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] https://www.mofa.go.jp/mofaj/s_sa/sea2/id/page4_005894.html	General cooperation	○
	2023/05/22 Signing of Memorandum of Understanding to Promote Development of New Capital City (JBIC) [Investment Promotion]. https://www.jbic.go.jp/ja/information/press/press-2023/0522-017787.html	Business Opportunity Creation, Business Promotion	△
	2023/05/21 OIKN signed on the Memorandum of Cooperation (JICA) [General Cooperation] https://www.jica.go.jp/information/press/2023/20230524_10.html	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]. https://www.mofa.go.jp/mofaj/files/100596191.pdf	General Cooperation	○
China	2023/09/08 Investment Support for Strengthening Economic and Political Relations [Investment Promotion]. https://www.pbs.org/newshour/world/indonesia-says-china-has-pledged-21-Billion-in-new-investment-to-strengthen-ties 2023/09/11 Minister of PUPR requested investment from China in water resources projects at the Water Resources Conference in Beijing [Investment Promotion]. https://en.antaranews.com/news/293427/indonesia-invites-china-to-invest-in-water-infrastructure-projects	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 the IKN. [Investment Promotion]. https://www.cnnindonesia.com/ekonomi/20231017184339-92-	Investment Promotion, General Cooperation	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	1012473/jokowi-minta-china-percepat-investasi-di-ikn 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.		
	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] https://indonesiabusinesspost.com/lobby/indonesia-collaborates-with-china-railway-for-automated-rail-transit-at-ikn/ 2024/04/03 Importing Chinese automated trains for IKN [Technical Assistance] https://www.thejakartapost.com/business/2024/04/03/indonesia-to-import-chinese-autonomous-trains-for-ikn.html 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] https://batamnewsasia.com/2024/06/14/indonesia-and-china-strengthen-rail-partnership-with-new-projects-in-bandung-and-ikn/	Infrastructure	◎
	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. https://en.tempo.co/read/1939594/prabowo-xi-jinping-discuss-blue-economy-giant-sea-wall-project-in-beijing	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]. https://jakartaglobe.id/business/hong-kong-keen-to-invest-in-nusantara-chief-executive	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]. http://www.businesskorea.co.kr/news/articleView.html?idxno=116995	Infrastructure, e-government, System Construction	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	2022/07/28 New Capital Project Cooperation Agreement [Technical Assistance]. https://www.reuters.com/world/asia-pacific/indonesia-south-korea-expand-cooperation-new-capital-city-project-2022-07-28/		
	2023/07/21 Technical Assistance for Water Supply System Construction [Technical Assistance]. https://en.antaranews.com/news/289005/south-korean-ambassador-supports-development-of-ikn-nusantara	Water Supply	◎
	2023/08/24 Investment will be considered after Presidential Election [Investment Promotion]. https://jakartaglobe.id/business/s-korea-waits-for-election-results-before-investing-in-nusantara 2023/09/08 Agreement of IKN Smart City Cooperation [Technical Assistance]. https://en.antaranews.com/news/293235/indonesia-s-korea-agree-on-mrt-ikn-smart-city-cooperation-minister	Investment Promotion ICT, human resource development, EV	△
	2023/11/27 Delegation of Korea International Cooperation Agency (KOICA) meets with OIKN Director General [Investment Promotion] https://en.tempo.co/read/1801990/south-korean-delegation-explores-to-collaborate-in-ikn-development	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] https://www.cnnindonesia.com/internasional/20240112154348-106-1048753/korea-selatan-masuk-5-besar-calon-investor-asing-di-ikn	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] https://www.cnbcindonesia.com/news/20240520153408-4-539775/airlangga-bertemu-bos-lg-di-korea-bahas-ikn-sampai-proyek-data-center	ICT	
	2024/05/20 PUPR Minister requests acceleration of water supply project (Net Zero Water Supply Infrastructure Project) for IKN in Korea [Technical Assistance]. https://kumparan.com/kumparanbisnis/menteri-pupr-minta-proyek-air-korea-selatan-di-ikn-dipercepat-22m2Gr0R3Ky/full	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] https://www.rri.co.id/daerah/774783/otorita-ikn-dan-korea-selatan-jajaki-kerja-sama	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] https://en.antaranews.com/news/321515/ikn-to-collaborate-with-south-korea-to-build-immersed-tunnel		
	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] https://asianews.network/indonesias-future-capital-nusantaras-flying-taxi-to-operate-commercially-in-2029/ [Progress] ・ The Sepak 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 Sepak River intake. ・ Two reservoirs with a capacity of 6,000 m^3 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 328.18 Billion IDR. 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]. https://www.straitstimes.com/asia/se-asia/singapore-govt-officials-businessmen-visit-indonesia-s-new-capital-to-explore- opportunities	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] https://en.antaranews.com/news/312081/some-29-singaporean-companies-interested-in-investing-at-ikn-jokowi	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] https://en.antaranews.com/news/332977/indonesia-singapore-discuss-cooperation-in-five-sectors	Others	
Malaysia	2023/08/08 Rail connection concept from Malaysian side to Indonesian side [General Cooperation]. https://indonesiabusinesspost.com/insider/malaysia-to-construct-railway-connection-to-kalimantan-probably-the-new-nusantara- capital-city/ 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]. https://www.thejakartapost.com/opinion/2023/07/19/nusantara-the-new-gateway-for-malaysia-indonesia-cooperation.html	Railroad Border, Palm oil	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	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] https://ekonomi.bisnis.com/read/20240324/45/1752256/3-investor-malaysia-siap-tanam-duit-di-ikn-garap-sektor-hunian-hingga- pendidikan	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]. https://www.cnbcindonesia.com/news/20240403155936-4-527991/heboh-kereta-cepat-kalimantan-tembus-ikn-reaksi-malaysia-mengejutkan	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] https://ikn.kompas.com/read/2024/05/01/140420087/50-calon-investor-malaysia-boyongan-ke-ikn-4-berminat	Investment Promotion	
	2024/08/13 Borneo Economic Forum: A strategic driving force to support economic growth in Kalimantan and IKN [Investment Promotion] https://kadin.id/en/kabar/borneo-economic-forum-momentum-strategis-mendukung-pertumbuhan-ekonomi-kalimantan-dan-ikn/	Investment Promotion	
Thailand	2023/08/28 Indonesian Products Exhibition and Investment Business Forum in Bangkok [Investment Promotion] https://thethaiger.com/hot-news/economy/indonesia-unveils-three-month-plan-to-boost-trade-and-cultural-ties-with-thailand	Investment Promotion	
Kazakhstan	2023/07/03 Nusantara and Astana Sign Sister City Memorandum of Understanding [General Cooperation]. https://kemlu.go.id/portal/en/read/4901/berita/30-years-of-indonesia-kazakhstan-bilateral-relations-astana-and-nusantara-forge- sister-city-cooperation-in-historic-first	Economy, Energy, Transportation, Urban Management, Culture	△
	2023/07/06 IKN guides Kazakhstani business owners to IKN [Investment Promotion]. https://en.tempo.co/read/1745262/ikn-authority-head-invites-kazakhstan-ceos-to-invest-in-indonesia-new-capital	Construction, finance	△
	2023/09/08 Interest in Green Forest [General cooperation]. https://en.antaranews.com/news/292683/ikns-green-forest-city-concept-attracts-kazakh-finnish-investors	Green City	
Turkey	2023/07/15 Turkey proposes bilateral cooperation in the field of construction in Nusantara [Technical Assistance]. https://jakartaglobe.id/news/turkiye-shows-interest-in-indonesias-new-capital-nusantara	Construction	
Qatar	2023/08/20 Encouraging Qatari Companies to Invest in Nusantara (Resort) [Investment Promotion]. https://m.thepeninsulaqatar.com/article/20/08/2023/businesses-from-qatar-encouraged-to-invest-in-nusantara-development	Resort Development	

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
UAE	2023/05/22 Signing of cooperation agreement for waste management project [Infrastructure Finance]. https://indoconnectsingapore.com/uaes-envirol-and-indonesias-nusantara-capital-authority-unite-to-transform-waste-management-in- future-capital/	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] https://www.ikn.go.id/en/uae-renewable-energy-company-masdar-receives-letter-to-proceed-for-renewable-energy-investment-in-nusantara	Renewable Energy	△
	2024/07/16President Joko Widodo's visit to the UAE was aimed at securing investment for the new capital. [Investment Promotion] https://indonesiabusinesspost.com/lobby/jokowi-visit-to-uae-aims-to-secure-investment-for-new-capital/ 2024/07/18 During President Joko Widodo's visit, Indonesia and the UAE signed eight memorandums of understanding on bilateral cooperation. https://en.tempo.co/read/1892953/indonesia-uae-ink-8-mous-on-bilateral-cooperation-during-jokowis-visit	Investment Promotion	△
UK	2023/01/19 Education and Health Sector Development [Technical Assistance]. https://www.thejakartapost.com/indonesia/2023/10/19/ikn-signs-deal-with-tony-blair-institute-to-build-research-center.html 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]. https://jakartaglobe.id/news/uk-keeps-eye-on-smart-city-nusantara-british-envoy [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. https://www.thejakartapost.com/indonesia/2023/10/19/ikn-signs-deal-with-tony-blair-institute-to-build-research-center.html	Education, Health, Environment Traffic	○
	2024/02/14 The British government is interested in supporting IKN as a carbon neutral city. [Technical support] https://www.ikn.go.id/ar/the-uk-government-expresses-interest-in-supporting-nusantara-as-a-carbon-neutral-city	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	△

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	https://en.antaranews.com/news/262097/ministry-finnish-government-explore-cooperation-for-ikn-development		
	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] https://en.antaranews.com/news/292701/indonesia-finland-collaborate-to-make-nusantara-be-smart-city	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] https://www.ikn.go.id/en/signing-of-memorandum-of-understanding-between-nusantara-capital-city-authority-and-the-government-of-finland	Smart City, Energy, DX	△
France	2023/06/13 Official Visit of Delegation of French Government Officials and Businessperson [General Cooperation]. https://en.antaranews.com/news/284910/french-delegation-visits-indonesias-nusantara-capital-city#:~:text=Jakarta%20%28ANTARA%29%20-%20French%20Ambassador%20to%20Indonesia%20Fabien,Capital%20City%20%20%28IKN%29%20area%20on%20Monday%20%28June%2012%29	Energy, etc.	△
	2023/09/10 President Joko Widodo praises French investment in strategic sectors in Indonesia [Investment Promotion] https://setkab.go.id/en/president-jokowi-appreciates-french-investment-in-strategic-sectors-in-indonesia/	Investment Promotion	
Denmark	2023/05/23Danish 4 Companies Support Indonesian Companies for Ammonia Production by Small Modular Reactor in Bontang [Investment Promotion]. https://www.neimagazine.com/news/newsdanish-companies-support-smr-use-for-ammonia-production-in-indonesia-10876912	Ammonia Production	△
	2024/05/08 Denmark and Dubai are considering investing IKN Nusantara [Investment Promotion] https://nusantaratimes.com/nasional/denmark-dan-dubai-siap-jajaki-investasi-di-ikn-nusantara/	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 research and education in sustainable development and ecosystem management, and agriculture. [Technical Assistance] https://expatlifeindonesia.com/netherlands-sets-sights-on-ikn-major-investments/	Water Resource Management, 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.	

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	https://www.netherlandsandyou.nl/web/indonesia/w/the-vice-minister-for-foreign-economic-relations-successful-inspiring-visit-to-indonesia		
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 Middle-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 the IKN. The possibility of financing public-private partnerships in IKN will also be discussed. https://www.usaid.gov/indonesia/fact-sheets/usaid-plus-ibu-kota-nusantara-forest-city-planning	Urban Development Plan, Green Space Management, Governance, PPP	◎
	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. https://www.usaid.gov/indonesia/fact-sheets/usaid-plus-ibu-kota-nusantara-forest-city-planning	Urban Development Management	
	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). https://pdf.usaid.gov/pdf_docs/PA021DS6.pdf		
	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~).		
	2024/07/09 PPU Designated as Facilitating Site for USAID SELARAS Program to Accelerate Waste Management in Indonesia [Technical Assistance] https://diskominfo.penajamkab.go.id/2024/07/ppu-ditetapkan-sebagai-lokasi-dampingan-program-usaid-selaras-percepatan-pengelolaan-sampah-di-indonesia/	Waste Management	△
	2024/03/08 USTDA provides 4 Million USD grant to fund a study of a transmission line connecting Indonesia and Malaysia as part of its support for	Energy	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	IKN development. [Technical Assistance] https://asianews.network/us-provides-4m-grant-to-support-nusantara-indonesia-malaysia-power-grid-study/ 2024/03/07 USTDA grants 39 Billion IDR for technical assistance to develop detailed IKN development design, technical specifications, procurement documents, and capacity building strategies to support development of IKN smart city priority infrastructure [Technical Assistance] https://ikn.kompas.com/read/2024/03/07/140000387/as-hibahkan-dana-rp-39-miliar-buat-pembangunan-ikn	Infrastructure, HRD	
	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] https://en.tempo.co/read/1798834/four-u-s-tech-companies-ikn-authority-collaborate-in-nusantara-capital-city-development	ICT	△
	2023/11/19 OIKN and Stanford University Sustainable Research Cooperation [Technical Assistance] https://voi.id/ja/keizai/330762 2024/06/12 OIKN and Honeywell agree to work together to apply smart city concepts to IKN development [Investment Promotion, Technical Assistance] https://en.antaranews.com/news/315834/oikn-honeywell-to-work-together-to-develop-nusantara-as-smart-city 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] https://en.antaranews.com/news/315948/oikn-motorola-work-together-to-make-ikn-a-safe-city [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. https://www.liputan6.com/global/read/5453127/jokowi-sambut-kemitraan-as-indonesia-untuk-perangi-krisis-iklim-hingga-kolaborasi- pembangunan-ikn	R&D Urban Development Plan, ICT Urban Development Plan, ICT	△
Australia	2022/11/08 Carbon Neutralization Support Study (in cooperation with ADB) [Technical Assistance]. https://www.adb.org/news/adb-indonesia-launch-study-help-future-capital-be-carbon-neutral	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] https://setkab.go.id/en/president-jokowi-reveals-priorities-on-indonesia-australia-partnership/	EV, Green Technologies, etc.	

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	[Progress] ・ Continued discussions on cooperation with Australia on campus construction, water resources management, and agriculture (agribusiness and smart farming). https://www.cnnindonesia.com/ekonomi/20231123181128-92-1028201/erick-thohir-australia-komitmen-buka-universitas-di-ikn		
Multiple Countries	17 countries have investment intentions as of 2023/05/07 [General Cooperation]. https://en.antaranews.com/news/282204/oikn-highlights-17-countries-ikn-investment-interest-until-may-7 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] https://en.antaranews.com/news/284910/french-delegation-visits-indonesias-nusantara-capital-city#:~:text=Jakarta%20%28ANTARA%29%20-%20French%20Ambassador%20to%20Indonesia%20Fabien,Capital%20City%20%20%28IKN%29%20area%20on%20Monday%20%28June%2012%29. 2023/05/23 More than 220 companies issued LOI [General Cooperation]. https://en.tempo.co/read/1729084/indonesia-collects-220-loi-from-investors-for-new-capital-project	General Cooperation	△
WB	2023/09 Sustainable Landscape Management Program (SLMP) [Technical Assistance]. https://www.worldbank.org/en/programs/indonesia-sustainable-landscapes-management-program/news-n-events	Land management, rural landscape, forest resource management, financing, coordination	◎
	2014-2022 Sustainable Ocean Program (ISOP) [Technical Assistance]. https://www.worldbank.org/en/programs/indonesia-sustainable-oceans-program/overview	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 https://hubdat.dephub.go.id/id/bptd/kaltim/publikasi/kunjungan-bappenas-world-bank-ke-bptd-kaltim-untuk-penyusunan-sump-kepala- bptd-hadir/ [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 1.6 Trillion IDR. https://mrv.kaltimprov.go.id/en/post-page-detail/pemerintah-kaltim-teken-penerimaan-dana-redd-program-fcpf-dari-world-bank	Traffic	△
ADB	2023/05/04 Signing of Memorandum of Understanding for Cooperation in Carbon Neutral Forest Urban Development [General Cooperation]. https://www.adb.org/news/adb-indonesia-sign-mou-develop-nusantara-	Urban planning and development, financing	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	carbon-neutral-forest-city		
	2023/05/04 Nusantara Development Cooperation Memorandum of Understanding Signed [Technical Assistance]. https://en.antaranews.com/news/280500/oikn-adb-institute-agree-to-cooperate-on-nusantara-development	Knowledge sharing, R&D	△
	2023/05/26 PPP Expert Hiring Support [Technical Assistance]. https://www.ijglobal.com/articles/172538/adb-scouts-for-expert-for-nusantara-mega-ppp	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] https://www.ikn.go.id/adb-indonesia-luncurkan-strategi-nol-bersih-untuk-ibu-kota-baru	Carbon Neutral	△
	2023/12/15 Grant of 37.22 Billion IDR (2.4 Million USD) aimed at supporting the development of IKN as a sustainable city [Technical Assistance] https://www.thejakartapost.com/business/2023/12/15/adb-provides-rp-37-22-Billion-of-grant-for-ikn-development.html	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] https://www.menpan.go.id/site/berita-terkini/berita-daerah/adb-dan-otorita-ikn-luncurkan-sdgs-baseline-report	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 the IKN over the period 2024-2029, programs, and targets to protect IKN biodiversity over the period 2024-2029. [Technical Assistance] https://ikn.kompas.com/read/2024/03/27/161224487/disusun-setahun-rencana-induk-pengelolaan-kehati-ikn-libatkan-adb-dan-australia	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] https://www.rri.co.id/daerah/870964/adb-urtf-siap-dukung-pembangunan-ikn https://www.adb.org/what-we-do/funds/urtf [Progress] ・ At COP28 in Dubai, it was announced that ADB will support the	Urban Development	△

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	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. https://www.ikn.go.id/en/adb-indonesia-luncurkan-strategi-nol-bersih-untuk-ibu-kota-baru ・ Technical assistance funds from the Asian Development Bank (ADB) amounted to 37.22 Billion IDR (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. https://www.thejakartapost.com/business/2023/12/15/adb-provides-rp-37-22-Billion-of-grant-for-ikn-development.html 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 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 https://www.ikn.go.id/en/13-un-special-agencies-support-nusantara-development	General Cooperation	
UNDP	2022/12/27 Indonesia Accelerator Lab [Technical Assistance]. https://www.undp.org/indonesia/blog/reimagining-indonesias-new-capital-city-foresight-approaches-inclusive-smart-forest-city 2023/8/1 Identified priorities for Nusantara on digitization and possible cooperation between IKN agencies [Technical Assistance]. https://www.ikn.go.id/en/united-nations-development-programme-menjajaki-kerjasama-digitalisasi-di-nusantara-bersama-otorita-ikn	Natural environment, biodiversity, community participation DX, Smart City	○
ESCAP	2023/09/12 Voluntary Local Review (VLR) Support Mechanism [Technical Assistance]. https://www.unescap.org/blog/navigating-challenges-new-city-development-nusantara-indonesias-future-capital ESCAP: United Nations Economic and Social Commission for Asia and the Pacific)	Sustainability, human rights and public participation	○

Country, Institutes, etc.	Activities	Field	Status △Agreed ○In Preparation ◎In Progress
	[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. https://www.ikn.go.id/en/13-badan-pbb-tegaskan-dukungan-untuk-membangun-ibu-kota-nusantara		
ISDB	2022/12/05 Member Country Partnership Strategy (MCPS) [General Cooperation]. https://www.isdb.org/news/isdb-president-meets-with-chairman-of-indonesias-new-capital-city-authority	Finance, climate change, women and youth, capacity building	△

Source: Prepared by the survey team from various press materials.

5.2 Outline of the Investment Seminar related to the IKN Development

5.2.1 IKN Development Related Investment Seminars held in Japan

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

【Seminar Outline】

Organized by Japan External Trade Organization (JETRO) Jakarta Office
Co-organized by Japan International Cooperation Agency (JICA) Indonesia Office
Jakarta Japan Club (JJC)
Conference Language English
Program * Jakarta time in parentheses
17:00-17:05 (15:00-15:05) Opening Remarks by Mr. Masakazu Takahashi, Director, JETRO Jakarta Office
17:05-17:10 (15:05-15:10) Greetings by Guest of Honor
17:10-17:15 (15:10-15:15) Greeting JICA Indonesia Office
17:15-17:20 (15:15-15:20) Greeting
17:20-18:00 (15:20-16:00)
About the New Capital City Development Plan - Focusing on GX and DX
Prof. Mohammed Ali Berawi, Deputy head of OIKN on Green and Digital transformation

【Major points of the seminar】

- More than 200 people attended the event in Jakarta, both at the venue in the capital city 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 particular time to explaining the development of IKN as a smart city, clearly outlining the infrastructure and technology needed.
- In his speech, Undersecretary Ali noted that as of June 28, a total of 256 LOIs for IKN development had been submitted from 19 foreign countries/regions and from within Indonesia, with 35 in "goods and services," 29 in "energy," and 25 in "technology" in descending order.
- Undersecretary Ali also stated that a Non-Disclosure Agreement (NDA) must be signed with OIKN in order to proceed to the FS study of the project, the step after the LOI submission.

(2) December 4, 2023 "Indonesia Investment Forum 2023"[10]

【Seminar Outline】

Sponsored by Ministry of Investment of Indonesia / Indonesian Investment Coordinating Agency (BKPM), Nikkei Inc.
Co-organized by ASEAN-Japan Centre
Date: Monday, December 4, 13:30-17:00
Venue: Tokyo Port City Takeshiba Office Tower (1-7-1 Kaigan, Minato-ku, Tokyo)
Contents:
14:00-14:10 Opening Remarks: HE Heri Akhmadi (Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to Japan)
14:10-14:20 Special Presentation: Mr. Nurul Ichwan (Deputy Minister for Investment Planning)
14:20-14:40 Speech: Mr. Noor Fuad Fitrianto (BKPM) "Sustainable Investment Projects in Indonesia Getting Ready"
14:40-15:00 Lecture: Mr. Rakhmat Yulianto (BKPM) "Investment Opportunities in Indonesia's Five Major Tourism Regions (DPSP)
15:00-15:40 Lecture: Ryuta Suzuki, Chihiro Fukuda (JICA), Koya Jibiki (Nikkei Inc.) "Investment Projects in Nusantara, the New Capital
15:50-16:55 Speech: Ms. Ratih Purbasari Kania, Ms. Maria Christina Endarwati and Mr. Pambudi Pratama (JICA) "Market Consulting: Investment Opportunity Map (PPI) to Create the Future of Indonesia Project"
15:50-16:55 Exchange and individual consultation

【Major 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 funds and technology in advanced areas 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 the latest information on the Indonesian economy and investment environment to Japanese companies that are developing business in various fields such as manufacturing, tourism, services, and start-ups, and to discuss the issues.
- In his special lecture, Mr. Nurul Ichwan, Deputy Minister of Investment, explained the trend of Japanese direct investment in Indonesia, investment opportunities and incentives, and introduced 12 investment projects, especially in IKN development.
- Other speakers introduced investment opportunities and incentives in each sector in Indonesia. Mr. Noor Fuad Fitrianto introduced cases of electric vehicle charging stations, motor manufacturing, and pharmaceutical factories, among the 69 “sustainable investment projects” in Indonesia as a whole.
- Mr. Rakhmat Yulianto introduced the fact that the country is emerging from the stagnation caused by COVID-19 and that the tourism industry can be a driving force behind it, presenting five special zones for the tourism industry and incentives for the tourism sector.
- Then, Japanese speakers Mr. Suzuki and Mr. Fukuda of JICA provided information on infrastructure investment, which is of interest to Japanese companies.

