservation value areas. In NKTs 1 and 3, most of them are located in the same area, and NKT 3 is part of the important wildlife habitat included in NKT 1. Some areas in NKTs 1 and 3 are part of KPHP Melatas' production forest concessions, namely PT. ITCI Hutan Manunggal, PT. ITCI Kartika Utama, and PT. Inhutani I Batu Ampar Mentawir, and these NKT areas are part of the Tahura Bukit Soeharto and Sungai Wain protected forest NKTs 1 and 3 are currently maintained by the concession holders, demonstrating their commitment to biodiversity conservation within their concessions.

Table 3-2 Distribution of Protected Wildlife in High Conservation Value Areas

No	Forest Area	Protected Wildlife Species According to P.106/2018	Search Range
1	NKT 1 - Bukit Bangkirai, PT. Inhutani I Batu Ampar Mentawir	Flying bustard, red langur, gibbon, sambar deer, slow loris, clouded leopard, kukui cat, water mongoose, hornbill, etc.	0,7 - 14,7 km^2
2	NKT 3 PT. IHM dan PT. ITCIKU	Crowded Tiger, Kwok Cat, Sun Bear, Eagle, etc.	0,7 - 14,7 km^2
3	Tahura Bukit Soeharto	Sun Bear, Sun Badia, Cloud Tiger, Kook Cat	0,7 - 14,7 km^2
4	Hutan Lindung Sungai Wain	Bornean orangutan, brown bear, red langur, tenant monkey, binturong, kuuk cat, sambar deer, clouded leopard, etc.	0,7 - 14,7 km^2

Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

NKT1 and NKT3 within PT. IHM are located in the western part of the Tahura Bukit Soeharto Conservation Area. NKT1 and NKT3 in IHM are located in the western part of the Tahura Bukit Soeharto Conservation Area. The NKT3 area is identified as a forested area on sandstone lowlands, and it is a habitat for a variety of wildlife, including clouded leopard, Auston's civet, honey bear, and eagle. However, the NKT3 area is not currently connected to the Tahura Bukit Soeharto Reserve, where similar wildlife such as clouded leopards, Auston's civets, and honey bears are found. The NKT3 area within IHM is separated by considerable distances for activities related to afforestation production, such as the establishment of an industrial timber estate and the construction of transport roads. Nevertheless, despite the fragmentation of the area, many wildlife species continue to exist in this state.

3.2.2 Vulnerable Groups and Social Inclusion Issues

East Kalimantan is home to a variety of vulnerable groups that face unique social, economic, and environmental challenges. The construction of Indonesia’s New Capital City, IKN Nusantara, along with large-scale development projects like mining and palm oil plantations, has had a significant impact on these communities. Indigenous peoples, women, children, informal workers, youth, persons with disabilities (PWDs), the elderly, and environmental refugees all face issues that demand attention and action.

One of the key challenges related to issues of vulnerable groups and social inclusion in East Kalimantan is improving the Gender Development Index (GDI) and the Gender Empowerment Index (GEI). The GDI represents the ratio of development outcomes between women and men, while the GEI measures the level of women's active participation in political and economic sectors.

According to 2022 data from the East Kalimantan Central Bureau of Statistics (BPS), the province's GDI stood at 85.98, which is lower than the national average of 91.07, placing East Kalimantan 31st out of 34 provinces in Indonesia. Similarly, the province's GEI was reported at 65.65, also below the national average of 75.24, placing East Kalimantan as the second-lowest province in Indonesia in terms of gender empowerment.

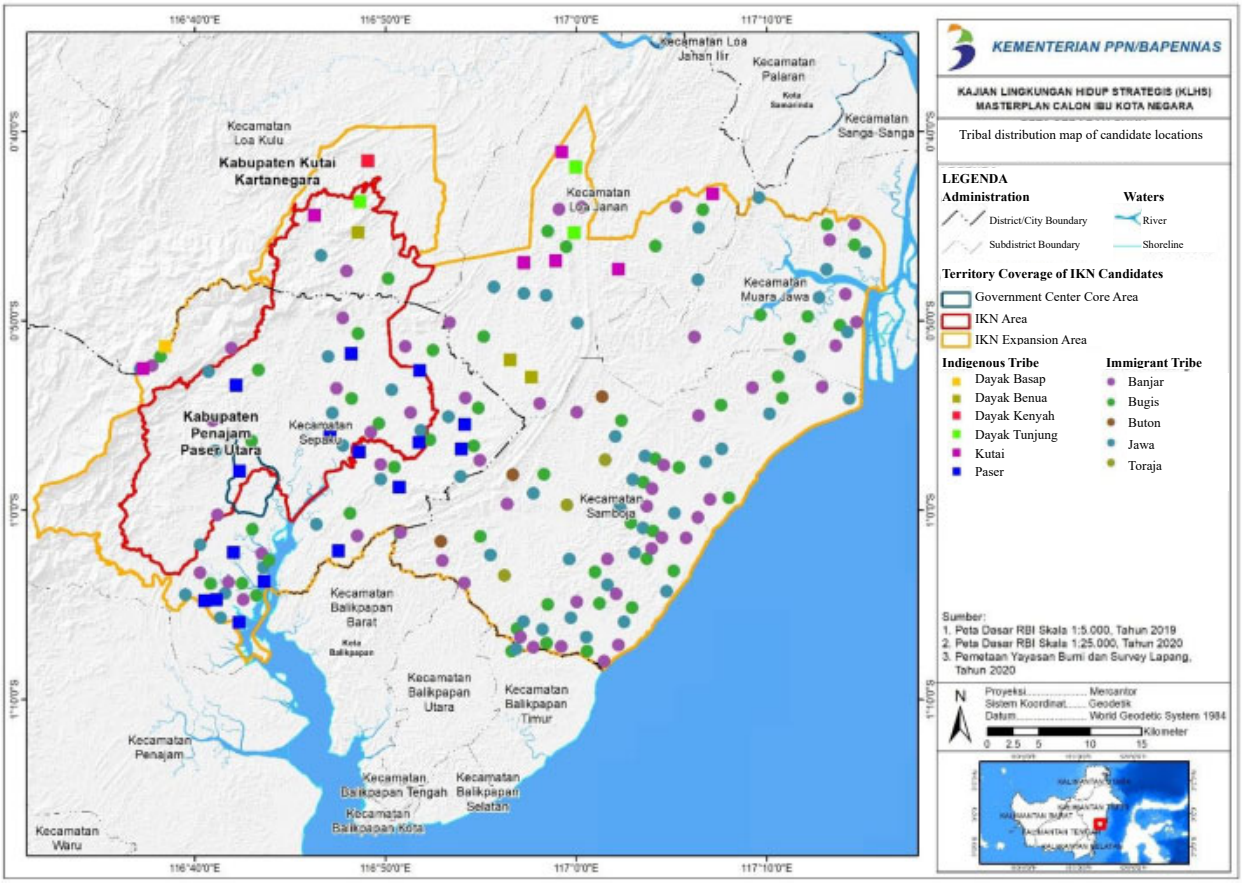
To address these challenges, the East Kalimantan Provincial Government has shown a strong commitment to improve women's empowerment through community-based programs. One notable initiative targets Female Heads of Households (Perempuan Ekonomi Kepala Keluarga/PEKKA), aiming to enhance their role in the economy and increase their financial independence. This initiative is part of the Gender Equality and Women's Empowerment Program from the Department of Population, Women's Empowerment, and Child Protection (DKP3A) of East Kalimantan, which seeks to strengthen the role of women in entrepreneurship. Empowering women in entrepreneurship not only improves their family's well-being but also contributes to broader community development and regional economic growth.

The program emphasized equal access to business opportunities and resources to drive significant change. This approach does not only contribute to women's economic advancement but also fosters positive shifts in social dynamics, enhances family well-being, and promotes gender equality and sustainable economic development.

These efforts aim to bridge the gender gap in economic, social, and political participation while addressing the challenges of social inclusion for vulnerable groups in East Kalimantan. By increasing women's access to resources, training, and decision-making opportunities, the province can promote greater gender equality and reduce the disparities reflected in GDI and GEI scores.

3.2.3 Social and Cultural Dynamics Matter

According to the KLHS IKN document, the Indigenous/Aboriginal Community Identification and Community Distribution Map (See figure below) which was compiled by the Ministry of National Development Planning/BAPPENAS based on the mapping conducted by Yayasan Bumi (2019) and their field survey in 2020 shows that the majority of the indigenous/aboriginal communities in the IKN region are Kutai, Paser, and generally Dayak. The characteristics of each tribe are as follows.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-7 Indigenous/Aboriginal Community Identification and Community Distribution Map

(1) Paser Community

The Paser people live mainly in the western part of the IKN or around the core area, especially in the PPU Regency. This is because PPU Regency, especially Sepak District, has become a gathering place for migrants from Java through the Migration Program from Java.

In terms of livelihood, the Paser community initially practiced slash-and-burn agriculture. However, cultural assimilation from the migrant communities transformed their agricultural practices into more sedentary patterns. The influence of the migrants did not stop there, but also led to intercultural intermarriage, which changed oral traditions, traditional ceremonies, and the artistic culture of the Paser people.[4]

The contemporary impacts on the Paser people are not only from the migrant communities, but also from the private sector, especially land-related enterprises. Based on the Initial Study Document on the Social Aspects of the Relocation of the New Capital City (IKN) to East Kalimantan issued by BAPPENAS in 2019, as cited in the KLHS IKN document, it indicates that the PT ITCI Hutani Manunggal (IHM) and PT ITCI Kartika Utama (ITCIKU) concession areas located within the IKN were part of the traditional territory of the Paser people in the past. It further indicates that traditional gardens and settlements extended into the upper reaches of the river prior to the entry of companies with plantation concessions in the 1970s.

[4] Ministry of National Development Planning/Bappenas, 2019

Currently, the PPU Regional Regulation No.2/2017 on the Preservation and Protection of Paser Indigenous Peoples has become a stronghold and momentum for the Paser tribe to sustainably preserve their way of life and intertwined culture.

(2) Land Ownership

One of the challenges related to social and cultural dynamics is the aspect of land ownership. There are generally three types of evidence of land ownership in communities, as shown in the table below.

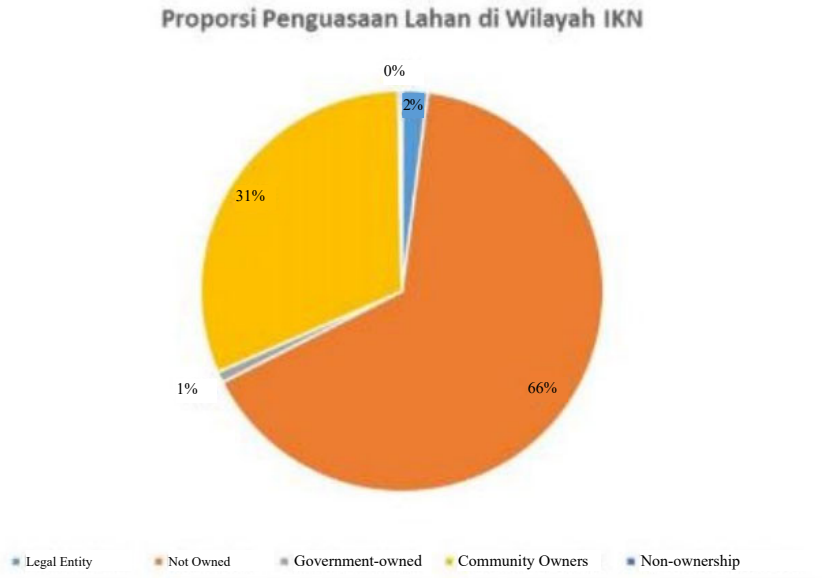
Table 3-3 Type of Land Ownership Classification in IKN Area

Classification.	Description.	Validity
Land certificate	-	Clear
Seal / Deed / Land Certificate	Issued by village authorities, but often without on-site measurement or verification.	Municipality
Customary land	Refers to the customary law of indigenous communities and is based on the party who first cleared the land.	The management of land by indigenous communities is governed by the Regulation on the Recognition and Protection of Indigenous Communities (Regulation of East Kalimantan No.1/2015, or Regulation of PPU Regency No.2/2017) Protection.

Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Based on the above data, the lands that are officially registered and have strong legitimacy are primarily those with land certificates. The other two categories of land ownership may have legitimacy within their respective jurisdictions. However, they are not comprehensively and systematically documented in a fully integrated database.

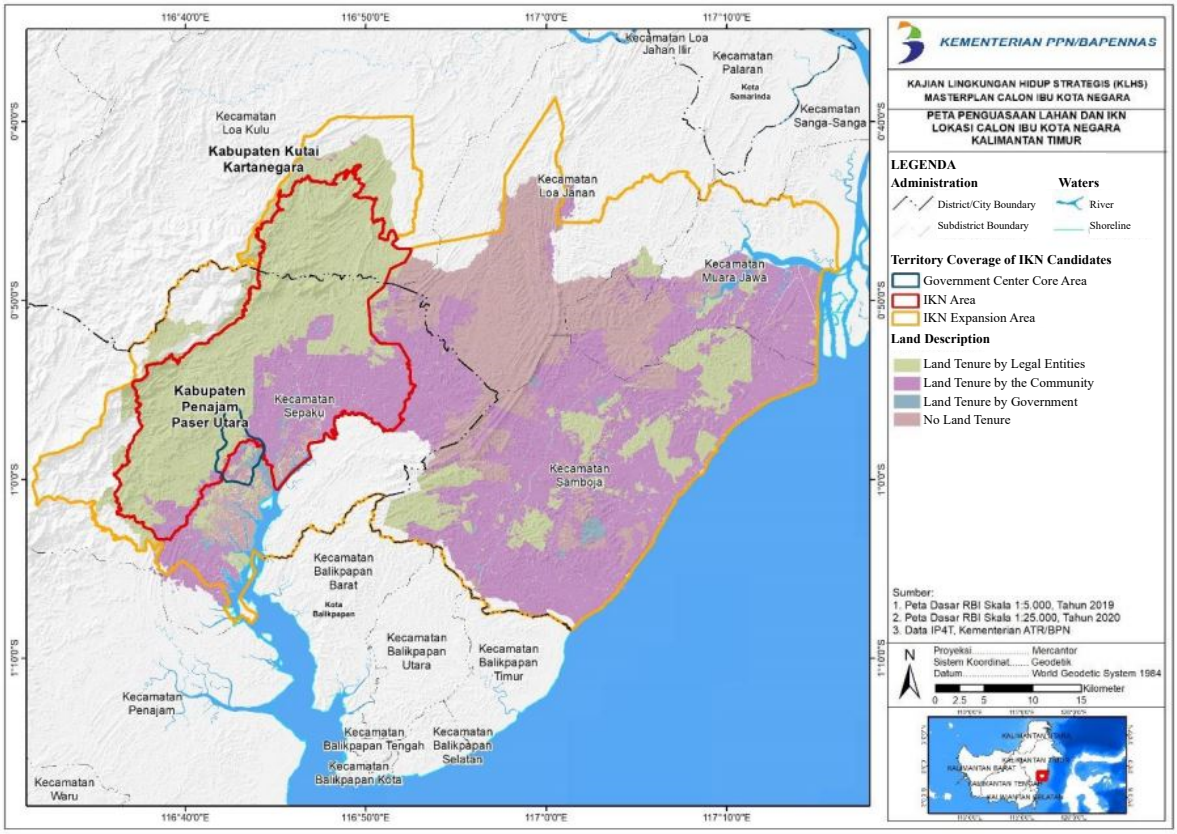
Based on the percentage of land ownership in the IKN region (See figure below) derived from the IP4T (Inventory of Land Ownership, Tenure, Use, and Utilization) data as cited in the KLHS IKN document, it can be seen that only 31% of the 75,968 land parcels in the IKN region are owned by individuals or communities with land certificates. IP4T stands for Inventory of Agrarian Reform Objects (Inventarisasi Penguasaan, Pemilikan, Penggunaan, dan Pemanfaatan Tanah). It is an initiative in Indonesia that involves the systematic collection and documentation of data regarding land ownership, control, use, and utilization. This program is a key part of Indonesia's agrarian reform efforts, aimed at addressing land tenure issues, resolving land conflicts, and promoting equitable land distribution. This means that only 31% of the total land ownership is evidenced by land certificates. On the other hand, 66% of land parcels are managed or used by individuals or communities without documented ownership. The remaining approximately 3% is either owned or unowned or unused by legal entities or governments.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-8 Percentage of Land Ownership in IKN

Although the percentage of land owned by the government appears to be small in the figure below, it may represent a substantial area due to the vast size of the region.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-9 Land Ownership in IKN

Of the 66% of land managed by non-owners in the community, about 63% are not identified to whom they belong. This 63% proportion includes lands recognized as girik legitimate by local villages and by local regulations (Regional Regulation of East Kalimantan Province No.1/2015 or Regional Regulation of PPU Regency No.2/2017) that are managed by the community and recognize customary rights. It is likely to include customary land/urayat land where ownership is recognized. Furthermore, 12% of the community-controlled lands are state-owned lands within the forest zone, 4% are state-owned lands, 2% are HGU lands, and the remaining community-controlled lands are lands under various lease systems, such as leased, rented, or cultivated lands.

According to data from the BAPPENAS Preliminary Social Survey, the lack of clarity in land ownership status is due to limited discussion and consultation within the smallest administrative unit (village). As a result, decisions regarding land management are made independently by various parties without the involvement of administrative bodies. The resolution of land disputes is an important issue for the government and the community to address, in order to achieve the progress and well-being of the IKN and its inhabitants. The following table identifies challenges that are more current.

Table 3-4 Summary of Land Challenges in IKN

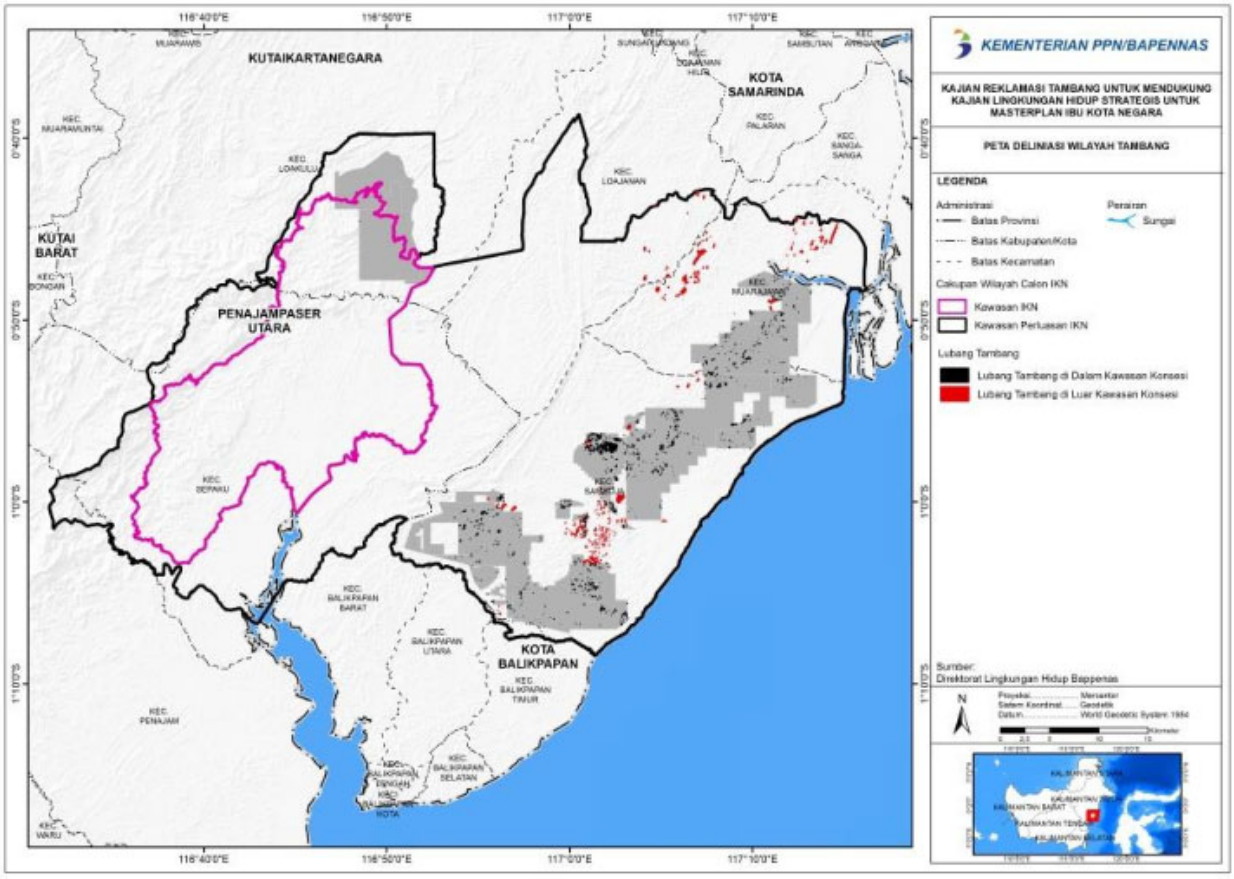
District/Village	Land Problem
Jonggon Desa Village	– The Dayak Basap community in Jongon Village is a community of PT. ITCI Kartika Utama (ITCIKU), PT. ITCI Hutani Manunggal (IHM), PT. Manunggal (IHM), and PT. Multi Harapan Utama (MHU) in the area of Multi Harapan Utama (MHU). However, negotiations with ITCIKU are ongoing through the Technical Implementation Unit of the Forest Management Unit (UPTD KPHP) regarding agricultural lands in the Dayak Basap community. – The Dayak Basap community wants about 40% of the 112,637 hectares of claimed customary land to be cultivated by the Dayak Basap community and the remaining 60% to be managed for the benefit of IKN. – Houses occupied by transferees receive certificates for their homes and farmland, causing social jeering due to unequal treatment.
Loa Kulu District	– The land issue in Lower Kulu County stems from overlapping business licenses, PKP2B issued by the central government and IUP issued by the regents. This triggered an inheritance dispute that has not been resolved to date.
Loa Janan District	– There is a land dispute involving lands recognized as belonging to the Sultanate of Kutai. The evidence presented is documentation dating back to the Dutch colonial period. Currently, duplicate use of land requires a re-registration process.
Samboja District	– The main issue relates to the unilateral designation of the People's Forest Park (Tafra), which, according to the community, overlaps approximately 63% of the resettlement area of the migrant community. For example, the Bugis community has been living and farming in the area that is now part of Tafra since the early 1970s, and there are also oil palm plantations and coal mines. – In the Sungai Merdeka area, the problem is that residents' land ownership status varies, with some having land certificates and others not. – Some community lands affected by the construction of the Balikpapan-Samarinda toll road have not received compensation or restitution. – This situation is exacerbated by land reclamation claims and land speculators.
Muara Jawa District	– Many farmers do not own land and instead lease land from coal mining permittees. In the Delta Mahakam area, there are land disputes among stakeholders, including shrimp farmers.
Sepak District	– Overlapping land in several villages and subdistricts in Sepak District involving PT. ITCI and other companies. involving ITCI and other companies.

Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

3.2.4 Mining Hole Management Issues

(1) Status of the Mining Holes

Based on the results of the identification using high-resolution aerial photographs as explained in KLHS IKN Document, 1,953 mining pits were identified within the mining concession and 432 outside the concession. Within the mining concessions, there are at least 50 pits with an area of 1ha or more (maximum area of 69ha), 127 pits with an area of 0.2 to 1ha, and 1,776 pits with an area of less than 0.2ha. Outside the mining area, there are at least 69 mining holes with an area of more than 1 ha (maximum area of 44.3ha), 84 holes with an area of between 0.2ha and 1 hectare, and 279 holes with an area of less than 0.2ha. The photo below is an aerial view showing the status of the mining holes in IKN.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-10 Map of the distribution of mining pits in the IKN area



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 3-11 Aerial View of Mining Holes in IKN

(2) Mining Hole Issues

The following are strategic issues that cut across sectors and stakeholders, as described in the KLHS IKN Document:

1. There are many mining holes abandoned by those responsible, leading to environmental destruction such as abandoned land, irregular landscape conditions, loss of biodiversity and soil fertility.