[10] https://futureofasia.net/indonesia23/

- Finally, during the Market Consulting session, the "Regional Investment Potential" based on the results of pre-FS research studies conducted in the surrounding regions (East Kalimantan, West Kalimantan, and East Java) that support IKN was presented.

(3) Indonesia Investment Forum 2024: 'Promoting Sustainable Economic Reform through Investment in the New Capital City Nusantara (IKN)

【Seminar Outline】

Organizer: Ministry of Investment of Indonesia / Indonesian Investment Coordinating Agency (BKPM)
Date: October 3, 2024, 13:30~16:00
Venue: Imperial Hotel Tokyo
Contents:
13:35~13:50 Lecture (1) HE Heri Akhmadi, Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to Japan
13:50~14:30 Lecture (2)
1. Overview of sustainable investment projects, including investment projects that support the development of the capital city Nusantara (IKN)
Mr. Saribua Siahaan, Director of Investment Promotion for Southeast Asia, Australia, New Zealand and the Pacific Region, BKPM
2. Investment opportunities in the capital city Nusantara
Nusantara Capital City Authority (OIKN)
14:30 - 15:00 Lecture (3)
1. Investment-related information and support
Mr. Michio Shindo, Deputy General Manager, International Strategy & Intelligence Division, Mizuho Bank, Ltd.
2. Sharing session on investment in Indonesia
Mr. Arby, President Director, Indonesia Institute of Strategic Studies
15:00 - 16:00 Individual meetings with BKPM and networking
16:00 Closing

【Major points of the seminar】

- FDI from Japan accounts for 9% of the total. Most of this is concentrated in Java, and the aim of IKN development is to ease the concentration of the economy in Java and shift it to other islands.
- In line with the goals of Vision Indonesia 2045, which are to create a strong nation, ensure equitable development and achieve sustainable economic development, the government is implementing five strategies: improving productivity, developing a green economy, DX, integrating the domestic economy and achieving economic growth from urban areas.
- The direction of the policies of the Prabowo administration is to separate the tax office from the Ministry of Finance, raise the ceiling on the budget deficit, set an economic growth target of 8% per year, increase direct investment, continue President Joko Widodo's continuation of major infrastructure policies (including IKN development), support for downstream industries (e.g. nickel), the launch of a green fund using profits from the sale of carbon credits, and the provision of free school meals using funds from the reduction of fuel subsidies, etc.
- BKPM has 81 projects that have already undergone pre-feasibility studies. Of these, 12 are projects that support IKN development (in the fields of agriculture, industrial development, real estate/industrial parks, infrastructure development, and tourism)

- BKPM is working to promote investment by disseminating information through mass media and overseas BKPM offices, holding business seminars in cooperation with embassies of various countries, and providing end-to-end services to investors. In addition, it is holding inspection programs for Japanese companies in cooperation with JICA.

5.2.2 Seminars and Events related to the New Capital City 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 Indonesia[11]	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 Session[12]	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 Workshop[13]	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; and (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	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

[11] https://www.fiabci-thai.org/seminar/index.php?id=2&lang=en
[12] https://www.clc.gov.sg/research-publications/publications/digital-library/view/visiting-nusantara-and-ikn-clc-s-first-knowledge- sharing-session
[13] https://kemlu.go.id/portal/id/read/6143/berita/kemlu-dan-unido-dorong-kerja-sama-internasional-dalam-mendukung-pembangunan-ikn

			Danish Way"[14]		
2024/05/02	Embassy of Indonesia in Malaysia	Malaysia	IKN Investment Mission[15]	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)[16]	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: Various information organized by JICA Study Team

5.2.3 Other

(1) Public Hearing on Proposed Amendments to the New Capital Relocation Law

A public hearing on the proposed amendments to the Capital Relocation Law was held on September 15, 2023. Below are comments from participants at the public hearing.

【Fourth Public Consultation on the Proposed Amendment to the Capital Relocation Law】

1) Opening: Aida Bagus, Legal and Compliance Officer, OIKN

The development of the New Capital City (IKN) 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 as a means to realize a secure, modern, sustainable, and resilient national capital.

IKN Development has established eight KPIs. These should serve as a reference in the development of IKN and relocation of the capital. However, in implementing preparatory activities, the current law greatly restricts movements and actions for them. In order to expedite the IKN Development, a solid foundation is needed. For example, there are many obstacles to land acquisition and land development in related sector laws. To this end, OIKN has coordinated and implemented various activities with BAPPENAS and, at the initiative of BAPPENAS, reached an agreement within the government to amend the Capital Relocation Law (No. 3 of 2022). Currently, the following main points of amendment are being discussed in the National Diet.

1. Boundary
2. Self-defense

[14] https://kemlu.go.id/portal/id/read/6009/berita/promosi-investasi-denmark-ke-indonesia-indonesia-investment-forum-iif-2024-sustainable-investment-in-indonesia-the-danish-way
[15] https://kemlu.go.id/portal/id/read/5904/berita/kbri-kuala-lumpur-boyong-lima-puluh-calon-investor-dalam-site-visit-ke-ibu-kota- nusantara-ikn
[16] https://kemlu.go.id/portal/id/read/5838/berita/indonesia-singapore-business-forum-2024-isbf-paparkan-arah-kebijakan-ekonomi- indonesia-pasca-pemilu-tahun-2024

3. Spatial planning
4. Financial management
5. Special authorities
6. Non-Civil Service Replenishment
7. Housing administration
8. Business Continuity Guarantee
9. Monitoring and Review

2) Teni Widuriyanti, Ministerial Expert Staff for Relations and Institutions

This public consultation is part of the process of completing the draft amendments to the Capital Relocation Law (No. 3 of 2022) to provide for an enhanced role of OIKN in the 4P development phase, namely the relocation of the capital and the preparatory implementation of government activities in the New Capital. The amendments are also intended to maximize the role of various stakeholders, including investors, and to increase coordination and harmonization of space use in the development of OIKN.

This fourth public consultation will enable OIKN to increasingly fulfill its mandate and be a driving force in the development of IKN are desirable. It is also hoped to communicate a number of things related to the main changes in the amended law, so that everything can move forward faster and more quickly, and so that the communities can also gradually feel a sense of development and fairness.

This equity could extend beyond infrastructure to include health education facilities, environmental improvements, and other higher quality public facilities based on the concept of a sustainable future. A different and more sustainable vision of the future than what it has to be seen so far in the existing city such as Jakarta.

After the enactment of the Capital Relocation Law in 2022, there were several challenges facing the IKN. In order to overcome these challenges, BAPPENAS developed this draft based on various inputs from OIKN and several stakeholders in the field.

【Main part of the Public Consultation】

4th Public Consultation Speaker List

- Moderator: Yayat Supriatna (Trisakti University)
- Agung purnomo SH. Mhum - legal director of OIKN
  (Explanation of key points of the proposed amendment)
- Silvia Halim - Deputy of facilities and infrastructure of OIKN.
  (Explanation of the proposed amendment regarding housing supply)
- Doktor H Alimudin Msi - Deputy of socio-cultural and community empowerment of OIKN
  (Explanation of the social and cultural content of the proposed amendment)
- Mirna asnawati - Deputy of Environment and Natural Resources Section of OIKN
  (Explanation of the proposed amendments related to forest cities and zero emissions)

Summary of Speaker's Remarks at the 4th Public Consultation

Moderator: Yayat Supriatna (Trisakti University)

The contents of this amendments were discussed at the parliamentary level during the third public consultation in August 2023, and the discussion was very interesting, and the expectations of the participants were very high, and it is accepted the very high expectations of the public as the background for this discussion.

First, it is important for the government to become not tied down by regulation in providing services that meet social needs.

The second is whether OIKN can effectively and efficiently carry out its functions as a local government (which we believe it can, due to the powers it will gain through this amendment.).

Further provisions on OIKN will be established in the future. For example, indigenous local groups in danger of decline will be symbolized and protected by OIKN. In other words, OIKN hopes that anything related to the culture and arts of the local community will be in the spirit of IKN.

Also in specific areas, for example in the area of health education, a grand design for education and a roadmap for health services are currently being developed. In the area of education, it is understanded that each child has different needs, and it is being formulated specific educational services to meet those needs.

The land on which IKN is located was originally part of several municipal districts, and as such, efforts are currently underway to empower citizens and improve their skills so that all residents can participate in the development of IKN.

Furthermore, the culture of East Kalimantan, where various ethnic groups coexist, will be incorporated while enhancing it as a characteristic of IKN.

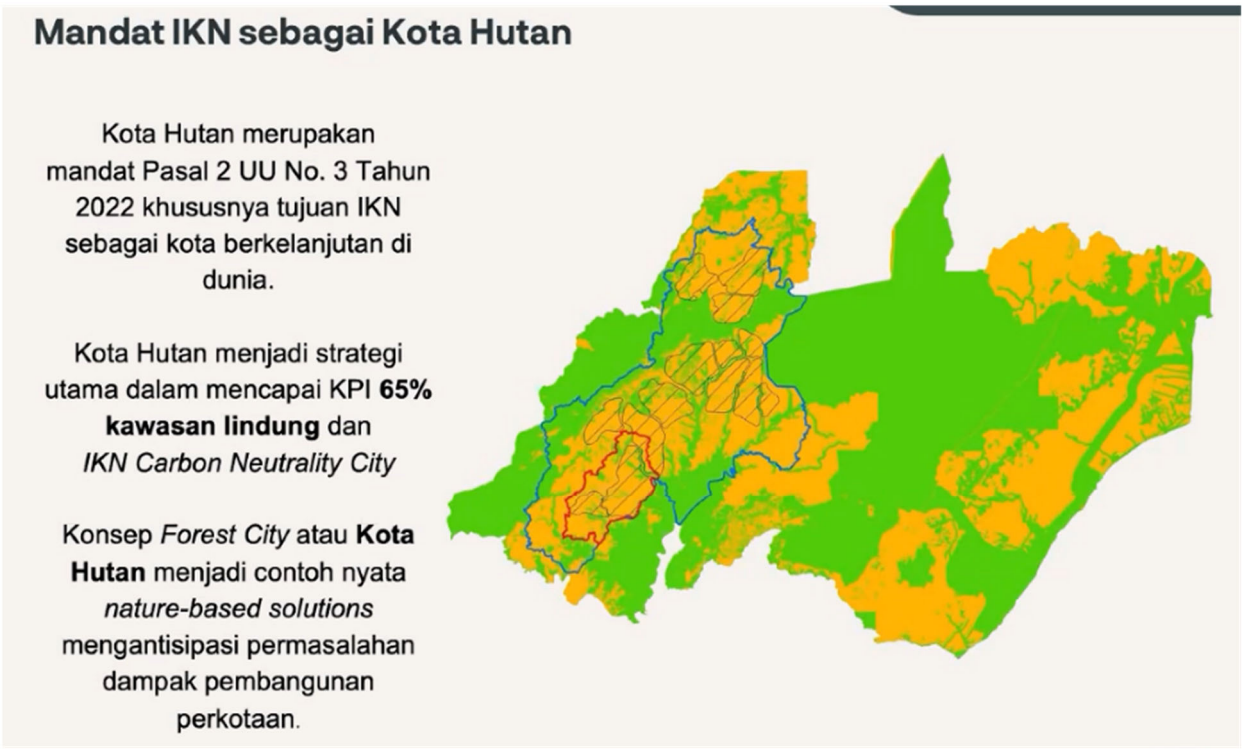
1. Ms. Mirna Asnawati - Vice President of SDA OKIN

The Capital Relocation Law contains 8 principles and 24 KPIs for IKN, along with several derivatives, including details of the master plan (shown in the figure below) .

Source: Fourth Public Consultation on the Proposed Amendment to the Capital Relocation Law

Figure 5-1 IKN's 8 areas of investment and 24 evaluation indicators

The first principle is very important: IKN must be designed according to natural conditions and KPIs and achieve the goal of having at least 75% of the IKN land area as green space (65% as protected area and 10% as food production area). It also has the goal of achieving net zero emissions in IKN by 2045 (shown in the figure below).



Source: Fourth Public Consultation on the Proposed Amendment to the Capital Relocation Law

Figure 5-2 Forest City Concept

The promotion of IKN as a forested city to achieve net zero emissions by 2045 is something heard a lot about in recent months. This is stipulated in Article 2 of the Capital Relocation Law, which aims to make IKN one of the most sustainable cities in the world.

Forest City is also one of the strategies to achieve the KPI of having 65% of IKN's area as protected area. It is also a means to achieve IKN as a carbon neutral city, and to build IKN according to the principles of harmony with nature is desirable.

As of 2019, only 6% of the IKN area had secondary forests; the average deforestation area in 2019 was 1,000 h per year, and environmental destruction occurred long before the IKN development. Therefore, the Forest City initiative hopes to restore the ecosystem of the IKN area (shown in the figure below).

Source: Fourth Public Consultation on the Proposed Amendment to the Capital Relocation Law

Figure 5-3 Concept of Forest Conservation

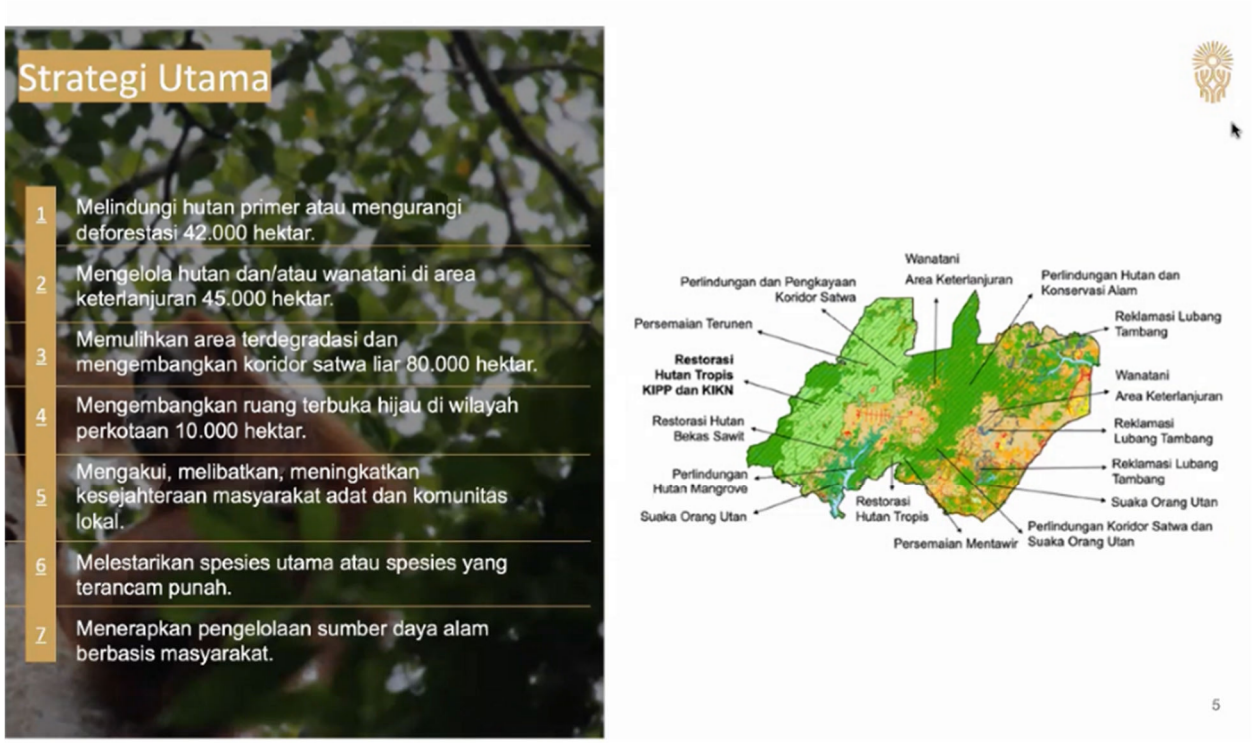
At least 177,000 ha have been set aside as protected areas or green spaces in this slide, and OIKN hopes to create a forest city by protecting existing primary forests.

The other is to promote agriculture as an important strategy while reducing deforestation.

Regarding the protection of animals, the IKN development respecting all living creatures, such as corridors of living creatures, is being promoted, and natural corridors are also protected.

And the construction of green open spaces is important in promoting the preservation of the knowledge and wisdom accumulated in the nature of indigenous peoples and local community areas. This initiative is based on environmental legislation, and this process is currently in its final stages.

Community-based natural resource management is also applied in the forest management strategy (shown in the figure below) .



Source: Fourth Public Consultation on the Proposed Amendment to the Capital Relocation Law

Figure 5-4 Land Use Map

Source: Fourth Public Consultation on the Proposed Amendment to the Capital Relocation Law

Figure 5-5 Tasks and responsibilities regarding the environment and nature

Looking back at the general description section of the Capital Relocation Law, it is stated that IKN will be a role model for urban management not only in Indonesia, but around the world.

It is hoped that the proposed amendments will make governance more effective and efficient. In other words, it is hoped that problems of unclear authority, games of authority, and duplication of authority will not occur in the future.

There are already dozens of laws on the environment and natural resources, and at least eight ministries dealing with the environment and natural resources. In this context, OIKN would like to build its mandate as an organization with a simple structure but with a wealth of functions. It will then promote its activities so that it can achieve its KPIs. Articles 6 and 12 of the proposed amendment state the need to improve it, add explanations, and strengthen it to avoid multiple interpretations.

Finally, I would like to emphasize the importance of spatial planning in relation to the environment. Spatial planning is a tool to control environmental destruction and pollution, and if it is "played" with spatial planning, it will never be able to develop in harmony with nature. It is very important to note that Article 15 of the new amended law states that all land use in the IKN must be in accordance with spatial planning. Without good spatial planning, the environment cannot be adequately protected.

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

5.3.1 Industry Sectors for Investment by Japanese Companies from GRDP's Perspective

In examining industrial sectors that are potential investment targets for Japanese companies in East Kalimantan Province, JICA Study Team will consider the possibility of Japanese companies entering the business in industrial sectors with a high share of the GRDP and investment amount in East Kalimantan Province, Balikpapan City, and Samarinda City, as surveyed in Chapter 2. In the table below, the top industrial sectors in terms of GRDP share for East Kalimantan Province, Balikpapan City, and Samarinda City, as well as the investment amounts in East Kalimantan Province and the industrial sectors in IKN, are shown. As a method for classifying industrial sectors, JICA Study Team have included infrastructure investment in the six economic clusters and two related fields envisaged in IKN shown in Table 5 7, with a view to keeping in mind the relationship with IKN's industrial development policies, and have examined the eight industrial sectors.

Table 5-3 GRDP by Sector, Tri-City Cities, East Kalimantan Province

	East Kalimantan			IKN	Balikpapan City	Samarinda City
rank	GRDP(2022) Unit: IDR	Domestic investment amount (2022) Unit: IDR	Foreign investment (2022) Unit: USD	8 sectors	GRDP(2020) Unit: IDR	GRDP(2020) Unit: IDR
1	Mining: 490.5 trillion 53.2%	Mining: 15.0 trillion (≒ 1 billion USD)	Mining: 510 million	natural renewable energy	Manufacturing: 47.1 trillion 56.6%	Construction industry: 14.1 trillion 21.2%
2	Manufacturing: 138.6 trillion 15.0%	Chemistry, medicine: 14.9 trillion	Base metal mining: 220 million	integrated medicine	Construction industry: 10.7 trillion 12.8%	Product sales industry: 11.3 trillion 17.1%
3	Construction industry: 70.9 trillion 7.7%	Plantation and livestock: 3.6 trillion	Plantation: 190 million	sustainable agriculture	Product sales industry: 6.9 trillion 8.3%	Mining: 7.4 trillion 11.0%
Four	Agriculture, forestry and fisheries: 64.9 trillion 7.9%	Food: 2.4 trillion	Food: 100 million	Eco-medical tools	Logistics: 5.5 trillion 6.6%	Manufacturing: 5.1 trillion 7.8%
Five	Product sales industry: 47.5 trillion 5.1%	Trade: 0.7 trillion	Chemical/Pharmaceutical: 0.6 billion	advanced chemistry	Information: 3.2 trillion 3.9%	Finance/Health 4.8 trillion 7.3%
6	Logistics: 28.9 trillion 3.1%	Logistics: 0.6 trillion	Forestry: 0.4 billion	low carbon fuel	Finance: 2.7 trillion 3.2%	Logistics: 4.7 trillion 7.1%
7	Government: 14.4 trillion 1.6%	Mechanical metals: 0.5 trillion	Transportation equipment: 0.1 billion	smart city	Real estate: 1.4 trillion	Government: 4.1 trillion 6.2%
total (including others)	921.3 trillion 100%	39.5 trillion (1.5 billion USD)	1.26 billion	21st century education	83.1 trillion 100%	66.5 trillion 100%

Sector color legend
- Resources/Energy
- Agriculture, forestry and food
- Chemistry/Pharmaceutical
- manufacturing
- information
- education
- tourism
- infrastructure

Source: JICA Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, Balikpapan City Regional Middle-Term Development Plan 2021-2026, and Samarinda City Regional Middle-Term Development Plan 2021-2026

(1) Target Industry Sectors for Investment in East Kalimantan Province

As shown in Table 5-3, the share of East Kalimantan Province's GRDP in 2022 by industrial sector is highest in mining, manufacturing, construction, agriculture, forestry and fisheries, retail and logistics, and these are considered to be potential investment targets. Assuming entry by Japanese companies, a possible entry method for mining, manufacturing and agriculture, forestry and fisheries is to combine local minerals and natural resources with Japanese technology. In the construction industry, cost competition with domestic contractors is tough for construction alone, so entry into PFI projects in the transportation and urban infrastructure sectors is expected. In the retail industry, services that combine e-commerce and finance, and in the logistics industry, fresh food delivery via cold chains, and other high value-added

services that are not available locally, are both possible entry methods.

In terms of investment share by sector, the highest shares of domestic investment are in mining, chemicals and pharmaceuticals, plantations, and food, while the highest shares of foreign investment are in mining, base metal mining, plantations, and food. Foreign investment is about half of domestic investment, and when considered together, the largest investments are in mining, chemicals and pharmaceuticals, plantations, the food sector, and base metal mining, in that order, and as these sectors are expected to develop in the future, they are considered to be investment targets for Japanese companies.

(2) Target Industry Sectors for Investment in IKN

According to IKN's industrial development policy (Table 5-7), six economic clusters, namely renewable energy manufacturing, integrated medicine, sustainable agriculture, eco-medical tourism, advanced chemistry, and low-carbon fuel energy, as well as two related fields, smart city and 21st century education, are positioned as sectors to be developed as industrial development by 2045. At present, there is no gross regional product data for IKN, but production value of the construction industry related to government buildings, housing development, and infrastructure development related to the development of the New Capital City is generated in the Jakarta-based construction sector, and with regard to eco-medical tourism, Hotel Nusantara has opened within IKN based on the demand of IKN visitors, and other production value is generated in the tourism sector in Balikpapan City and Samarinda City. Demonstrations of smart cities have begun at the IKN Command Center, and in the education sector, schools and research institutes, including two universities, are under construction.

(3) Target Industry Sectors in Balikpapan City

As shown in Table 5-3, Balikpapan City's GRDP in 2020 was approximately 83.1 Trillion IDR, accounting for just under 10% of the GRDP of the province, with the largest shares of the city's GRDP coming from manufacturing, construction, retail, logistics, and information, in that order. In relation to manufacturing, the city is home to the second largest petrochemical complex in the country, operated by the state-owned oil company Pertamina, and the Kariangau industrial area is home to a large palm oil refinery operated by Singapore-owned Apical, among others. Taking advantage of the potential of chemical manufacturing, which is the basis for integrated pharmaceuticals and advanced chemistry expected in IKN in the future, there is high potential for Japanese companies to enter the business. In addition, if mechanical manufacturing companies are to come into the city, the current focus is on repair services for mining-related equipment, and utilizing their human resources will be an issue. With regard to the GRDB for manufacturing, it is unclear how the breakdown of industries within the sector and how each company's performance is recorded by the Jakarta headquarters and Balikpapan City.

The situation regarding the entry of Japanese companies into the construction and retail industries is the same as in East Kalimantan Province, but in terms of logistics, there is the Kaltim Karianagu container port in Balikpapan Bay, which could be used as a port that uses the Lombok Strait to replace the congested Strait of Malacca. The actual regional production

value of the information industry is unknown, and a detailed study is needed to examine its potential.

As shown in Table below, the growth rates of GRDP by sector from 2017 to 2019 are high for accommodation and food, information, education, and medical care. As for eco-tourism envisioned by IKN, the occupancy rate of accommodation facilities is also high, and if it targets Japanese tourists, there is likely to be room for Japanese companies to enter the industry. Regarding information and education, consideration is needed based on the introduction of smart technology in IKN and the establishment of educational institutions.

Table 5-4 GRDP Growth Rates by Sector for Balikpapan City and Samarinda City

	Balikpapan City	Samarinda City
Rank	GRDP growth rate (2017-19 average) Unit: %	GRDP growth rate (2017-19 average) Unit: %
1	Accommodation/Food: 9.2%	Electricity/gas procurement: 10.5%
2	Other services: 8.3%	Other services: 8.5%
3	Information: 6.7%	Accommodation/Food: 8.2%
Four	Education: 6.5%	Education: 7.2%
Five	Medical: 6.1%	Information: 7.2%
6	Construction: 5.9%	Medical: 7.0%
7	Merchandise sales industry: 5.9%	Water/waste: 6.7%
total (including others)	100%	100%

Sector color legend
Resources/Energy
Agriculture, forestry and food
Chemistry/Pharmaceutical
manufacturing
information
education
tourism
infrastructure

Source: JICA Study Team based on the Balikpapan City Regional Middle-Term Development Plan 2021-2026 and the Samarinda City Regional Middle-Term Development Plan 2021-2026

(4) Target Industry Sectors in Samarinda City

As shown in Table 5-3, Samarinda City's GRDP in 2020 was approximately 66.5 Trillion IDR, about 80% of that of Balikpapan City. The city's GRDP share is highest in the construction, retail, mining, manufacturing, and finance/insurance industries, in that order. The situation is the same as in East Kalimantan Province for the construction and retail industries, but in relation to mining, there is potential for the city to become a base for the entry of low-carbon energy industries related to coal. However, it should be noted that many of the marine oil and natural gas fields at the mouth of the Mahakam River belong to Kutai Kartanegara Regency, which surrounds Samarinda City, and that several related companies are based in the same regency, and that Bontang City is the base for natural gas refining. As for manufacturing, shipbuilding along the Mahakam River can be mentioned, but it is small in scale.

As shown in Table 5 4, the growth rates of GRDP by sector from 2017 to 2019 are high for electricity/gas-related, accommodation/food/drinks, education, information, medical care, and water/waste, but the breakdown needs to be examined in detail.

5.3.2 Industrial Development from the Perspective of Relevant Municipal Industrial Policies

The direction of industrial development in East Kalimantan province is greatly influenced by the direction and policies of the IKN industrial development plan. This section describes the

population estimates, infrastructure development plans, major industrial clusters and stages of industrial development, which are prerequisites for the industrial development planned by IKN, and describes the relationship with the industrial development plans of East Kalimantan Province, Balikpapan City, and Samarinda City mentioned in Chapter 2.

(1) IKN's industrial development policy

1) IKN Population Trends

As shown in the table below, for the basis and basic data for promoting industrial development and investment in IKN, the population frame of the envisioned ministries and their employees/workers, families and students, and the area around KIPP (the government core) until 2045 is presented in Chapter 6 of the attachment to Presidential Decree No. 3/2012. The plan estimates 20,000 to 30,000 ministry employees in five-year increments from Phase 2 to Phase 4, along with related personnel, family members, students, and workers in various industries. The total population is expected to increase from around 480,000 in Phase 1 to 800,000 in Phase 2, and then to 200,000 in Phases 3, 4, and 5. A more detailed classification has also been made. The number of visitors to IKN and its population dynamics, including the distribution by region, will have a significant impact on the development of the industry.

Table 5-5 Projected Population Change in IKN (persons)

	Phase 1 2022-2024	Phase 2 2025-2029	phase 3 2030-2034	phase 4 2035-2039	phase 5 2040-2045
1. Officials, employees, construction workers, etc.	77,398	365,389	421,577	493.368	573,287
2.The above family members, students, etc.	257,675	758,851	867,167	1,004.779	1,167,664
3. Existing residents within IKN	153,336	159,349	164.223	167.954	171.037
Total	488,409	1,283,589	1,462,967	1.666.121	1,911,988

Source: JICA Study Team based on Presidential Decree No.63/2022 Annex VI

2) IKN Infrastructure Development

As shown in the table below, a master plan has been developed for KIPP, which outlines the development of housing, waste treatment, sewage treatment, water supply, electricity, gas, ICT, and transportation in the Tri-City area until 2045. Lifeline supplies, such as gas supply, are assumed to be provided until 2045, and K-IKN (New Capital City Area) adjacent to KIPP is to be developed in 5 to 10 years after 2045. In addition, a rail and road plan has been presented for the surrounding KP-IKN (New Capital City Development Area), and a toll road from Balikpapan City to KIPP is currently under construction. Since individual projects are expected to be potential investment targets as PPP projects, it is necessary to sort out which projects are under direct government control and which have the potential to become PPP projects. In addition, with regard to electricity and gas supply, it is necessary to pay attention to whether the supply plans are consistent with those of PLN, the state-owned electricity company, and Pertamina, the state-owned oil and gas company.

Table 5-6 IKN's infrastructure phasing plan

Phase 1 2022-2024	Phase 2 2025-2029	Phase 3 2030 2034	Phase 4 2035-2039	Phase 5 2040-2045
		a) Mass public transportation system in KIKN b) Wastewater treatment installation (IPAL) c) Potable water treatment plant (IPAM) located in a central infrastructure area with a 50% capacity of the overall plan was built, and an expanding IPAM with a 60% capacity of the overall plan. d) IPAM : IPAM located in central infrastructure area with a 50% capacity of the overall plan was built and expanding IPAB with a 60% capacity of all. e) Batu Lepek dam already operated. f) Sponge City supporting facilities: Detention areas (green and blue corridors) in developed area, as well as construction of rainwater harvesting facilities in government-owned buildings, including ASN houses. g) Waste treatment : Additional capacity of the existing facilities. h) Providing electricity and energy : Additional capacity and facilities in Southeast and North of KIKN. i) Additional digital & urban amenity to apply Smart City solution in the priority area.	a) Regional railway development to support IKN: Train station have been built and operate to accelerate economic development. b) Identify the potential and other multipurpose dam designs. c) Wastewater treatment installation (IPAL) d) IPAL expansion located in central infrastructure area with 100% capacity. e) IPAM f) Providing electricity and energy : Additional capacity and facilities in Northeast area and solar farm in North IKN.	a) Regional railway development to support IKN: Train station have been built and operated to accelerate economic development. b) Identify the potential and other multipurpose dam designs. c) Wastewater treatment installation (IPAL) d) IPAL expansion located in central infrastructure area with 100% capacity. e) IPAM f) Providing electricity and energy: Additional capacity and facilities in Northeast area and solar farm in North IKN. g) Additional digital & urban amenity to apply Smart City solution in the priority area.

Source: JICA Study Team based on Presidential Decree No63/2022 Annex VI, Indonesia's New Capital Nusantara based on Law No.3/2022 Study2,3 by BKPM Japan Desk Prepared by the research team based on Kumiko Honma

3) IKN Industrial Development

As shown in the table below, an industrial development phase plan has been developed for K-IKN and partly for KP-IKN along the coast until 2045, covering six economic clusters: renewable energy manufacturing, integrated pharmaceuticals, sustainable agriculture, eco-medical tourism, advanced chemicals, low-carbon energy and mining, as well as two related matters: Smart Cities and the 21st Century Education. See 5.3.3 for details.

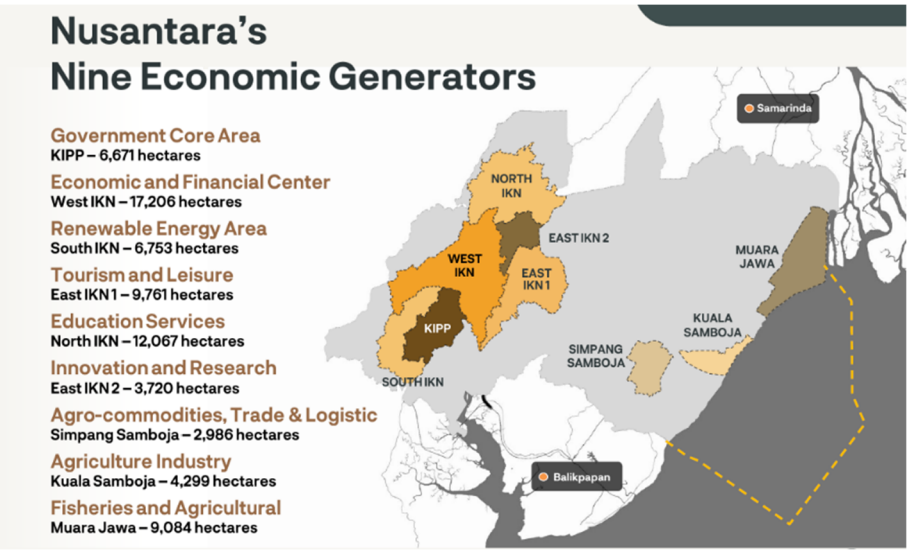
Table 5-7 IKN's Industrial Development Stage Plan

6 economic clusters (JICA 8 sectors)	Phase 1 2022-2024	Phase 2 2025-2029	Phase 3 2030 2034	Phase 4 2035-2039	Phase 5 2040-2045
1. Natural renewable energy manufacturing (climate change)) (Electricity/Energy)	a. KIPP area b. Contracts, adjustments, and land acquisition c. Transportation to basic infrastructure and initial government facilities d. Infrastructure development (land consolidation, energy supply, communications, water sources, clean water, sewage, waste, sewage, flood control) e. Temporary infrastructure and transportation facilities	Attracting assembly plants specializing in	Attracting state-owned and international companies related to solar panels and EVs	Increase production capacity in response to demand. Incentives for investment in R & D , parts and component production for electric motorcycles and solar panels	Research, development and invention for the development of next generation technology. Concentrate on R & D and technology development that connects both ends of solar panels and EVs
2.Integrative medicine (industrial development)		Increase the variety of drug ingredients and preparation products	promote	Increase the amount of pharmaceutical raw materials produced in Indonesia . Manufacture of chemicals and vaccines for export .	Concentrate on R & D and continuous innovation to instill export expansion . Sufficient domestic supply of raw materials and products
3. Sustainable agriculture (industrial development)		Attract investment in production bases, R&D , commercialization of local resources, and value-added products	Attract investment in production sites, R & D and increased production of existing sustainable products	Along with the above, attract investment in nutritional product manufacturing.	Specializing in R&D of new protein formats and nutritional supplements
4.Ecotourism , medical tourism (industrial development)		Coastal tourism destinations, wildlife parks, health-conscious cities, MICE hotels	Same as left	Same as left	Diversifying destinations, innovating tourism services , and strengthening support systems to ensure competitiveness and sustainability

6 economic clusters (JICA 8 sectors)	Phase 1 2022-2024	Phase 2 2025-2029	Phase 3 2030 2034	Phase 4 2035-2039	Phase 5 2040-2045
5.Advanced chemistry (industrial development)	a. KIPP area b. Contracts, adjustments, and land acquisition c. Transportation to basic infrastructure and initial government facilities d. Infrastructure development (land consolidation, energy supply, communications, water sources, clean water, sewage, waste, sewage, flood control) e. Temporary infrastructure and transportation facilities	Investigating the potential of a new petrochemical facility scheduled to begin production in 2030 and the global supply and demand balance for all products	Understanding increased production capacity and export opportunities	Increase R & D for specialty chemical producers and inter-industrial petrochemical users, petrochemical export destinations, vegetable oil refiners, and oleochemical products.	-shelf chemicals and new medicines for specialty chemical producers, industrial petrochemical users, and active pharmaceutical ingredient manufacturers
6. Low carbon fuel energy and mining (industrial development) (Electricity/Energy)		Upstream activities to attract investment in biofuel development and the development and deployment of enhanced oil recovery (EOR) technologies to improve oilfield productivity.	EOR , renewal of the Balikpapan refinery, development of coal gasification facilities to reduce dependence on imports, downstream expansion through machinery center development, additional recovery measures, and technologies to reduce environmental impact.	Coal gasification to reduce dependence on imports, improvements to machinery centers, exploration of biofuel development potential , additional recovery measures, and technologies to reduce environmental impact.	Increased technology to reduce environmental impact and application of the latest decarbonization technologies
7.Smart cities and digital centers (city management)		Launch of Industry 4.0 focusing on IKN 's existing sectors	Launch of Industry 4.0 focusing on IKN 's existing sectors	Start Industry 4.0 and apply smart city technology to AI etc.	Start Industry 4.0 and apply smart city technology to AI etc.
8. 21st Century Education (industrial development)		IKN 's human resource development strategy for the economy and industry centered on junior high and high schools, vocational training schools, and universities	IKN 's human resource development strategy for the economy and industry centered on junior high and high schools, vocational training schools, and universities	special sector universities to world-standard international campuses	Strengthening special sector universities to world-standard international campuses

Source: Prepared by JICA Study Team based on Presidential Decree No63/2022 Annex VI, Indonesia's New Capital Nusantara based on Law NO3./2022 Study2,3 by BKPM Japan Desk Kumiko Honma

The designated industrial areas are as shown in the diagram below, with West IKN to the west of KIPP being an economic and financial center, South IKN to the south of KIPP being a renewable energy district, East IKN for tourism and leisure, North IKN for education, East IKN 2 for research and development, Simpang Samboja for agricultural products and distribution, Kuala Samboja for agricultural industry, and Muara Jawa for business and agriculture.



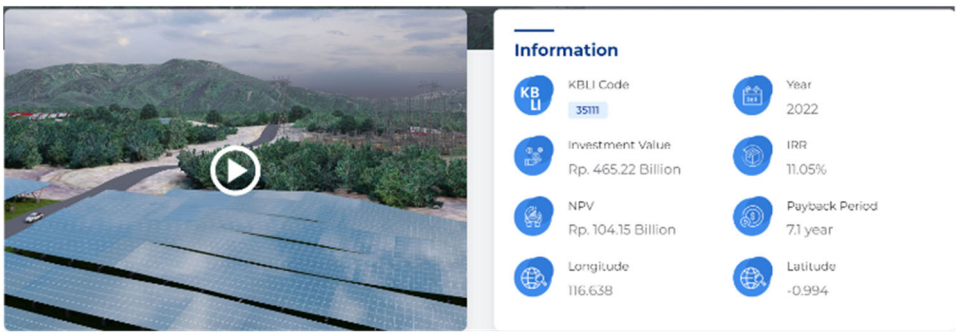
Source: BAPPENAS 2023

Figure 5-6 IKN's Nine Industrial Development Zones

As shown in the figure below, the Indonesia's Investment Coordinating Board (BKPM) has formulated a PPP project scheme for solar power generation in the South IKN area, which aims to create a renewable energy industry, and is seeking investors, but the scale of the project and its relationship with PLN must be closely examined.

Project Name: Solar Power Plant in East Kalimantan Province

Location: Pemaluan Village, Sepaku District, PPU Regency, East Kalimantan Province



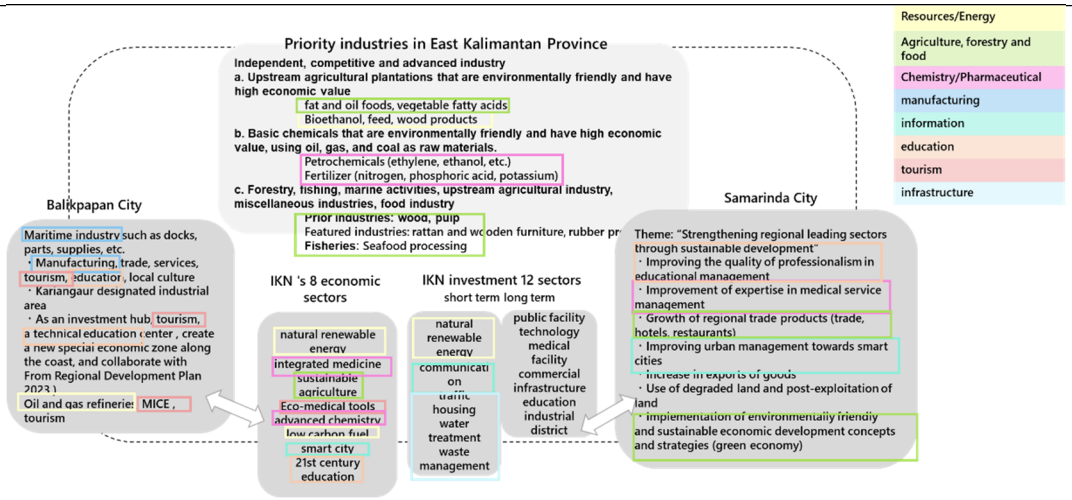
Source: Source: https://regionalinvestment.bkpm.go.id/pir/peluang-investasi/detail/?id=1284

Figure 5-7 Solar Power Generation Project in South IKN Area

The six industry clusters are divided into several subthemes, consistent with Presidential Decree No. 3/2022: EV Motorcycles and Photovoltaics in the Next Generation Renewable Energy Equipment sector; Active Pharmaceutical Ingredients, Bio Generic Drugs, and Vaccines in Integrated Pharmaceuticals; Plant Proteins, Herbs and Nutrition, and Plant Extracted Products in Sustainable Agriculture; MICE, Urban Tourism, and Health Tourism in Eco and Health Tourism ; Petrochemicals and Oleochemicals in Advanced Chemistry; and Biofuels, synthetic fuels, and coal gasification in Low Carbon Fuel Energy.

(2) Tri-City Industry-Related Policies

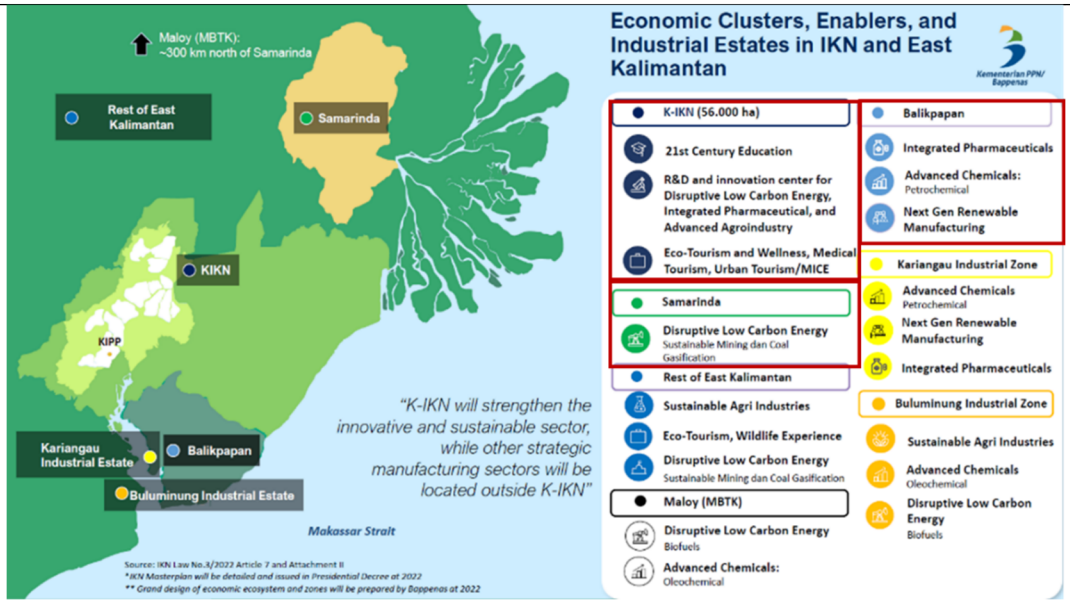
As shown in the figure below, the industrial development-related measures in the regional middle-term development plans of East Kalimantan Province, Balikpapan City, and Samarinda City, as well as IKN's industrial development-related measures, as summarized in Chapter 2, are summarized in Figure 5-8. The industrial development policy is based on a comprehensive policy based on the current situation in East Kalimantan Province and IKN's future vision. It aims to revitalize environmentally friendly industries centered on agriculture, downstream commercialization using natural mineral resources, and fishing and forestry with an awareness of the blue economy. Balikpapan City has positioned oil and gas refining, manufacturing, shipping, and tourism as its main industries, while Samarinda City has an industrial development policy of restoring and reusing coal mine sites, as well as medical care, education, and smart cities. All three municipalities share a common challenge in their current industrial structure, which is the transition to high-value-added commercialization of existing natural resource industries. The latest regional long-term development plans (drafts) of the three municipalities, published as of September 2024, are more conscious of IKN's industrial development measures.



Source:JICA Study Team based on the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026, the Balikpapan City Regional Middle-Term Development Plan 2021-2026, the Samarinda City Regional Middle-Term Development Plan 2021-2026, and IKN Presidential Regulations

Figure 5-8 Industry-Related Policies in IKN, Tri-City-Related Cities

As shown in the table below, with regard to the geographical industrial arrangement of the six industries proposed in the IKN, Presidential Decree 63/2022 proposes that the IKN become an Economic Superhub, with roles in adjacent municipalities and in East Kalimantan Province as a whole; K-IKN in the center of the IKN will have low-carbon energy, pharmaceutical, agriculture R&D, and the 21st century education functions; Balikpapan City will have production and manufacturing functions in the pharmaceutical, advanced chemical (petrochemical), and renewable energy equipment sectors; and Samarinda City will have low-carbon energy (sustainable energy) functions. Balikpapan City will be responsible for production and manufacturing in the pharmaceutical, advanced chemical (petrochemical), and renewable energy equipment sectors, and Samarinda City will be responsible for low-carbon energy production (sustainable mining and coal gasification). The Kariangau Industrial Area, a part of Balikpapan City, is expected to produce advanced chemistry (resin chemistry) and renewable energy equipment (electric motorcycles and solar panels). Agriculture, tourism/wilderness experiences, and sustainable mining and coal gasification are also envisioned for other locations in the province and will guide the industrial development of the three municipalities in the Tri-City initiative.



Source: BAPPENAS, 2024

Figure 5-9 Role of Six Industries in IKN and Adjacent Areas

5.3.3 Industrial Development Challenges in Six Economic Sectors and Two related Sectors on the IKN Development Plan

Based on the current status and policies of industries in East Kalimantan Province, Balikpapan City, and Samarinda City in the previous chapter, the following items are described for the six industries and two related sectors envisioned in IKN to extract the potential and challenges in industrial development in Tri-City.