2. Identification of active and inactive mining holes has not been completed.

3. Acidic groundwater treatment of former mining sites and dealing with the associated hazards.

4. The need to establish reclamation targets in line with the zoning of the IKN area.

5. Mining pits threaten the safety of the surrounding community.

6. The former mining site could be used for water storage, aquaculture, water recreation/tourism, water sports, floating agriculture, and flood control.

7. Efforts have been made by mining companies to use former mine sites as part of preparations for mine closure and to provide benefits to the communities surrounding the mines.

CHAPTER4 Impact and Rippled Effects on Surrounding Areas by New Capital City Development and Confirmation of Consistencies in Current Development Plans

4.1 Impact and Rippled Effects on Surrounding Areas by New Capital City Development

It is important to consider how to develop the surrounding areas of the New Capital City taking account of the impact caused by the capital relocation and the New Capital City Development. The result of the analysis on the impact and rippled effects of the capital relocation to the East Kalimantan Province, Balikpapan City, and Samarinda City is as shown as below.

4.1.1 Connectivity (Transportation, ICT)

The table below shows expected impacts and rippled effects by the IKN Development on the East Kalimantan Province, Balikpapan City, and Samarinda City from a connectivity perspective.

Table 4-1 Connectivity-related Impacts and Rippled Effects by IKN Development

Classification	Assumed Impacts and Rippled Effects
Road	➢ IKN Development will increase road traffic between IKN and Balikpapan City, Samarinda City, and other areas by the increase of new residents and economic activities. ➢ Balikpapan City and Samarinda City are expected to experience increased economic activities and urban development, which will lead to a rapid increase in traffic throughout the entire intra-city road network. ➢ The volume and mixing rates of heavy traffic vehicle are expected to increase between logistics centers, such as ports and industrial areas, and the New Capital City. ➢ Increased traffic is expected between the airport and the New Capital City. ➢ Increased traffic around new rail stations and a modal shift to rail are expected.
Railway	➢ Balikpapan City-KIPP railway development is under study. ➢ The development of new railway network and station areas will impact on the surrounding urban environment and increase in traffic volume. ➢ A modal shift from road and public transportation to rail is expected. ➢ Whereas Balikpapan-Samarinda railway development is expected to take time, it is expected to increase transport demand between two cities and IKN surrounding areas.
Ports and Logistics	➢ The IKN Development will increase demand for cargo both inbound and outbound, as well as for imports and exports and for construction materials during the development phase. ➢ Due to increased logistics demand, the volume and mixing rate of heavy vehicle traffic between major ports and logistics hubs and IKN is expected to increase.
Public Transportation	➢ Public transportation demand between IKN and Balikpapan City, Samarinda City, and other areas is expected to increase. ➢ Increase of economic activities and urban development in Balikpapan City and Samarinda City will cause demand increase of intra-urban traffic and local public transportation. ➢ In particular, public transportation demand will increase in urban development industrial development areas, and areas surrounding new train stations, airports, bus terminals, and so on, where traffic is expected to be generated with the development of IKN.
Airport	➢ While VVIP airport for key personnel is constructed, general passengers demand would increase especially at Sepinggan Airport and APT Pranoto Airport. ➢ In addition to demand from residents and visitors to the IKN Development Area, urban development and economic industry in the surrounding area are expected to increase spillover passenger demand.
Communication	➢ The information and communication network will need to be strengthened and related

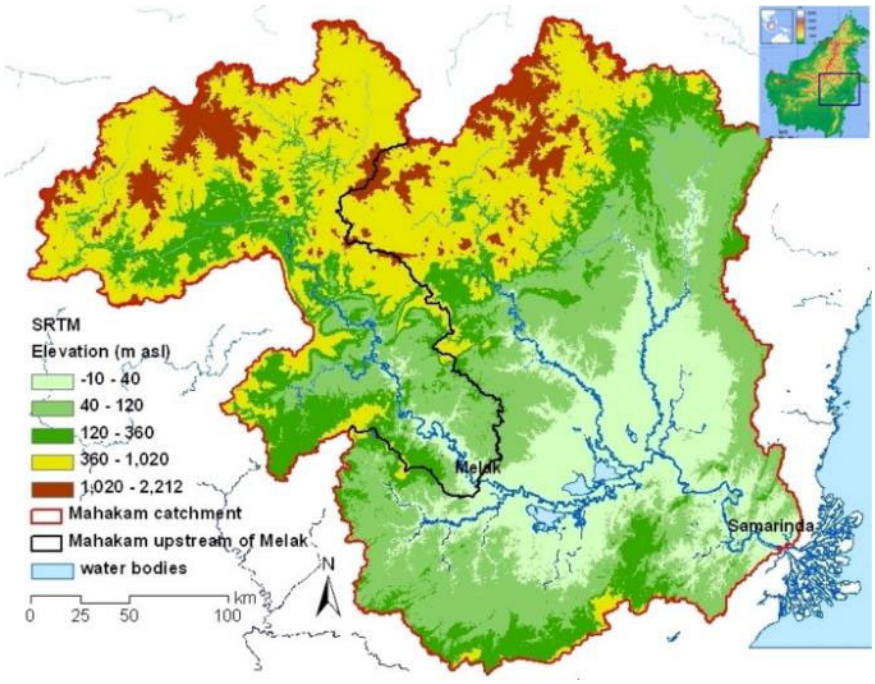
and Information	facilities will need to be developed.

Source: JICA Study Team

4.1.2 Climate Change Measures (Zero Emissions, Disaster Prevention)

According to the National Capital City Master Plan 2020 by BAPPENAS, the capital functions are planned to be relocated with the aim of reducing disaster risk, however the New Capital Area to be relocated also has a certain degree of disaster risk, especially flooding.

Flood control measures can be broadly classified into river flood control and stormwater drainage control. Regarding the former, a large area of East Kalimantan Province, including IKN and surrounding Balikpapan City and Samarinda City, is located in the Mahakam River Basin as indicated in the figure below. The East Kalimantan Regional Middle-Term Development Plan states that river flood control measures will be implemented to improve the channel's capacity to carry water during floods by repairing river structures and preventing waste dumping into the river. It is unclear whether the existing river structures and the measures described in the Regional Middle-Term Development Plan have been considered comprehensively in terms of the capacity of the river channel to carry water during floods and its storage capacity in the entire basin, and no measures have been identified in the comprehensive basin. With the development of IKN, the topographical and land use conditions in the watershed and the various conditions related to rainwater infiltration and flood runoff may change, which would also affect the frequency and trends of flooding caused by river flooding in the surrounding areas.

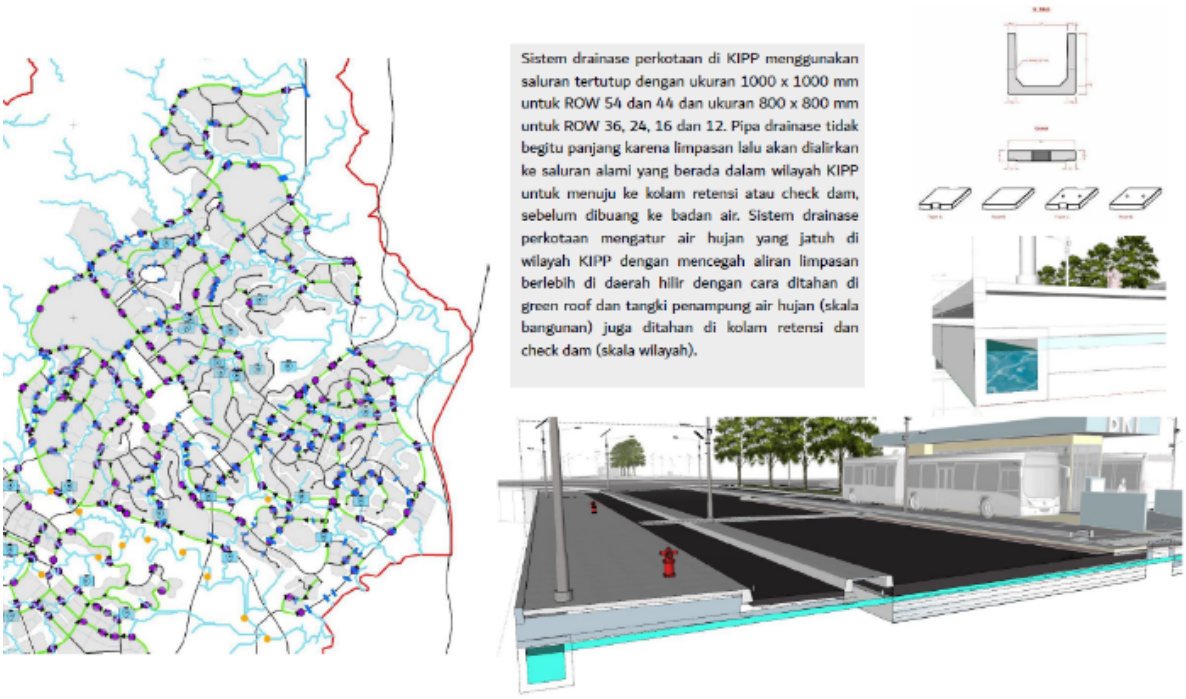


Source: https://www.sciencedirect.com/science/article/pii/S2212682114000225

Figure 4-1 Watershed of Mahakam River in East Kalimantan Province

For stormwater drainage control, stormwater drainage plans for each catchment area are identified in the IKN Development Plan shown below. Since stormwater drainage plans are basically made for individual catchments, the stormwater drainage plan for IKN is not considered to have a significant impact on the surrounding area.

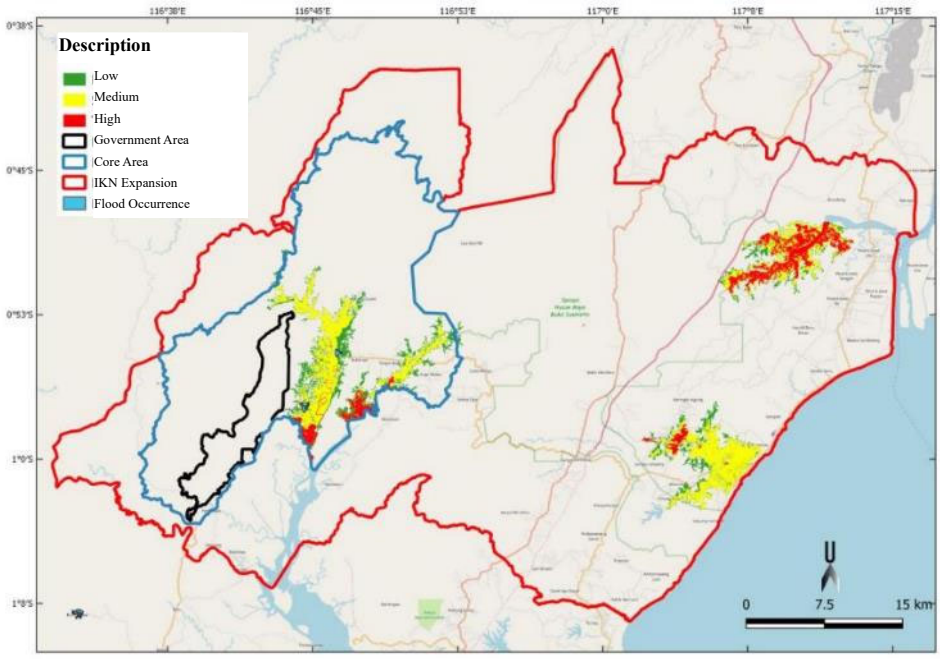
Drainage System Plan



Source: Masterplan Pengendalian Banjir DAS Sanggai, PUPR, 2022, IKN Development Plan, PUPR, 2021

Figure 4-2 Stormwater Drainage Planning in IKN

As shown in the figure below, the IKN Area is predominantly flood-prone and medium likelihood; KRB 3 or high flood-prone areas with a flood potential more than 3 meters occupy 2,835ha of area within IKN. The medium-level areas (KRB 2) with a flood elevation of 1 to 3 m occupy 6,919ha and the low-level flood areas with a flood elevation of less than 1 m occupy 3,956ha.



Source: Preparation of a Strategic Environmental Impact Assessment for the National Capital Masterplan Fiscal Year 2020

Figure 4-3 Flood-Prone Areas in IKN

High flood potential areas (KRB 3) are considered no development zones due to the high risk of flooding impacts. Moving forward to KRB 2 and KRB 1, where flood potential is moderate to low, these areas are considered as the areas constrained and development is not recommended. If development is planned in these areas, an integrated drainage system must be in place to accommodate the annual flood runoff in the river basin. Areas outside of these zones can be developed if appropriate land uses and integrated drainage systems are considered.

IKN aims to achieve Net-Zero Carbon Emission, 100% renewable energy use, and 60% reduction in building energy consumption by 2045. As of 2015, East Kalimantan as a whole, including Balikpapan and Samarinda, is estimated to have emitted 1.5 billion tons of greenhouse gases, and renewable energy accounts for only a few percent of electricity generation in the table below. There seems to be a huge gap between the actual conditions of the surrounding areas and the goal of IKN. Therefore, it is expected that actions will be taken in the surrounding cities in line with the IKN policy of Net-Zero Carbon Emission and 100% renewable energy use.

Table 4-2 Projected Emissions in East Kalimantan Province

Amount of Discharge	2015	2020	2025	2030	2035	2040	2045	2050
Carbon Dioxide (CO2)	15,926.07	16,166.77	17,195.36	19,853.84	23,323.57	27,271.24	31,841.73	37,772.42
Nitric Oxide (N2O)	0.17	0.16	0.18	0.21	0.25	0.30	0.35	0.41
Methane (CH4)	0.93	0.87	0.97	1.13	1.33	1.55	1.78	2.07

Source: East Kalimantan Province Regional Energy Plan 2019
Unit: thousand tons

The dominant sources of greenhouse gas emissions are the energy and transportation sectors. Neither sector is a stand-alone entity in IKN, and continuity with the surrounding cities, including Balikpapan City and Samarinda City, needs to be considered.

4.1.3 Environmental Management, Waste Treatment, Waste Management

In presenting the impacts and rippled effects, environmental management, waste treatment, and waste management in the New Capital City are reviewed based on the existing master plan.

In the National Capital City Master Plan 2020, environmental management has been analyzed with respect to water and air quality. For water quality, the water quality index in East Kalimantan Province is moderately to heavily polluted, and almost all rivers in the IKN region are mildly polluted. On one hand, air quality is referred to as the same as in East Kalimantan Province, and it is concluded that the IKU value is currently good at around 89. However, the plan states that the relocation of the New Capital City will affect the air quality, which is still in good condition, because the increase in population in IKN will indirectly lead to an increase in the number of vehicles.

According to the Integrated IKN Development Implementation Information Guidelines 2022, the following goals are specifically identified for waste management.

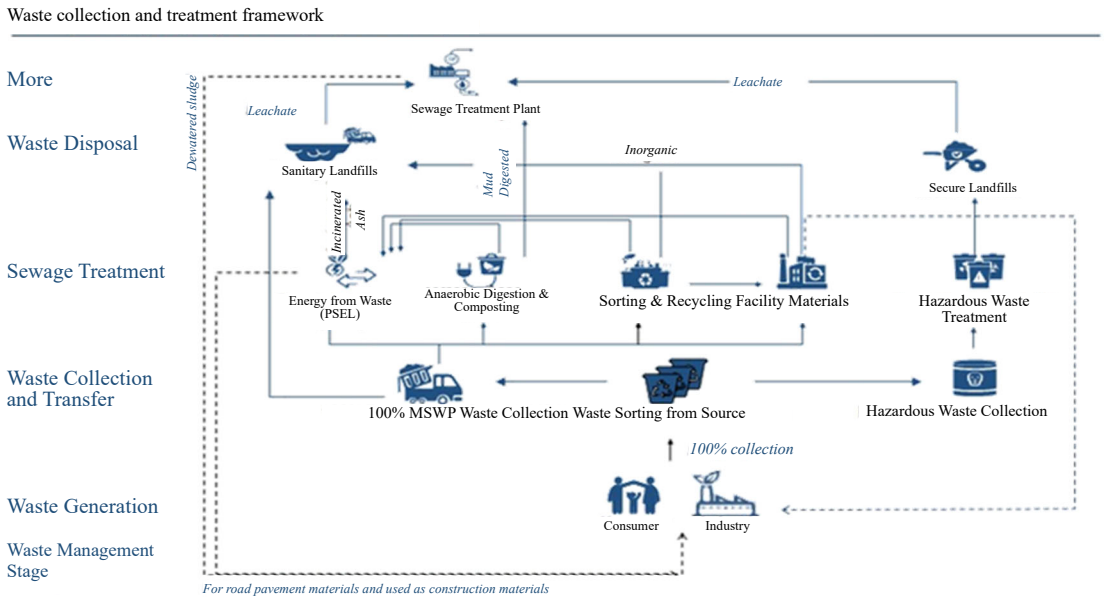
- Increase recycling rate to 60% by 2045
- Waste disposal rate (control rate) 100%.

The following is a list of waste treatment network system configurations that realize this goal.

- Primary collection station with 3R functionality (TPS3R)
- Waste collection, transportation, and relay facilities (SPA)
- Integrated Waste Management Facility (TPST)

Furthermore, the waste treatment flow (Waste Management Framework) is presented in the figure below. Based on its components, the following are assumed to be the contents of the integrated waste management facility. One point of special note in the treatment flow below is the segregation of B3 hazardous waste at the source.

- Anaerobic digestion (biogasification) and aerobic digestion (composting) facilities
- Material recycling facility
- Treatment facility (not explicitly marked as incineration)
- Landfill site for B3 hazardous waste
- Sanitary Landfill



Source: IKN Development Master Plan and Strategy

Figure 4-4 Waste Management Framework in IKN

Although only treatment facilities are mentioned in this framework, the introduction of WtE is also explicitly mentioned on other pages, and WtE is estimated to contribute to a 40% reduction in the amount of waste delivered to landfill sites.

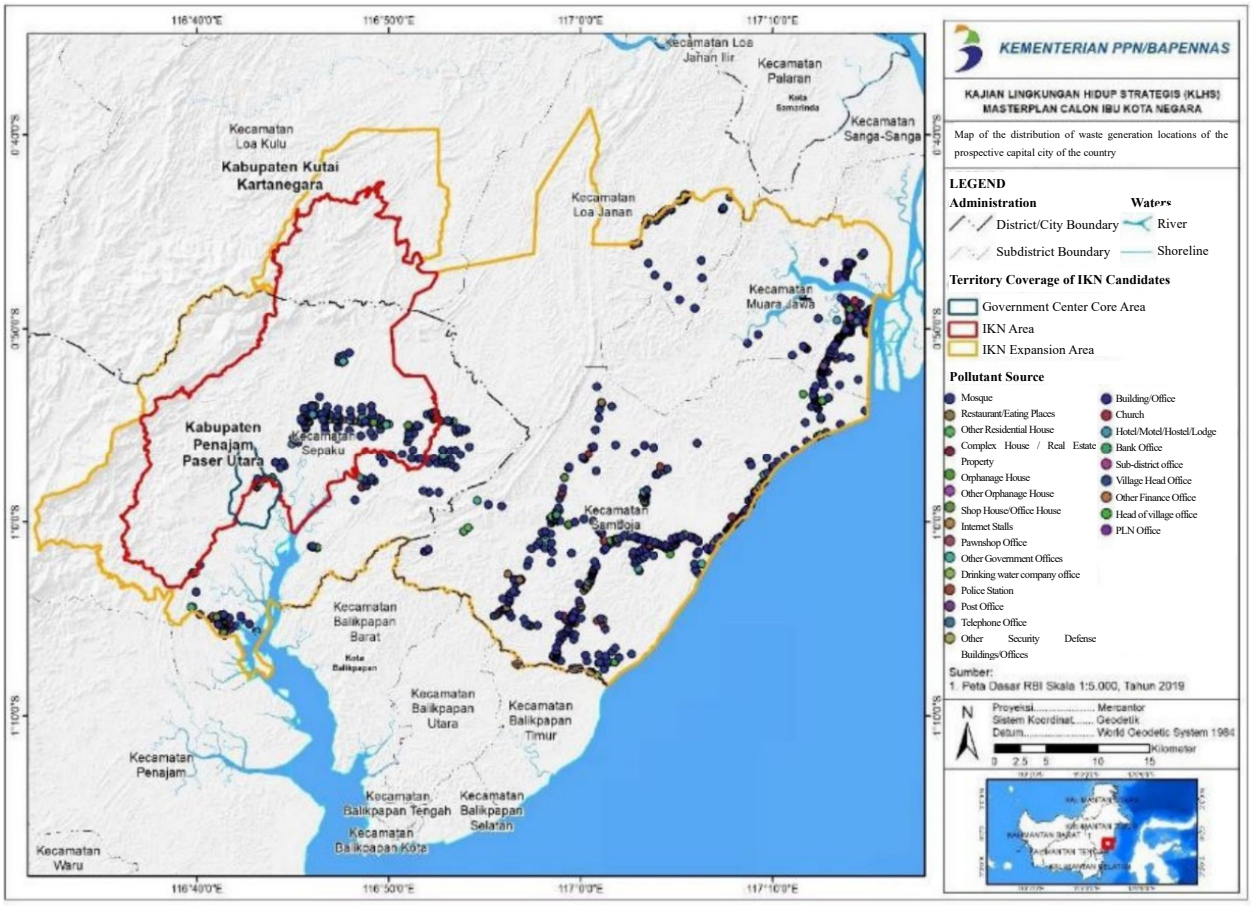
IKN also focuses on waste collection and transportation, and smart waste collection and transportation using Ultra-Reliable and Low Latency Communications (URLCC) is mentioned. However, no details on the actual status of this technology are provided. Other plans include the use of Pneumatic Waste Conveyance Systems (PWCS), and it is expected that the wide range of the technologies will be introduced. In addition, a waste bank, an

existing initiative in Indonesia, is also planned to be established in IKN.

Furthermore, in the Preparation of Land Transportation Master Plan of IKN, the source measures to separate biodegradable and non-degradable waste into different types of garbage cans are indicated, and the segregation classification is also discussed in accordance with the framework.

In the documents prior to the development of the above guidelines, details were provided on the respective processes and technologies. The feasibility of these is detailed below for the purpose of introducing current assumptions, although they cannot be said to be certain.

The National Capital City Master Plan 2020 below shows the location distribution of waste generation sources. The majority of the plotted points are general buildings, indicating that they are concentrated not only in the center of IKN, but also in the access routes of Samarinda City and Balikpapan City and its nearby coastline.



Source: National Capital City Master Plan for 2020

Figure 4-5 Geographic Distribution of Waste Sources

In addition, the projected waste generation is as follows.

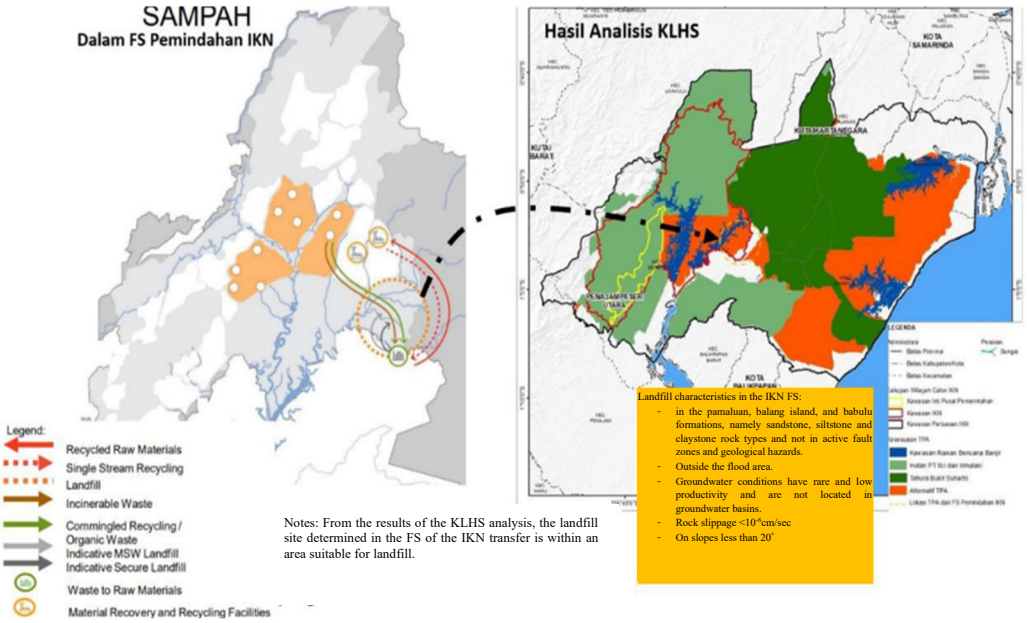
Table 4-3 Projected Waste Generation in IKN

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Unit
Per-unit waste generation	0.80	0.84	0.89	0.94	0.99	kg/day/person

Total waste generated	179,900	293,800	358,700	513,700	668,500	Tons/year

Source: National Capital City Master Plan 2020

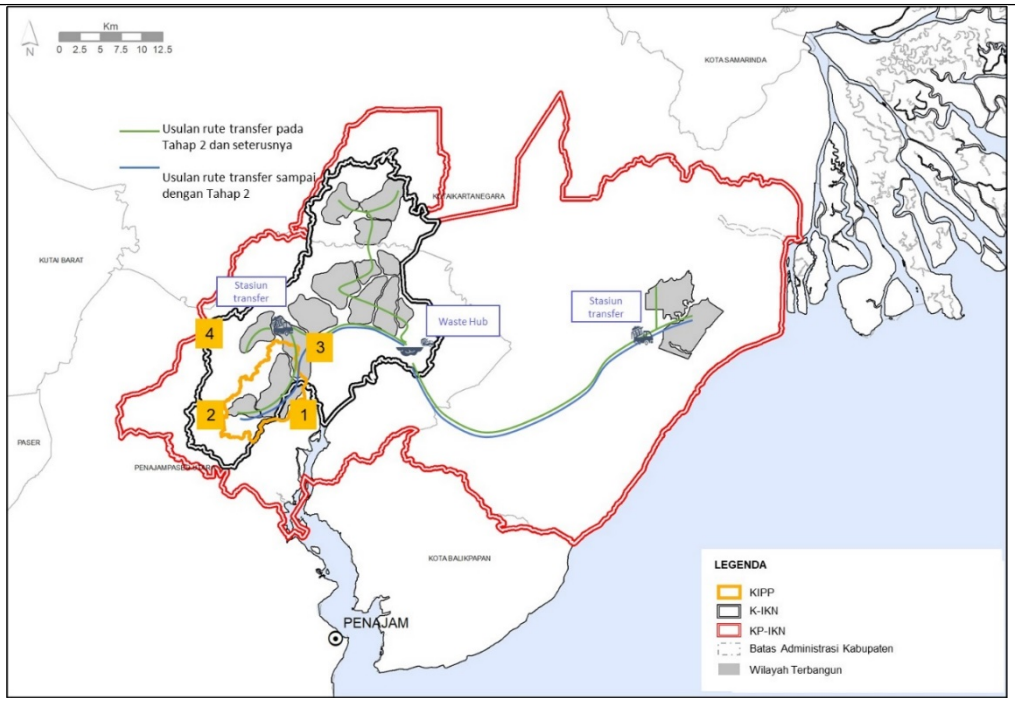
On the other hand, the candidate sites for the Integrated Waste Management Facility (TPST) mentioned earlier have been indicated (see the following figure).



Source: National Capital City Master Plan for 2020

Figure 4-6 Assumed Location of TPST

The site is also shown in the Master Plan and Strategy for the Development of IKN as shown in the figure below. The proposed TPST site, labeled "Waste Hub," is located on the outskirts of K-IKN and is planned to be approximately midway between two major waste generation sites.



Source: Master Plan and Strategy for the Development of IKN

Figure 4-7 The location of the Waste Hub

Furthermore, the Master Plan and Strategy for the Development of IKN foresees that food and horticultural crop waste will be composted until the fourth year and converted to anaerobic digestion in stages from the fifth year in order to meet the agricultural demands of the IKN Development Area.

The following is an overview of waste management in Balikpapan City and Samarinda City, obtained through field surveys and other means. Balikpapan City has a well-planned waste management system and a well-managed landfill site, and waste management is relatively smooth, however, there is an urgent issue of a shortage of landfill sites. On the other hand, Samarinda City, as described in the Samarinda City Regional Spatial Plan 2014-2034, for example, has five landfill sites and is likely to have enough capacity, although it could not be confirmed that systematic treatment is being conducted. Therefore, there is concern about the environmental impact of improper disposal, while the city is vigorously promoting waste bank initiatives, and so on. In this respect, it is considered that 3R initiatives are being promoted.

Table 4-4 Overview of Waste Disposal in Balikpapan City and Samarinda City

Item	Balikpapan City	Samarinda City
Planning & Policy	· Balikpapan City aims to achieve zero waste by 2030. · The City Government's goal for waste management is the same as the national plan: 30% reduction of waste through the waste bank by 2025, and 70% management of waste. · The 2045 target sets various ambitious indicators and figures, such as waste disposal rate (58.64%) and greenhouse gas emission reduction (42.79%).	· No clear targets were identified. Therefore, it is considered to be equivalent to the national targets of 80% management and 20% reduction of waste as shown in the National Middle-Term Development Plan 2020-2024.
Separation, collection and transportation	· The percentage of recycled waste is negligible: 1) refuse banks collect and purchase household and commercial waste 2)	· More than 70% of waste is delivered directly to final disposal sites · Some garbage is dumped in rivers or burned

	scavengers sell the collected waste to nearby vendors, etc. · TPS and TPS-3R are maintained.	in the open. · Cooperative efforts between the Waste Bank and the government have been implemented, and sharing and systematization of waste and recycling information is relatively advanced.
Intermediate treatment	· Waste derived from pruning branches is mixed with about 5% plastic and aerobically fermented, then crushed and molded into pellets for steam power generation; a pilot project is underway in cooperation with PLN to convert 3% of the fuel into pellets (the rest is coal). · The prunings, which are completely woody, are chipped and directly incinerated for steam power generation. · There is also a composting facility. (There are no facilities for aeration, etc.)	· Although some composting processes are in place, only about 2 tons of all garbage collected is composted each month.
final disposal	· Manggar Landfill is a sanitary landfill under the technical guidance of PUPR, and its landfill is scheduled to be completed in 2026. · Due to difficulties in acquiring land and opposition from residents, there are no plans to construct a new disposal site. · WtE has been installed at Manggar Landfill, and the methane gas extracted is supplied directly to surrounding households as part of CSR.	· There are two disposal sites, Sambutan Landfill Site and Bukit Pinag Landfill Site. Sambutan Landfill Site does not have an appropriate access road, and most waste is currently landfilled at Bukit Pinag Landfill Site. · The above disposal sites are open dumping. · Sempaja Third Landfill Site is in the planning stages, but land acquisition has not yet been completed. · Bukit Pinag Landfill Site is running out of capacity, so collectors are digging holes in nearby land to bury waste

Source: JICA Study Team

In the National Capital City Master Plan 2020, the rippled effects of the New Capital City development on Balikpapan City, Samarinda City, and East Kalimantan Province, especially in terms of the environment and waste, include population growth and the creation and expansion of industry, which will increase the environmental burden (wastewater, emissions, waste, deforestation for land development, etc.).

Therefore, not only is there concern about a decline in air quality, as has been pointed out, but also the IKLH (Environmental Quality Index) in East Kalimantan Province, which is currently maintained at a high level, is likely to decline in the New Capital Region and surrounding areas, resulting in an overall downward trend. Mentioned in the National Long-Term Development Plan 2025-2045, the development of the New Capital City would accelerate industrial development, not only within East Kalimantan Province, but also outer areas including Sulawesi Island. This would result in further environmental degradations if not being considered and handled carefully in the future plans. Similar issues also acknowledged by East Kalimantan Province as stated in the East Kalimantan Province Regional Long-Term Development Plan draft 2025-2045. One of the recommended policy directions is to restore water crisis lands, areas polluted by wastewater and solid waste, and areas which water and air are contaminated due to development of city's border (including IKN). At the level of Balikpapan City and Samarinda City, environmental degradation issue as a rippled effect of the IKN Development were discussed in the relation to rapid population growth due to migration. Some of the expected outcomes include increase in waste generation, lowering the

service period of municipal solid waste management infrastructures, and expansion of slums areas which exacerbate the environmental pollution. Therefore, it is important to review the targets or take appropriate environmental measures and to implement the integrated and collaborative approach in the New Capital Region and surrounding areas, as well as the East Kalimantan Province.

On the other hand, while the plan's quantitative analysis of waste indicates that the waste generated will not exceed the allowable amount of waste infrastructure in the new metropolitan area, other challenges and opportunities include the followings.

- The current waste management framework mainly covers general waste and commercial waste and does not consider industrial waste, making it particularly important to encourage compliance and appropriate monitoring and management of environmental management in general by businesses.
- The current waste treatment framework assumes the treatment of waste generated only from the New Capital Region, which will be formed in a part of East Kalimantan Province and does not provide a solution for the population increase in Balikpapan City, Samarinda City, and the rest East Kalimantan Province, which is expected as a side effect of the New Capital City Development.
- On the other hand, the New Capital City is scheduled to introduce intermediate treatment facilities such as incineration-type WtE and biogasification facilities, however in areas such as Balikpapan City, Samarinda City, and the rest East Kalimantan Province, such intermediate treatment facilities are rarely used for treatment. Therefore, if other municipalities follow the classification of waste in the New Capital City, there is a possibility that they will be able to share the treatment of waste at intermediate treatment facilities. In this case, for example, other municipalities would benefit from the volume reduction of waste through incineration in terms of extending the life of their landfill facilities, and if the private sector were to take the lead in setting up such facilities in the New Capital City, the increased volume of waste to be treated would increase business profitability and benefit the stable operation of incineration facilities.

4.1.4 Industrial Development and Investment Promotion

(1) Industrial Development

In terms of industrial development, it is assumed that the movement of capital functions to IKN and the relocation of related personnel will create various industrial needs according to government agencies' needs. It also makes it easier to secure highly skilled human resources to support the industries, and increase the needs of lifestyle-related industries, according to the population growth. In addition, Tri-City's wide-area infrastructure development, such as transportation networks, is seen as a potential investment project as a PPP project. Furthermore, the implementation of IKN's plans for eight economic sectors (six economic sectors and two related sectors) will create needs for the industries in the surrounding areas. However, since it will take time for IKN to develop and populate, Balikpapan City and Samarinda City need to supplement urban functions in the meantime. The following table describes the impact on East Kalimantan province and Balikpapan City and Samarinda City.

Table 4-5 Regional Impacts from an Industrial Development Perspective

Category	Impact on East Kalimantan Province	Impact on Balikpapan City	Impact on Samarinda City
Movement of central government and officials to IKN, emergence of new urban functions and housing	· Need to consider reallocation of urban service industries within Tri-City. · Expansion of in-state businesses into IKN.	· Address needs for MICE functions, housing, and living services that cannot be addressed within IKN.	· IKN's entry into the urban services industry and supply of human resources. · Complementary functions of educational, medical, commercial and other services.
Tri-City wide infrastructure development	· Need to align with state plans and financial resources regarding transportation and logistics networks. · Participation of intrastate operators in IKN's intrastate transportation services.	· Urban development in line with IKN's transportation network plan. · Cooperation in water supply and waste disposal.	· Need smoother access to IKN to capture its growth.
Six economic sectors and two related areas			
1. Manufacture of renewable energy equipment (solar panels, EV motorcycles)	· If IKN's mega-solar project is successful, it will provide an incentive for other regions to follow suit, and further demand for solar power panels is expected. · Synergistic effects with battery manufacturing using Kayan Dam hydroelectric power are expected.	· Manufacturing base for solar panels and EV motorcycles. · Solar power installations in homes and buildings.	· Introduction of mega solar power generation in abandoned mines. · Installation of solar houses in un-electrified areas.
2. Integrated medicine	· Utilization of medicinal herbs and herbs that can be produced in the region. · Reallocation of medical	· Mutual use of medical facilities. · Attracting pharmaceutical facilities and	· The growth rate of pharmaceutical-related investments is high, and the potential for collaboration is seen.

	services within Tri-City. · Tri-City to manufacture development chemicals for IKN's research institutes.	laboratories.	· Improvement of medical services.
3. Sustainable agriculture	· Increase food self-sufficiency in the state. · Improvement of the business potential of agriculture.	· Linkage of the food processing industry with the agricultural products district of KP-IKN.	· Linkage between KP-IKN's fisheries and agriculture districts and fisheries logistics.
4. Ecotourism, medical tourism	· Tourism branding that links Tri-City as a starting point with the marine resorts in the northern part of the state. · Improve the level of medical care in the state.	· Eco-villages with performances and handicrafts, and linkage with eco-parks in mangrove forests.	· Linkage with eco-villages with performances and crafts, mangrove forest eco-parks, and Mahakam River cruises.
5. Advanced chemistry	· Collaboration with research facilities within IKN or with IKN companies in the gas chemical industry in Bontang.	· Downstream commercialization of the Apical and Pertamina refineries in the Kariangau industrial area north of the city.	· Pertamina oil field is at the mouth of the Mahakam River. · Utilization of palm oil, etc.
6. Low-carbon fuel energy and mining	· The biggest challenge of East Kalimantan province and need to incorporate the new technology at IKN. · It is important to see if existing oil, coal, and palm oil companies are willing to work on the projects.	· Conversion of the petroleum fuel industry, including Pertamina, to methanol, hydrogen fuel, etc. · Production of biofuels in oil and oleo chemical industry.	· Efficiency and gasification of the coal industry. · Environmental restoration of abandoned coal mines and plantation sites. · Conversion of palm oil and palm oil shells into biofuels.
7. Smart cities and digital centers	· It is expected to be introduced in the state in conjunction with the introduction of IC cameras and MaaS in IKN.	· Introduction or prior demonstration of IKN results.	· Introduction or prior demonstration of IKN results.
8. Education in the 21st century	· Linkage of higher education institutions within IKN and in East Kalimantan province.. · A center for human resource development in the state.	· Linkage with Kalimantan Institute of Technology. · Vocational training school for IKN.	· Attracting international schools for IKN government and embassy staff. · Vocational training school for IKN.

Source: JICA Study Team

(2) Investment Promotion Measures in the New Capital City and Partner Regions

Pursuant to Article 12.3 of the Law No.3/2022 on the capital relocation, the Government of Indonesia promulgated Government Regulation No.12/2023 on March 6, 2023 on granting business license permits, business promotion measures, and investment promotion for businesses in the New Capital City.

Government Regulation No.12/2023 aims to ease business-related regulations to promote industrial development in the New Capital City and Partner Regions, especially investments from foreign capitals.

1) Deregulation of Business License Acquisition

New business investments in the New Capital City and Partner Regions do not require a taxpayer identification number, which is normally required when obtaining a business license.

2) Business Promotion Measures: Relaxation of Foreign Investment Restrictions

Among the restrictions on foreign investment normally imposed on specific industries in Indonesia, the restriction on foreign capital ratio, which mandates foreign capitals to make a joint venture with a local company, are not applied in the New Capital City and partner regions for the following industries: arms and firearms, military vehicles, ships and aircraft, radar, domestic shipping and water transportation, air transportation, courier services, media (during expansion), etc.

However, it should be noted that the provisions regarding the 46 industries that require partnerships with small, medium, and micro businesses and cooperatives in Indonesia remain in effect.

3) Business Promotion Measures: Relaxation of Regulations on Employment of Foreign Workers

Generally, foreign workers can only be hired according to the Foreign Labor Use Plan (Rencana Pengunaan Tenaga Kerja Asing or "RPTKA"), which must be approved by the Ministry of Manpower. However, under the Government Regulation No.12/2023, the approval of RPTKA for foreign workers in IKN is for 10 years and can be extended. Therefore, foreign workers in IKN can also obtain a residence permit for a maximum of 10 years, which can be extended according to the validity period of the foreign worker's relevant employment contract. If the foreigner holds a management position in the company, he/she may also be granted a residence permit as long as his/her position continues.

The Compensation Fund for the Use of Foreign Workers, which is required when hiring foreign workers, is exempted when they are engaged in public works projects in the New Capital City.

4) Business promotion Measures: Granting of Land Titles

In Indonesia, foreigners and foreign corporations are not allowed to own land when conducting business, so they generally acquire the right to conduct business or construct and own buildings for 25 or 30 years, but in the New Capital City and Partner Regions, it is possible to acquire long-term rights as follows;

- Business Operation Right: up to 95 years (35-year grant, 25-year extension, 35-year renewal) (further extension of up to 95 years possible)
- Construction Right: up to 80 years (30-year grant of rights, extended for 20 years,

renewable for 30 years) (with the possibility of further extensions of up to 80 years)

- Land Use Right: Maximum 80 years (30-year grant, 20-year extension, 30-year renewal) (with the possibility of further extensions of up to 80 years)

5) Investment Promotion

The Government Regulation No.12/2023 states that the following incentives will be provided as investment facilities.

Table 4-6 Outline of Investment Facilitation for IKN Development

Type	Tax Break	Period/Deadline
Corporate Income Tax (CIT)	CIT is reduced by 100% for domestic corporate taxpayers investing at least IDR 10,000,000,000 in the New Capital City in the following business sectors a. Infrastructure and general services (covers: renewable energy, toll roads, ports, airports, public transportation, industrial parks, healthcare, education) b. Economic development (subject: shopping malls and hotels) c. Other business sectors (subject: agriculture, fisheries)	a. 30 years (subject to investment by 2030) b. up to 20 years (subject to investment by 2030) c. up to 10 years (subject to investment by 2030)
	Domestic corporate taxpayers may receive a 100% CIT reduction by investing at least IDR 10,000,000,000 in IKN's Partner Regions in infrastructure and general services.	15-25 years depending on the time of investment.
	Domestic corporate taxpayers in the financial services sector operating in the IKN Financial Center are entitled to a CIT reduction of 85% to 100%, depending on the nature of their business, source of income, and use of income.	Up to 25 years (if invested by 2035) Up to 20 years (for investments between 2036~2045)
	Foreign taxable persons are exempt from income tax on income arising from investments in IKN Financial Center.	10 years from the time investment is made.
	When establishing or relocating a headquarters or branch office in IKN, the CIT is reduced by 100% for the first 10 years and by 50% for the next 10 years.	20 years in total, and in any case not later than 2045.
	For domestic corporations and taxpayers that establish their headquarters or branch offices in IKN, the corporate income tax paid from income generated in IKN will be reduced by 100% for the first 10 years and by 50% for next 10 years.	20 years in total
Other Tax Deductions	Domestic corporate taxpayers that conduct or participate in certain human resource development activities (e.g., vocational training, education, internships, etc.) in IKN may deduct up to 250% of their expenses.	Until 2035
	Domestic corporations and taxpayers based in or doing business in IKN may deduct up to 350% of such expenses for certain research and development activities.	Until 2035
	Domestic taxpayers who make charitable or non-profit contributions in public, social or other facilities in IKN may deduct up to 200% of their expenses.	Until 2035
	Government pays personal income tax (Article 21 income tax) for employees who reside in IKN and possess a taxpayer identification number registered with the IKN tax office	Until 2035
	Micro, small and medium enterprises that invest less than 10 Million USD in IKN and meet certain conditions are subject to 0% income tax.	Until 2035
	Taxpayers who transfer land ownership in IKN are entitled to a 100% reduction in income tax on income arising from the transfer of land ownership.	Until 2035
Value Added Tax(VAT)	No VAT is collected on the following items a. Strategic products and services b. Imports of strategic commodity	Until 2035
Luxury Tax	Sales of luxury homes to individuals, corporations, and institutions based in, posted to, or doing business in IKN are exempt from the luxury tax.	Until 2035
Import Duty	The following import duties are exempted a. Capital goods (e.g., production equipment) imported for industrial development in IKN and Partner Regions b. Goods and materials (raw materials, etc.) for industrial development in IKN and Partner Regions Import duties are exempted for the following sectors a. Power generation facilities including renewable energy b. Toll road c. Seaport d. Airport	2-4 years

	e. Water Purification	
	Goods imported by the central or local government for the public benefit of IKN or Partner Regions are exempt from import duties.	-
Special Tax Revenue Facilities	OIKN can implement measures to reduce, abate, or exempt IKN special taxes.	-
	OIKN may offer the following to investors for investment in IKN a. Land (Location) b. Infrastructure c. Collateral for investments d. Access to labor	-

Source: Prepared by the Survey Team

The revised Law Capital Relocation Act, passed on October 3, 2023, corrects one of the above, which has been a challenge in promoting development in the New Capital Area.

4.1.5 Power and Energy

An updated power business plan (RENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL) 2021-2030) has been developed by the PLN that takes into account the changes in demand for electricity in East Kalimantan Province due to the construction of the New Capital City. While details regarding the impact of the construction of the New Capital City are underway separately, the following items are planned for power development, generation, and transmission, taking into account the increased demand as of 2021.

(1) Power Development and Generation

Taking into account the overall impact of economic growth throughout Indonesia, the replacement of existing aging power generation facilities, and the construction of a New Capital City, the plan is to add about 40 GW of power generation facilities throughout the country by 2030, which corresponds to about 80% of the existing capacity. Kalimantan will account for 2.8 GW of this total.

The power generation capacity required to supply electricity to IKN is estimated to be 0.9 GW by 2045. However, this estimate is based on population growth projections and other factors prior to 2019. It is noted that a detailed study based on the latest population growth projections and development plans is required.

Table 4-7 Summary of Power Development Plans throughout Indonesia and in IKN

Existing Installed Power Generation Capacity (as of 2020)	51.6 GW throughout Indonesia
Additional Generation Capacity Required by 2030	40.575 GW throughout Indonesia 2.8 GW in Kalimantan
Generation Capacity Required to Supply Electricity to IKN	About 0.9 GW by 2045

Source: RENCANA USAHA PENYEDIAAN TENAGA LISTRIK（RUPTL）2021-2030

A large-scale non-fossil energy source power generation project is the Kayan Hydropower Project. This is a cascade hydropower plant construction project being undertaken by PT Kayan Hydro Energy (KHE). The project plans to construct a cascade hydropower plant on Kayan River in phases, with an expected final installed capacity of 9 GW in total. The project site and details on the phased construction are described below.

Table 4-8 Overview of Kayan Hydroelectric Power Project

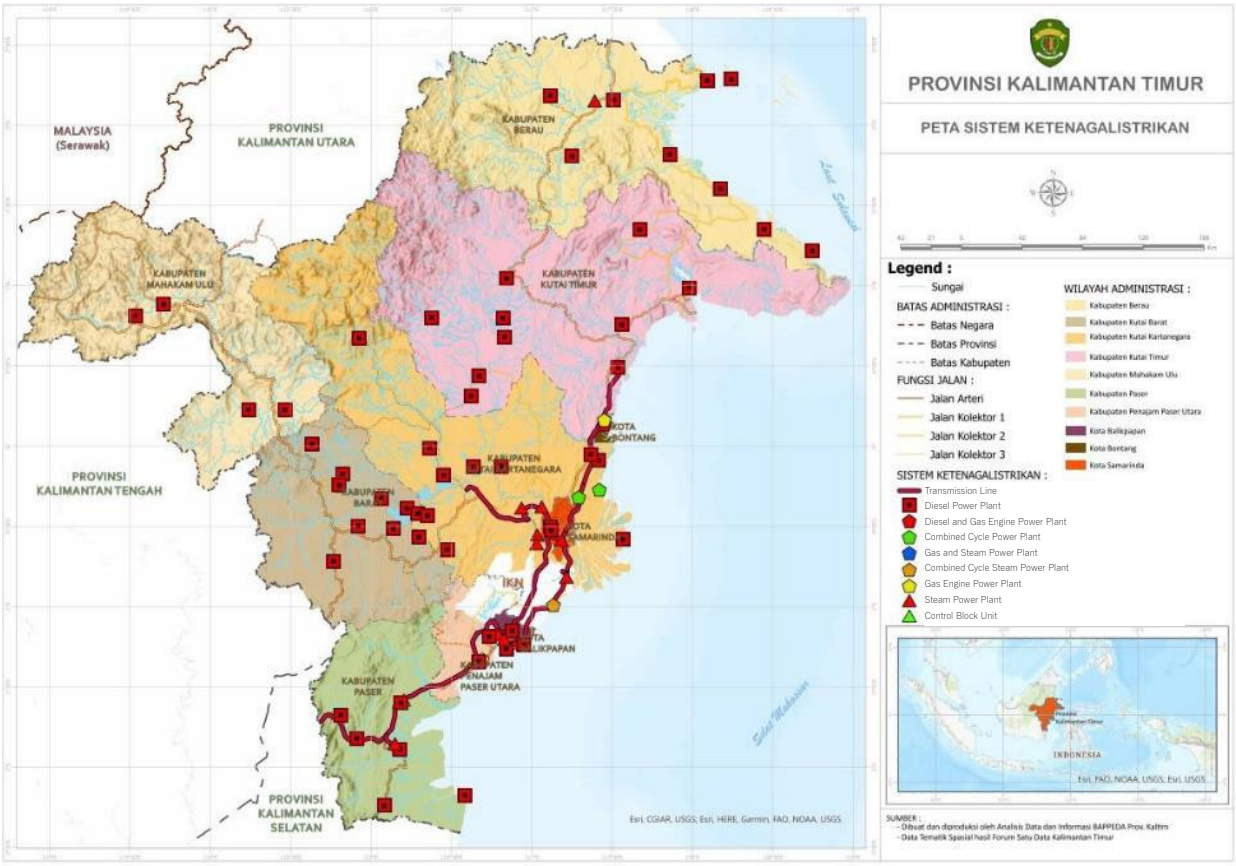
Site	North Kalimantan Province
Generation Capacity	Kayan1: 900MW [Developed by 2026] Kayan2: 1200MW Kayan3: 1800MW Kayan4: 1800MW Kayan5: 3300MW
Developer	PT Kayan Hydro Energy (KHE) Sumitomo Corporation

Source: NNA Corporation (http://www.nna.jp/), 7 October 2022.