- Market (production volume, sales, etc.)
- Key players
- Current related policy and measures
- Support measures that will be required in the future
- Potential and challenges in building value chains in Indonesia

(1) Next-generation renewable energy equipment sector (EV two-wheelers and photovoltaic panels)

Background

In its 2021 "Low Carbon and Climate Change Resilience Long-Term Strategy Towards 2050," Indonesia declared that it would achieve carbon neutrality by 2060, and proposed electric motorcycles and solar panel manufacturing as next-generation renewable energy equipment sectors. IKN's industrial development plan follows this and has adopted it as one of six economic clusters.

1) EV Motorcycle Industry

Summary

Indonesia's electric motorcycle industry is in its early stages but has great potential for growth. Despite the existing policy measures, the sector faces various challenges on both the demand and supply side.

On the demand side, bottlenecks include the high cost of EVs, insufficient vehicle specifications, and limited charging infrastructure constraints. On the supply side, weak demand and high capital investments in vehicle manufacturing and infrastructure deployment are key challenges.

As a Tri-City, the location potential is not thought to be high at present, but since demand influences policies and measures, it is necessary to keep a close eye on domestic trends.

a) EV Motorcycle Market

Sales Volume of EV Four-Wheelers and EV Two-Wheelers

Indonesia's motorcycle market is the largest in the ASEAN region. According to the Indonesia Motorcycle Industry Association, domestic sales in 2019 were 1.03 Million four-wheeled vehicles[17] and 6.4 Million motorcycles[18]. Due to the direct impact of COVID-19, domestic motorcycle sales subsequently halved to 3.6 Million units, before recovering to 5.06 Million units in 2021. Of these, EV motorcycles accounted for only 0.2%, or about 10,000 units.

Penetration Rate and Vehicle Price

In Indonesia, the transition to four-wheeled vehicles as a form of transportation for ordinary households is still some way off, with motorcycles still playing a leading role. Approximately 70% of households that own either a motorcycle or a four-wheeled vehicle also own a motorcycle, while around 30% own a four-wheeled vehicle. The penetration rate of motorcycles is approximately 2.3 times that of four-wheeled vehicles. The price of an EV motorcycle is affordable even at Indonesia's income level (average annual income of 62 Million IDR), with popular EV motorcycles costing between 13 Million and 35 Million IDR, equivalent to 20% to 50% of annual income, while the price of a popular EV four-wheeled vehicle (approximately 750 Million IDR) is more than 10 times the average annual income.

b) Key Players

Production Capacity

According to the Indonesia Automotive Manufacturers Association's wholesale database, the EV production capacity for 2020 is announced to be 1,200 units per year for four-wheeled vehicles and 877,000 units per year for two-wheeled and three-wheeled vehicles. There is a significant gap between the number of motorcycles that can be produced and the number of units sold, so it is necessary to verify the actual situation as to whether production is possible if there is demand.

EV Manufacturers

As of November 2020, Indonesia has 15 EV two- and three-wheeler manufacturers and one EV bus manufacturer with manufacturing facilities that are said to have begun producing electric vehicles, while another 10 EV manufacturers are registered with the Ministry of Industry (MoI) but have yet to begin production.

Battery Manufacturers

Regarding batteries, there are two registered manufacturers in the country, and in mid-2021,

[17] Source:GAIKINDO
[18] Source: AISI

state-owned Indonesia Battery Corporation (IBC) announced it had begun construction of the country's first EV battery factory. The company aims to start production in the first half of 2024, but no clear information has been provided about the actual start of production.

Battery Replacement Service Providers

In November 2020, the Ministry of Energy and Mineral Resources opened three battery swap stations for electric motorcycles in the capital, Jakarta. The stations were set up in collaboration with ride-hailing service Grab, electric motorcycle manufacturer Kymco, and battery swap providers Ezyfast and Oyika[19]. At the end of the same year, two domestic manufacturers, Viar and Selis, began producing electric motorcycles that can use the battery swap stations. These electric motorcycle models can be purchased without a battery and the battery swap service is available after purchase.

c) Current Related Policy and Measures

Objectives and Policy

The Indonesian government is implementing measures to make domestically produced electric motorcycles the mainstay of the motorcycle market and manufacturing. The Ministry of Industry's scenario has set a target of 25% of total annual sales of electric motorcycles and an annual production capacity of 2.5 Million units by 2030. Indonesia has also positioned electric motorcycles as a top priority industry in its National Industry Master Plan (RIPIN) 2015-2035. This policy is driven by innovative technologies, research and development (R&D), and strengthening charging infrastructure, and the strategic direction is also indicated in the National Medium-term Development Plan (RPJMN)[20].

Contribution to the decarbonization strategy

The shift to electric motorcycles will bring significant environmental benefits, reducing CO2 emissions by 0.48 tons per vehicle per year. Replacing 12.5 Million internal combustion engine vehicles with electric motorcycles by 2030 will reduce CO2 emissions by 6.1 Million tons, equivalent to 4% of Indonesia's total transportation sector emissions.

Current support measures

Presidential Decree No. 55 of 2019 requires all relevant ministries and agencies to enact their own implementing regulations to support the transition to EVs. In June 2021, the Minister of Energy and Mineral Resources mentioned an ambitious national goal of only selling EV motorcycles from 2040 onwards, and converting all motorcycles to EVs from 2050 onwards, but this has not yet been officially reflected in any circulars or policies.

d) Support Measures Required in the Future

Demand Stimulation

- Financial incentives for consumers should be implemented in line with specific selection criteria based on outcomes, such as reducing initial cost burden on consumers, reducing

[19] Indonesia transport electrification strategy, WORKING PAPER 2021-36, INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION, October 2021
[20] Electrifying Indonesia's Two-Wheel Industry, BCG, AEM, November 2023

ongoing costs, reducing emissions, promoting the uptake and encouraging the adoption of EV motorcycles, promoting sales of specific types of EVs, promoting adoption of specific types of EVs, reducing the inventory of ICE vehicles, and promoting technological development.

- Preferential services, such as parking, are required, including free or discounted parking, preferential relaxation of road restrictions, toll road discounts, permit exemptions, and preferential services for EV motorcycles, such as dedicated parking spaces.

Supply Stimulation

- Financial incentives for manufacturers should be considered, such as support for specific steps in the value chain, setting numerical targets for specific activities, setting targets for small and medium, or large companies, etc., and utilizing hydroelectricity to take advantage of Indonesia's strategic strength and providing subsidies for battery production.
- As manufacturer tax incentives, Indonesia already granted several tax incentives, including a corporate income tax exemption for EV manufacturing activities, tax credits for EV-related investments, and import duty exemptions for semi-knockdown auto kits. In the short term, further targeted tariff exemptions for certain EV components could encourage local auto manufacturing.
- As a reduction of regulatory hurdles, foreign investment restrictions on auto manufacturers need to be eased.

Charging Service

- As charging network support, since a full household charging typically takes 5 to 8 hours, battery replacement stations outside the home must be widely available.
- For industry standardization, measures are needed to ensure the safety of EV motorcycle batteries and their compatibility with the Battery Share System (BSS) infrastructure, including battery size, weight, and capacity.

e) Potential/Challenges in Building Value Chains in Indonesia

The value chain related to EV motorcycles consists of technological development, battery and component procurement, vehicle manufacturing, product shipment, sales and marketing, and services including charging.

Technological Development

When purchasing an EV motorcycle, the maximum speed limit and the short battery driving range are obstacles to purchasing as vehicle specifications. The maximum speed usually does not exceed 70km/h, and the maximum driving range on a single charge usually does not exceed 60km/h, so there is a need to develop technology to improve both of these, as well as manufacturing technology to achieve low prices.

Battery and parts procurement

Indonesia has the world's largest reserves of nickel, a key raw material for lithium-ion batteries for EVs, giving it a natural resource advantage in the development of battery electric vehicles (BEVs). Approximately 40% of the cost of an electric vehicle is the battery, so if Indonesian companies can make good use of domestic nickel, they could potentially overtake foreign competitors in the EV sector. However, the underdeveloped domestic supply chain for key

components is a major hindrance, and improving this is a challenge. A flexible supply chain that also takes into account the use of imported parts when necessary is also required[21].

Attracting Vehicle Manufacturers

The biggest challenge in the value chain is the large initial capital investment required for production facilities at a time when the outlook for demand is unclear. It is estimated that an investment of 120 Million to 150 Million USD is required to build a production facility for 400,000 to 500,000 electric motorcycles. For electric motorcycle manufacturers to be able to decide to invest, it is necessary to improve the market environment as well as to improve support measures to reduce the burden of the initial investment.

Upfront Investment for Services including Charging

The country's charging infrastructure is relatively limited, with only 86 public vehicle battery swap stations (BSS) and 155 public EV charging stations as of 2022. As of 2021, most of the charging infrastructure is concentrated on the island of Java, and in the future, when developing the market environment, it will be necessary to develop charging stations in this area first.

f) Potential and Challenges of Value Chains in Tri-Cities

Based on the above considerations, the anticipated strengths, challenges, and necessary support activities for building a value chain for the development of the EV motorcycle industry in Tri-Cities are summarized in the table below.

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Table 5-8 Tri-City EV Motorcycle Industry Value Chain Analysis

R&D	Inbound Logistics	Operation	Outbound logistics	Sales/Marketing	Service	Others
Need R&D in South IKN 3,720ha Innovation and Research zone.	Most of the mechanical parts and batteries shall be imported from Jawa islands. Battery manufacturing plan in Bulungan	Kariangau industrial area in Balikpapan. Green power supply of solar power in IKN. Skilled human resource. Restriction of foreign investment.	Kariangau container Terminal in Balikpapan. Logistic infrastructure to the port.	Enhance market demand and establish the branding by demonstration experiment in IKN. Manufactures who have the domestic and international markets are needed.	Establish Battery stations in IKN. Share bike service for visitors.	Alignmnet with Kalimantan Institute of Technology.
Support Activity ✓ Technology Development: National research and development institute is needed. ✓ Human resource Management: Human resource of coal/oil/gas industries could be shifted. ✓ Infrastructure: Industrial road network to the ports are needed. ✓ Marketing: Incentive for local customers and share service for visitors.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team

2) Photovoltaic (Solar) Panel Industry

Summary

Located just below the equator, Indonesia is well suited for solar power generation due to its large amount of solar radiation. East Kalimantan Province is an area with the potential to

[21] Electrifying Indonesia's Two-Wheel Industry, BCG, AEML November 2023

become one of Indonesia's leading solar power generation resources, including future investment. The production of solar panels is expected not only to secure the electricity needed to charge batteries in line with the expected demand for EV motorcycles, but also to reduce CO2 emissions in the manufacturing process of EV motorcycles.

Since production of solar panels requires advanced technology and equipment, which is not yet fully developed in Indonesia, foreign investment and technology transfer, including quality control and maintenance, are essential. High standards are also required for quality control and maintenance of solar panels.

As a Tri-City, due to the uncertainty of green power demand, the location's potential is not thought to be high at present, but a large-scale solar power generation facility is being planned, and if IKN actively promotes solar power generation as a showcase for the country, there is a possibility that demand can be secured.

a) Photovoltaic Panel Market

Characteristics of Indonesian Market

Indonesia leads ASEAN in total renewable energy installed capacity (23GW) along with Vietnam (45GW) and Thailand (12GW), but its solar power generation development is lagging behind other ASEAN countries[22]. As of 2021, Percentage of total electricity generation accounted for by solar power in the national power grid was less than 200 MW, or less than 0.1% of the total electrical capacity.

One of the reasons for the slowdown in growth is that Indonesia is a country of 17,000 islands, making it difficult to develop a transmission infrastructure. In addition, there is an abundant supply of coal and natural gas from Java, making it difficult for solar power generation to compete on price. In addition, Indonesia's import taxes are higher than other countries, and manufacturing costs are higher due to the need to import raw materials.

On the other hand, Indonesia's power capacity is based on the government's Long-Term Power Business Plan (RUPTL), which envisages around 5GW of solar power generation by 2030, meaning that around 0.7 gigawatt peak (GWp) of solar power plants will need to be built per year, creating huge investment opportunities.

Trend Towards Decarbonization

Neighbouring Singapore's decarbonisation strategy relies on importing clean energy from neighbouring countries, which is why it is promoting solar power projects in Indonesia through Just Energy Transition Partnership (JETP[23]), a 20 Billion USD initiative to raise funds from the public and private sectors.

Solar PV and Power Grid

Most of the current PV development is for stand-alone PV systems installed in remote areas and some large-capacity on-grid systems. According to the International Renewable Energy Agency (IRENA), the total off-grid installed capacity of solar PV in Indonesia will reach 67.59 MW in 2021, compared to 43 MW in 2017, representing an annual growth rate of 11.4%.

[22] How to power Indonesia’s solar PV grow the opportunities, Mckinsey&Company, October 19, 2023
[23] a financing cooperation mechanism designed to help coal-dependent countries transition to cleaner energy sources in a fair and equitable manner.

This growth rate is expected to increase in the coming years[24].

Indonesia plans to increase its electrification rate to 99.7% by 2025. The government is promoting the electrification of rural areas using new and renewable energy sources, with PV mini-grids being the most cost-effective option. Over the past few years, several PV projects have been launched to supply power to off-grid villages and to replace diesel generation in remote areas. This has led to the large-scale use of the off-grid solar energy sector. Thus, the off-grid sector is expected to experience significant growth in the Indonesian solar energy market in the future.[25] However, the development of mini-grid systems utilizing rooftop solar power may be limited if the surplus power cannot be utilized, as the distribution system of the state-owned electricity company PLN incurs high costs for connecting distributed solar power to transmission substations.[26].

Low-Cost Production

The cost of solar panels is falling around the world. The price of a solar panel module has dropped from 4.12 USD per watt in 2008 to 0.17 USD per watt in 2020. This brings the cost of solar energy to about 0.04 USD per kWh, below the average cost of coal energy of 0.05 USD to 0.07 USD per kWh.

In 2019, the capital efficiency of solar power projects in Indonesia, including the solar panels mentioned above, averaged over 1,000 USD/kWp (USD /kWh), but this has dropped sharply in recent projects to an average of 800 USD /kWp. In comparison, wind power project costs are higher than in other countries, at nearly 2,500 USD/kWp, making solar power more economically efficient in Indonesia.

b) Key players

Major players in the Indonesian solar panel market include Canadian Solar, PT. Surya Utama Nuansa, PT Solardex Energy Indonesia, PT.Sumber Energi Surya Nusantara, PT. Sumber Energi Sukses Makmur, and others.

Related plans for Tri-City neighborhoods include:

- The plans to build an EV battery factory in Kalimantan Industrial Park, Bulungan, East Kalimantan Province is reported[27].
- The Solar Archiperago (Surya Nusantara) plan, a program driven by Indonesia's Ministry of Energy and Resources, aims to install 1GW of solar power generation in IKN every year until 2025[28].
- PT Adaro Aluminium Indonesia signed a letter of intent to invest US$728 Million in the Green Industrial Zone in North Kalimantan Province to supply aluminum to the solar panel industry and electric vehicle manufacturing. The PT Adaro Aluminium

[24] Erick Koons, Solar Energy In Indonesia: Potential and Outlook, https://energytracker.asia/solar-energy-indonesia/ 21 February, 2024
[25] Indonesia Solar Energy Market Size & Share Analysis - Growth Trends & Forecasts (2024 - 2029), https://www.mordorintelligence.com/industry-reports/indonesia-solar-energy-market, Mordor Intelligence
[26] Indonesia Energy Transition Outlook 2022, IRENI, 2022
[27] The Indonesia. Id, Indonesia To Build Largest Green Industrial Park, Producing EV Batteries, https://www.theindonesia.id/explore/2023/03/01/105147/indonesia-to-build-largest-green-industrial-park-producing-ev-batteries, March 1, 2023
[28] Indonesia transport electrifiacation strategy, Working Paper 2021-36, International council on cleas transportation, October 2021

Indonesia smelter will utilize renewable energy from hydroelectric and solar power plants with modern environmentally friendly construction standards[29].

c) Current Related Policy and Measures

Climate change-related policy and measures

Indonesia's National Middle-Term Development Plan (RPJMN) 2020-2024 sets a target to increase the renewable energy rate from 8.6% in 2019 to a maximum of 23% by 2024, with solar PV expected to account for 40% of the renewable energy. The plan recommends the development of small-scale grids, photovoltaic systems including batteries, rooftop and offshore solar power, and the production of photovoltaic cells.

Furthermore, in 2021, Indonesia announced the "Indonesia Long-Term Strategy for Low Carbon and Climate Resilience 2050," a long-term strategy to promote low carbon and climate change solutions targeting the year 2050. In this strategy, solar power is positioned as a renewable energy source along with hydropower, geothermal, biomass, biofuels, and wind power. The national policy is to introduce photovoltaic power generation for both on and off the grid in the future, 13GW was supplied, and the goal is to produce it domestically along with EV batteries.

According to IRENA's "Indonesia Energy Transition Outlook 2022," if the transition to renewable energy is economically viable by 2050, the utilization rate is expected to increase from 14% to about 66%. To achieve this, it is necessary to add 66GW of solar power by 2030 and develop the related infrastructure.

Government's Guidelines and Other Measures

As part of the government's promotion measures, in 2019 and early 2020, the government has issued the following two regulations in the energy sector:

- Regulation of the Ministry of Energy and Mineral Resources (MEMR) prescribing the procedure for specification of rooftop solar photovoltaic panel power generation systems by PLN customers
- Regulation of the Ministry of Energy and Mineral Resources (MEMR) prescribing the general governance for the use of renewable energy in public electricity supply

Encouraging Distributed Renewable Energy System

Distributed renewable energy systems are also growing. To help the government meet its commitment to increase the renewable energy share of its energy mix to 23%, the Ministry of Energy and Natural Resources (MEMR) is encouraging the installation of rooftop photovoltaic systems in domestic households, with a goal of up to 3.6 GW of rooftop PV systems by 2025.

Local Sourcing Obligation for Components

To achieve its 23% pledge, the government is encouraging the installation of rooftop solar power systems, a distributed renewable energy system, on homes across the country, with a goal of installing up to 3.6GW of solar power capacity by 2025.

[29] The Jakarta Post, https://www.thejakartapost.com/business/2024/03/21/adaros-kipi-aluminum-smelter-aims-for-full-operation-by-early-2026.html, March 21 2024

d) Support Policy Required in the Future

Case Studies of India and Vietnam

India is a growth success story in solar power: in March 2023, the Indian government awarded bids for 39.6 GW of solar manufacturing to 11 companies. The government encouraged manufacturing under the second phase of the Production Linked Incentive (PLI) scheme, providing subsidies of 140 Billion IDR (about 1.7 Billion USD) over five years. This allowed Indian domestic solar PV manufacturers to reduce production costs and compete with Chinese products. At the same time, the Indian government imposed a 40% tariff on products imported from China, raising their prices. In contrast, Vietnam has not imposed local sourcing obligations on the PV manufacturing industry and has introduced tax incentives to attract foreign OEM investment. This has allowed Chinese OEMs to move some of their production to Vietnam, avoiding tariffs. Vietnam has also introduced a higher feed-in tariff (FiT) scheme, offering energy producers a rate of 84 USD /MWh in 2019. This rate exceeded the estimated levelized cost of electricity generated (LCOE) for solar power plants, increasing domestic demand. India's example could serve as a reference for Indonesia, which emphasize domestic production.

Measures to Support Potential Investment

- Introduce grants and subsidies, low-cost borrowing capital, and preferential electricity rates for the development of photovoltaic panel manufacturing plants.
- Provide flexibile measures regarding local procurement requirements to stimulate additional local demand by attracting foreign OEMs.
- Provide incentives for battery manufactures to store renewable energy.
- Explore export opportunities.

e) Potential/Challenges in Building Value Chains

The value chain for photovoltaic panels consists of technological development, material procurement, cell/module/panel manufacturing, product shipment, sales and marketing, and services related to photovoltaic panels.

Promotion of Technological Development

The main themes of photovoltaic technology development in Indonesia include improving power generation efficiency: increasing the efficiency of photovoltaic panels; optimizing batteries and distribution grids, reducing costs, utilizing silica sand produced in Kalimantan, developing storage batteries and distribution grids suitable for Indonesia's archipelagic characteristics.

Building Supply Chain for Parts and Material Procurement

As of 2023, China dominates the entire photovoltaic manufacturing chain, with global production capacity shares of photovoltaic polysilicon, ingots and wafers, photovoltaic cells, and photovoltaic modules at 79%, 95%, 76%, and 68%, respectively, but in the ASEAN region, sourcing parts from regions including India is becoming commonplace for domestic production of photovoltaic panels. From the perspective of fostering domestic industries, including cost control and nurturing domestic industries, it is important for the public and

private sectors to work together to control what level of raw materials or semi-finished products to import from where, and to what extent to produce domestically.

Indonesia has approximately 25 Billion tons of silica sand reserves, which are used to make glass and polysilicon cells for solar panels. China's Xinyi Glass plans to invest 11.5 Billion USD in solar panel manufacturing on Rempang Island near Singapore, which also aims to use this silica sand. Indonesia has banned the export of many raw materials, notably nickel, and the government is considering a similar ban on unprocessed silica sand, so utilizing domestic silica sand could be beneficial for domestic solar panel manufacturing[30].

Reducing Manufacturing Costs and Site Selection for Cells, Modules and Panels

Due to the influence of low-cost products from China, Indonesian manufacturers need to lower their production costs to about 0.24USD/Wh to be price competitive, which requires a minimum annual production volume of about 3GWp to 7GWp. In addition, the Indonesian Photovoltaic Manufacturers Association (APAMSI) has stated that Indonesia's photovoltaic manufacturing capacity in 2021 will be in the range of 50-100MW per factory per year, which is only about 2% of China's average factory capacity, and there is a risk that domestically produced panels will be about 40% more expensive than imported panels. Even if produced for domestic demand, it is important to conduct feasibility studies for price competition with imported products.

Regarding location, Indonesia's solar power generation potential is large in the eastern part of the country, but solar power generation facilities will be concentrated in areas with low electricity demand, so the selection of the location of the power generation facility is important.

Establishment of Product Shipment, Sales, and Marketing Strategies

The products are expected to be shipped to Kalimantan, as well as the entire country and the ASEAN region. Sales targets are solar power generation business operators and owners of large-scale facilities. The power generation business operators face various challenges when building power supply systems that incorporate solar power generation panels, batteries, and local grids, such as at night or during bad weather. Therefore a marketing strategy for the entire system, not just the solar power generation panels alone are needed

Enhancement of After-Sales Services

In Indonesia, solar power generation is perceived as expensive and difficult to maintain, which is one of the reasons for its low adoption. Challenges after the panels are delivered include maintenance and inspection of solar power generation facilities, leveling out supply using batteries, responding to fires, and disposing of solar panels after the depreciation period has expired.

f) Potential and Challenges of Value Chains in Tri-Cities

Based on the above considerations, the anticipated strengths, challenges, and necessary support activities for building a value chain for the development of the solar power panel industry in Tri-City are summarized in the table below.

[30] The Financial Times Limited, Chinese investment sees Indonesia climb the solar value chain, https://www.sustainableviews.com/chinese-investment-sees-indonesia-climb-the-solar-value-chain-3ec8f298/#:~:text=A%20%2411.5bn%20plan%20by%20China%E2%80%99s%20Xinyi%20Glass%20to,beyond%20raw%20material%20production%20in%20the%20solar%20supp, August 23, 2023

Challenges for solar power panel production in Tri-City include an unstable supply of raw materials such as silicon and glass that are easily affected by price fluctuations, a lack of regulations and standards regarding the disposal of solar power panel waste, which raises concerns about the impact on the environment, and the current low penetration rate of solar power panels, which means that a change in consumer awareness and the provision of incentives are necessary to expand the market.