If the electricity supplied by the project is implemented in the New Capital City and the surrounding areas, it is expected to promote the use of renewable energy in the area and contribute to the reduction of GHG emissions in IKN and the surrounding areas, including Balikpapan City and Samarinda City, and the achievement of the target for the percentage of electricity generated from renewable energy sources.

(2) Transmission

As shown in the figure below, the power system in East Kalimantan Province is transmitted through an integrated interconnected system called the Mahakam System, which is connected to the Barito System in South Kalimantan Province. Therefore, the electricity demand in East Kalimantan is mainly supplied by power plants in East Kalimantan Province and South Kalimantan Province.



Source: East Kalimantan Province Regional Middle-Term Development Plan 2024-2026

Figure 4-8 Power System Diagram

On the other hand, considering the expected increase in electricity demand in East Kalimantan Province, including IKN, and the fact that North Kalimantan Province has major potential for hydropower generation but no significant electricity demand, the construction of a 500 kV transmission network connecting North Kalimantan Province and East Kalimantan Province will be considered. The project is to construct a 500 kV transmission network connecting North Kalimantan Province and East Kalimantan Province. At present, East Kalimantan Province is mainly interconnected with South Kalimantan Province through power transmission, but there is no infrastructure for interconnection with North Kalimantan Province. However, no specific plans were mentioned.

In addition, the following issues related to transmission technology and facilities were identified as challenges to improve service performance to meet increased demand.

- Voltage stabilization
- Improvement of indexes related to power outages (SAIDI, SAIFI)
- Improvement of losses related to power transmission and distribution
- Rehabilitation of aging facilities such as power transmission conductors and support materials
- Grid interconnection of power transmission and distribution facilities to accommodate the mass introduction of renewable energy

(3) Electricity and Energy Management

According to Nusantara Smart City Blueprint (OIKN, 2023[5]), the smart grid and energy storage systems such as V2X are to be introduced for the purpose of data visualization and utilization for efficient management. In addition, a real-time electricity supply and demand monitoring system is expected to be introduced for the purpose of power load leveling and renewable energy control. All of these management systems need to be integrated with the management systems of the power and energy networks not only in the IKN region but also outside the region, considering that power and energy will be supplied from both inside and outside the IKN region.

4.1.6 Urban Management

The table below shows the expected impact and rippled effects from the implementation of the New Capital City Development on East Kalimantan Province, Balikpapan City, and Samarinda City from the perspective of urban management.

Table 4-9 Summary of Impact of New Capital City Development on Urban Management

Category	Impact and Rippled Effects of Expected New Capital City Development
Urban and Regional Development Planning	➢ The New Capital City Project is expected to increase road traffic between IKN and Balikpapan City, Samarinda City, and other areas and rise up the demands of urban development and real estate in IKN and the surrounding area due to the increase in new residents and economic activity.

[5] Nusantara Smart City Blueprint: https://www.ikn.go.id/cetak-biru-kota-cerdas-nusantara

Category	Impact and Rippled Effects of Expected New Capital City Development
Administration	➢ A partnership between the Central Government and East Kalimantan Provincial Government must be enhanced to create a shared vision of what the region should be and a mechanism to resolve conflicts of interest in an equitable manner. ➢ In particular, differences remain between central and state thinking on the nature of regional industries with coal mining at their core, requiring compromise and commitment on both sides through fair and open discussion.
Financing and Budgeting	➢ Transparency and accountability in budget allocation is required to ensure proper management of funds from the central government for the capital relocation project, leading to equitable development of the entire region and community. ➢ The burden that the population growth associated with the relocation of capital city will place on the region's buffer cities in terms of residency, infrastructure services and the environment must be anticipated, and appropriate budgeting must be made for measures and public improvements to prevent the deterioration of the living environment.
Economy and Employment	➢ With the relocation of the capital functions, a large population increase is expected in the future, and a variety of service industries are expected to develop. ➢ On the other hand, it is necessary to correct the educational and income disparities, etc. between professional human resources migrating from Java and Sumatera and local human resources in Kalimantan, and to control the stratification of social, economic, and employment opportunities.
Education	➢ In order to ensure the competitiveness of local human resources in administrative and economic activities in the New Capital City, it is necessary to raise overall educational access and standards, and to expand higher education institutions that foster expertise in appropriate fields. ➢ The development of human resources in the creation of a global and tourism industry as an international gateway is an urgent need, and the composition of an education system and curriculum with an international flavor is urgently needed.
Medical Welfare	➢ Population growth will require overall health and welfare access and standards to be raised, as well as advanced medical services in appropriate areas. ➢ Ensuring the high level of medical care required by the urban population moving in from Java and Sumatra will be a key item in the formation of a sustainable New Capital City Project.
Housing	➢ While the expected influx of workers in the administrative, construction, and service industries following the relocation of the New Capital City is expected to revitalize the housing market in surrounding cities, stagnant supply to meet housing demand from diverse family structures and income groups will lead to the formation of slums and soaring housing market prices, which will also cause friction between the incoming population and the local population. ➢ While private capital is the main source of housing development, the government is also expected to play a significant role in providing affordable housing, establishing new residential districts, and improving infrastructure.
Village Development	➢ The existing urban population absorption capacity is limited and housing development in villages is needed. Development practices that prevent conflicts between migrant and local populations and ensure that the benefits of development are spread throughout the social fabric are required.
Public Safety and Security	➢ In order to prevent conflicts between the incoming and local populations in the region, where populations of diverse cultures, occupations, and incomes will be concentrated, it is necessary to form a society where the benefits of development are fairly distributed and everyone is satisfied in terms of employment, income, education, healthcare, and housing. If shortages and injustices are left unchecked, social fragmentation will progress.

Source: JICA Study Team

4.1.7 Living Environment

The following table shows the items that are expected to be affected by the New Capital City Development in terms of the living environment and infrastructure in East Kalimantan

Province, Balikpapan City, and Samarinda City.

Table 4-10 Impacts and Rippled Effects of New Capital City Project on Living Environment

Classification	Impact and Rippled Effects of New Capital City Development
Water Supply	· It is assumed that population growth will cause water supply shortages. · It is assumed that the water supply plan related to the New Capital City Project, especially the plan to secure raw water in Balikpapan City, may be affected.
Drainage and Sewage	· It is assumed that population growth will cause overflow of the existing allowable amount of sewage treatment. · Spillover effects on neighboring cities are assumed by planning and studies of sewage pipeline networks and drainage simulations in the New Capital City.

Source: JICA Study Team

The outline of study and planning on water supply, drainage, and sewage in IKN is described in below.

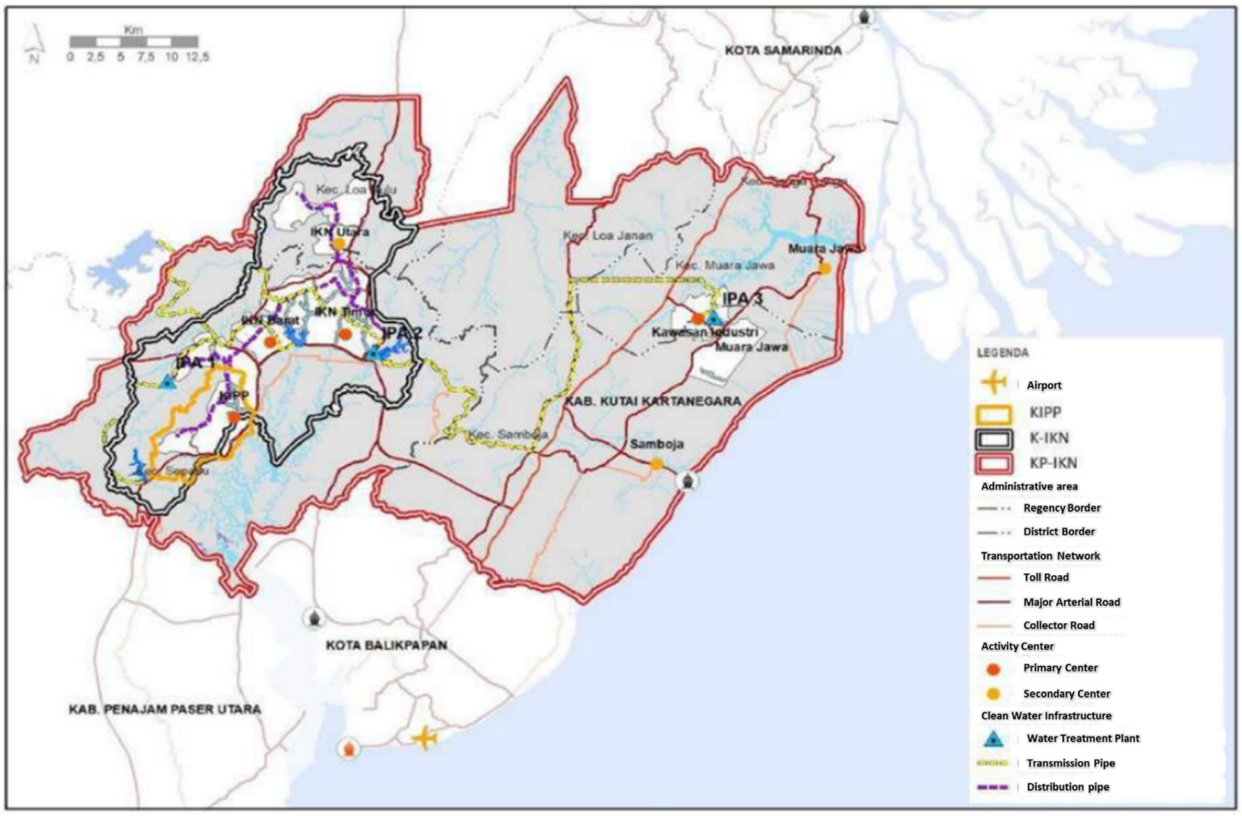
According to the IKN Strategic Environmental Impact Assessment (2020), ecosystem services related to water resources in the IKN are analyzed by the categories of "natural landscape and landforms", "biology and vegetation", and "human activities and land use". Ecosystem services are classified as low and medium, with the majority of the ecosystem services in the area being medium (85.01%) and low (12.42%) according to area percentage.

A certain level of water resource availability in the IKN Area can be expected. On the other hand, the existing needs in the IKN are not being met due to the lack of infrastructure such as raw water supply and distribution pipes, and the situation is that rivers, reservoirs, and wells (shallow and deep wells) are utilized.

In IKN Masterplan 2021, the water supply plan identifies the following water sources to be used by IKN.

1. Sepaxemoi Dam (stage 3)
2. Southern green dam near KIPP area (phase 1)
3. Sepaku water management system (phase 1)
4. Batu Lepeck II Dam

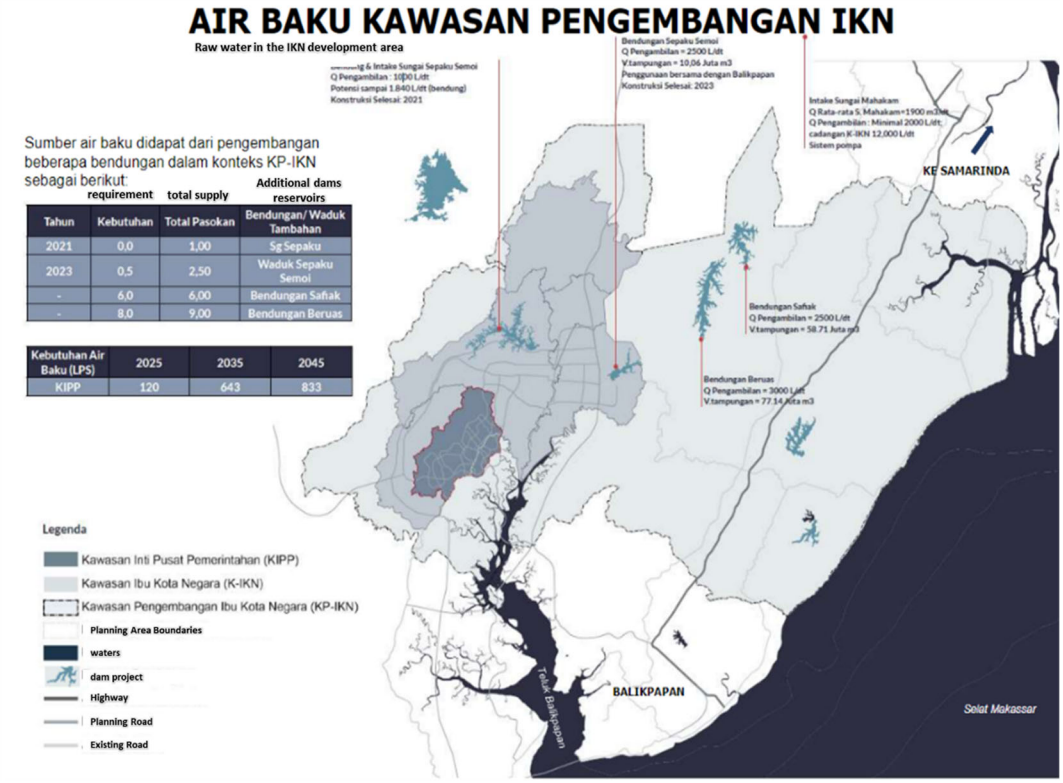
The water treatment plant arrangement to ensure IKN water quality consists of two facilities in the K-IKN Area serving the city and surrounding areas and one facility in the Muara Java Industrial Zone serving the region and surrounding areas. In addition, a secondary distribution basin will be constructed for the water supply system to regulate the amount of water distributed to users and the discharge of water. The layout of the clean water infrastructure indicated in the master plan is shown in the figure below.



Source: Masterplan Ibu Kota Negara/MP IKN 2021

Figure 4-9 Clean Water Infrastructure Map

As shown in the following figure, the future source of raw water for KP-IKN can be obtained from several dams, including Safiak Dam and Beruas Dam.

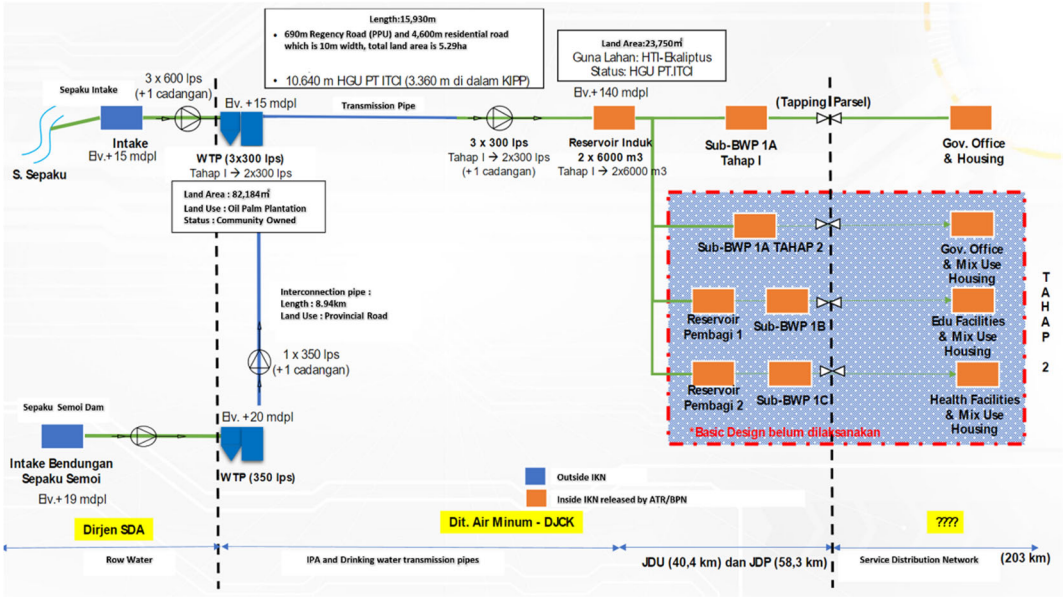


Source: Masterplan Ibu Kota Negara/MP IKN 2021

Figure 4-10 Drinking Water Supply System of KIPP-IKN

According to the plan of KIPP-IKN about drinking water supply system shown below, KIPP-IKN's water supply will be taken from two locations, Sepaku Semoi Dam and Intake Sepaku, and distributed to each town block and household via water storage sites in the district.

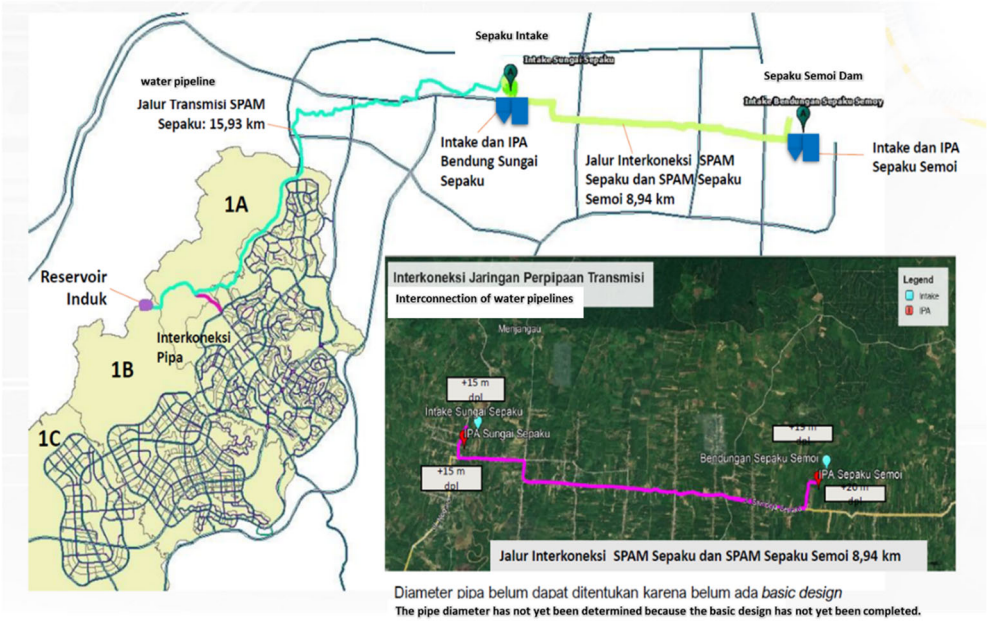
From Sepaku Semoi Dam, 350 liter/sec will be sent through the Water Treatment Plant (WTP) and from Intake Semoi, 3*300 liter/sec (2*300 liter/sec for the time being) will be sent through the water treatment plant to the main reservoir (2*6,000m^3). The main reservoir (2*6,000 m^3) will receive 3*300 liter/sec.



Source: Pembangunan Infrastructure Ibu Kota Negara Tahun 2022-2024

Figure 4-11 Drinking Water Supply System of KIPP-IKN

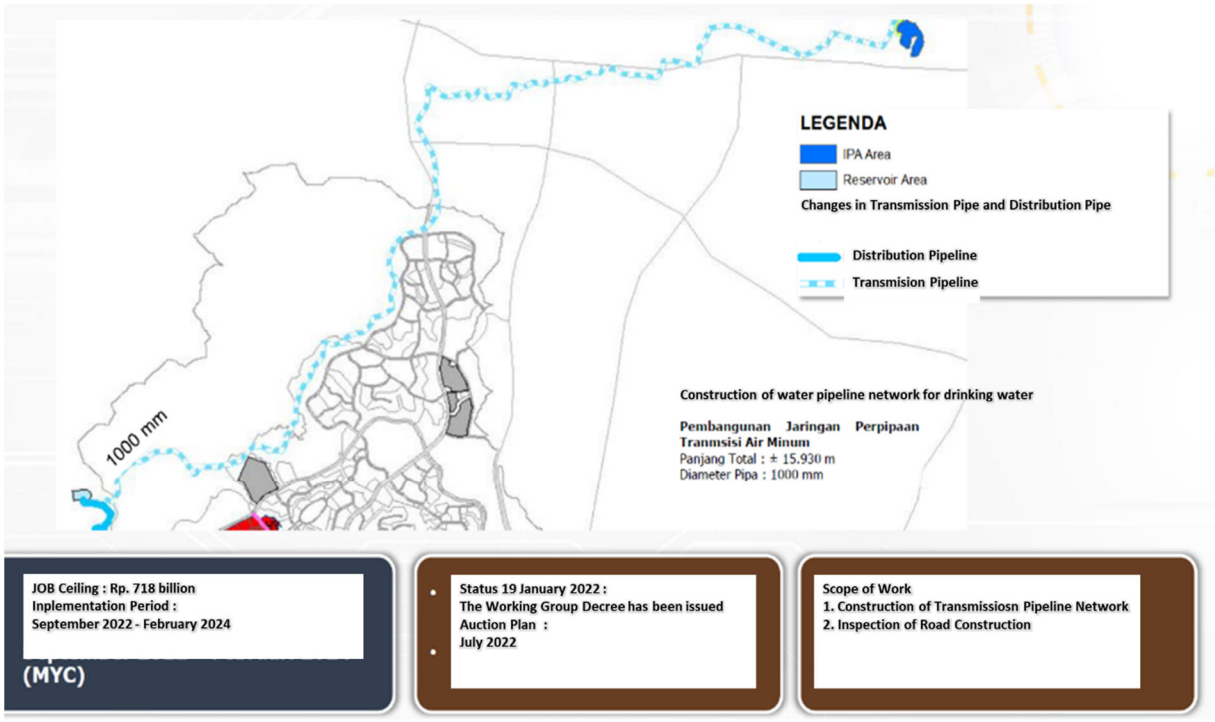
Interconnection of Sepaku Semoi Dam and Intake Semoi is planned to ensure availability of raw water source for KIPP-IKN as shown in the following figure.



Source: Pembangunan Infrastructure Ibu Kota Negara Tahun 2022-2024

Figure 4-12 Interconnection of Sepaku Semoi Dam and Intake Sepaku

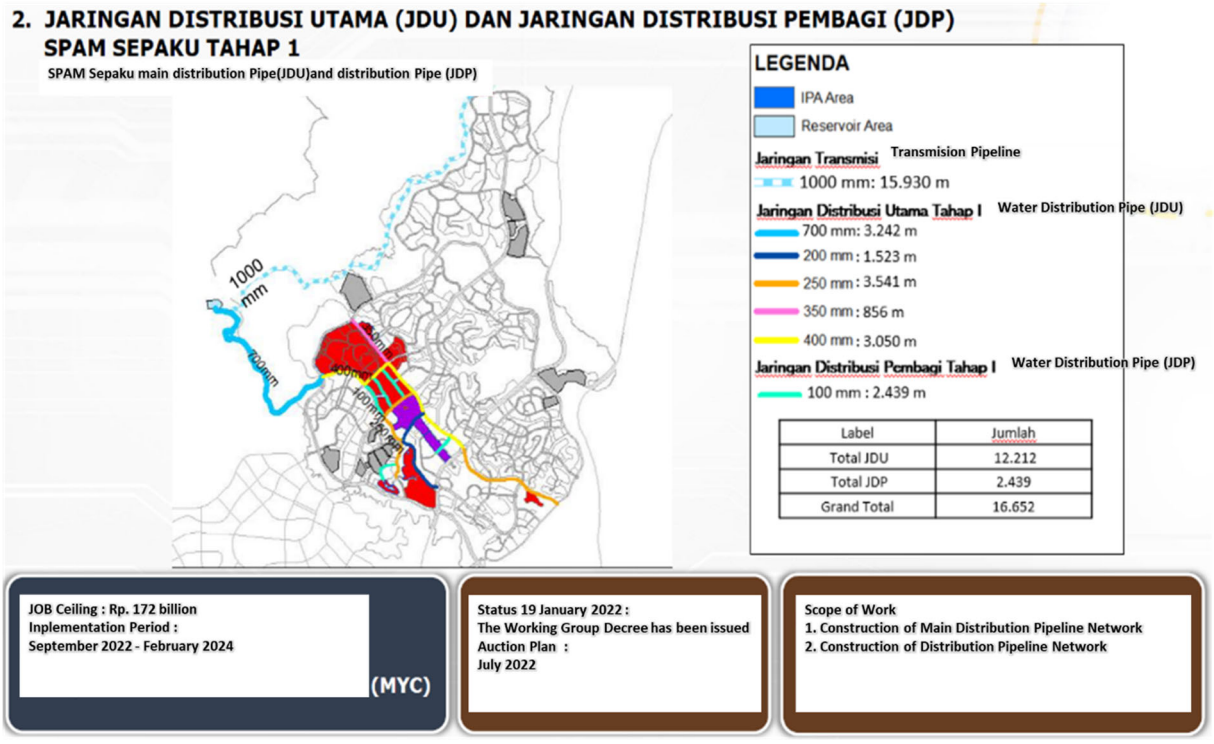
As shown in the following figure, the water is transported 15.93 km to the reservoir by a water pipe (ϕ 1,000) from Intake Sepaku,.



Source: PEMBANGUNAN INFRASTRUKTUR IBU KOTA NEGARA TA 2022-2024

Figure 4-13 Water Delivery from IPA

Then, the water is supplied from the reservoir to each town block and household by distribution pipes as shown below.



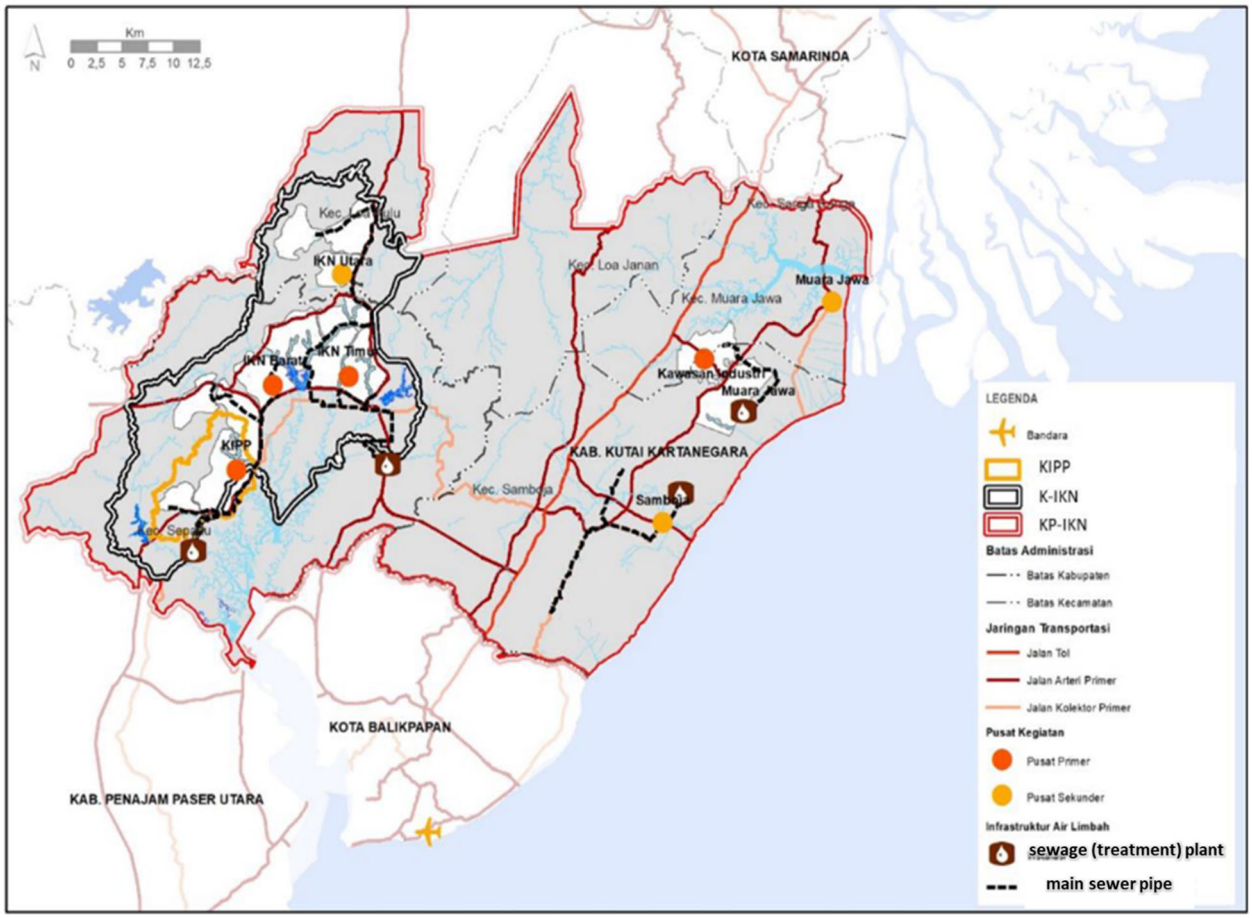
Source: PEMBANGUNAN INFRASTRUKTUR IBU KOTA NEGARA TA 2022-2024

Figure 4-14 Pipe Network from Reservoir

In the IKN Masterplan 2021, the wastewater treatment systems used in KP-IKN are as follows.

1. Off-site centralized drainage system to be used in the new K-IKN development and industrial park
2. On-site sanitation system with existing population linked to off-site sanitation system

In IKN, as shown in the following map, four sewerage treatment plants are planned for construction: two in K-IKN, one in the Muara Java Industrial Zone and one in the Kuala Samboja region.



Source: IKN MASTERPLAN FINAL 2021

Figure 4-15 Wastewater Infrastructure Map

According to IKN Masterplan 2021, the sewerage management strategy is as follows. The basic policy is to separate rainwater and sewerage in a diversion system. It is also assumed that treated sewerage will be recycled as non-potable water.

1） Identify the generation of wastewater.

2） Integrate existing wastewater management into a comprehensive system and establish an appropriate treatment or service system with renewable systems.

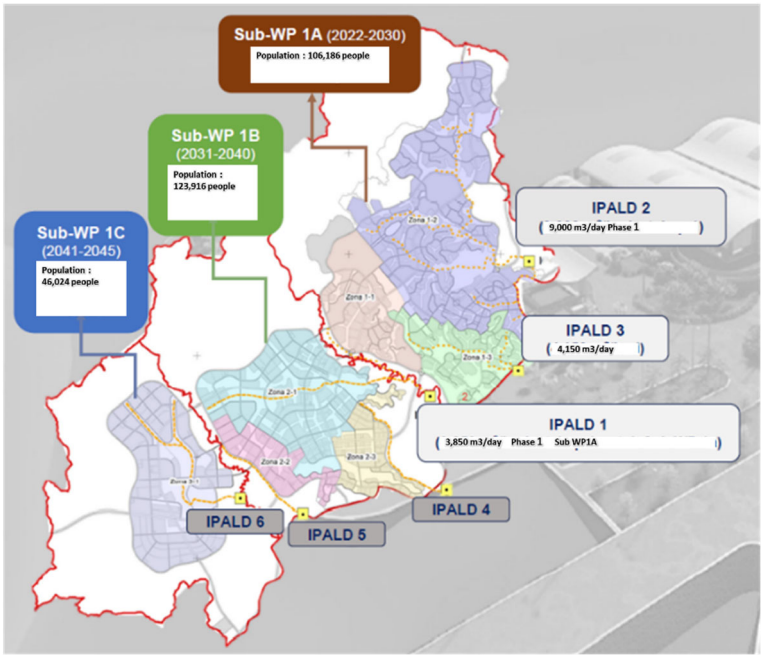
3） It is proposed to convert the existing regional wastewater management system (off-site or centralized system)

4） Integrate with waste management to properly treat potential residual waste such as silt,

fecal sludge, and leachate to reduce final product and avoid burdening landfills.

5) Select preferred technologies to minimize disposal of environmentally non-compliant waste.

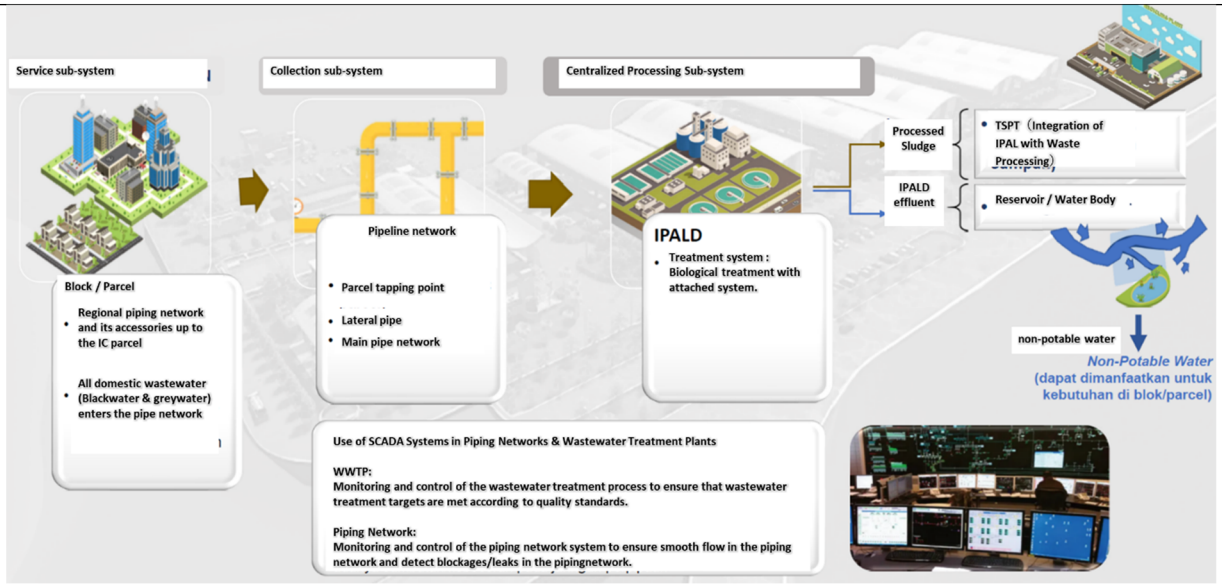
According to Domestic Wastewater Management System KIPP-IKN, the KIPP area will be treated by 2035 with all drainage connected to the regional centralized sewerage treatment plant (IPALD-T: Instalasi Pengolahan Air Limbah Domestik Terpusat) via a pipeline network. The service area of the preceding city block (Sub WP 1A) will be divided into three sections according to topography, and an IPALD will be constructed in each section with a total treatment capacity of 17,000m^3/day (2022-2024) as written in the following figure.



Source: Sistem Pengelolaan Air Limbah Domestik KIPP – IKN

Figure 4-16 Wastewater Service Area in KIPP

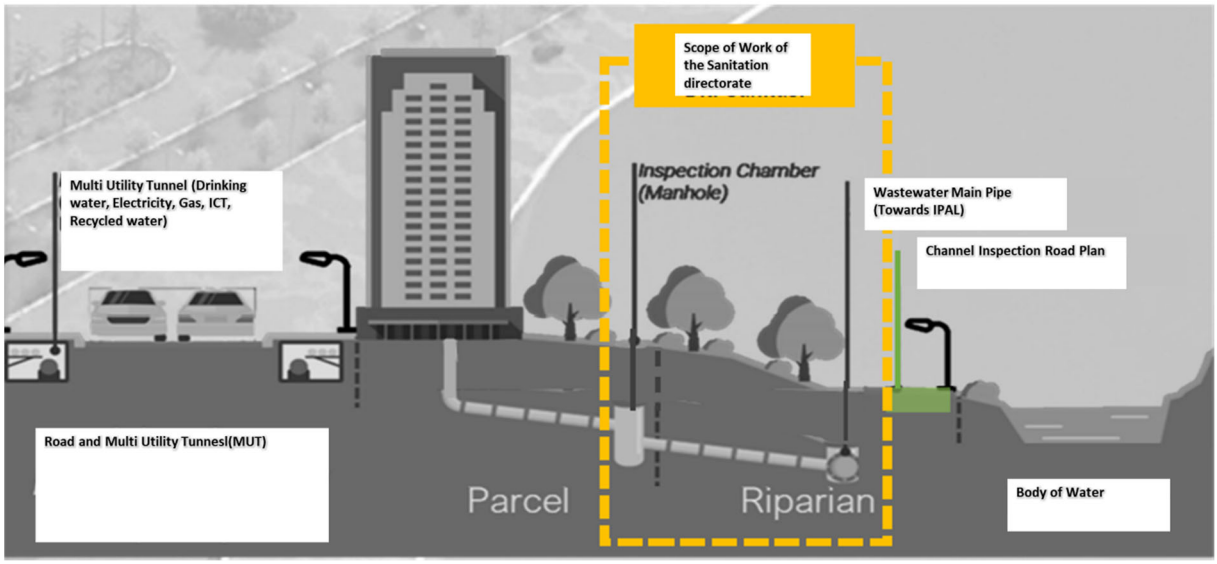
As shown below, wastewater from each household and city block is discharged downstream by a network of pipes and collected at IPALD for treatment. The treated wastewater will then be discharged to existing water bodies as non-potable water, and the treated sludge will be disposed by the Integrated Sewerage Treatment Plant and Waste Treatment (TPST: Integrasi IPAL dengan Pengolahan Sampah).



Source: Sistem Pengelolaan Air Limbah Domestik KIPP – IKN

Figure 4-17 Drainage System of IKN

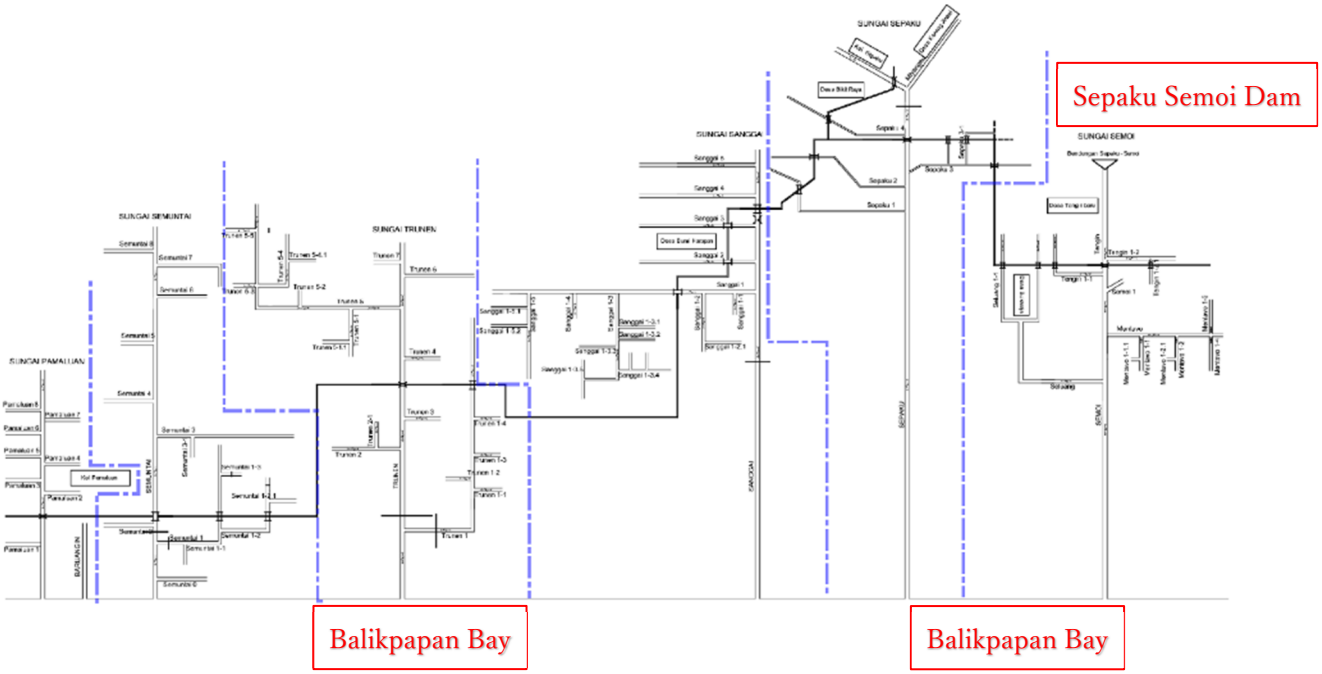
The following figure show the drainage range in IKN.



Source: Sistem Pengelolaan Air Limbah Domestik KIPP – IKN

Figure 4-18 Drainage Range

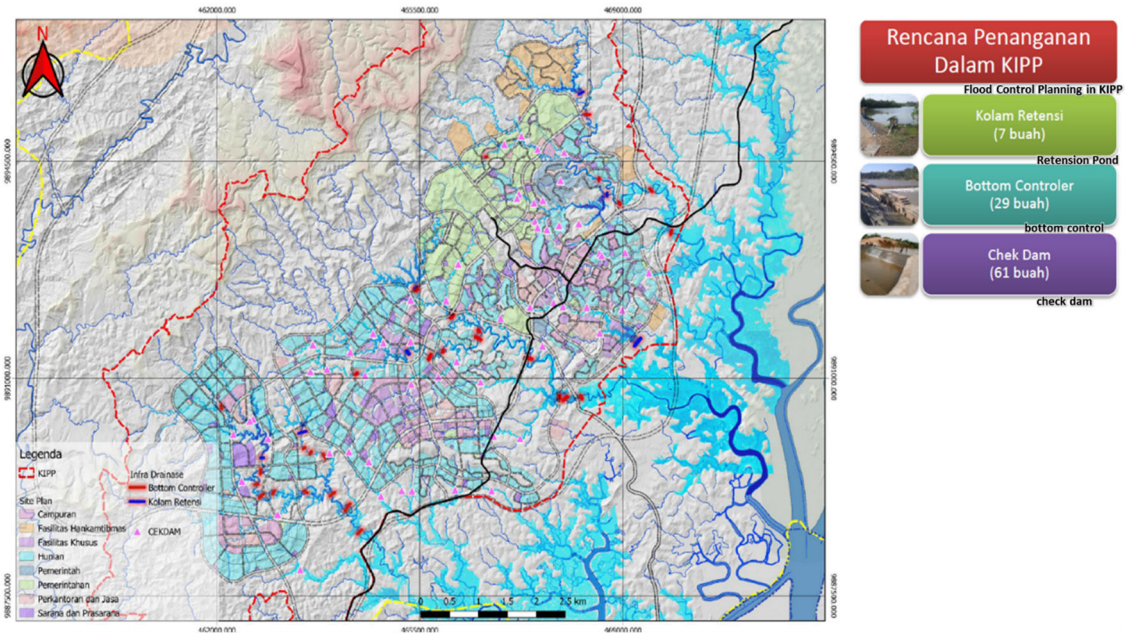
KIPP-IKN is in the Sanggai watershed, and in the "Master Plan Pengendalian Banjir DAS Sanggai", stormwater drainage in the Sanggai watershed is studied by identifying and simulating flood events. Simulations have been conducted for each sub-watershed within the Sanggai watershed. As shown in the following figure, the watersheds in which KIPP-IKN is located all have topography that eventually flows down to Balikpapan Bay, so the impact on the surrounding areas is expected to be minimal.



Source: Master Plan Pengendalian Banjir DAS Sanggai

Figure 4-19 Schematic of Water System in Sanggai Watershed

Based on the existing topography, drainage facility conditions, and future facility plans, flood and inundation simulations are conducted, flood control plans are developed, and drainage facility plans (regulating reservoirs, check dams, etc.) are made and reflected in the plans. In addition, the height of bridge plans and discharge locations into the river are planned in accordance with the drainage plans as shown in the following map.



Source: Master Plan Pengendalian Banjir DAS Sanggai

Figure 4-20 Plan for Drainage Structures

4.1.8 Diversity

The core location of IKN is planned to occupy part of the PPU Regency and Kutai Kartanagara Regency areas. The total population of the East Kalimantan Province is currently 4,448,763 people and almost half (45%) of the total population in East Kalimantan Province lives in three cities (Samarinda City, Balikpapan City, and Bontang City) with population densities ranging from 1,139 - 1,380 people/km^2. The population in PPU Regency is 160.9 thousand people with population density 58 people/km^2, and in Kutai Kartanegara Regency, it is 786.1 thousand people with population density 27 people/km^2. Most of East Kalimantan Province's population is presently dominated by immigrants from Java people, Bugis people, and Banjar people, as well as other ethnicities in relatively minor numbers. Issues caused by social diversity, which could happen due to the development of the New Capital City include the followings.

(1) Population Movement

The construction and relocation of the capital city to East Kalimantan Province has the potential to cause massive population movement both from other provinces in Kalimantan and from Java, Sumatera, Sulawesi and other islands to East Kalimantan Province. Migration of a diverse population from many backgrounds or differences in culture, ethnicity, religion, gender, age, level of education, and so on, which will produce a variety of different points of view and would cause changes of social-economic and culture conditions in the IKN Area and surroundings regencies/cities areas including PPU Regency, Kutai Kartanegara Regency, Balikpapan City, and Samarinda City. These changes in social, economic and cultural conditions also have the potential to increase the risks of differences in perception and public unrest which tend to become social (public) conflicts.

The population movement will also increase social and economic inequality if it is not addressed immediately in planning. Inequality can occur because the exodus wave is a group of people who already have a standard of living in Jakarta. Inequality that has not yet been resolved and the threat of population movement from Java to Kalimantan, creates its own threats. The uncontrolled urbanization process in the IKN Area and surrounding cities and the existence of a hierarchy of these cities would have various negative impacts, including the potential for the emergence of poverty symptoms in urban areas, per capita income inequality, unemployment, crime, water, air and noise pollution, growth of slum areas, and so on.

In everyday life, individuals or groups cannot be separated from interactions with other groups. Interactions in multicultural groups with differences in physical characteristics, knowledge, customs and beliefs are vulnerable to conflict. In Indonesia, conflicts resulting from cultural differences often turn into destructive conflicts that result in clashes between ethnicities, religions, races or groups. The context of ethnic conflict in Indonesia originates from cultural clashes due to feelings of ethnocentrism.

(2) Existence of Traditional Institution (Lembaga Adat)

The Traditional Institution party stated that they felt that the government was still lacking in involving them in various decisions for the welfare of the community. Traditional Institutions then explained that they were a media for the voices of their indigenous communities which needed attention from the government. Lack of the treatment on this issue will create social problems.

(3) Marginalization of Society

The potential for local communities to be marginalized and the loss of local identity and culture is a concern expressed by many communities and traditional leaders. These concerns are rooted in land and livelihood issues, as well as the erosion of cultural and traditional values by modernization. In the BAPPENAS report on the relocation of the capital, it is of the view that the lives of indigenous people are very vulnerable to the pressure of rapid changes that are occurring. If relocation must be carried out, then economic life based on forests and natural resources needs to be maintained, so that the identity and livelihood of the community can be maintained, and their welfare is not far behind from other tribes.

Public concerns are also due to the pressure of competition when the capital is moved due to the rate of migration. This fear is also felt by the community because education in East Kalimantan is less competitive when compared to the quality of education of Jakarta and Java residents.