Table 5-9 Tri-City Solar Panel Industry Value Chain Analysis

R&D	Inbound Logistics	Operation	Outbound logistics	Sales/Marketing	Service	Others
Need R&D in South IKN 3,720ha Innovation and Research zone.	Most of the cells are imported from China and India. Battery manufacturing plan in Bulungan	Kariangau industrial area in Balikpapan. Financial support for domestic manufacturing. Restriction of foreign investment and import of foreign components.	Kariangau container Terminal in Balikpapan. Logistic infrastructure to the port.	Promote solar power market in IKN. Manufactures who have the domestic and international markets are needed.	After-sales service, maintenance. Power supply balance with batteries. Power sales for private customers. Life cycle management for product disposal.	Alignmnet with PLN.
Support Activity ✓ Technology Development: National research and development institute is needed. ✓ Manufacturing: Incentive for domestic and foreign manufacturers. ✓ Infrastructure: Power grids to level power supply. ✓ Marketing: After-sales service, maintenance.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team based on the preceding paragraph.

(2) Integrated Pharmaceutical Industry

1) Summary

The integrated pharmaceutical industry focuses on the production of APIs, biopharmaceutical generics, and vaccines, and envisions an increased emphasis on R&D with a view to increasing the range of pharmaceuticals by 2029 and the production of APIs and vaccines for export from around 2035.

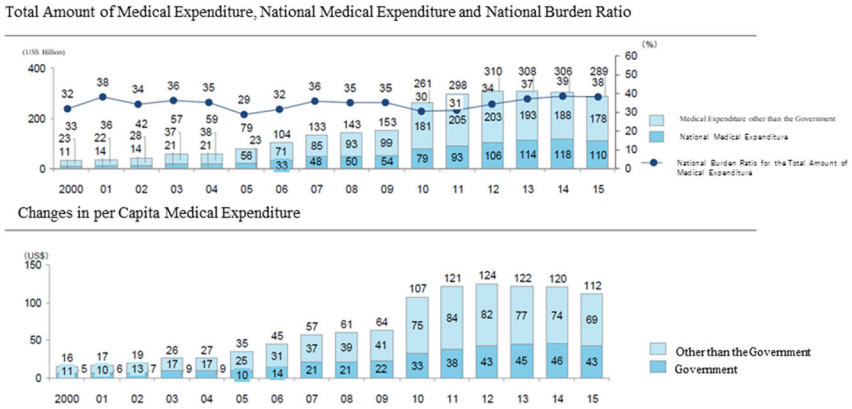
The development of an API involves a process of therapeutic targeting, compound discovery, screening, preclinical testing, manufacturing process development, clinical trials, regulatory filings, and marketing, which can take more than 10 years and cost an enormous amount of money. Bio-generic drugs are manufactured under certain standards for drugs whose patents have expired in the drug discovery process from small molecule drugs to biopharmaceuticals, which reduces development costs, but competition is fierce. Vaccine production is more difficult than regular drug discovery because it requires clinical trials involving thousands to tens of thousands of people to confirm that the infection does not develop.

As a Tri-City, the location potential is not thought to be high at present, but if a pharmaceutical research institute is established as part of the capital's functions, and if human resource development institutions such as universities are developed, and if there is convenience in terms of pharmaceutical administration, etc., it may be possible for pharmaceutical manufacturers' research institutes to set up there.

2) Medical Market

a) Per Capita Health Care Spending

As shown in the figure below, in 2017, per capita health care spending was 112 USD, about one-fifth of Japan's per capita spending, which is internationally low. In addition, 38% of the total 28.9 Billion USD in health care costs was borne by the government. However, the medical insurance system, which aims for universal coverage, began in January 2014, covering a population of 250 Million, with 60% coverage in September 2015, and there are high expectations for growth potential in the pharmaceutical market.[31]



Source: Country Report on International Medical Expansion: Indonesia, Ministry of Economy, Trade and Industry 2021

Figure 5-10 Medical Expenditures (upper panel) and Per Capita Medical Expenditures (lower panel)

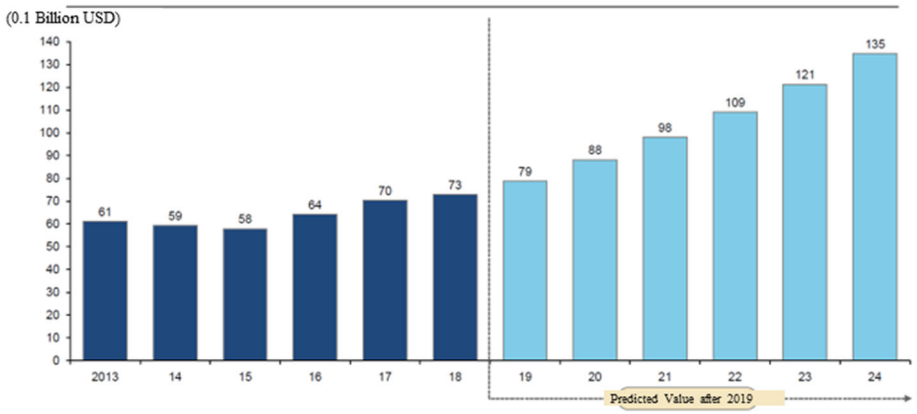
Productivity losses due to disease are estimated amount to nearly 30% of the annual GDP. more than 201 Billion USD, which is about 19% of GDP, is lost due to non-communicable diseases such as heart failure, respiratory diseases, and cancer, while 101 Billion USD is lost due to communicable diseases such as typhoid fever and malaria. However, it is suggested that the productivity decline from non-communicable diseases is relatively avoidable, and priority should be given to avoiding communicable diseases. To improve these conditions, there is a need for healthcare that reaches more patients with quality and affordability.[32]

3) Pharmaceutical Market

a) Classification and Market Share of Pharmaceuticals

As shown in the figure below, the need for pharmaceuticals is increasing with population growth and rising health awareness. Healthcare spending as a percentage of GDP per capita is also increasing, and the domestic pharmaceutical industry is expected to grow. As of 2018, the pharmaceutical market was composed of approximately 60% prescription drugs and 40% over-the-counter drugs. The market size was 7.3 Billion USD and was projected to reach 13.5 Billion USD by 2024. At that time, 70% of sales came from domestic companies, with branded generics, which are brands purchased from new drug manufacturers, being the mainstream.

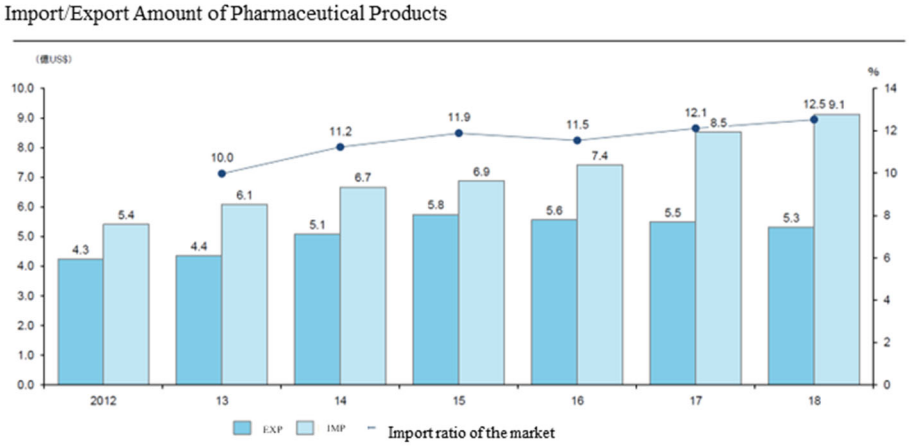
[31] Research Report on the Current State of the Pharmaceutical Market in Indonesia and Business Opportunities and Challenges for the Japanese Pharmaceutical Industry, Pharmaceuticals and Society Vol. 26 No. 4 Nakamura Hiroshi, Wakutsu Naohiko, 2017
[32] Oliver Wyman, Indonesia 2030: the $68 billion healthcare opportunity, https://www.oliverwyman.com/our-expertise/perspectives/health/2019/jan/the-future-of-the-indonesian-healthcare-ecosystem.html



Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-11 Pharmaceutical Market Size (0.1 Billion USD)

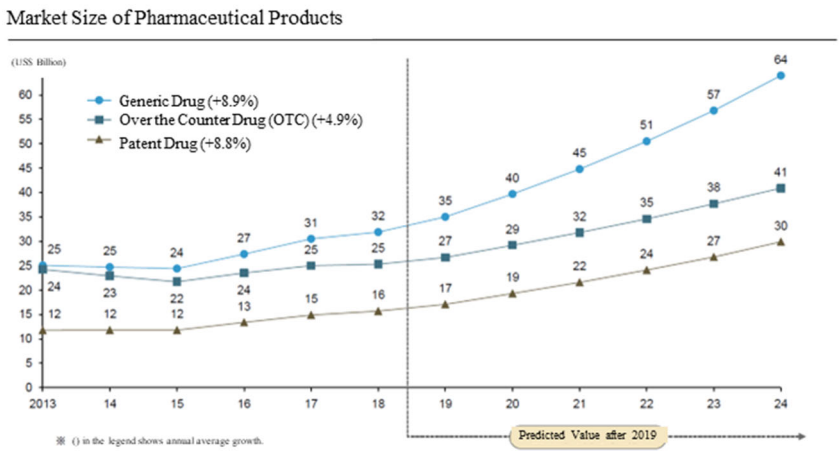
At the time of 2018, imports exceeded exports, accounting for 12.5% of the market.



Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-12 Import/Export Value of Pharmaceutical Products

As shown in the figure below, among ethical drugs, new drugs (brand name drugs) account for 30% and generic drugs for 70%. The market for generic drugs, over-the-counter drugs, and patented drugs (bulk drugs) is expected to grow, but the market for generic drugs is the largest.



Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-13 Pharmaceutical Market Size

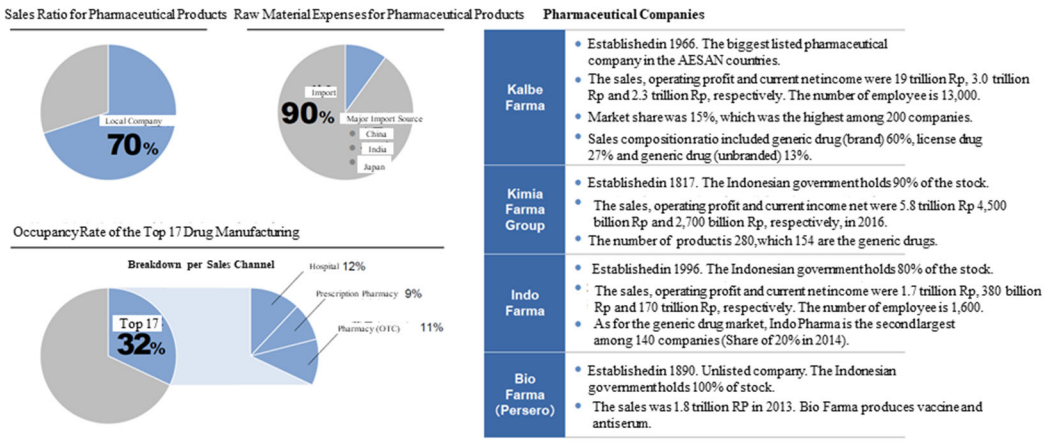
b) Cost

Retail prices of ethical drugs are significantly higher than in other countries. High distribution costs are the main reason, especially for new drugs. For generic drugs, distributors and wholesalers set a margin rate of about 10% of the shipping price, and retailers are said to set another 25% margin rate.

4) Key Players

a) Domestic Companies

As shown in the figure below, as of 2018, there were approximately 200 domestic pharmaceutical-related companies. Most of them are located in the provinces of West Java, East Java, and the Special Capital Region Jakarta. 70% of their pharmaceutical sales are from domestic companies, and 90% of their raw materials are imported from China, India, and Japan.



Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-14 Pharmaceutical Market and Domestic Companies Overview

Representative domestic firms include:

Kalbe Farma, KLBF

Kalbe Farma, Indonesia's largest pharmaceutical company, announced that it has partnered with two Japanese companies Health Science Research Institute (HSRI) based in Yokohama and Toyota Tsusho Corporation, a subsidiary of Toyota Motor Corporation, to establish a clinical laboratory worth 100 Billion IDR in North Jakarta. The joint venture with Japanese companies, Innolab Sains Internasional, was established by Kalbe Farma holding a 60% stake, while HSRI and Toyota Tsusho each hold a 20% stake.[33]

PT Darya-Varia Laboratoria Tbk

Darya-Varia, an Indonesian private pharmaceutical company founded in 1976, operates two manufacturing plants that meet Good Manufacturing Practices (c-GMP) and National Pharmaceutical and Food Regulatory Agency (BPOM) standards: All plant facilities have implemented the Halal guarantee system. 2020 sales were 1,829.7 Billion IDR.

[33] ASEAN JAPAN 29.01.2018 https://www.asean-j.net/39330/

PT Phapros Tbk (Phapros)

Founded in 1954, Phapros, an Indonesian pharmaceutical company, manufactures more than 250 types of pharmaceutical products. Most of them are developed in-house, and are not only sold within Indonesia, but also exported to Cambodia, Myanmar, and Peru. In addition, Phapros is expanding its business scope into the non-pharmaceutical sector with non-electric medical devices that have obtained distribution licenses from the Indonesian Ministry of Health. In 2020, the company's sales revenue was 980.6 Billion IDR.

b) Foreign Companies

As shown in the figure below, the health sector, including the pharmaceutical industry, is subject to foreign investment restrictions, and basic clinics and pharmacies are not allowed foreign investment.

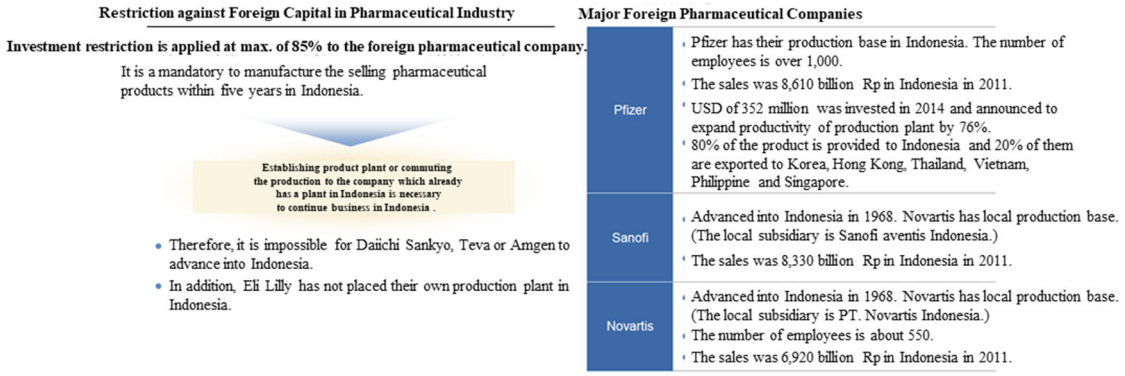
Negative List in the Health Sector (2016)

Max. Investment of Foreign Capital	Major Business Area
85%	• Pharmaceutical Industry
67%	• Contract Research Coordinator • Medical evacuation/Emergency medical evacuation • Hospital • Major clinic (Specialist, dentist, care-giving specialist, medical rehabilitation)
49%	• Supplier of medical devices (Requires special permission from MOH)
33%	• Medical device class A (cotton, napkin, gauze, stick, injection stand, sanitary napkin, adult diaper, patient bed and wheelchair)

Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-15 Negative List in the Health Sector (2016)

As shown in the figure below, foreign companies include Pfizer (ranked 5th in domestic sales), Sanofi (ranked 6th in domestic sales), and Novaltis (ranked 9th in domestic sales), which are required to produce the drugs they sell domestically or outsource production to domestic companies within five years.



Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-16 Overseas Pharmaceutical Companies and Their Surrounding Environment

A summary of the other firms is below.

PT Bayer Indonesia

The Indonesian subsidiary of Bayer AG, Germany, established in 1957.
PT Bayer Indonesia's main business units are Pharmaceuticals division; Radiology business

division; Consumer Health Care division; and Crop Science division, including hybrid seed and drone services. The products are not only sold in Indonesia but also exported to countries around the world.

PT Merck Tbk (Merck)

PT Merck Tbk, a foreign pharmaceutical company founded in 1970, began producing pharmaceuticals in 1972. The company is headquartered in Pasar Rebo, East Jakarta, and has 640 employees. PT Merck Tbk is the only manufacturing facility in Southeast Asia and also serves as the manufacturing center for its parent company the Merck Group. Merck is a leader in the Indonesian prescription drug market and complements its in-house products by importing products from group companies around the world. The company has medical teams in 41 major cities across the country to handle customer support.[34]

c) Japanese Companies

Investment by Japanese Companies in the Indonesian Pharmaceutical Industry

From 2010 to 2015, Japan was the largest foreign investor in the Indonesian pharmaceutical industry (drugs and active pharmaceutical ingredients) with investments totaling approximately 127 Million USD, followed by Germany, the United States, South Korea, Singapore, and Spain. Japanese investment has been mainly in the Java provinces of Banten, Jakarta Special Region, West Java, and East Java.[35]

According to the 2018 edition of the "Japanese multinationals facts & figures", there are 12 local subsidiaries established by Japanese companies as indicated below.

NO.	Overseas Affiliated Company Name	Shareholding Company in Japan	Business Description	No. of Employee
1	P.T. Astellas Pharma Indonesia	Astellas Pharma	Import/export of pharmaceutical products	Unknown
2	P.T. Eisai Indonesia	Esau Co., Ltd.	Import/export of pharmaceutical products	Unknown
3	P.T. Hisamitsu Pharma Indonesia	Hisamitsu Pharmaceutical	Manufacture/sales of pharmaceutical products	Unknown
4	P.T. Meiji Indonesian Pharmaceutical Industries	Meiji Seika Pharma	Manufacture/sales/export of pharmaceutical products	685
5	P.T. Merapi Utama Pharma	Otsuka Pharmaceutical	Purchase/sales of drug and medical apparatus	Unknown
6	P.T. Ohara Halim Chemicals Indonesia	Ohara & Co., Ltd.	Heavy chemical, pharmaceutical drug, synthetic resin and familiar product, electronic material, sales/import/export of mineral product	4
7	P.T. Otsuka Indonesia	Otsuka Pharmaceutical	Manufacture/sales of pharmaceutical products	1,054
8	P.T. Rohto Laboratories Indonesia	Rohto Pharmaceutical Co., Ltd.	Manufacture/sales of drug and contact lenses	175
9	P.T. Taisho Pharmaceutical Indonesia Tbk	Taisho Pharmaceutical	Manufacture/Sales of OTC pharmaceutical products and ethical pharmaceutical	149
10	P.T. Takeda Indonesia	Takeda Pharmaceutical	Manufacture/sales of pharmaceutical products	Unknown
11	P.T. Tanabe Indonesia	Mitsubishi Tanabe Pharma Corporation	Manufacture/sales of pharmaceutical products	365
12	P.T. Widatra Bhakti	Otsuka Pharmaceutical Factory	Manufacture/sales of drug and infusion	598

Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-17 Japanese Companies in the Indonesian Pharmaceutical Industry

PT Taisho Pharmaceutical Indonesia Tbk

The Indonesian pharmaceutical company founded in 1970 as PT Squibb Indonesia. Its factory is located in Cilangkap, Depok, West Java Province. The company's main products are over-

[34] BIZLAB Magazine 2022.04.22 https://bizlab.sg/magazine/blog/2022/04/14/indonesia-main-pharmaceutical-biotechnology/
[35] Investment Opportunities in the Indonesian Pharmaceutical Industry, Indonesian Investment Coordinating Agency, 2016.04.08

the-counter (OTC) drugs, which are sold domestically and exported.

PT Rohto Laboratories Indonesia

The Indonesian joint venture of Japan's Rohto Pharmaceutical Co., established in 1996. Initially, the business was limited to intraocular lenses (IOLs) for cataract surgery and Rohto eye drops. Its products include eye care products, shampoos, lip care, sunscreen, etc.

PT FUMAKILLA INDONESIA

An Indonesian joint venture of Japan's Fumakilla Limited, established in 1990. The company was initially founded to produce and sell vapes and mosquito coils. Currently, the company provides a full range of household pest control products, including rodent and insect repellents, throughout Indonesia, and professional disinfection services.

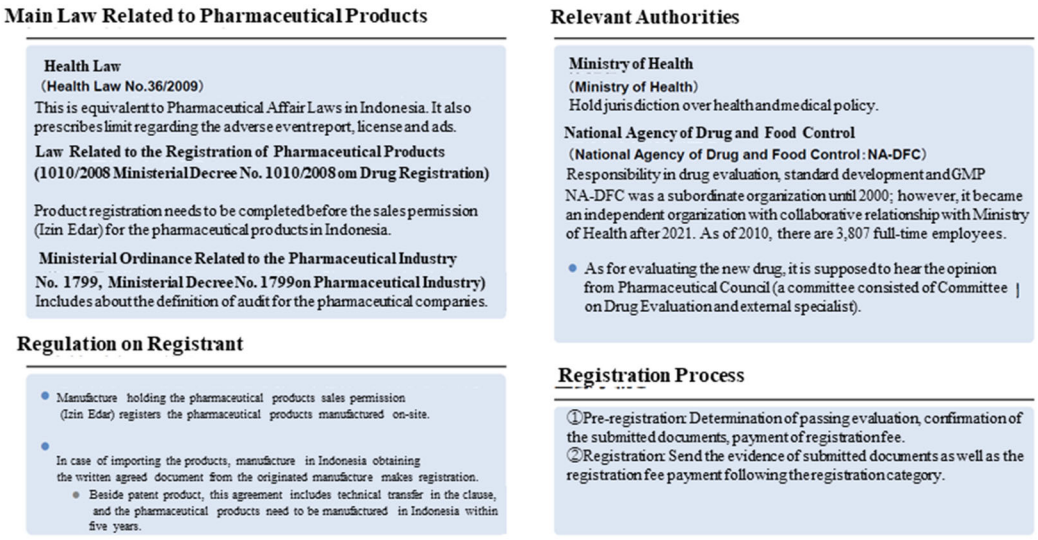
PT Takeda Indonesia

The Indonesian subsidiary of Japan's Takeda Pharmaceutical Company founded in 1971. Currently, the company has 518 employees and has operations in almost every city in Indonesia. In the area of essential supplements, the company has been recognized as a leader in the Indonesia's vitamin market, having focused on Vitamin C and Vitamin sweetlets since its foundation in 1971.

5) Current Related Policy and Measures

a) National regulations and standards

The table below describes Indonesia's regulations and standards related to pharmaceutical products. The National Agency for Drugs and Food Supervision (NA-DFC) is responsible for the review of pharmaceutical products. The review process for new drugs takes a long time, reportedly from one to three years. Criteria for conducting clinical trials are also set.



Source: Country Report on International Medical Expansion: Ministry of Economy, Trade and Industry 2021

Figure 5-18 Regulations and Standards for Medicines

The current incentives for foreign companies investing in the pharmaceutical industry are as follows. This is a preferential measure compared to the investment restrictions of 49% or less

for general manufacturing industries.

b) Import duty exemption for machinery/equipment and materials

- Import duty exemption for machinery/equipment for two years, which may be extended until the completion of the project depending on circumstances.
- Import duty exemption for materials and raw materials necessary for production for two years, which may be extended for another year (total of three years of duty exemption).
- For pharmaceutical manufacturers who source more than 30% of their total machinery production equipment from within Indonesia, import duty exemption for raw materials necessary for production for four years, which may be extended for another year (total of five years of duty exemption).

c) Tax exemption (products may be designated as eligible)

- 30% of the investment amount is deducted from income tax for six years, assuming an investment of 5% per year.
- Application of accelerated depreciation and installment repayment, etc.
- Investment support for the pharmaceutical industry and removal of the negative list.
- Foreign capital ratio in pharmaceutical (final product) manufacturing can be up to 85%.
- Allows foreign capital investment of up to 100% in the manufacture of pharmaceutical raw materials (including active pharmaceutical ingredients).

d) Reaching out to Japanese companies

The Indonesian Consulate General in Osaka, the Indonesian Embassy in Japan, the Indonesian Investment Coordinating Board, and the Ministry of Trade held the Japan-Indonesia Pharmaceuticals and Medical Devices Business Forum in Osaka in June 2022. After explaining the current situation surrounding Indonesian pharmaceuticals and medical devices and investment incentives, business matching was conducted between Indonesian pharmaceutical and medical device companies visiting Japan and Japanese companies[36].

6) Support Measures Required in the Future

To promote investment in the pharmaceutical industry, the government is focusing on the development of pharmaceutical raw materials (including APIs). According to the Indonesian Pharmaceutical Industry Association (GP Farmasi Indonesia), the reason why imports are higher than exports is because 95% of raw materials (including APIs) are imported from overseas. In the future, it will be necessary to support the development of APIs to improve the negative balance between imports and exports in the pharmaceutical industry.

[36] The 2nd Japan-Indonesia Pharmaceutical and Medical Device Business Forum held, JETRO Business Brief, https://www.jetro.go.jp/biznews/2023/10/1357ee34485173f8.html、 2022.10.13

7) Potential/Challenges in Building Value Chains

The value chain of the pharmaceutical industry can be divided into R&D (basic research, non-clinical testing, clinical testing, and approval review), raw material procurement, manufacturing (including licensing and approval), product shipment, sales (including licensing and approval), and research.

a) Identifying trends in new drug development

Domestic pharmaceutical companies are developing new drugs such as those listed below, and it will be important to assess future areas for new drug development, along with drugs for preventing infectious diseases.

- Phapros Tbk, a leading Indonesian pharmaceutical company, announced that Indonesia has the potential to become the largest producer of herbal medicines on March 2, 2023. Phapros is focused on developing Fitofarmaka made from natural ingredients. Indonesia is very rich in pharmaceutical raw materials made from natural ingredients and is one of the tropical countries with the richest biodiversity in the world.
- PT Takeda Indonesia, a Japanese affiliated company, announced in August 2022 that its dengue vaccine (QDENGA) has been approved by Indonesia's National Agency of Drug and Food Control (BPOM). QDENGA is the only dengue vaccine approved in Indonesia for use in individuals that does not require pre-vaccination testing[37].
- Indonesian pharmaceutical company PT Kalbe Farma Tbk.(KLBF) started the Phase 3 clinical trial of its anemia drug in August 2020. KLBF, through its subsidiary Kalbe-Genexine Biologics (KGBio), enrolled the first trial patients in Indonesia and provided the drug for the Phase 3 clinical trial.

b) Raw Material Procurement

Developing raw materials that can be produced domestically, such as medicinal herbs harvested in East Kalimantan Province, and improving current distribution costs could lead to lower drug prices. As most imports and exports are by air, access to airports and logistics capabilities are necessary.

c) Manufacturing

In an interview with Bio Farma, it was said that a sufficient number of hospitals and human resources such as university students with pharmacy degrees are essential conditions for entering the pharmaceutical business. In IKN, where the population and hospitals are still small, the establishment of an institution specializing in research that meets the needs of the people is considered to be a suitable driving force for the future pharmaceutical industry.

d) Product shipping, sales, and research

In the pharmaceutical industry, the target market is the domestic and ASEAN mass markets.

[37] BIZLAB Magazine, Indonesia's pharmaceutical and biotechnology industry, https://trend.bizlab.sg/blog/2023/05/01/indonesia-medicine-manufacture/ 2023.05.01

8) Potential/Challenges in Building Value Chains in Tri-Cities

Based on the above considerations, the anticipated strengths, challenges, and necessary support activities for building a value chain for integrated pharmaceutical industry development in the Tri-Cities are summarized in the table below.

Table 5-10 Tri-City Pharmaceutical Industry Value Chain Analysis

R&D	Inbound Logistics	Operation (Permits and licenses)	Outbound logistics	Sales/Marketing (Permits and licenses)	Service	Others
Need R&D in South IKN 3,720ha Innovation and Research zone. Hospitals that can conduct clinical trials.	90% of raw materials are imported by air transport. Air cargo services and land logistics. Utilize herbs in East Kalimantan.	Kariangau industrial area in Balikpapan. Human resource development for pharmaceutical manufacturing.	Air cargo services and land logistics.	Weak market with Small population and few hospitals. Domestic and international strong sales network and competitive prices.	After-sales service, maintenance.	Cooperartion with PLN.
Support Activity ✓ Research & Development: National research and development institute is needed. ✓ Manufacturing: Human resources, Incentive for foreign manufacturers. ✓ Infrastructure: Air cargo services and land logistics. ✓ Marketing: Domestic and International marketing network.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team based on the previous paragraphs

(3) Sustainable Agriculture

1) Summary

Sustainable agriculture in IKN's industrial development plan aims to commercialize and add value to local agricultural resources, targeting plant proteins, nutritional supplements, and plant extract products, but as described in Chapter 2, East Kalimantan Province aims to improve self-sufficiency in basic food ingredients. In Tri-City, basic food production is the base, and the production of high-value-added products and plant proteins is an extension of that.

Plant proteins such as soy protein and wheat protein are used in processed foods such as frozen foods and chilled prepared foods. Nutritional supplements are foods that provide energy, protein, vitamins, minerals, and hydration, and are used as supplements to replenish nutrients that are difficult to obtain through regular meals. Plant extracts are the basis of plant-based medicines, of which there are said to be about 70,000 kinds in the world, and include medicinal herbs produced in East Kalimantan Province.

Regarding the relationship with Tri-City, consistency with the East Kalimantan Province Regional Middle-Term Development Plan 2024-2026 described in Chapter 2 is important. The province is expected to improve self-sufficiency in basic foods such as rice and soybeans, and to create added value in snacks and confectionery, protein sources, and nutritional products through food processing. In the fisheries industry, the development of cold chains to distribute abundant marine resources and the development of aquaculture technology are in sight, so the main target areas will be agriculture in Simpamg Samboja and Kuala Samboja districts of IKN, and agricultural land and fishing grounds in the Jawa district.

2) Agricultural Products Market

a) Agricultural production

As shown in the table below, Indonesia aims to be self-sufficient in five major commodities: rice, corn, soybeans, meat, and sugar. However, the country relies heavily on imports for soybeans.[38]

Table 5-11 Production and self-sufficiency of major food products

	Production Amount and Self-supply Ratio for Major Products					
Items		2013	2014	2015	2016	2017
Rice	Amount of Production (1,000 ton)	41,695	41,428	44,104	46,368	47,596
	Self-supply Ratio (%)	102	100	100	101	102
Corn	Amount of Production (1,000 ton)	18,512	19,008	19,612	23,578	27,949
	Self-supply Ratio (%)	85	85	86	95	99
Soy	Amount of Production (1,000 ton)	2,593	2,907	3,245	3,146	2,454
	Self-supply Ratio (%)	30	33	30	27	22
Beef	Amount of Production (1,000 ton)	378	373	380	389	398
	Self-supply Ratio (%)	94	88	94	81	88
Chicken	Amount of Production (1,000 ton)	1,895	1,940	2,031	2,301	2,258
	Self-supply Ratio (%)	105	105	105	105	105
Sugar	Amount of Production (1,000 ton)	2,551	2,579	2,498	2,223	2,465
	Self-supply Ratio (%)	47	47	41	35	75

Source: Latest Situation of Indonesian Agriculture Ichiro Tsurusaki JICA 2019.12.26

The table below shows the trends in production of major food crops and livestock products. Rice, corn, soybeans, hot pepper, shallots, sugarcane, and beef were positioned as important strategic foods and subject to production increase policies in the agricultural development plan for 2015-2019. The production of rice, corn, hot pepper, shallots, and broilers is on the increase. However, the production of soybeans, sugarcane, and beef continues to decline and stagnate. The government has aimed to reduce imports and achieve domestic self-sufficiency through increased production of strategic foods, but there have been years when the production of major food crops such as rice declined due to climate and other factors.[39]

Table 5-12 Production of Food Crops and Livestock Products

[38] Ichiro Tsurusaki, The latest status of agriculture in Indonesia, JICA, 2019.12.26
[39] Agricultural and Trade Policies of Major Countries, Policy Research Institute for Agriculture, Forestry and Fisheries Research Materials No. 6, March 2021

(Unit: 1,000t)

	2013	2014	2015	2016	2017	2018
Rice	71,280	70,846	75,398	79,355	81,149	59,201
Corn	18,512	19,008	19,612	23,578	28,924	-
Soy	780	955	963	860	539	-
Hot pepper	1,013	1,075	1,045	1,046	1,206	1,207
Shallot	1,011	1,234	1,229	1,447	1,470	1,503
Sugarcane	2,551	2,579	2,498	2,205	2,122	2,171
Beef	505	498	507	518	486	498
Broiler	1,498	1,544	1,628	1,905	3,176	3,410

Source: National Institute of Agriculture, Forestry and Fisheries Policy [Agricultural and Trade Policies of Major Countries] Research Material No. 6 (2021.3)

b) Agricultural trade balance

As shown in the table below, the agricultural trade balance maintains a surplus overall, but the amount is decreasing year by year, and the food crop, horticultural crop, and livestock sectors are in the red. The plantation crop sector is in the black, and most of the exports are palm oil, but the growth of palm oil exports has slowed due to the sluggish Chinese economy, import restrictions from India, and the conflict between Indonesia and the EU over palm oil trade.

Table 5-13 Trade in Agricultural and Livestock Products

(Unit; 100 million USD)

		2013	2014	2015	2016	2017	2018
Food crop	Export Value	186	206	212	142	171	213
	Import Value	7,519	7,812	6,790	6,499	6,492	7,971
	BOP	-7,333	-7,606	-6,577	-6,356	-6,321	-7,758
Garden crop	Export Value	434	523	577	507	442	440
	Import Value	1,530	1,645	1,461	1,780	2,232	2,309
	BOP	-1,095	-1,122	-884	-1,274	-1,790	-1,869
Estate crop	Export Value	29,477	29,722	26,814	25,536	32,283	28,094
	Import Value	4,241	4,090	3,306	4,373	5,095	5,232
	BOP	25,236	25,633	23,507	21,162	27,188	22,862
Livestock Products	Export Value	593	588	443	543	625	640
	Import Value	3,175	3,814	2,934	3,191	3,371	3,683
	BOP	-2,582	-3,226	-2,491	-2,648	-2,746	-3,042
Total	Export Value	30,690	31,039	28,046	26,728	33,520	29,387
	Import Value	16,465	17,360	14,491	15,843	17,190	19,195
	BOP	14,225	13,679	13,555	10,885	16,330	10,192

Source: National Institute of Agriculture, Forestry and Fisheries Policy [Agricultural and Trade Policies of Major Countries] Research Material No. 6 (March 2021)

c) Food Consumption

Due to the Westernization of food in recent years, the consumption of flour, meat, and milk has increased rapidly, while the consumption of rice and corn has decreased. Although domestic production of soybeans has decreased, consumption has increased, leading to an increase in imports. Traditionally, Indonesia's agricultural development policy has focused on rice and corn, but with the increase in consumption of meat, milk, and flour, a measure to increase production of diverse agricultural and livestock products is necessary. In addition, for foods that are difficult to produce domestically, a stable supply must be secured, including

through imports.

3) Key Players

With regards to the consumption of agricultural products, the high consumption rate of producers suggests that most agricultural producers are small family businesses. In terms of marketing harvested agricultural products, there are multiple middlemen between farmers and retailers, and this creates a burden in terms of distribution costs. The Indonesian government has identified the improvement of these distribution channels and supply chains as one of its priority issues.

a) Japanese companies

The status of Japanese food-related companies in Indonesia is as follows:
Before 1990: Ajinomoto
1990s: Yakult, Nissin Foods Holdings, Calpis, Lotte, Fuji Oil, Shikishima Baking, Taisho Pharmaceutical, Otsuka Holdings
Since 2000: Meiji, Morinaga Milk Industry, Kirin Kyowa Foods, Suntory, Toyota Tsusho, Asahi, Ito En

These companies enter through the establishment of joint ventures with local firms. The local firms are responsible for dealing with compliance and integrating into the local community, which Japanese firms are not good at, while the Japanese firms take the lead in production. In order to develop business in Indonesia, it is important not only to understand consumers, but also to build retail and wholesale networks. Asahi, Suntory, and Ito En are partnering with companies that have local sales networks.[40]

4) Current related measures

a) Agricultural Development Plan 2015-2019 (Rencana Strategis Kementerian Pertanian)

Under the Agriculture Development Plan 2015-2019, Indonesia has made improvements in food production and distribution, supply chain development, food price stabilization, improved nutrition, better food access, economic support, correction of interregional inequalities, and consumption patterns and market demand management. In particular, emphasis was placed on increasing food production and self-sufficiency. The government has initiated the "Crop Production Promotion Program" to achieve self-sufficiency in rice, corn, and soybeans, and to reduce imports of beef and sugar. The government’s goal is to become self-sufficient in food crops by 2020, establish a system for a stable export of surplus crops, and become Asia’s “food pantry” by enhancing the fertilizer subsidy system; however, increased financial burdens and excessive use of fertilizer have become problematic. Subsequently, efforts were made to improve the lives of farmers by managing holders of farmer cards (government-issued identification cards for agricultural workers and farmers), efficiently distributing and managing fertilizer, enforcing fertilizer use rules for farmers, and expanding access to banking services with farmer cards.

[40] Report on the Survey on Production, Distribution and Investment Environment for Creating a Framework for Building Food Value Chains in Indonesia, Commissioned by the Ministry of Agriculture, Forestry and Fisheries, International Development Center of Japan, March 2018

b) Agricultural Development Plan 2020-2024

The Agricultural Development Plan 2020-2024 aims to improve food security and agricultural competitiveness. While placing emphasis on market mechanisms, the new policy shows more flexible approach than previous ones, aiming to ensure stable food supplies, including through imports. A policy was announced to focus on increasing production from 2020 to 2024 regarding important agricultural and livestock products.

The plan's goals include maintaining national food security, increasing value-addition and international competitiveness, maintaining the sustainability of agricultural resources, infrastructure, and facilities, developing human capital, and reforming the bureaucratic system.

The plan's focus areas include strengthening the functions of farmer associations, developing biofuels, improving rural economy, and empowering farmers, low-carbon development, and strengthening governance.

Strategies regarding food security include improving domestic food productivity, expanding employment, and increasing farm incomes (agricultural and rural economic development), ensuring food sufficiency for local residents through food aid, utilizing local resources, education on programs to utilize local resources, and ensuring the safety of fresh food.

Specific recommended crops include rice, corn, and soybeans as strategic food crops, hot peppers, red onions, and garlic as strategic horticultural crops, cacao, coffee, and palm oil as strategic estate crops, and beef, buffalo, and goat as strategic livestock products.

c) Food Estate Development

The Joko Widodo administration has launched a large-scale, capital-intensive agricultural production and distribution project called Food Estates as a national strategic project for sustainable and efficient agricultural production. Vast tracts of land have been secured for food estate development in the relatively large provinces of West Kalimantan, Central Kalimantan, East Kalimantan, Maluku, and Papua, and the project includes the promotion of large-scale production and processing of a variety of agricultural and livestock products such as rice, vegetables, corn, and sugarcane, the spread of high-yielding varieties, and agricultural vocational training for local human resources. The project is intended to improve agricultural productivity and added value in the target areas and to develop related industries, technologies, and organizations in an integrated manner.

The target area for the food estate plan in Kalimantan is 1.7 Million ha across the five provinces of West Kalimantan, Central Kalimantan, East Kalimantan, Maluku, and Papua mentioned above. The development is centered in the rice paddy areas of Central Kalimantan, where a past project called the Ex-Mega Rice Project to develop peatland into rice paddies was carried out, but it is said to have ended in failure. Current food estate development aims to improve productivity through the restoration, intensive use, and expansion of irrigation facilities, as well as the development of the entire food supply chain. Profitability-focused business models are implemented, capital investments are made, human capital is developed, management and services are improved, and business evaluations are carried out39. The reasons for the failure of Food Estate and the current situation provide a useful reference for agricultural development in the Tri-City[39].

5) Potential/Challenges in Value Chains

The food value chain in agriculture consists of technological development including products, procurement of fertilizers and other inputs, agricultural production, processing of food and agricultural products, transportation and distribution, and marketing, sales and consumption. The achievements and challenges in food security are summarized in the following aspects, which are also related to the challenges in building value chains.

a) Improving food productivity

The increase in production of sugar, soybeans, livestock products, etc. has not kept pace with the increase in consumption, so domestic demand is being met through increased imports. The increase in agricultural productivity through technological development is a major challenge in achieving national food security, given that population growth and urbanization are progressing and the area of farmland and the number of people engaged in agriculture are decreasing.

b) Correcting regional disparities

The degree of achievement of food security varies from region to region. In the 2019 survey, 11 provinces, including Bali, Central Java, and West Java, are classified as good regions with relatively high food security achievement. In comparison, two provinces, Papua and West Papua, have the lowest levels of food security achievement rates and are considered the highest priority for efforts to improve food security. In addition, four provinces, including East Nusa Tenggara Timur, Kalimantan Barat, and Maluku, have relatively low levels of food security achievement and are considered to be areas where urgent action is needed. Since the principle for local production for local consumption of fresh agricultural products is considered to be the principle, agricultural production in regions with low achievement is necessary in areas where the achievement rate is low.

c) Stabilizing food supplies

Food prices have remained relatively stable in regions where food production has increased and food distribution has been developed. However, in the eastern and archipelago regions, food production is still insufficient and distribution networks are underdeveloped, resulting in soaring food prices and instability. These measures include the improvements of business practices as well as logistics.

One example of a distribution system improvement project is the JICA's public-private partnership project to improve agricultural product distribution system. JICA started a trial project in 2016 to improve the cultivation techniques and production and distribution models of vegetable farmers in six provinces in West Java and has been working to protect farmers by increasing harvest volume, cultivating Japanese vegetables, and cutting costs by simplifying the distribution system.[41]

d) Improving nutritional status

Stunting of children is a major problem for both the poor and the non-poor. Although the caloric intake of the population is increasing, the intake of fish, meat, vegetables, fruits, and micronutrients, etc. is insufficient, and food intake is not diversifying. Given these circumstances, it is believed that the development of plant proteins, nutraceuticals, and plant-extracted products is being proposed at IKN.

[41] Changing Lives through Food Value Chains, Indonesia, JICA, https://www.jica.go.jp/information/publication/magazine/mundi/1808/201808_03.html, 2018

6) Potential and Challenges in Building Value Chains in the Tri-Cities

Sustainable agriculture development in the Tri-Cities requires, reducing imports by increasing production of major food items, and moving away from an export structure that is overly dependent on palm oil by diversifying and increasing added value of export items. At the same time, in order to correct regional disparities, respond to the increase in wheat and meat consumption, and improve nutritional deficiencies, it is important to establish production and supply systems that meet demand, diversify food consumption, and expand nutritional education. We will discuss the points to keep in mind when building sustainable agriculture in Tri-Cities.

a) Evaluation of farmland in East Kalimantan Province

The land area of East Kalimantan Province is divided into forest and non-forest areas, with non-forest areas accounting for approximately one-third of the total area of the province. Forests are found in the northern inland mountainous areas, with broadleaf dipterocarp forests and mangrove forests occupying the lowlands. The climate is influenced by monsoons, with distinct rainy and dry seasons, and in recent times the El Niño phenomenon has caused extreme weather conditions, resulting in severe droughts and destructive fires.

Due to low soil fertility and difficult access to the inland areas, agriculture in East Kalimantan Province is mainly based on rubber, coconut and oil palm plantations. The area of oil palm plantations has been steadily expanding since the 1990s in line with global demand.

b) Utilizing state agroforestry policies

To address the demand for agricultural land in food producing areas, the East Kalimantan provincial government is exploring nature-based solutions called agroforestry within forested areas. The cultivation method involves growing shade-tolerant crops under tall trees, balancing forest conservation and restoration with economic goals. Agroforestry practices are said to be able to restore degraded forest areas such as former plantations, recover carbon stocks, and expand cultivated land that is more resilient to changing climate phenomena. Depending on the crops produced, it may also be possible to incorporate agroforestry as a cultivation method[42].

c) Tri-City's Sustainable Agriculture Value Chain

The following stages are envisioned with respect to agricultural production and processed food manufacturing, and their strengths and challenges are summarized in the table below.

Technological development: production varieties need to be developed with a view to developing varieties for food security and high value-added products (plant proteins and nutraceuticals, plant extracted products), and there is a demand for the establishment of R&D institutions or technical cooperation.

Procurement of fertilizer, etc.: A logistic network is needed to supply fertilizer from the local petrochemical industry.

Agricultural production: It is necessary to secure farms suitable for the target crops, experienced workers and managers, and an organization capable of large-scale business

[42] Foodscapes: Toward Food System Transition, The Nature Conservancy, 2021

management. It is also necessary for the products to be market-appropriate in terms of price and specifications.

Manufacturing and Processing: Both Balikpapan City and Samarinda City have a thriving small- and medium-scale food processing industry using soybeans and other products, and since the products are consumed locally, the processing of products have a large economic impact on the local area.

Distribution: For distribution within the Tri-City, in addition to the development of industrial roads, soft measures such as devising times and routes that do not intersect with general traffic congestion are also necessary. The cold chain in the fisheries industry is also be considered.

Sales and Consumption: Since the consumption population is expected to increase relative to production, it is necessary to manage the production volume of each item.

Table 5-14 Tri-City Sustainable Agriculture Value Chain Analysis

R&D	Inbound Logistics	Production	Manufacturing/Processing	Outbound Logistics	Service	Others
R&D institutions such as Japanese agricultural experimental stations are needed.	Fertilizer production and logistics to the fields.	Evaluation of agricultural fields in IKN. Human resource development and secure labors.	Existing food processing industry areas. Plant protein and nutritional supplement products, plant extract product manufacturing technology	Improving logistics for fresh vegetables and fish in East Kalimantan.	Agricultural produce supply commensurate with the market population for sales.	Evaluation of agricultural fields outside of IKN.
Support Activity ✓ R & D: Selection and improvement of cultivars. ✓ Production: Improving profitability through the establishment of agricultural associations and corporate large-scale farming. ✓ Outbound Logistics: Building a cold chain for fresh vegetables and seafood ✓ Marketing: Marketing and distribution in East Kalimantan.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team

(4) Eco-Medical Tourism (MICE, Urban Tourism, Health Tourism) Industry

1) Summary

Its role is to develop the tourism industry by linking the tourism resources of the three Tri-Cities and East Kalimantan Province. The core area of KIPP, including the Presidential Palace under construction, has already become a destination for domestic and international visitors to IKN and it is expected to serve as a catalyst for tourism industrial development in East Kalimantan Province when the main facilities are completed next year. Potential directions for industrial development include eco-tourism to experience coastal mangrove forests and forest conservation and biodiversity within the IKN; industrial tourism to experience the introduction of renewable energy, revitalization of former coal mine sites; local handcrafts and traditional performing arts in the cities of Balikpapan and Samarinda; local agriculture and produce, processed foods, seafood, and more, as well as medical tours at specialized hospitals that will be built in the future.