(4) Cultural Including Traditions and Customs[6][7][8][9]

With the construction of IKN, there are concerns about the loss of several cultures such as the Long House (Rumah Panjang) which is usually used as a gathering place for the community during this time; old cemeteries considered sacred sites; several tourist attractions, such as Wall Stone (Batu Dinding), which have not yet been fully developed; as well as cultural activities such as ketinting competitions in the river, Dayak motif weaving and bead embroidery competitions, and so on which have been regularly held.

(5) Social Conflict

Considering that Indonesia is a multicultural country, where it is prone to social conflicts, capital relocation is an agenda that requires in-depth study, especially in social sector. In terms of socio-cultural effects, it is estimated that there is an increase in cultural diversity, not only in terms of ethnicity but also in economic and educational levels, urbanization, the emergence of metropolitan cities, and the opening of business and employment opportunities, all of which can spark social conflicts among ethnic groups. Nonetheless, social, economic, and political inequality is a pervasive issue.

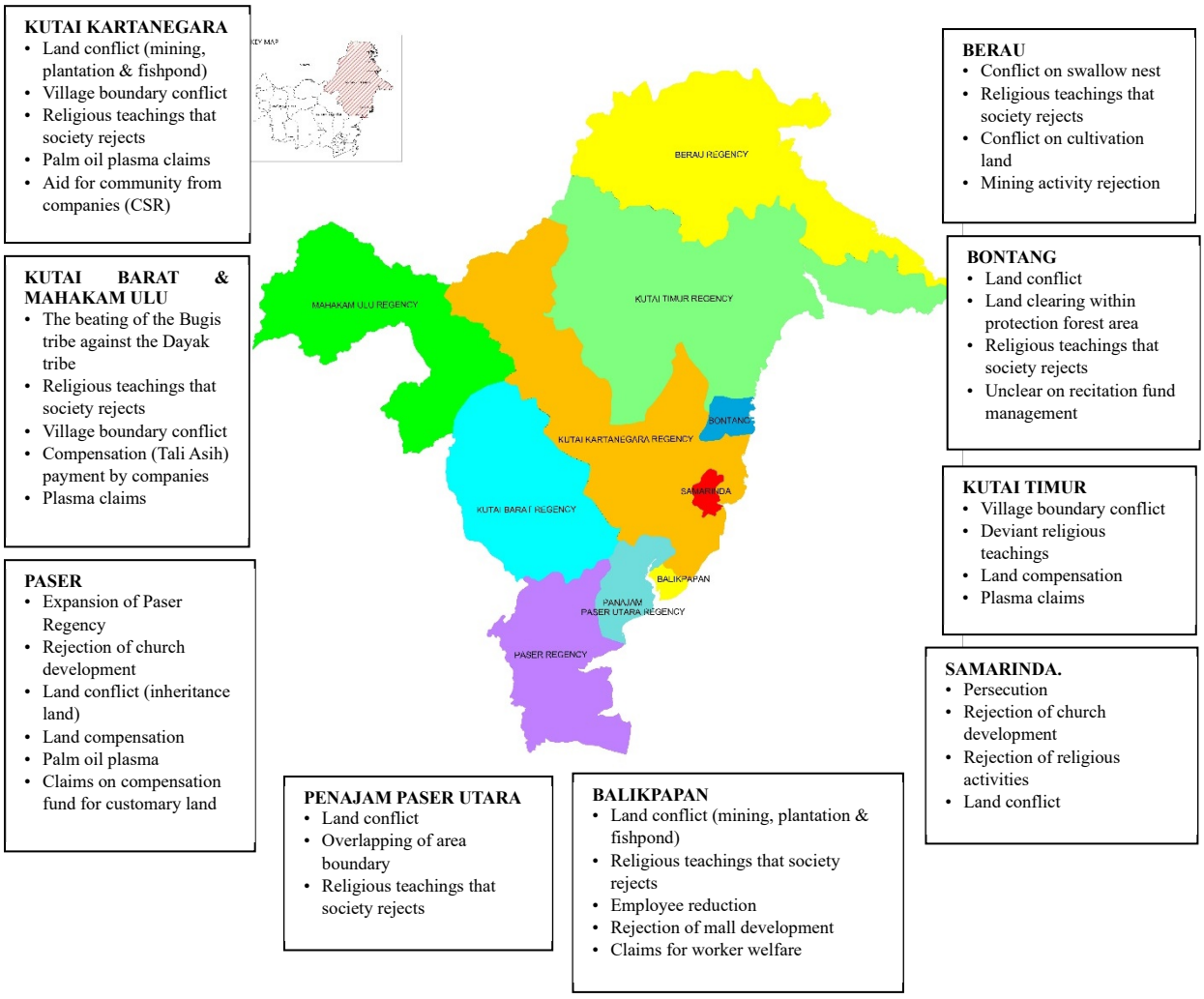
East Kalimantan Province was one of the 10 provinces in Indonesia that experienced the lowest incidents in 2017. However, according to data from the Central Statistics Agency (BPS) in 2018, East Kalimantan Province experienced the highest mass conflict when compared to other provinces on the island of Kalimantan. The types of problems include commotion between groups of residents, students, between tribes, residents and government officials or security forces.

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[6] The Potential of Social Conflict in Capital Relocation of the Republic of Indonesia(Hana Dwi Djayanti, I Gede Sumertha, Anang Puji Utama)
[7] Moving the National Capital (IKN) from a Strategic Intelligence approach (Sundawan Salya, Lecturer of the State Intelligence Collage, Indonesia)
[8] Journal of Governance and Public Policy ISSN: 2460-0164 (print), 2549-7669 (Online) Vol 9, No 2 (2022): Page no: 161-170 "The Impact of IKN on Socio-Economic Development in Penajam Paser Utara (PPU) and Kutai Kartanegara".
[9] Capital on the Move: Policy of Relocating the Indonesian Capital City (IKN) and Its Transfer Consequences Unggul Sagena, Technology & Society Researcher Universitas Indonesia

Based on information from the East Kalimantan Regional Police, conflicts that often occur are due to fights between tribes which then escalate into social conflicts with the formation of groups in society. However, this conflict is often proven to be a criminal case which is actually only superficially framed as a social conflict.

The map below shows the potential conflict map for East Kalimantan Province. From the results of the social conflict mapping carried out in 2019, there seems to be five problems that have potential to give rise to social conflicts including: (1)SARA (ethnic, religious and racist) issues; (2)land ownership status; (3)licensing; (4)social problems; and (5)governance issues. The figure below presents the Map of Potential Conflict in the East Kalimantan Province.



Source : Agency for Nation Unity and Politics (Kesbangpol), East Kalimantan, 2019

Figure 4-21 Map of Potential Conflicts in East Kalimantan

4.2 Confirmation of Consistencies in New Capital City Development Plan and Current Development Plans for the Surrounding Areas

4.2.1 Connectivity (Transportation, ICT)

As mentioned above, the New Capital City Development is expected to have significant impacts on the surrounding cities and regions in the East Kalimantan Province, including an increase in transport demand. Traffic congestion has already become apparent in Balikpapan City and Samarinda City, and it is urgent to promote planning studies and project implementation taking account of impacts of the New Capital City Development. Based on the review of existing plans, field surveys, and assumptions of the impacts and effects of IKN Development on connectivity, followings would be key challenges that should be considered and studied in the future development of Balikpapan City and Samarinda City as well as Tri-City development.

(1) Challenges on Connectivity in Balikpapan City

The existing Balikpapan City Regional Middle- and Long-Term Development Plans and Balikpapan City Regional Spatial Plan generally do not adequately consider and reflect the impact and linkage of the IKN Development. While the plans revised and formulated after 2020 mention the need to link and support the New Capital City Development as a neighboring city, the impact and rippled effects of the New Capital City Development have not been sufficiently considered, analyzed, or reflected especially in quantitative terms during the planning of policies and projects.

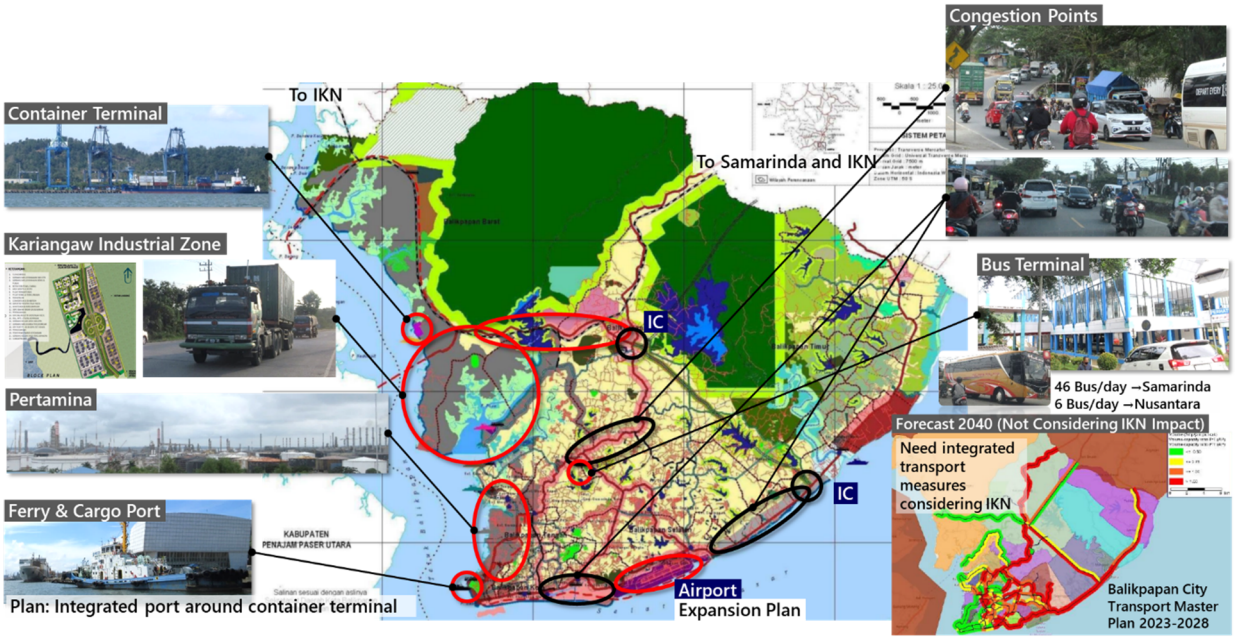
Traffic congestion during peak hours is already occurring on the coastal roads of Balikpapan City, at intersections where large vehicles, private cars, and other vehicles from the Kariangau industrial area and suburban residential areas are entering the city, and at intersections near toll-road entrances (refer to the figure below). On the other hand, public transportation use within the city is low and the number of users is declining. However the Balikpapan City Transportation Master Plan has recently been developed, it does not fully reflect the development of the New Capital City in terms of road and public transportation demand forecasts, and the next revision is expected to be made around 2028. Even without fully reflecting the impact of the IKN Development, the results of road traffic demand forecasts indicate that traffic congestion is expected to occur in many places of the city in the future. It is urgently needed to study transportation plan that carefully consider the impact of IKN Development and to implement measures to deal with the situation.

Although construction of a toll road from Balikpapan City to KIPP is underway, it is necessary to implement the project while securing land and coordinating with existing infrastructure in the section near the existing urban area. Drainage infrastructure is inadequate, and some areas of the city are flooded during and after heavy rains. Thus, roads around drainage channels are flooded and impassable. It is necessary to improve the traffic environment to make it more disaster-resistant to cope with the traffic demand increase caused by the New Capital City Development and to realize a safe urban environment to support the development of IKN.

While study and planning are underway by MOT to develop a railway between Balikpapan City and KIPP, careful consideration is required for passenger demand forecasting in light of the impact of the New Capital City Development. In addition, whereas the construction of a railway between Balikpapan City and Samarinda City will be studied in the future, it would

be essential to study the inter-city transport demand forecast based on the impact of the IKN Development as early as possible.

Regarding the ports in Balikpapan City, whereas the expansion and enhancement of the Kariangau Container Terminal and Semayang Port are being considered, the Balikpapan Harbor Master Plan formulated by MOT did not well reflect the impact of the IKN Development and capital relocation onto the plan as described in the Chapter 2. It would be necessary to pay attention to the impact of the New Capital City Development and to reflect the latest planning trends. In addition, although the expansion and enhancement of Sepinggan Airport is being considered by MOT and AP, it is important to accurately reflect the possibility of rapid increase in inter-regional flow is in the planning of the airport due to the development of the New Capital City.



Source: Balikpapan City Regional Spatial Plan 2012-2032, Balikpapan City Transportation Master Plan 2023-2028; Photo: JICA Study Team

Figure 4-22 Main Transportation Facilities and Current Status in Balikpapan City

(2) Challenges on Connectivity in Samarinda City

The existing Samarida City Regional Middle- and Long-Term Development Plans and Regional Spatial Plan do not adequately consider or reflect the impact of the IKN Development. While the Regional Spatial Plan and other plans that have recently been considered for revision mention the promotion of development in support of the New Capital City Development, specific measures and project plans have not been sufficiently considered and analyzed based on the analysis of impact and rippled effects of the New Capital City Project, especially quantitatively(refer to the figure below).

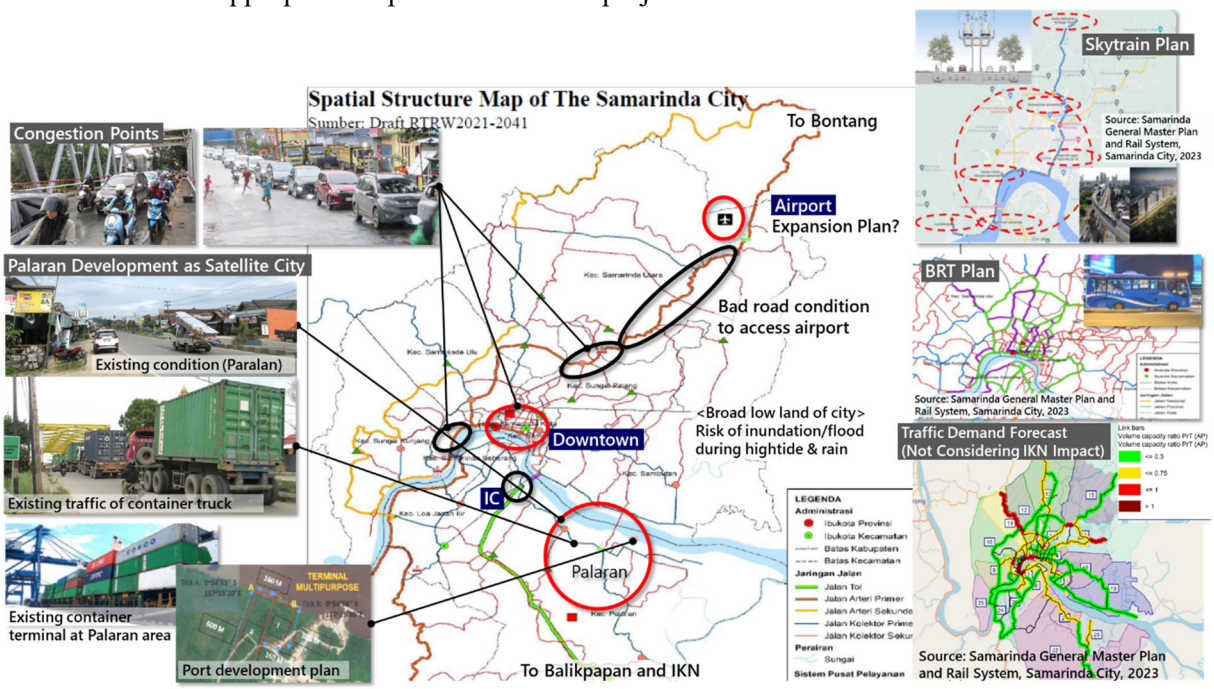
Traffic congestion was already observed at bottleneck points such as bridge sections and hills along the canal north of the Mahakam River. In addition, the road section between the container terminal and the toll-road exit in the Palaran area is already heavily traveled by large logistics vehicles such as containerized cargo trucks. With support for the development of a New Capital City in mind, a port expansion plan and urban development are being considered in the Palaran area, and there are concerns that the traffic environment will deteriorate due to the increase in traffic associated with the development. It would be important to analyze the

future traffic demand in the region based on the impact and effects of the IKN Development and reflect it in urban and transportation infrastructure development plans.

Regarding the road between Samarinda City and KIPP, while the East Kalimantan Province Regional Spatial Plan describes a plan for a secondary arterial road from western Samarinda City, there seems to be no concrete development plan. In addition, the road environment and structure between the Samboja interchange, which is an important existing access road from Samarinda City to KIPP, and KIPP is no good. It would be important to improve the driving environment by improving the alignment, longitudinal gradient, and slope disaster prevention measures for the road section between Samboja and KIPP.

The number of users and the number of vehicles operated by Angkot, the main intra-city public transportation system, has been declining, and Samarinda City is introducing a regional public transportation system utilizing BRT and apps to improve convenience. Regarding the city's railway plan, which is part of the Trans-Kalimantan Railway Plan, Samarinda City is also considering a skytrain plan for the section between APT Pranoto Airport and within the city center by elevating the line. These public transportation plans should also be examined to accurately reflect the impact of the New Capital City Development Project and changes in transportation demand.

It is essential that the expansion and improvement projects of APT Pranoto Airport and Palaran Port, which are being considered by MOT and Samarinda City, also accurately reflect changes in traffic and logistics demand through the IKN Development, and that the plans be revised as appropriate to promote effective projects.



Source: Balikpapan City Regional Spatial Plan 2012-2032, Balikpapan City Transportation Master Plan 2023-2028;
Photo: JICA Study Team

Figure 4-23 Major Transportation Facilities and Current Conditions in Samarinda City

4.2.2 Climate Change Measures (Zero Emissions, Disaster Prevention)

In the Mahakam River Basin, where a large area of East Kalimantan Province is located, the development of IKN will change the topographical and land use conditions of the basin, as

well as the conditions related to rainwater infiltration and flood discharges. Therefore, it is necessary to optimize river flood control measures for the entire watershed based on the IKN Development Plan.

While stormwater drainage measures are basically planned in each catchment area, inconsistencies with river flood control measures may result in ineffective stormwater drainage measures. In order to implement stormwater drainage measures effectively and economically, it is necessary to ensure consistency with flood flow sharing plans for riverine flood control and the topographical conditions of each facility.

In Balikpapan City, one of the existing surrounding cities, a stormwater drainage plan was established in 2022. However, the construction of new structures such as new drainage channels often takes time due to factors such as land acquisition and conflicts with existing infrastructure, which tend to prevent smooth progress of measures. Therefore, it is important for newly developed IKN stormwater drainage plans to be consistent with river flood control measures in the basin and the latest development plans to ensure smooth implementation of the measures.

In relation to disaster response, according to Nusantara Smart City Blueprint (OIKN, 2023), the Integrated Information and Control Center (ICC) to be implemented in IKN will provide emergency information to communities during disasters and monitor disasters such as flooding and air pollution. The occurrence and progression of disasters will be monitored by IKN. Since the occurrence and progression of disasters are often linked to events outside IKN Area, it is necessary to collect and provide information in cooperation with the surrounding areas and to harmonize data management in the surrounding areas.

On the other hand, regarding zero emissions, the electricity consumed in IKN is supplied by the Barito system that connects East Kalimantan Province and South Kalimantan Province and is provided by the power plants in East Kalimantan Province and South Kalimantan Province. However, according to the latest power development plan, about 30% of the capacity in East Kalimantan Province and about 70% of the capacity in South Kalimantan Province, which is connected to the Barito system that interconnects with East Kalimantan Province, is thermal power, and IKN is planning to use 100% renewable energy. This is a discrepancy between IKN's plan to use 100% renewable energy and the plan for South Kalimantan Province's plan to use 100% renewable energy.

Table 4-11 Power Development Plan in Kalimantan

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Amount
PLN											
PLTU	17	200	-	-	219	-	-	-	-	-	436
PLTGU	-	-	-	-	-	80	-	-	-	100	180
PLTG/MG	150	3	100	-	-	40	-	-	-	40	333
PLTM	-	-	-	-	2	-	-	-	-	-	2
PLTA	-	-	-	-	73	-	-	180	300	100	653
PLTS	9	20	30	33	30	-	-	-	-	-	121
PLT Lain	-	-	-	-	-	-	-	-	-	-	-
PLT EBT Base	-	-	-	-	-	-	100	-	-	-	100
Amount	176	223	130	33	324	120	100	180	300	240	1.826
IPP											
PLTU	100	-	14	-	-	-	-	-	-	-	114
PLTM	-	-	-	9	17	-	-	-	-	-	26
PLTA	-	-	-	-	200	100	200	-	-	-	500
PLTS	-	1	109	-	72	-	-	-	-	-	182
Other PLT	-	5	71	60	10	10	-	-	-	-	156
Amount	100	6	194	69	299	110	200	-	-	-	978

Total											
PLTU	117	200	14	-	219	-	-	-	-	-	550
PLTGU	-	-	-	-	-	80	-	-	-	100	180
PLTG/MG	150	3	100	-	-	40	-	-	-	40	333
PLTM	-	-	-	9	19	-	-	-	-	-	28
PLTA	-	-	-	-	273	100	200	180	300	100	1.153
PLTS	9	21	139	33	102	-	-	-	-	-	304
Other PLT	-	5	71	60	10	10	-	-	-	-	156
PLT EBT Base	-	-	-	-	-	-	100	-	-	-	100
Amount	276	229	323	102	624	230	300	180	300	240	2.804

*PLTS=SOLAR PV, PLTU=STEAM POWER PLANT, PLTMG=GAS POWER PLANT, PLTBio=Bio POWER PLANT, PLTA=HYDROPOWER, PLTG/MG/GU=GAS/Mini Hydro/Geothermal POWER PLANT

Source: RENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL) 2021-2030

Unit: MW

Table 4-12 Power Development Plan in East Kalimantan

NO	Electric Power System Name	Power Plant Type Name	Power Plant	Capacity (MW)	COD	Status	Developer
1	Isolated	PLTS	Lisdes Kaltim	7,2	2021	Plan	PLN
2	Isolated	PLTS	Lisdes Kaltim	5,5	2022	Plan	PLN
3	Isolated	PLTS	Dedieselization	24,8	2023	Plan	IPP
4	Mahakam	PLTG	Kaltim Peaker 2	100	2023	Committed	PLN
5	Isolated	PLTS	Lisdes Kaltim	4,1	2023	Plan	PLN
6	Mahakam	PLTS	PLTH Kaltim Peaker 2	1	2023	Committed	PLN
7	Mahakam	PLTU	Tanah Grogot	2x7	2023	Construction	IPP
8	Isolated	PLTS	Lisdes Kaltim	3,2	2024	Plan	PLN
9	Mahakam	PLTS	Kalseltengtimra (Kuota) Tersebar	50	2025	Plan	IPP
10	Mahakam	PLTBio	Kalseltengtimra (Kuota) Tersebar	10	2025	Plan	IPP
11	Mahakam	PLTA	Kelai	55	2025	Plan	PLN
12	Mahakam	PLTA	Lambakan	18,2	2025	Plan	PLN
13	Mahakam	PLTGU	Kaltim Add on Blok 2	80	2026	Plan	PLN
14	Mahakam	PLTA	Tabang	90	2028	Plan	PLN
				462,9			

*PLTS=SOLAR PV, PLTU=STEAM POWER PLANT, PLTMG=GAS POWER PLANT, PLTBio=Bio POWER PLANT, PLTA=HYDROPOWER, PLTG/MG/GU=GAS/Mini Hydro/Geothermal POWER PLAN

Source: RENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL) 2021-2030

Table 4-13 Power Development Plan in North Kalimantan

NO	Electric Power System Name	Power Plant Type Name	Power Plant	Capacity (MW)	COD	Status	Developer
1	Isolated	PLTS	Lisdes Kaltara	1,43	2021	Plan	PLN
2	Mahakam	PLTU	Malinau	3	2021	Construction	PLN
3	Mahakam	PLTMG	Nunukan 2	10	2021	Construction	PLN
4	Mahakam	PLTU	Tanjung Selor	2x7	2021	Construction	PLN
5	Bunyu	PLTMG	Bunyu	3	2022	Plan	PLN
6	Isolated	PLTS	Lisdes Kaltara	1,19	2022	Plan	PLN
7	Isolated	PLTS	Dedieselization	4,55	2023	Plan	IPP
8	Isolated	PLTS	Lisdes Kaltara	2,07	2023	Plan	PLN
9	Mahakam	PLTBio	Kalseltengtimr a (Kuota) Tersebar	10	2024	Plan	IPP
10	Isolated	PLTS	Lisdes Kaltara	1,01	2024	Plan	PLN
11	Mahakam	PLTA	Kalseltengtimr a (Kuota) Tersebar	200	2025	Plan	IPP
12	Mahakam	PLTA	Kalseltengtimr a (Kuota) Tersebar	100	2026	Plan	IPP
13	Mahakam	PLTG/MG /GU	Sei Menggaris	2x20	2026	Plan	PLN
14	Mahakam	PLTA	Kalseltengtimr a (Kuota) Tersebar	200	2027	Plan	IPP
15	Mahakam	PLTA	Sesayap	90	2028	Plan	PLN
16	Mahakam	PLTA	Kaltimra	200	2029	Plan	PLN
17	Mahakam	PLTA	Kaltimra	100	2030	Plan	PLN
18	Mahakam	PLTG/MG/G U/MGU	Kaltimra (Eks.Tarakan)	2x20	2030	Plan	PLN
				1020,2			

*PLTS=SOLAR PV, PLTU=STEAM POWER PLANT, PLTMG=GAS POWER PLANT, PLTBio=Bio POWER PLANT, PLTA=HYDROPOWER, PLTG/MG/GU=GAS/Mini Hydro/Geothermal POWER PLANT
Source: RENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL) 2021-2030

Table 4-14 Power Development Plans in South Kalimantan

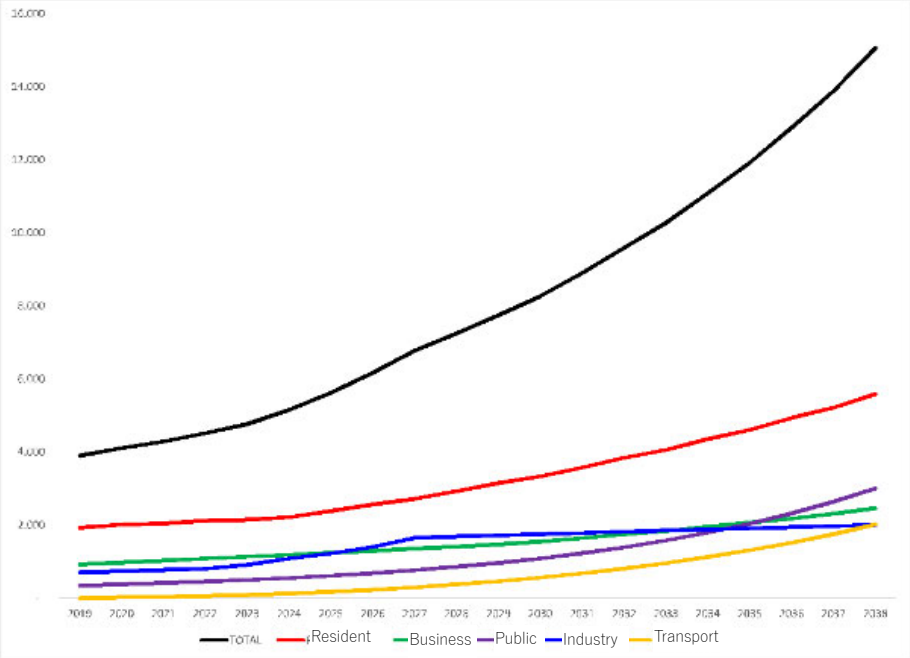
No	Electric Power System Name	Power Plant Type Name	Project	Capacity (MW)	COD	Status	Developer
1	Isolated	PLTS	*Kalsel (Kuota) Tersebar*	0,9	2022	Plan	IPP
2	Barito	PLTU	*Kalselteng 2*	2x100	2022	Construction	PLN
3	Isolated	PLTS	*Dedieselization*	1,2	2023	Plan	IPP
4	Barito	PLTG/MG/GU/ MGU	*Kalsel (Relokasi)**	200*	2023/24	Relocation	PLN
5	Barito	PLTB	*Tanah Laut*	70	2023/24	Plan	IPP
6	Barito	PLTU	*Kotabaru*	2x7	2025	Construction	PLN
7	Isolated	PLTS	*Dedieselization*	2,03	2025	Plan	IPP
8	Barito	PLTGU	*Kalsel 1*	100	2030	Plan	PLN
		Total		388,2			

* Relocation Power Plant, which does not count as additional capacity

*PLTS=SOLAR PV, PLTU=STEAM POWER PLANT, PLTMG=GAS POWER PLANT, PLTBio=Bio POWER PLANT, PLTA=HYDROPOWER, PLTG/MG/GU=GAS/Mini Hydro/Geothermal POWER PLANT
Source: RENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL), PLN

According to the National Electricity General Plan, the electricity demand forecast for the entire province of East Kalimantan Province is estimated to increase by an average of about 7.1% per year over the next 10 years and about 7.4% per year over the next 20 years, resulting in an electric energy requirement of 7,243 GWh in 2028 and 15,069GWh in 2038(refer to the

figure and table below). The electric energy requirement is estimated to be 7,243GWh in 2028 and 15,069GWh in 2038. In addition, the potential of primary energy sources, such as hydropower, geothermal, and solar, which contribute to zero emissions, has been identified as a potential source of energy (refer to the following figure). It is necessary to plan in detail how to achieve 100% renewable energy use in IKN, taking into account the increase in electricity demand for the entire province of East Kalimantan and the potential of primary energy sources.



Source: National Electricity General Plan

Figure 4-24 Electricity Demand Forecast for East Kalimantan Province: Trends(GWh)

Table 4-15 Electricity Demand Forecast for East Kalimantan Province: (a)Breakdown of Demand Projections

URAIAN/ DESCRIPTION	SATUAN/ Unit	TAHUN/ YEAR										
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Rata-Rata 10 TAHUN/ Average 10 YEARS
ASUMSI & TARGET /Estimates and Goals												
Pertumbuhan Ekonomi economic growth	%	3,5	3,8	3,2	3,3	3,4	3,5	3,6	3,7	3,8	3,9	3,6
Inflasi inflation	%	4,0	4,0	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,6
Pertumbuhan Penduduk population increase	%	2,0	1,9	1,9	1,9	1,8	1,8	1,8	1,8	1,7	1,7	1,8
Rasio Elektrifikasi rate of electrification	%	100	100	100	100	100	100	100	100	100	100	
HASIL PROYEKSI /Results of implementation												
Kebutuhan Tenaga Listrik Electric Power Requirements	GWh	3.897	4.106	4.281	4.510	4.762	5.150	5.623	6.169	6.778	7.243	
Pertumbuhan Kebutuhan Tenaga Listrik Power demand growth rate	%	7,4	5,4	4,3	5,4	5,6	8,1	9,2	9,7	9,9	6,9	7,1
Konsumsi Listrik Per Kapita Power consumption per person	kWh	1.047	1.082	1.107	1.145	1.188	1.261	1.353	1.459	1.576	1.656	
Kebutuhan Tambahan Kapasitas (Per tahun) Additional capacity (per year)	MW	49	335	291	145	258	236	100	100	100	100	171
Kebutuhan Tambahan Kapasitas (Kumulatif) Additional capacity (Accumulated)	MW	49	384	674	819	1.077	1.313	1.413	1.513	1.613	1.713	
Total Kapasitas total capacity	MW	1.023	1.351	1.621	1.763	2.015	2.250	2.350	2.447	2.546	2.640	
Produksi Tenaga Listrik (Neto)) Electricity production (Accumulated)	GWh	4.455	4.574	5.757	6.470	8.164	9.726	9.904	10.749	11.941	12.468	
BBM	%	9	16	3	1,3	1	1	1	1,1	1,8	1,7	
Gas	%	44	16	19	29	44	53	45	42	41	39	
Batubara(Coal)	%	47	67	77	69	54	46	53	56	57	59	
EBT	%	0,00	1	1	1	1	1	1	1	1	1	

Source: National Electricity General Plan

Note: According to the Indonesian numerical notation, the thousands separator is "." and the decimal separator is ",".

URAIAN/ DESCRIPTION	SATUAN/ Unit	TAHUN/ YEAR										
		2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	Rata-Rata 20 TAHUN/ Average 20 YEARS
ASUMSI & TARGET /Estimates and Goals												
Pertumbuhan Ekonomi economic growth	%	3,9	3,9	4,0	4,0	4,1	4,1	4,2	4,2	4,2	4,3	3,8
Inflasi inflation	%	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,3	3,3	3,3	3,5
Pertumbuhan Penduduk population increase	%	1,6	1,6	1,5	1,5	1,4	1,4	1,3	1,3	1,3	1,3	1,6
Rasio Elektrifikasi rate of electrification	%	100	100	100	100	100	100	100	100	100	100	
HASIL PROYEKSI /Results of implementation												
Kebutuhan Tenaga Listrik Electric Power Requirements	GWh	7.744	8.266	8.901	9.595	10.270	11.094	11.925	12.882	13.882	15.069	
Pertumbuhan Kebutuhan Tenaga Listrik Power demand growth rate	%	6,9	6,7	7,7	7,8	7,0	8,0	7,5	8,0	7,8	8,5	7,4
Konsumsi Listrik Per Kapita Power consumption per person	kWh	1.743	1.832	1.943	2.064	2.178	2.321	2.463	2.625	2.792	2.992	
Kebutuhan Tambahan Kapasitas (Per tahun) Additional capacity (per year)	MW	0	0	0	0	0	0	336	215	188	419	144
Kebutuhan Tambahan Kapasitas (Kumulatif) Additional capacity (Accumulated)	MW	1.713	1.713	1.713	1.713	1.713	1.713	2.049	2.264	2.452	2.871	
Total Kapasitas total capacity	MW	2.640	2.638	2.636	2.595	2.579	2.562	2.896	3.111	3.299	3.671	
Produksi Tenaga Listrik (Neto) **) Electricity production (Accumulated)	GWh	8.880	8.760	8.805	8.793	8.764	10.110	11.343	11.830	12.256	12.961	
BBM	%	0,5	0	0	0,5	0,5	0,3	0,1	0,0	0,04	0,03	
Gas	%	33	30	27	26	26	17	2	3	3	1	
Batubara(Coal)	%	66	69	72	72	73	82	89	90	91	82	
EBT	%	1	1	1	1	1	1	9	7	7	16	

Source: National Electricity General Plan

Note: According to the Indonesian numerical notation, the thousands separator is “.” and the decimal separator is “,”.

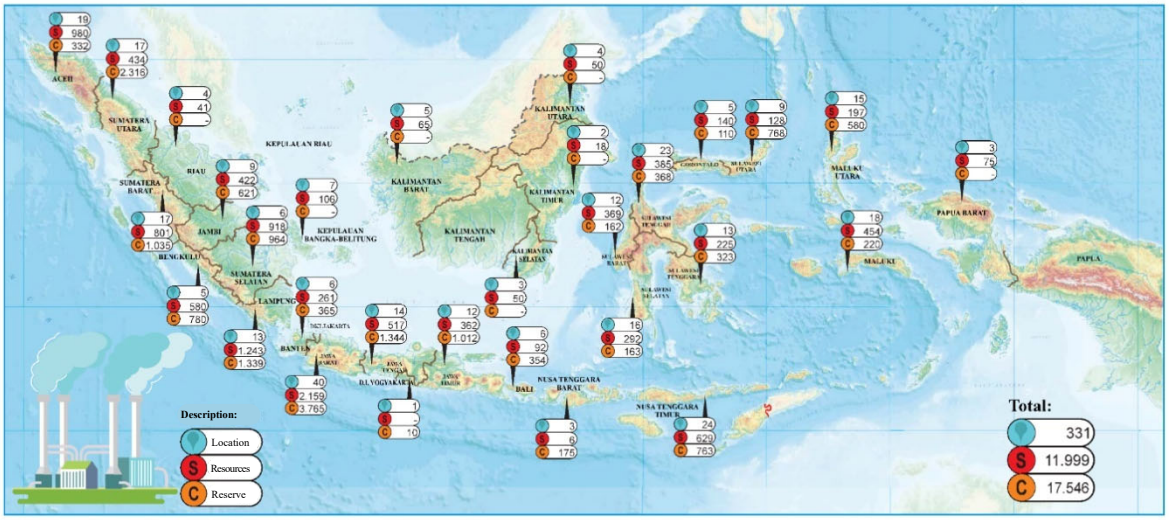
Table 4-16 Primary Energy Source Potential in East Kalimantan Province

Primary Energy Sources	Potential quantity
Coal	Approx. 48,180.2 million tons
Natural gas	11,713.9BSCF
Petroleum	Estimated approx. 463.6 MMSTB
Hydroelectric power	Approx. 16,844 MW (including potential in South and Central Kalimantan)
Geothermal	Approx. 18 MWe
Coal Bed Methane (CBM)	Approx. 106.3 TCF
Small hydro	3,562 MW
Bioenergy	Approx. 964.3 MW
Solar power	13,479 MW
Wind power	Approx. 212 MW

Source: JICA Study Team based on National Electricity General Plan

Geothermal potential map

(Unit MWe (Mega Watt electric))



Source :: Rencana Umum Energi Nasional (RUEN)

(a) Geothermal

Natural Gas Potential Map

Unit BCF (*Billion Cubic Feet*)



Source :: Rencana Umum Energi Nasional (RUEN)

(b) Natural gas

Hydro Power Potential Map

Unit MW (Mega Watt))



Source Rencana Umum Energi Nasional (RUEN) & RUED Provinsi Kalimantan Utara 2018-2050

(c) Hydraulic power

CBM Potential Map
(*Coal Bed Methane*)

Unit 1 TCF (Trillion Cubic Feet))

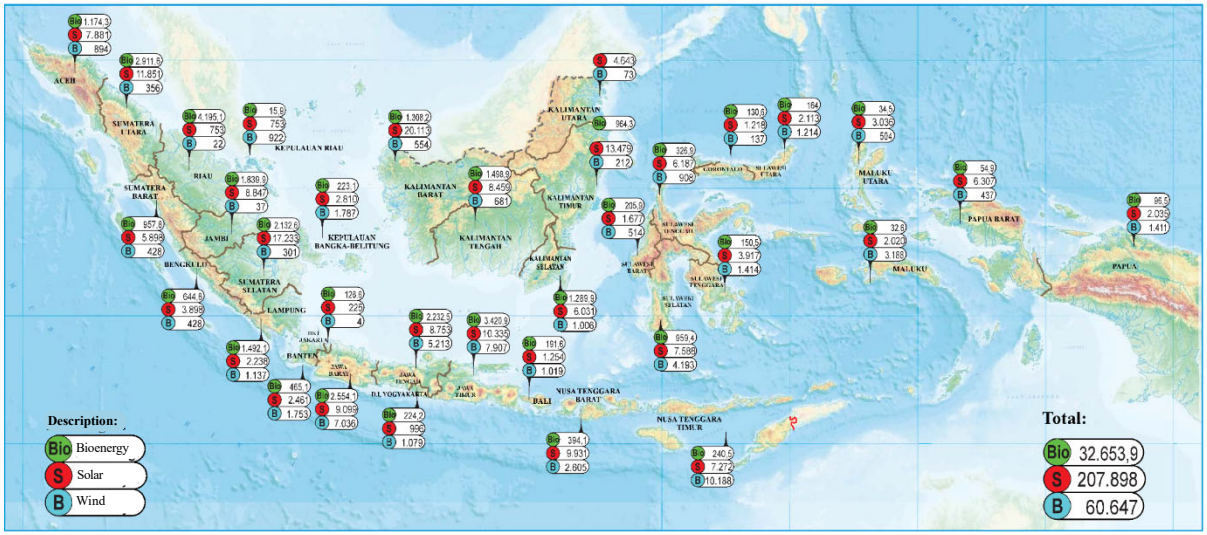


Source Rencana Umum Energi Nasional (RUEN)

(d) CBM

Bioenergy, solar and wind potential map

Unit : MW (Mega Watt))



Source : Rencana Umum Energi Nasional (RUEN)

(e) Bioenergy and Solar, Wind

Small Hydro, Micro Hydro, and Wave Power Potential Map

Unit : MW (Mega Watt))



Source : Rencana Umum Energi Nasional (RUEN)

(f) Small hydropower, Micro Hydro, and Wave Power

Source: National Electricity General Plan

Figure 4-25 Potential map of primary energy sources

4.2.3 Environmental Management, Waste Treatment, Waste Management

(1) Current situation, challenges and measures in Kutai Kartanegara Regency and PPU Regency

In order to confirm the consistency, the current status, issues and measures from various plans in Kutai Kartanegara Regency and PPU Regency are summarized below.

According to the Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026, the IKLH (Environmental Quality Index) in Kutai Kartanegara Regency is very good, recording values above 70 in some years as shown in the following table. However, in 2020,

for example, it is far below the IKLH value of 75.25, which is the IKLH value for East Kalimantan Province, and is not considered to maintain adequate environmental performance.

Table 4-17 IKLH Trends in Kutai Kartanegara Regency

Year	IKLH
2017	66.79
2018	69.26
2019	77.89
2020	68.77

Source: Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

In addition, waste management and waste disposal have developed positively in Kutai Kartanegara Regency in recent years, with a waste volume of 255.5 thousand m^3 recorded in 2019, of which 81.25% was reportedly processed as shown in the following table. This is a significant increase from the waste volume of 138.70 thousand m^3 and management rate of 73.92% in 2017. However, past trends indicate that an increase in waste volume due to population growth is inevitable. In fact, the Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026 indicates the disposal of household and industrial waste and inadequate sanitation as key issues in environmental protection.

Table 4-18 Waste Volume and Management Rates in Kutai Kartanegara Regency

Year	Waste Volume (thousand m^3)	Control Ratio
2017	138.7	73.92
2018	146.04	74.79
2019	255.5	81.25
2020	322.47	78.05

Source: Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

A summary of the general waste management system in Kutai Kartanegara Regency is shown in the table below. Currently, there are reportedly four landfills, but their capacities and landfill progress rates were not confirmed.

Table 4-19 Current Status of General Waste Management System in Kutai Kartanegara Regency

Subdistrict Name	Number of Villages	Reclaimed Land	Number of Dump Trucks	Refuse Collection Bank	Collection Frequency
Muara Jawa	8	Mutiara/Vico final disposal site	3 Unit	-	Every 2 days
Samboja	23	PT.Singlurus Mine Site Final Disposal Site	2 Unit	1 location	Every 2 days
Loa Kulu	15	Bakotok Landfill in Tenggarong	2 Unit	1 location	per day
Loa Janan	8	Tani Bhakti temporary landfill site	9Unit	1 location	per day

Source: National Capital City Master Plan 2020

In response to this situation, Kutai Kartanegara Regency has implemented the following measures and programs. Although the number of landfill sites was initially one, the number of landfill sites became four as mentioned above. It was confirmed that some of the sites are

progressing relatively as planned. The Kutai Kartanegara Regency Regional Spatial Plan 2013-2033 includes Tenggarong Seberang, Samboja, Loa Janan, Kota Bangun, and Kembang Janggut districts. Although there are differences in the number and locations from the previous plan, it was confirmed that development has progressed as planned in Samboja and Loa Janan districts, for example.

Table 4-20 Operations and Programs of Environmental Sector in Kutai Kartanegara Regency

Operations and Programs	Performance Indicators	Initial Value	Exit Target
Water Resource Management Program	Irrigation network as % of irrigated area of district authority	75%	85%
	Percentage of flood-prone areas protected by flood protection infrastructure in river basins in the county jurisdiction.	1%	8%
	Percentage of area of coastal residential neighborhoods in river basin boroughs protected by coastal safety infrastructure that are susceptible to abrasion, erosion, and accretion	0%	4%
Waste Management Program	Number of landfills constructed	1	6
	Waste management rate	78.5%	99.96%
Wastewater System Management and Development Program	Percentage of households receiving wastewater treatment services	81.7%	90%
Environmental Planning Program	Percentage of environmental planning documents developed	100%	94.4%
Environmental pollution and/or damage control programs	Number of trees planted in the 1 Million Tree Planting Program in reforestation and reclamation areas	0	1,000,000
Biodiversity Management Program	Fulfillment rate of green open spaces in urban areas	0	100%
Hazardous and Toxic Substances (B3) and Waste Management Programs	Number of survey data on hazardous waste generation from MSME activities that generate hazardous waste in Kutai Kartanegara province	0	18
Guidance and supervision program for environmental permits and environmental protection management permits	Percentage of compliance by persons responsible for operations and/or activities with environmental permits issued by county governments.	19.32%	19.3%
Environmental education, training, and counseling programs for the community	Number of institutions that provided environmental education/counseling	35	175
Local Environmental Award Program	Number of local environmental awards received	101	626
	Number of villages/kerlahans that won major categories of the Environmentally Friendly Village Award	0	21
Environmental Grievance Program	Percentage of environmental permits issued by district/municipal governments, PPLH permits, environmental laws and regulations, and responses to complaints from the public regarding their impact on business locations and district/municipal areas.	100%	100%

Source: Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

In the PPU Regional Long-Term Development Plan 2005-2025, PPU Regency has set forth

the following policy directions, particularly with regard to the environment.

- Management and utilization of natural resources and value addition
- Develop waste management performance
- Environmental Pollution and Damage Control
- Protection and conservation of natural resources
- Green Open Space (RTH) Management
- Improve the quality and accessibility of information on natural resources and the environment
- Restoration and rehabilitation of natural resource preserves.
- Availability of forest resources
- Forest and Land Restoration
- Mining Sector Development and Oversight

Based on this, the PPU Regency Regional Middle-Term Development Plan 2018-2023 organizes the current situation, issues and measures more specific to waste from an environmental perspective.

In PPU Regency, waste remains a major environmental concern; in 2017, only 25.52% or 46,546 m^3 of waste was transported to Buluminung Landfill. Given the population distribution, the storage capacity of the TPS can be found from the ratio of TPS capacity to waste generation. Data by sub-district are presented in the table below.

Table 4-21 TPS Capacity Ratio per Waste Generated by Subdistrict 2017

District	Resident	Waste Generated (m^3/day)	TPS		Ratio of TPS Capacity to Waste Generated
			Number of Locations	Capacity (m^3/day)	
Penajam	79,294	238	161	512.5	2.15
Waru	18,471	55	8	43	0.78
Babulu	33,799	101	14	67	0.66
Sepaku	34,990	105	57	357	3.40

Source: PPU Regency Regional Middle-Term Development Plan 2018-2023

Constraints related to solid waste include limitations on the number of garbage trucks/transporters and operating costs, as well as service areas that are too large/distant. Furthermore, it is reported that public awareness of waste separation and reduction is still low, and no efforts have been made to increase local capacity in waste management (e.g., enactment of waste recycling).

The implementation of EIAs is also important for environmental discussions. 59 business activities have obtained environmental permits, of which 39 have obtained UKL-UPL documents, 15 have obtained EIA documents, and 8 have obtained DPLH/DELH documents. Based on the above, the issues facing the province are summarized in the following three points.

<Challenges>

- Public and private participation in environmental management and conservation remains low.
- The number of available facilities and infrastructure is not proportional to the amount of waste generated or the size of the cleaning service area.
- Improper waste and wastewater management

In response to the above, the Plan presents the following programs for countermeasures as shown in the table below. It can be seen that the number of programs is very limited compared to those in Kutai Kartanegara Regency, and Samarinda City and Balikpapan City.

Table 4-22 Operations, and Programs of Environmental Sector in PPU Regency

Operations and Programs	Performance Indicators	Initial Value	Exit Target
Waste Management Performance Development Program	Waste management rate	25.27%	90%
Environmental Pollution and Damage Control Program	IKLH value	68.5	75.65
Natural Resource Conservation and Preservation Program			
Programs to improve the quality of and access to information on natural resources and the environment	Availability of environmental management performance information	1 document	5 documents
Green Open Space (RTH) Management Program	Percentage of managed green space (%)	100%	100%

Source: PPU Regency Regional Middle-Term Development Plan 2018-2023

(2) Confirming the consistency of the IKN Development Plan with the surrounding area plan, and analyzing challenges

As mentioned above, in the East Kalimantan Provincial Plan, the IKLH (Environmental Quality Index), which is used throughout Indonesia, is applied as an indicator to measure environmental impacts, and targets are set for each of the constituent provinces and cities. On the other hand, in the plans of the provinces mentioned so far, such as Balikpapan City, Samarinda City, Kutai Kartanegara Regency, and PPU Regency, the effective use of such unified indicators for analysis and target setting tends to be limited. Of course, each municipality implements policies, operations, and programs based on its own priorities, and there is nothing wrong with such efforts, but uniform indicators are an excellent tool for comparing and contrasting regions side by side. In East Kalimantan Province, in particular, as the New Capital City construction project is expected to have a significant impact on multiple municipalities, it is recommended that a common language be established to enable coordination among the constituent municipalities, such as by evaluating and managing the current situation based on such unified indicators.

On the other hand, in waste treatment and waste management, IKN envisions a treatment system in which each municipality is responsible for the treatment of its own area, and in principle, the treatment of its own area and the treatment of other areas do not intersect because each municipality is basically responsible for its own treatment. Therefore, there is no particular room for detecting consistency. On the other hand, in Kutai Kartanegara Regency, PPU Regency, Balikpapan City, and Samarinda City, there is a concern that their plans do not yet fully reflect the impact of IKN.

Even though both Samarinda City and Balikpapan City have drafted the most recent Regional Long-Term Development Plan that consider the development of IKN, there are still lack of details on how solid waste management system should be developed or improved to adapt such situation. For instance, it is well known that Balikpapan City is expected to experience massive increase in population number due to migration and will result in increasing number

of waste generation. At the same time, Manggar Landfill (Balikpapan City's final disposal) is on the brink of its service period as it will be at its full capacity in 2026. However, there are still few known information on how Balikpapan City will address the waste final disposal issue after Manggar Landfill is out of service and IKN is established.

In particular, the amount of waste generated is largely dependent on population, and population changes have a large impact on waste treatment. Therefore, it is important to align the emission intensity of general waste and B3 hazardous waste, as well as the population and source categories, in each plan in order to avoid inconsistencies between plans, especially in the case of integrated waste management in each region.

4.2.4 Industrial Development and Investment Promotion

The challenge in promoting industrial development and investment related to IKN is to determine the degree to which the growth scenario of the economic and social frame of the New Capital City can be realized and the prospects for financing 80% of infrastructure development other than the minimum basic infrastructure through private investment. The Long-Term Development Plans for East Kalimantan Province, Balikpapan City, and Samarinda City, both revised in 2024, are oriented in accordance with the industrial development intentions of IKN, however they do not provide specific measures. The following table summarizes the inconsistencies with the current plans for the New Capital City and both cities.

Table 4-23 Inconsistencies with Current Plans with Balikpapan City and Samarinda City from an Industrial Development Perspective

Category	IKN Issues	Inconsistency with Balikpapan City's Plan	Inconsistency with Samarinda City's plan
IKN Staged Development and Socioeconomic Frames.	Embodiment of the migration of about 480,000 people in 2024 and 1,280,000 people in 2029.	It is not envisioned to address needs for MICE functions, housing, and living services that cannot be addressed within IKN.	・The entry into urban services industry and supply of human resources in IKN has not been forecasted. ・Educational, medical, commercial, and other needs are not anticipated.
Securing financial resources for IKN infrastructure development.	In a timely manner, 80% of the maintenance will be privately funded and 20% will be publicly funded.	Regarding transportation and logistics infrastructure, there is a lack of alignment between demand forecasts and timing of infrastructure development.	No forecast and plan of human interaction and logistics with IKN.
Six economic sectors and two related areas			
1. Manufacture of renewable energy equipment (solar panels, EV motorcycles)	・IKN's mega solar operator shall be selected. ・Utilization of EVs and realization of the 10 minutes concept.	Designated as a manufacturing site of 2W-EV in the long-term development plan, but no specific measures are in place.	There is no mention of renewable energy equipment manufacturing.
2. Integrated medicine	Incentives for pharmaceutical companies to enter market, such as establishment of research institutes. Supply of researchers and other HR. Securing conditions for pharmaceutical establishment.	Designated as a manufacturing site of pharmaceutical industry, but no specific measures are in place.	The pharmaceutical industry is included in the long-term development plan, but there are no specific measures.
3. Sustainable agriculture.	Securing fertile farmland. Securing experienced operators. Improvement of the business potential of agriculture.	Nutritional foods and enhanced food reserves are included in the long-term development plan, but there are no specific measures.	Same as on the left.
4. Ecotourism, medical tourism	Early realization of the New Capital City Tourism Region Development Action Plan 2023.	Long-Term Development Plan mentions cooperation with local communities, such as eco-tourism, urban tourism, and enhancing MICE function, but cooperation and division of roles with IKN is unclear.	Long-term development plan includes environmental protection and tourism infrastructure, marketing, and cooperation with NGOs.
5. Advanced chemical	Incentives for chemical companies to enter market, such as establishment of research institutes. Supply of researchers and other human resources. Securing conditions for pharmaceutical establishments.	Designated as a manufacturing site, it is envisioned to be downstream of existing petrochemical and oleo-chemical operations.	There is no description for the chemical industry.
6. Low-carbon fuel energy and mining	Need a research institute or policy driven agency to incorporate the coal industry in Balikpapan and Samarinda.	No mention of low-carbon energy, but a direction toward renewable energy.	Designated as a manufacturing center, but no description of specific project formation, etc. for coal gasification.
7. Smart cities and digital centers	Linkage with Industry 4.0 is unclear. Supported by countries and manufacturers, but the overall picture is unclear.	Long-Term Development Plan aims for a development information and communication technology index of 8.	Smart, green, sustainable urban development.
8. Education in the 21st century	Vocational training schools in IKN have a high hurdle due to their location, which requires living in a dormitory.	Vocational training for experienced and skilled labor supply is included in the long-term development plan.	Same as on the left.

Source: JICA Study Team

4.2.5 Power and Energy

The latest electricity business plan (PENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL) 2021-2030), which considers changes in electricity demand in East Kalimantan due to the construction of the New Capital City, is based on population growth projections and other factors prior to 2019. Thus, a detailed study based on the latest population growth projections and development plans is required, but the details of the detailed study being separately studied by PLN are not known.

Also shown below is the power supply development plan up to 2030 in North Kalimantan Province, the project site of the Kayan Hydroelectric Power Project, which is being implemented jointly by PT Kayan Hydro Energy (KHE) and Sumitomo Corporation. In this plan, there is no mention of a power supply plan for 900MW of hydroelectric power generation, which is planned to be developed in the first phase by 2030. This indicates that the phased construction plan of the hydroelectric power plant in the Kayan Hydropower Project is not included in the latest power project plan.

Table 4-24 Power Development Plans in North Kalimantan

NO	Electric Power System Name	Power Plant Type Name	Power Plant	Capacity (MW)	COD	Status	Developer
1	Isolated	PLTS	Lisdes Kaltara	1,43	2021	Plan	PLN
2	Mahakam	PLTU	Malinau	3	2021	Construction	PLN
3	Mahakam	PLTMG	Nunukan 2	10	2021	Construction	PLN
4	Mahakam	PLTU	Tanjung Selor	2x7	2021	Construction	PLN
5	Bunyu	PLTMG	Bunyu	3	2022	Plan	PLN
6	Isolated	PLTS	Lisdes Kaltara	1,19	2022	Plan	PLN
7	Isolated	PLTS	Dedieselization	4,55	2023	Plan	IPP
8	Isolated	PLTS	Lisdes Kaltara	2,07	2023	Plan	PLN
9	Mahakam	PLTBio	Kalseltengtimra (Kuota) Tersebar	10	2024	Plan	IPP
10	Isolated	PLTS	Lisdes Kaltara	1,01	2024	Plan	PLN
11	Mahakam	PLTA	Kalseltengtimra (Kuota) Tersebar	200	2025	Plan	IPP
12	Mahakam	PLTA	Kalseltengtimra (Kuota) Tersebar	100	2026	Plan	IPP
13	Mahakam	PLTG/MG/GU	Sei Menggaris	2x20	2026	Plan	PLN
14	Mahakam	PLTA	Kalseltengtimra (Kuota) Tersebar	200	2027	Plan	IPP
15	Mahakam	PLTA	Sesayap	90	2028	Plan	PLN
16	Mahakam	PLTA	Kaltimra	200	2029	Plan	PLN
17	Mahakam	PLTA	Kaltimra	100	2030	Plan	PLN
18	Mahakam	PLTG/MG/GU/MGU	Kaltimra (Eks.Tarakan)	2x20	2030	Plan	PLN
				1020,2			

*PLTS=SOLAR PV, PLTU=STEAM POWER PLANT, PLTMG=GAS POWER PLANT, PLTBio=Bio POWER PLANT, PLTA=HYDROPOWER, PLTG/MG/GU=GAS/Mini Hydro/Geothermal POWER PLANT
Source: PENCANA USAHA PENYEDIAAN TENAGA LISTRIK (RUPTL) 2021-2030

As mentioned above, North Kalimantan Province and East Kalimantan Province are not interconnected in the existing power transmission system, and power generated by the Kayan Hydroelectric Project cannot be consumed in East Kalimantan, including the New Capital City.

4.2.6 Urban Management

The table below shows the inconsistencies in the urban management sector between the New Capital City Development Plan and the Spatial Plan and the current plans for the surrounding areas.

Table 4-25 Inconsistencies of Urban Management between Current Plans for New Capital City Development and Spatial Planning and Surrounding Areas

Category	Inconsistencies on Urban Management
Urban and Regional Development Planning	· Detailed plans such as population growth projections for the capital relocation project have not been shared by OIKN with the governments of East Kalimantan Province, Balikpapan City, and Samarinda City, which has hindered the local governments in formulating their response plans. · Regarding the future distribution of the influx population, the distribution among the New Capital City, Balikpapan City, Samarinda City, and surrounding villages, and the establishment of specific residential area plans have not progressed. · Although the amount of road traffic between cities is expected to increase significantly, a comprehensive transportation plan has not been established based on the layout of residential areas and employment centers in the region.
Administration	· Mechanisms for intergovernmental consultations between the central government, the provincial government of East Kalimantan Province, and Balikpapan City and Samarinda City have not been enacted. · There remain significant differences in thinking at the central, provincial, and municipal levels on the state of regional industries with coal mining at their core. While at the national level the main policy is decarbonization in the economy of the New Capital Region, the provincial government recognizes the coal industry as the greatest strength in the regional economy and is not in sync with the national policy.
Financing and Budgeting	· Although the population growth associated with the relocation of the New Capital City is expected to place a burden on the region's buffer cities in terms of housing, infrastructure services and the environment, and appropriate budgeting is required for measures to prevent the deterioration of living conditions and public improvements, no legal or organizational mechanism is in place to enforce this. However, there is no legal or organizational mechanism in place to enforce this. It is necessary to establish a fair mechanism to share the burden associated with the capital relocation project.
Economy and Employment	· It is necessary to correct the educational, income, and other disparities between professional human resources migrating from Java and Sumatra and local human resources in Kalimantan, and to curb the stratification of social, economic, and employment opportunities, but no concrete strategies have been proposed at the national, provincial, and municipal levels.
Housing	· The public housing development incorporated in the capital relocation project is limited to the provision of housing for construction workers and government officials, and there is no plan at the national, provincial, or municipal levels to provide housing for the expected influx of service industry workers and other people with diverse family structures and income levels. · As a major component of a comprehensive regional development plan that includes villages and rural areas, a master plan for housing and related infrastructure for the entire region needs to be established with the agreement of the national, provincial, and municipal governments.
Village Development	· Population absorption capacity in existing urban areas is limited, requiring residential development in villages, but the master plans of Samarinda City and Balikpapan City and the regency-level village development plans are not integrated in terms of spatial and functional distribution. Even in areas designated as forest reserves at the national level, expansion of villages and development of new towns should be considered, and the higher-level plans should be carefully reviewed for regional development

Category	Inconsistencies on Urban Management
	plans that can absorb the future population.

Source: JICA Study Team

4.2.7 Living Environment

The following table shows the inconsistencies in the living environment sector in the current plans of IKN and Spatial Plan and the surrounding areas.

Table 4-26 Inconsistencies of Living Environment between New Capital City Development and Spatial Plan, and Current Plans for Surrounding Areas

Category	Inconsistencies on Living Environment
Water Supply	· Demand plans, etc. based on the development of IKN, including surrounding cities, are not clearly presented. · No unified plan for securing raw water demand among regions is presented.
Drainage and Sewage	· Demand plan based on the development of IKN, including surrounding cities, is not clearly presented.

Source: JICA Study Team

The following is a summary of studies related to water supply, drainage and sewage in the surrounding cities.

This section summarizes the status of water supply maintenance in PPU Regency. Typically, people obtain water from wells (groundwater), rivers, rainwater and PDAM (Regional Drinking Water Company). The capacity of drinking water that PDAM PPU can distribute is 50 liter/sec, and the number of customers (in 2009) was 3,095 households and 127 hotels, tourist facilities and government.

Calculating the demand for clean water until the end of 2029, as shown in the following table, the need for drinking water in the PDAM Penajam Paser Utara is 47,313,216 liter/day. On the other hand, PDAM PPU's drinking water production in 2009 was 1,243,766.50 liter/day. In order to meet these needs, it is necessary to develop raw water sources, both in quality and quantity. Available potential raw water sources are surface water (rivers). It is anticipated that water treatment will help river water that does not physically or chemically meet the requirements of healthy water to become healthy. In addition, a network of water distribution pipes should be developed in residential areas where population growth is projected, and promotions should be implemented to attract new customers each year. Some of the key factors that PDAM PPU must consider in improving its services include the following:

Table 4-27 Calculation of water demand in PPU Regency

Tahun Year	Jumlah Penduduk Total Population	Kebutuhan (liter/hari) Required Quantity (liter/day)				Total (lt/hari) Total (liter/day)
		Domestik Inside the Region	Non Domestik Outside the Region	Hidran Fire Hydrant	Kehilangan Air Water Loss	
2010	140,228	14,022,800	8,413,680	2,243,648	2,243,648	26,923,776
2029	246,423	24,642,300	14,785,380	3,942,768	3,942,768	47,313,216

Source: PPU Regency Regional Long-Term Development Plan 2012

To overcome these problems, PPU Regency government is attempting to construct treatment plants based on the need for services and coverage according to local conditions, in addition to the adequacy of water source drawdown conditions, rather than centralized drinking water management. Urban water treatment plants that have been constructed include (1) the drinking

water treatment plant in Bendung Waru, (2) the drinking water treatment plant in Sepaku, and (3) the water treatment plant in Rawa Mulya, Babulu Laut.

In addition, the provision of non-piped rural SPAM (Water supply system) services in the village areas of PPU Regency is still relatively low. Non-piped water supply systems (BJPs) are typically wells that are fed by groundwater dug or pumped by the community. There are two types of wells used by well water communities as a source of drinking water: protected wells and unprotected wells/springs. On average, people in the PPU Regency use wells, including boreholes (WTPs), dug wells and unprotected wells/springs, as a means of meeting their demand for clean water because they are outside the PDAM service area and may not have access to clean water.

The WTPs were constructed to improve the quality and fulfillment of drinking water. PPU Regency Government constructed five WTPs in Babul Sub-district between 2007 and 2014. In addition, there is a WTP constructed by BPPT (BPPT：Badan Pengkajian dan Penerapan Teknologi, Present BRIN) in Tanjung Tengah Village, Penajam Subdistrict.

The status of the wastewater management system in PPU Regency is basically a community (individual) sanitation service for fecal matter in the form of fecal matter collection from septic tank to final disposal. Currently, PPU Regency has a manure treatment facility (IPLT) with one desludging service vehicle at the Buluminung Landfill in Penajam Subdistrict. However, desludging services are still limited to government-owned utilities. In general, manure disposal in the PPU Regency is provided individually by the community.

Drainage issues include limited drainage for residential use, etc., resulting in flooding and other damage in many cases. Housing challenges include housing surplus supply and uninhabitable housing (RTLH). For both issues, while IKN is planned for some parts of the province, no description regarding coordination with IKN plan is found, so future plans should reflect IKN plan. For waterworks, it is necessary to coordinate with IKN Plan, since it is required to establish a raw water network that spans across city areas.

Considering that the source of raw water in Kutai Kartanegara Regency is the Mahakam River which also carries wastewater from businesses and households, the need for clean water is an important consideration. According to the latest data shown below, the number of households using clean water has increased along with the total number of households in Kutai Kartanegara Regency. This increase also resulted in an increase in the percentage of households using clean water.

Table 4-28 Percentage of Population and Households Using Clean Water in Kutai Kartanegara Regency

Uraian Description	2016	2017	2018	2019	2020
Rumah Tangga Pengguna Air Bersih(%) Households consuming clean water (%)	89.57	83.70	84.88	85.39	87.90
Jumlah Total Rumah Tangga Total Households	196,390	199,166	209,119	222,503	228,867
Penduduk Berakses Air Minum Residents with access to drinking water	419,652	439,516	464,612	486,220	508,700
Jumlah Penduduk Total Population	657,796	674,759	677,755	761,493	729,382
Rasio(%) Ratio	57.09	65.13	68.55	63.85	69.74

Source: Kutai Kartanegara Regency Regional Middle-Term Development Plan 2021-2026

As for wastewater challenges, the percentage of households with access to sanitation facilities is lower than the average in East Kalimantan Province, and the percentage needs to be increased.

Kutai Kartanegara Regency Regional Meddle-Term Development Plan 2021-2026 states that preparations must be made to support the acceleration of the IKN Development as part of the enhancement of the IKN Development readiness, and although infrastructure development to improve connectivity and accessibility is a focus of the government in supporting the IKN Development, specific adjustments and studies are not explicitly stated.

4.2.8 Diversity

Generally, regulations in the aspects of diversity including regulations concerning equality, gender inclusion, vulnerable people, customary law, land acquisition, and religious freedom all refer to national regulations. Regulations or policies regarding diversity contained in provincial/city/regency regional regulations generally serve as guidelines for implementing diversity management in their respective regions. The challenge lies in the fact that these regulations are not yet fully implemented on the ground (provincial and cities/local government), otherwise the diversity's problem resolution programs in East Kalimantan Province, Balikpapan City and Samarinda City are carried out slowly in stages based on risk scale priorities that can be resolved. As stated in Short-Term (one year), Middle-Term (5 years) and Long-Term (20 years) Regional Development Plans, these regulations and policies seems inconsistent in its implementation in the regions.

National regulations and policies regarding legal recognition of customary communities and customary land, the East Kalimantan Provincial government has issued Regional Regulation of East Kalimantan Province No.1/2015, concerning Guidelines for the Recognition and Protection of Customary Law Communities in East Kalimantan Province. In accordance with national policy, the regulation of indigenous communities in East Kalimantan Province is also implemented based on the principles of social justice, equality, non-discrimination, environmental sustainability, transparency, participation in the public interest, benefits and legal certainty. Customary law communities have rights to customary land, customary territories, and natural resources on the surface of the land. These land rights are communal and cannot be transferred to other parties, except for the public interest through a joint decision-making mechanism with the customary law community concerned based on the customary law adopted. Even though recognition of customary land has been regulated since 2015, to date there is still a lot of customary land in East Kalimantan Province that has not been legally registered, so cases of conflict over customary land are still high, especially in rural areas. The Directorate General of Determination of Land Rights and Registration, Ministry of Agrarian Affairs and Spatial Planning/National Land Agency, has just carried out an inventory and identification of customary land in East Kalimantan Province in early 2023. According to the interim results to date, there are 143 plots of land claimed to be owned by 121 customary communities spread across 113 villages, including 16 plots of customary land in IKN Area owned by 11 indigenous Paser communities.

Recognition of customary law communities and customary land is also explained in Regional Regulation of East Kalimantan Province No.46/2014 concerning Technical Guidelines for

Implementing Preparations for Land Acquisition for Development for Public Use. As with the case of customary land above, because customary land in East Kalimantan Province has been slow to be officially inventoried and identified, cases of customary lands disputes continue to occur, especially in the process of land acquisition for mining, plantations and development for the public interest. The latest land dispute case is the land dispute over the construction of the Sepaku-Semoi Dam in IKN Area, namely a lawsuit against the Government (Ministers of ATS/BPN and PUPR, Governor of East Kalimantan Province, Regent of PPU, and Sepaku sub-district head) regarding land acquisition for the construction of the Sepaku-Semoi Dam and was won by the plaintiff at the Supreme Court. This indicates that the Governor's regulations regarding the land acquisition process mentioned above have not been implemented properly or have not been consistent in their implementation.

In terms of empowering women in regional development, the government of East Kalimantan Province has also issued Regional Regulation of East Kailimantan Province No.2/2016 concerning gender mainstreaming in regional development. Gender mainstreaming, in East Kalimantan Province is a strategy built to integrate gender into an integral dimension of planning, preparation, implementation, monitoring, reporting and evaluation of development policies, programs and activities in the region. This regulation was created to provide guidance to Regional Governments (regencies/cities in East Kalimantan Province) in implementing gender-responsive governance, development and community services. In terms of development results, it can be seen from the Human Development Index (IPM), Gender Development Index (IPG) and Gender Empowerment Index (IDG). The gender gap in East Kalimantan Province is still low. East Kalimantan Province's IPG achievement ranks 32nd and the IDG ranks 26th out of 34 provinces in Indonesia. This situation shows that there is a gap in human resource development between women and men. Several aspects, that hinder equal development achievement apart from economics, law, and decision making, are the political representation of women in parliament and government officials (judicial, legislative and executive). It is known that achieving political representation in East Kalimantan Province at 18 percent still requires a struggle to reach 30 percent. Through the role of women in politics, it is expected that the percentage of political representation will increase sensitivity and commitment in decision making in the political field for the implementation of the gender mainstreaming (PUG) program in East Kalimantan Province.

Related to vulnerable people, the fact shows that Indonesia has many laws and regulations governing vulnerable groups, however the level of implementation is very diverse. Some laws are very weak in implementation, so that its existence does not provide benefits to society. Existence vulnerable groups who make up the majority in this country need active action to protect their rights and interests through law enforcement and other legislative actions. Human rights of positioned people as a community of vulnerable groups have not been fulfilled optimally, so that bring consequences for the lives of themselves and their families, as well as indirectly

According to Article 8 of Law No.39/1999 concerning Human Rights, the protection, promotion, enforcement, and fulfillment of human rights are the responsibility of the government as well as society. The term "Vulnerable Groups" is not explicitly defined in legislation, but it is mentioned in Article 5 paragraph (3) of Law No.39/1999, which states that individuals belonging to vulnerable community groups are entitled to special treatment and protection based on their specific characteristics. In the explanatory notes to this article, it is mentioned that vulnerable community groups include, among others, the elderly, children,

the poor, pregnant women, and persons with disabilities.

However, according to the Human Rights Reference, vulnerable groups include: refugees, Internally Displaced Persons (IDPs), national minorities, migrant workers, indigenous peoples, children, and women.

There is also Government Regulation No.78/2021 concerning Special Protection for Children. This regulation constitutes affirmative action aimed at ensuring a sense of security by providing the necessary services for children in need of special protection, with the hope of minimizing the number of children requiring special protection. Furthermore, this regulation clarifies the authority of the Central Government, Regional Governments, and other state institutions to take necessary steps in the prevention and handling of children in need of special protection. Not only does it involve the government, but it also provides space for the community to participate in providing special protection for children.

Another relevant regulation is Regulation of BAPPENAS No.3/2021 on the Implementation of Government Regulation No.70/2019 concerning Planning, Implementation, and Evaluation of the Respect, Protection, and Fulfillment of the Rights of Persons with Disabilities. According to this regulation, persons with disabilities are defined as individuals who experience long-term physical, intellectual, mental, and/or sensory limitations that, when interacting with their environment, can encounter barriers and difficulties in fully and effectively participating with other citizens based on the principle of equal rights.

Based on the understanding above and the same as other diversity regulations/policies, there are no inconsistency between national and regional policies. The development mission in East Kalimantan Province does not conflict with the national mission, development that upholds diversity, ethnicity, religion, non-discrimination, gender equality and vulnerable populations and social inclusion. Difficult things are that the development achievements in each province/region are different, and the implementation of these policies/regulations is not all implemented optimally in each region.