2) Tourism Market

a) International Market

As shown in the figure below, in April 2024, 1,066,000 foreign tourists visited Indonesia, with 887,000 entering through major customs and 179,000 through land borders.

Source: Official Statistic News, No. 42/06/Th. XXVII, 3 June 2024, BPS-Statistics Indonesia

Figure 5-19 Number of Foreign Tourists to Indonesia

As shown in the table below, the number of tourists who entered the country by air in January-April 2024 was 2.799 Million, an increase of 30.2% over the same period last year. Jakarta's Soekarno-Hatta Airport received 663,000, compared to Bali's Ngurah Rai Airport has an overwhelmingly larger load of 1.83 Million, indicating Bali's status as an international tourist destination. Balikpapan City's Sepinggan Airport had 1,423 international arrivals during the same period, a 114% increase over the same period last year, although the number of international arrivals was small. During the same period, a further 533,000 people entered the country by sea and 91,000 by land.

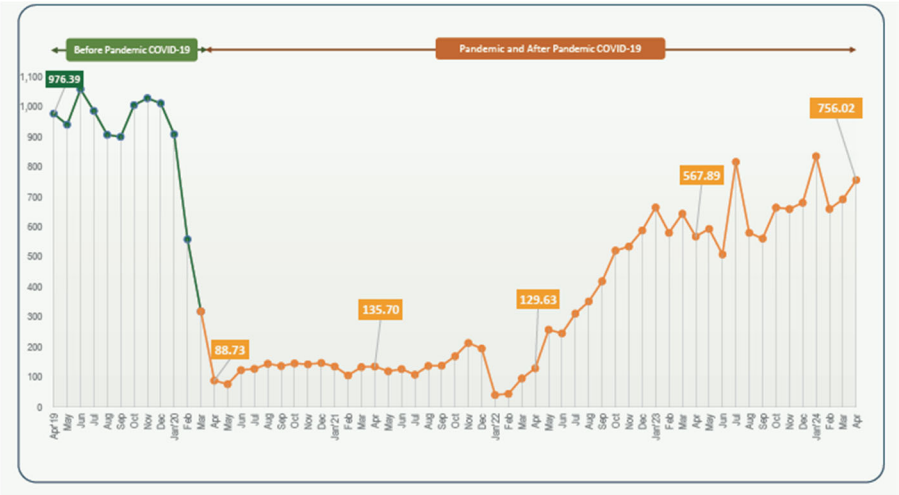
Table 5-15 Number of Foreign Tourists

Arrival Gates	Number of Arrivals					Change (%)		
	Apr 2023	Mar 2024	Apr 2024*	Jan–Apr 2023	Jan–Apr 2024*	Apr 2024 to Apr 2023	Apr 2024 to Mar 2024	Jan–Apr 2024 to Jan–Apr 2023
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. MAIN GATES	703,239	859,797	887,302	2,629,868	3,424,111	26.17	3.20	30.20
A. Air Transport	560,434	682,439	750,085	2,087,045	2,799,557	33.84	9.91	34.14
1. Ngurah Rai	410,281	463,804	502,870	1,424,151	1,836,009	22.57	8.42	28.92
2. Soekarno-Hatta	99,289	160,917	157,409	480,052	663,946	58.54	-2.18	38.31
3. Juanda	12,361	18,543	29,043	45,626	92,808	134.96	56.63	103.41
4. Kualanamu	15,497	15,068	25,178	60,821	79,625	62.47	67.10	30.92
5. Yogyakarta Int. Airport	5,592	6,258	8,790	19,316	31,740	57.19	40.46	64.32
6. Lombok Int. Airport	2,903	5,208	6,536	9,559	24,450	125.15	25.50	155.78
7. Minangkabau	4,100	2,976	7,166	13,333	23,060	74.78	140.79	72.95
8. Sam Ratulangi	4,156	4,045	3,451	11,600	13,495	-16.96	-14.68	16.34
9. Sultan Syarif Kasim II	2,453	2,081	3,996	7,688	11,912	62.90	92.02	54.94
10. Sultan Iskandar Muda	1,349	1,582	2,533	6,714	10,915	87.77	60.11	62.57
11. Hasanuddin	1,564	579	1,402	5,020	4,131	-10.36	142.14	-17.71
12. Hang Nadim	364	640	505	1,999	2,978	38.74	-21.09	48.97
13. S.A.M.S Sepinggan	324	261	378	664	1,423	16.67	44.83	114.31
14. Kertajati	-	371	698	-	2,663	-	88.14	-
15. Halim Perdanakusuma	75	91	121	284	369	61.33	32.97	29.93
16. Others	126	15	9	218	33	-92.86	-40.00	-84.86

Source: Official Statistic News, No. 42/06/Th. XXVII, 3 June 2024, BPS-Statistics Indonesia

In April 2024, the number of visitors by country was, in order of popularity, 170,000 from Malaysia, 127,000 from Australia, 85,000 from China, 81,000 from Singapore, 61,000 from East Timor, 55,000 from India, and 21,000 from Japan.

As indicated in the figure below, the number of people leaving from Indonesia was 756,000 in April 2024 and has not yet back to pre-Covid-19 levels. The destinations are three Muslim countries, Malaysia, Singapore Saudi Arabia, accounting for about 60% of the total and are followed by China, Thailand, Cambodia, and Japan at 4-5%.



Source: Official Statistic News, No. 42/06/Th. XXVII, 3 June 2024, BPS-Statistics Indonesia

Figure 5-20 Number of Domestic Tourists

As shown in the table below, in the lodging industry-related sector, the national average room occupancy rate (ROR) for starred hotels in April 2024 was 47.14%, up 5.77% from the same period last year. Similarly, Bali was at 54.87%, up 13.88% y/y, and East Kalimantan Province was second to Bali at 57.69%, with an increase of 1.25%.

Table 5-16 Hotel Occupancy Rates by Region Rank

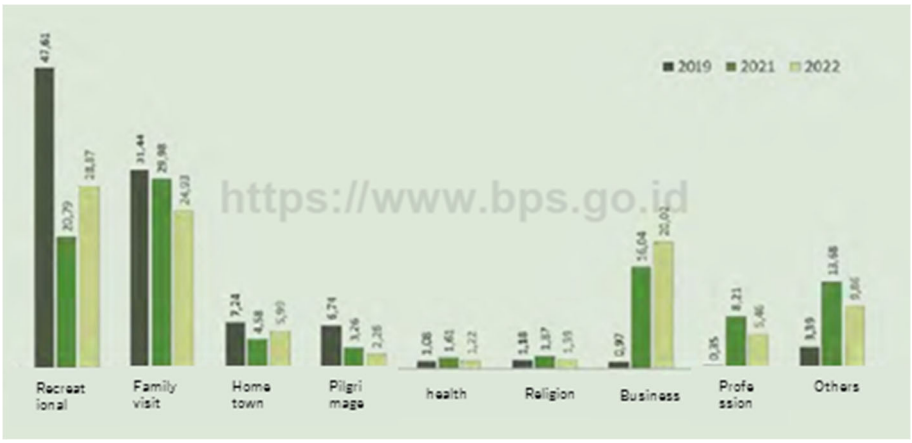
Province	ROR of Star Hotels (%)					Change (percentage points)		
	Apr 2023	Mar 2024	Apr 2024*	Jan–Apr 2023	Jan–Apr 2024	Apr 2024 to Apr 2023	Apr 2024 to Mar 2024	Jan–Apr 2024 to Jan–Apr 2023
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Aceh	20.82	31.03	40.29	28.16	34.81	19.47	9.26	6.65
2. Sumatera Utara	41.29	43.49	48.06	44.17	46.00	6.77	4.57	1.83
3. Sumatera Barat	36.49	33.84	41.38	41.34	37.82	4.89	7.54	-3.52
4. Riau	32.80	38.12	40.82	35.41	39.50	8.02	2.70	4.09
5. Jambi	42.99	46.36	48.31	46.47	45.04	5.32	1.95	-1.43
6. Sumatera Selatan	46.01	44.15	52.21	47.76	48.81	6.20	8.06	1.05
7. Bengkulu	32.21	35.44	40.34	35.71	37.48	8.13	4.90	1.77
8. Lampung	46.00	36.74	39.20	47.95	40.98	-6.80	2.46	-6.97
9. Kep. Bangka Belitung	24.85	22.88	23.85	27.90	23.82	-1.00	0.97	-4.08
10. Kepulauan Riau	36.78	54.85	51.63	43.13	55.68	14.85	-3.22	12.55
11. DKI Jakarta	42.52	44.08	43.47	49.18	47.48	0.95	-0.61	-1.70
12. Jawa Barat	42.81	40.56	46.32	46.20	45.36	3.51	5.76	-0.84
13. Jawa Tengah	41.66	36.73	45.88	43.07	41.79	4.22	9.15	-1.28
14. DI Yogyakarta	41.14	37.80	48.64	51.91	47.91	7.50	10.84	-4.00
15. Jawa Timur	43.14	43.53	48.57	47.17	46.88	5.43	5.04	-0.29
16. Banten	44.02	45.99	49.89	48.75	48.31	5.87	3.90	-0.44
17. Bali	44.31	52.71	57.69	43.18	55.42	13.38	4.98	12.24
18. Nusa Tenggara Barat	26.70	28.45	31.75	31.43	31.95	5.05	3.30	0.52
19. Nusa Tenggara Timur	35.03	32.46	38.47	32.15	34.75	3.44	6.01	2.60
20. Kalimantan Barat	47.30	45.35	46.72	49.07	45.05	-0.58	1.37	-4.02
21. Kalimantan Tengah	38.92	45.35	43.04	45.31	43.21	4.12	-2.31	-2.10
22. Kalimantan Selatan	46.86	46.48	47.05	48.39	49.30	0.19	-1.43	0.91
23. Kalimantan Timur	53.62	53.49	54.87	56.29	55.61	1.25	1.38	-0.68
24. Kalimantan Utara	40.46	47.57	36.65	46.98	44.04	-3.81	-10.92	-2.94
25. Sulawesi Utara	35.53	38.90	41.71	36.73	39.04	6.18	2.81	2.31
26. Sulawesi Tengah	31.95	47.67	46.52	43.43	48.39	14.57	-1.15	4.96
27. Sulawesi Selatan	37.42	43.95	42.13	43.32	43.90	4.71	-1.82	0.58
28. Sulawesi Tenggara	30.23	31.90	30.70	37.06	32.90	0.47	-1.20	-4.16
29. Gorontalo	34.72	35.70	40.24	35.55	37.47	5.52	4.54	1.92
30. Sulawesi Barat	16.23	22.58	19.42	22.45	25.66	3.19	-3.16	3.21
31. Maluku	32.12	28.80	29.68	30.23	30.31	-2.44	0.88	0.08
32. Maluku Utara	34.62	37.39	38.56	40.85	36.87	3.94	1.17	-3.98
33. Papua Barat	27.75	35.73	24.61	31.81	29.04	-3.14	-11.12	-2.77
34. Papua Barat Daya	35.11	48.63	43.26	44.10	44.39	8.15	-5.37	0.29
35. Papua	40.38	45.27	33.57	35.57	41.54	-6.81	-11.70	5.97
36. Papua Selatan	33.96	47.64	38.07	39.41	41.67	4.11	-9.57	2.26
37. Papua Tengah	22.84	49.41	36.33	30.14	38.30	13.49	-13.08	8.16
38. Papua Pegunungan	17.62	25.57	24.76	20.35	25.46	7.14	-0.81	5.11
INDONESIA	41.37	43.41	47.14	45.05	46.61	5.77	3.73	1.56

Source: Official Statistic News, No. 42/06/Th. XXVII, 3 June 2024, BPS-Statistics Indonesia

The national average number of overnight stays for international tourists in April 2024 was 2.8 nights compared to 1.5 nights for domestic visitors, while in Bali, it was 3.18 nights for international tourists and 2.26 nights for domestic tourists, while it was 2.78 nights for international tourists and 2.26 nights for domestic tourists in East Kalimantan Province.

b) Domestic Market

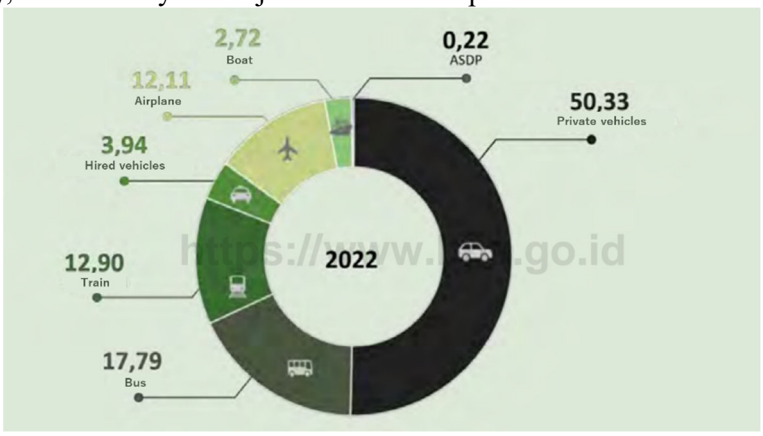
As shown in the figure below, approximately 70% of domestic tourists are between the ages of 25 and 44, and their main purposes are recreation and visiting relatives, as well as attending business and professional meetings.



Source: Domestic Tourist Statistics 2022, Central Bureau of Indonesia

Figure 5-21 Main Purpose of Trip

As shown in the figure below, private cars and buses are the most common means of transportation, with air and sea travel accounting for 12.11% and 2.72% of the total, respectively, and are not yet a major means of transportation.



Source: Domestic Tourist Statistics 2022, Central Bureau of Indonesia

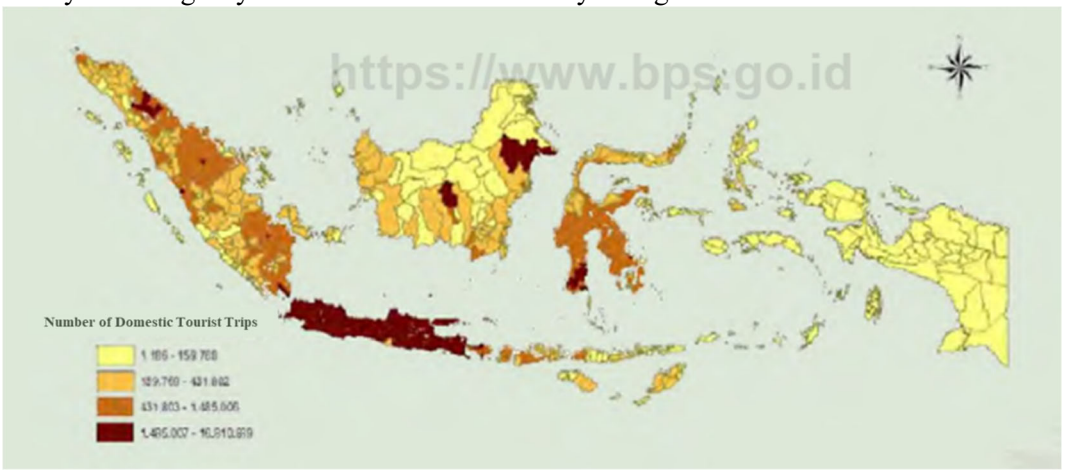
Figure 5-22 Main means of transportation

As shown in the figure below, the average spending on a single trip in 2022 was 2.43 Million IDR, an increase of 1.09% over 2021. The breakdown is as follows: 25.31% for lodging, 17.76% for food and beverage, and a much higher 20.97% for transportation, which has increased by 18.59% in one year due to higher gasoline prices.

Source: Domestic Tourist Statistics 2022, Central Bureau of Indonesia

Figure 5-23 Average length of stay when traveling

As shown in the figure below, the islands of Bali and Java are the most popular destinations for foreign tourists. In East Java, Surabaya City, Malang Regency, and Sidoarjo Regency are the most visited areas. Meanwhile, in West Java, Bogor Regency, Bandung City, and Bekasi City are the most visited areas, while in Central Java, Semarang City, Surakarta City, and Banyumas Regency are the most visited areas by foreign tourists.



Source: Domestic Tourist Statistics 2022, Central Bureau of Indonesia

Figure 5-24 Areas with many foreign tourists

3) Key Players

a) Travel agencies

There are major travel agencies such as PT Anta Express Tour & Travel Service, a long-established travel agency established in 1976, and Panorama Tours, which offers domestic and international travel packages.

b) Airlines

Indonesia's flag carrier is Garuda Indonesia, and its LCCs include Batik Air and its sister company, Lion Air.

c) Accommodation

Indonesian-owned hotel management companies include PT Grahawita Santika, a member of Kompas-Gramedia Group, the largest media company in Indonesia; TAUZIA Hotel Management, a subsidiary of The Ascott Limited; PT Hotel Sahid Jaya International Tbk, established in Indonesia in 1969; and the hotel division of PT Jakarta Setiabudi Internasional Tbk, a real estate company established in Indonesia in 1976.

d) Land Operators in Kalimantan Island

These include TAM International, which arranges various original trips and tours in Kalimantan, and Wendy Tours, which specializes in Tanjung Puting National Park and orangutan tours.

e) Transportation services

In major cities such as Jakarta, trusted cab companies such as Blue Bird Group and Express, as well as ride-hailing apps such as Grab and Gojek, are widely used.

f) Sightseeing apps

In addition to TripAdvisor for searching tourist destinations, apps such as Klook are used as booking facilities.

4) Current related measures

a) Policies on National Tourism Development Master Plan 2010-2025 (RIPPARNAS 2010-2025, Decree No. 50/2011) and National Tourism Strategic Plan 2012-2014 (RENSTRA 2012-2014, Ministerial Order enacted in 2012)

Policy

Vision

To make Indonesia an internationally competitive, sustainable travel destination that contributes to regional development and the welfare of its people.

Mission

i. To develop and improve travel destinations that are safe, comfortable, attractive, easily accessible, environmentally friendly, and bring economic benefits to the nation, regions, and local communities.

ii. To increase the number of domestic and foreign tourists through synergistic marketing.

iii. To develop the tourism industry into a competitive, growing industry that is responsible for the natural, social and cultural environment and fosters active collaboration between companies.

iv. The central government, local governments, and the private sector cooperate with each other, and develop human resources, legislation, and management systems for the development of sustainable tourism.

Numerical targets

In addition, the following targets have been set as indicators to be achieved by 2025, but a range has been provided to consider possible changes in the situation.

i. Number of foreign tourists visiting Japan: From 6.4 Million to 15 to 20 Million. (Pace of 12 Million visitors per year by April 2024)

ii. Number of domestic travelers: 22.5 Million to 32.8 Million to 37.1 Million.

iii. Tourism industry revenue from foreign visitors: 7.3 Billion USD to 15-17 Billion USD.

iv. Spending by domestic travelers: 123 Trillion IDR (about 1.1 Billion JPY) to 230-260 Trillion USD (about 2.1-2.3 Billion JPY).

v. Tourism industry's share of total GDP: from 4.7% to 5.0-6.0%.

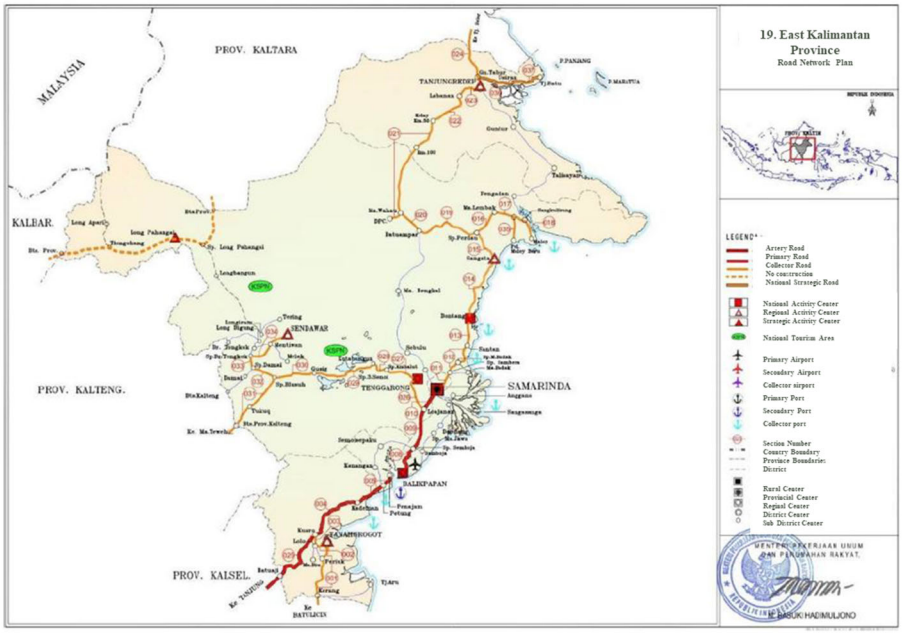
b) Study of Potential Development of East Kalimantan Province Tourism Destinations 2022

Since this plan was developed at the same time as the IKN development plan, it does not incorporate the specifics of the IKN plan, although it does mention the IKN plan. However, it is useful in developing a tourism plan for the Tri-City, as it provides information on tourism resources and transportation in East Kalimantan Province and is likely to be useful in formulating tourism-related plans for the Tri-Cities.

■ Transportation infrastructure

The locations of major highways, tourist core cities (PKN: National Activity Center, PKW:

Regional Activity Center, PKSN: National Strategic Activity Center), airports, and seaports before the IKN development are shown in the following figure.

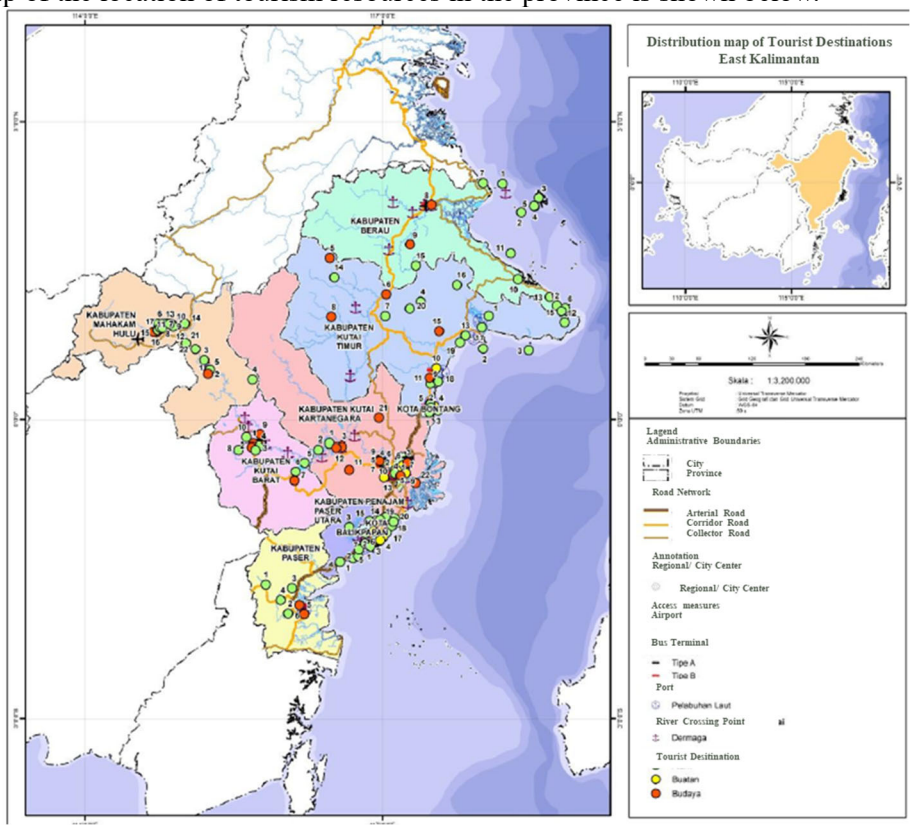


Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

Figure 5-25 Tourism Core Cities and Highways in East Kalimantan Province

■ Location of tourist attractions

A map of the location of tourism resources in the province is shown below.



Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

Figure 5-26 Location map of tourism resources in East Kalimantan Province

□ Accommodations and Restaurants

The accommodation capacity centered around the Tri-Cities is as below, with starred hotels

concentrated in Balikpapan City and Samarinda City.

Table 5-17 Accommodations in East Kalimantan Province

Regency/City	Number of Accommodations		Number of Rooms		Number of Beds	
	Star	Non-Star	Star	Non-Star	Star	Non-Star
Regency						
Paser	2	30	149	584	232	924
West Kutai	-	55	-	815	-	926
Kutai Kartanegara	2	80	138	1,162	170	1,744
East Kutai	2	99	113	1,737	156	2,311
Berau	-	169	-	1,022	-	1,077
PPU	-	16	-	359	-	526
Mahakam Ulu	-	20	-	161	-	194
City						
Balikpapan	44	57	4,812	1478	6,623	1,700
Samarinda	17	83	2,085	2019	3,027	2,587
Bontang	3	27	230	573	391	873
East Kalimantan Province	**70**	**636**	**7,527**	**9,910**	**10,599**	**12,862**

Source: East Kalimantan Province, TOURISM DEVELOPMENT MASTER PLAN 2022-2037

The number of restaurants is below, and the number of restaurants in Balikpapan City is nearly half of the province's total.

Table 5-18 Food and Beverage Establishments in East Kalimantan Province

Regency/City	Year				
	2015	2016	2017	2018	2019
Regency					
Paser	24	28	27	29	10
West Kutai	27	42	41	42	95
Kutai Kartanegara	118	120	121	124	131
East Kutai	34	35	35	38	47
Berau	93	95	95	106	48
PPU	27	29	29	30	-
Mahakam Ulu	18	20	20	23	-
City					
Balikpapan	340	353	353	400	428
Samarinda	274	326	326	348	172
Bontang	73	80	80	79	109
East Kalimantan Province	**864**	**925**	**925**	**1,015**	**1,040**

Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

- **Tourist Information Center**

Tourist information centers (TICs) exist in Balikpapan City and Samarinda City, as well as in Kutai Karatanegara Regency as indicated in the table below.

Table 5-19 Tourist Information Centers in East Kalimantan Province

Regency/City	Existence of TIC	Address

Regency		
Paser	None	-
West Kutai	None	-
Kutai Kartanegara	Yes	Jln. Patin Tenggarong
East Kutai	None	-
Berau	Yes	Arrival terminal of kalimarau airport, Jl.Silo - Berau
PPU	None	-
Mahakam Ulu	None	-
City		
Balikpapan	Yes	Sultan Aji Muhammad Sulaiman Sepinggan International Airport, Jl. Air Marshal R. Iswahyudi, Sepinggan
Samarinda	Yes	Jl. Bhayangkara, Bugis, Kec. Samarinda City
Bontang	Yes	Bontang Kuala Parking Area, Jl. Piere Tandean, East Kalimantan

Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

- **Travel agency**

As of 2018, there are 195 travel agencies in Balikpapan City, 173 in Samarinda City, 59 in Kutai Kartanegara Regency, and 2 in PPU Regency, handling trips such as the pilgrimage to Mecca.

- **Number of tourists to East Kalimantan Province**

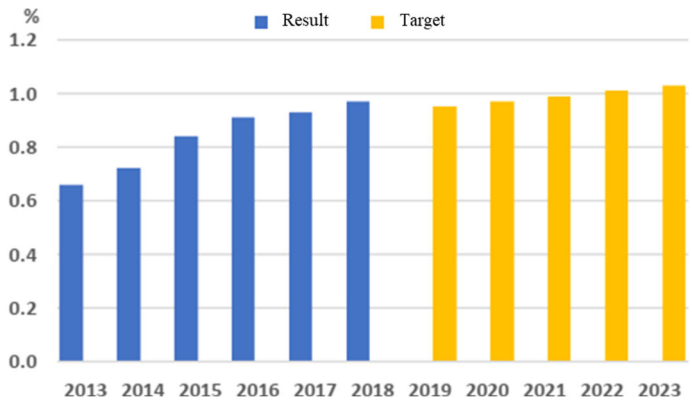
As shown in the table below, the number of domestic and international visitors prior to Covid-19 was as follows and had been increasing until 2018.

Table 5-20 Number of Travelers to East Kalimantan Province

Travelers	2013	2014	2015	2016	2017	2018	2019
Overseas	32,973	49,285	53,155	61,376	58,281	62,424	72,301
Domestic	1.926.569	3.914.289	4.316.220	5.897.490	5.899.828	7.479.870	6.875.817
Total	1.959.542	3.963.574	4.369.375	5.958.866	5.958.109	7.542.294	6.948.118

Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

As shown in the figure below, the contribution (GRDP share rate) of tourism to the local economy was less than 1% in 2018, but then fell in Covid-19.



Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

Figure 5-27 GRDP Contribution of Tourism to Local Economy（%, Blue Result, Yellow: Trget）

□ Tourism resources

In the East Kalimantan Region Tourism Development Master Plan 2013-2023, Samarinda City has been designated as KSPP (Provincial Tourism Strategic Region) II, and IKN and Balikpapan City have been designated as KPPP (Provincial Tourism Development Region) I in relation to the Tri-Cities, and the following specific tourism resources are listed:

Table 5-21 Tourism resources included in the Tri-City area (Samarinda City)

KSPP II	Tourist Destination		Location
	Featured	Support	
Samarinda	Mahakam River	Islamic Center	Samarinda City
		Pampang Cultural Village	Pampang Village
		Weaving Village	Kec. Samarinda Seberang
		Citra Niaga	Samarinda City Center

Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

Table 5-22 Tourism resources included in the Tri-City area (Balikpapan City and others)

KPPP I	Tourist Destination	Location
Balikpapan and Surroundings	Manggar Segarasari Beach	Kec. Balikpapan East
	Wain River Protection Forest	Kec. North Balikpapan
	Colorful House	Kel. Balikpapan East
	Crocodile Breeding	Kel. Teritip Kec. Balikpapan East
	SAMS International Airport	Kec. Balikpapan East
	Thematic Tourism Village	Kel. Lamaru, Kec. Balikpapan East
	KWPLH	Kec. Karang Joang
	Graha Indah Mangrove Forest	Kel. Graha Indah, Kec. Bpp. North
Samboja and Surroundings	Samboja and surrounding areas: Samboja and surrounding areas	Kec. Samboja
	BOS Foundation	Margomulyo Village, Kec. Samboja
	Argo Wisata Bukit Bangkirai	KM 38 BPP-SMD Poros Road, Kec. Samboja
	Tanjung Harapan Beach	Tanah Merah Village, Kec. Samboja
	Ambalat Beach	Amborawang Laut Village, Kec. Samboja
	Handil Beach Muara Baru	Handil Baru Village, Kec. Samboja
	Black River Samboja	Kel. Kuala Samboja
	Balitek KSDA Herbarium	Kel. Sungai Merdeka, Samboja
	Kumala Island	Tenggarong
	Tanah Merah Tourism Area	KM 50 BPN-SMD Axis, Tanjung Harapan Village
Penajam and Surroundings	Tanjung Jumlai Beach	Kel. Kampung Baru, Kel. Tanjung Tengah
	Mangrove Forest Beach Kampung Baru	Kel. Kampung Baru, Kel. Tanjung Tengah
	Agathis Tree	Kel. Maridan, Kec. Sepaku
	Deer Breeding	Api-api Village Kec. Waru
	Nipah-nipah Sipakario Beach	Kel. Nipah-nipah

Source: East Kalimantan Province TOURISM DEVELOPMENT MASTER PLAN 2022-2037

c) IKN Tourism Area Development Action Plan (Phase 1) 2023

□ Position

This is a facility development plan to make IKN a tourism destination with three tourism theme zones within the KIPP core area, along with projected future demand. Tourism is positioned as "inclusive ecotourism and health tourism" in the IKN Plan, and IKN's position among the tourism resources in East Kalimantan Province is shown in red circle in the figure below.

Source: New Capital City Tourism Regional Development Action Plan 2023

Figure 5-28 Tourism Resources in IKN and East Kalimantan Province

- **Issues**

Although IKN has advantages such as future urban plans and nearby natural tourism resources, challenges include the current lack of tourism industry, the green space being in the form of plantations, ongoing construction work within the area, and problems with branding as a Tri-City.

- **Target number of tourists**

As shown in the table below, the target for the future visitor population to the Tr-City is predicted to be over 30 Million by 2044.

Table 5-23 Targeted Tourist Projections for Tri-Cities

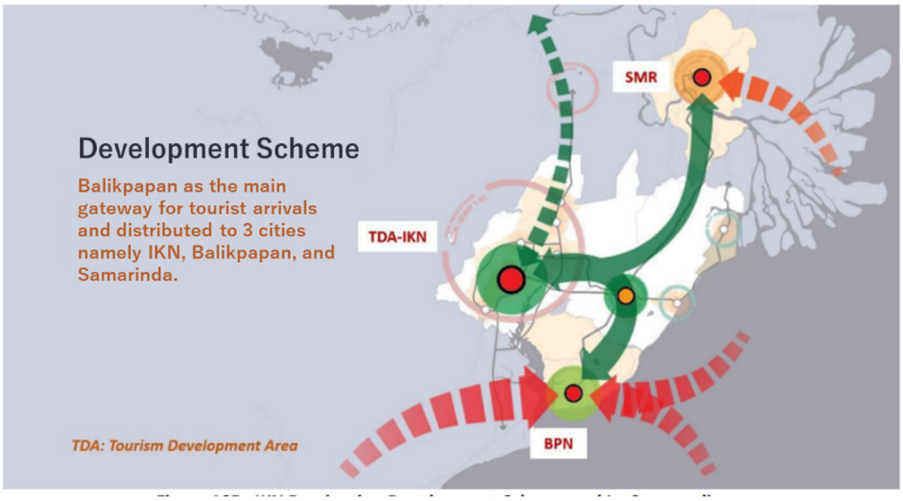
Target	IKN + Balikpapan + Samarinda					
Year	Foreign tourists	Increase rate	Domestic	Increase rate	Total	Increase rate
2024	41,000	-	3,900,000	-	3,941,000	-
2029	66,000	10.0%	6,800,000	11.9%	6,866,000	11.7%
2034	129,000	14.3%	13,910,000	15.4%	14,039,000	15.4%
2039	213,000	10.5%.	23,670,000	11.2%	23,883,000	11.2%
2044	278,000	5.4%	30,500,000	5.2%	30,778,000	5.2%

Source: New Capital City Tourism Regional Development Action Plan 2023

- **KIPP's Tourism Development Concept**

As shown in the figure below, in the Tri-City tourist destination development plan presented by IKN, Balikpapan is the main gate for tourist arrivals, from which they will be dispersed to the three cities of IKN, Balikpapan City, and Samarinda City. Samarinda City itself is a secondary gate, and by combining the three cities, tourists visiting IKN will enjoy the existing services of Balikpapan City and Samarinda City. At this point in time, due to the limited tourist capacity of the IKN, the plan states that for a similar scheme to work in the future, excellent transportation access for tourists to move between the cities and between tourist resources is needed. The conceptual map also presents nodes (urban cores) at the transportation nodes of

IKN, Balikpapan City, and Samarinda City.



Source: New Capital City Tourism Regional Development Action Plan 2023

Figure 5-29 KIPP's Tourism Development Concept

- **Tourism clusters within KIPP**

As shown in the figure below, the plan is to form A. Nationality Axis Tourism Cluster, B. Botanical Garden Tourism Cluster, and C. MICE and Sports Cluster were formed within KIPP, with the following facility configurations.

A. Nationality Axis Tourism Cluster

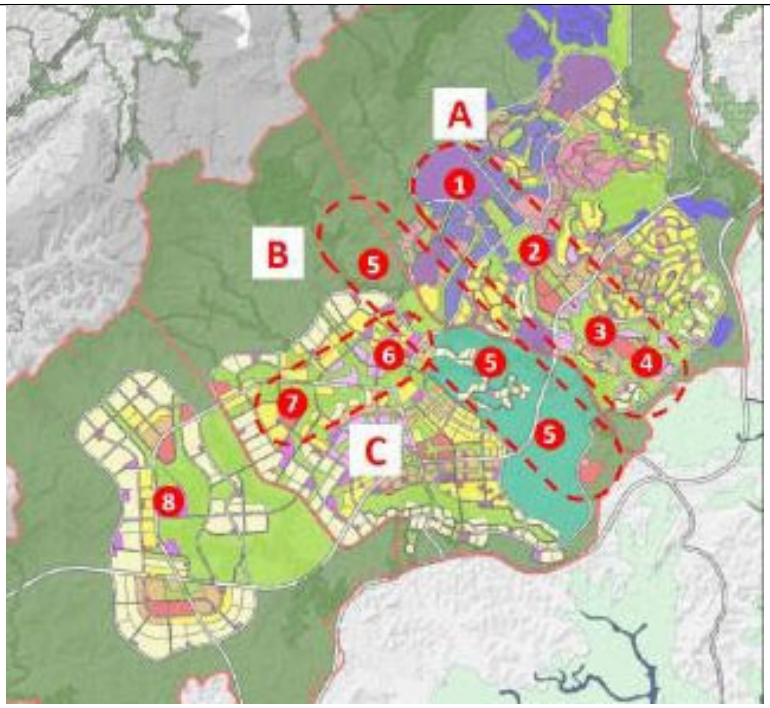
National Palace, National Institutional Axis, Museum of Civilization, National Cultural Center, Cultural Gallery, Worship Center Area, Lake Panchasila, City Park

B. Botanical Garden Tourism Cluster

Botanical gardens, arboretums, biodiversity museums, nurseries and greenhouses, bird watching areas, wetland parks

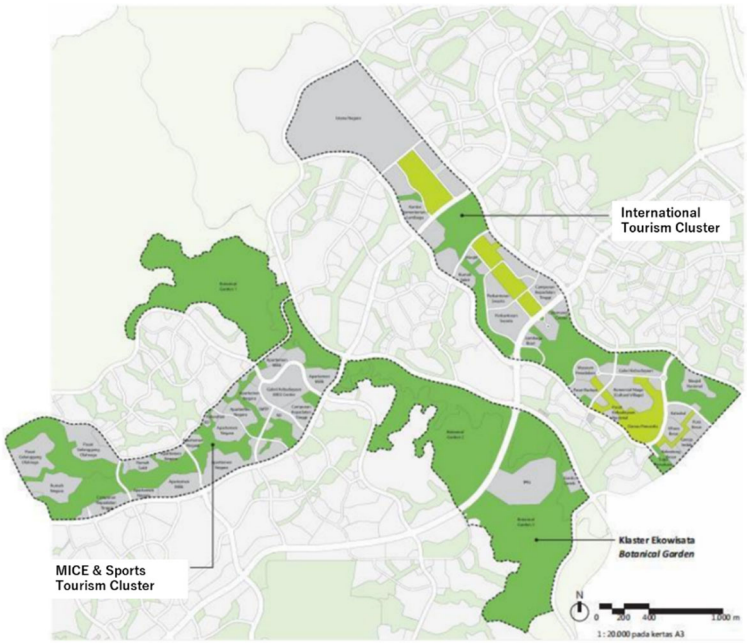
C. MICE and Sports Tourism Cluster

Convention centers, commercial centers, sports centers, city parks



Source: New Capital City Tourism Regional Development Action Plan 2023

Figure 5-30 Tourism Development Cluster in KIPP



Source: New Capital City Tourism Regional Development Action Plan 2023

Figure 5-31 KIPP's Tourism Development Cluster Plan Map

5) Potential/Challenges in Building Value Chains

The value chain of the tourism industry can be categorized into tourism resources (tourism resource development, attractiveness creation through product development), PR (promoting visits through transportation infrastructure development, information dissemination, and attraction activities), transportation and information (tourist information centers, information boards, information provision, and promoting travel through tour guides), and consumption and sales (promoting the creation of a favorable impression through lodging, food and

beverage, stores, tourist facilities, and financial services).

Since Covid-19, there has been a trend towards people preferring short-term travel in the vicinity, and tourist spending is concentrated on the populous island of Java. There are concerns about the impact of overtourism in Bali on the environment of Java and Bali. Another challenge is the development of tourism aimed at popularizing travel patterns that assume longer stays in areas outside of Java and Bali.

6) Potential and Challenges of Building Value Chains in Tri-Cities

Based on the above considerations, the anticipated strengths, challenges, and necessary support activities for building a value chain for ecotourism and medical tourism development in the Tri-Cities are summarized in the table below.

In the value chain, it is important for IKN, where facility development is still underway, and the two cities, where the development of existing tourism resources is progressing, to cooperate and brand along a timeline.

Table 5-24 Tri-Cit Tourism Value Chain Analysis

Tourism Resources (Attractiveness creation)	Public Relations (Visit promotion)	Transportation/Information (Promoting migration)	Consumption /Sales (Promoting a good impression)	Others
IKN Tourism Area Development Action Plan. Duration to develop tourism resources and Medical Examination Facilities. Develop national office tour. Establish a network for Eco Tourism.	Attracting international flights, and development of a public transport network from the airport. Regional branding through unified information dissemination. Attracting tourism resources such as MICE. Collaboration with travel agencies.	Development of tourist information centers within IKN and Tri-City common information boards. Establishment and promotion of model tourist routes. Dissemination of unified tourist information within Tri-City. Training of tourist guides.	Attracting accommodation facilities of appropriate size and quality. Variety and convenient food and drink, including halal. Souvenirs and stores for tourists. Information dissemination promotion.	
Support Activity ✓ Tourism Resources : Development model tour route. ✓ Public Relations: Promotion at various tourism events. ✓ Transportation: Formation of a transportation network along tourist routes ✓ Accommodation: Accommodation capacity management based on expected demand within the region。				Notes: Blue: Strength Red: Challenges

Source: JICA Study Team

(5) Advanced Chemical Industry

Summary

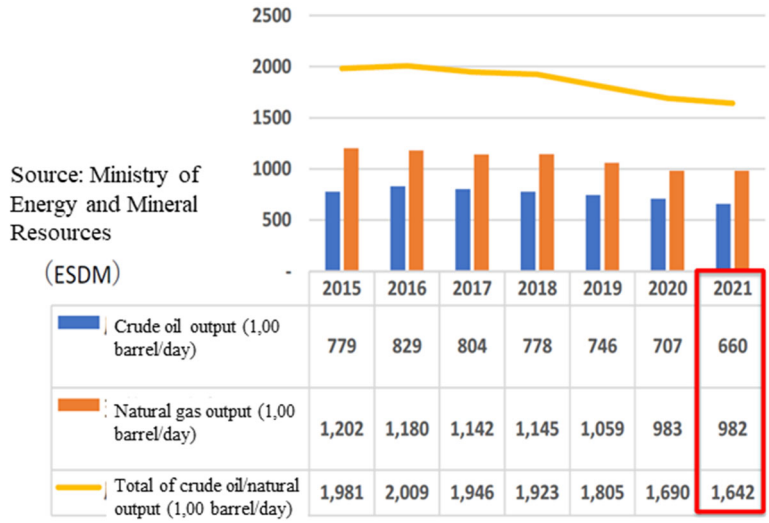
IKN's industrial development includes the introduction of basic chemical production technologies for the manufacture of petrochemicals (specialty chemicals, pharmaceuticals) and oleochemicals (vegetable oils, oil and fat products).

In terms of its relationship with the Tri-Cities, this is the sector with the most potential among the six economic clusters. It is also necessary to take into consideration the locational division of roles of the chemical industry in East Kalimantan Province, including Pertamina in Balikpapan City and the Bontang Natural Gas Complex, which is outside the Tri-Cities.

1) Petrochemical

a) Summary

As shown in the figure below, Indonesia's crude oil and natural gas production has been on a downward trend. In 2021, combined crude oil and gas production averaged 1.642 Million barrels per day (bpd).



	2015	2016	2017	2018	2019	2020	2021
Crude oil output (1,00 barrel/day)	779	829	804	778	746	707	660
Natural gas output (1,00 barrel/day)	1,202	1,180	1,142	1,145	1,059	983	982
Total of crude oil/natural output (1,00 barrel/day)	1,981	2,009	1,946	1,923	1,805	1,690	1,642

Source: Indonesia Upstream Development Omnibus, Japan Oil, Gas and Metals National Corporation, 2022

Figure 5-32 Indonesia's Crude Oil and Natural Gas Production

GRDP and export/import amounts

Indonesia's chemical industry consists mainly of two sub-industries: petrochemicals and oleochemicals, and its economic contribution has been steadily increasing. Output has increased from 180.04 Trillion IDR in 2014 to 339.18 Trillion IDR (approximately 22.28 Billion USD) by the end of 2021. As of November 2022, however, exports of processed chemicals were 20.01 Billion USD, according to data from the Indonesian Ministry of Industry, imports reached 27.85 Billion USD. Processed chemicals remain the largest import category, although the gap between imports and exports is narrowing as Indonesia becomes more industrialized.

According to the Ministry of Industry, the upstream chemical industry makes a small contribution to the supply of materials to the building component industry, but has a stable supply of components to the food industry, with the pharmaceutical industry being its largest supplier. The resource and energy utilization efficiency of the chemical industry is 60-70% and the industry is capital-intensive, technology-intensive, and energy-intensive, which are challenges that must be overcome in future development. In Indonesia, the necessary infrastructure for the chemical industry is not sufficiently developed, placing the country in a lower position in the global supply chain. This dependency on importing raw materials leads to increased production costs.[43]

b) Major production bases and companies

Pertamina

Indonesia's oil and petrochemical sector has been government-controlled and largely nationalized since 1968, with foreign companies operating under a production-sharing model. PT. Pertamina, established in 1957, owns major paraxylene producer PT Trans-Pacific

[43] Business Indonesia, Chemica, https://business-indonesia.org/chemical, 2021

Petrochemical Indotama (TPPI) and polypropylene producer Polytama Propindo. Pertamina currently aims to build two new refineries and upgrade its Dumai, Plaju and Cilacap refineries to increase its refining capacity from 1 Million barrels per day to 1.5 Million barrels per day.

Downstream, various projects are underway for domestic production of olefins and aromatics. TPPI's Tuban PP plant in East Java is scheduled to come on stream in 2024, while the ISBL aromatics revamp project, which will increase domestic production of aromatics such as paraxylene, is expected to be completed this year.

- **Lotte Chemical**

South Korea's Lotte Chemical is investing 3.95 Billion USD for a 1 Million ton per year naphtha cracker and downstream ethylene and propylene project in Cilegon, Banten, with completion scheduled for 2025.

- **Tanah Kuning Kalimantan Industrial Park**

In a bid to reduce its petrochemical import dependency, Indonesia has announced it will stop importing petrochemical products after construction of the Tanah Kuning Kalimantan Industrial Park (KIPI), which will be powered by hydropower from the Kayan Dam in North Kalimantan province, is Table in 2027. KIPI is set to become Southeast Asia's largest petrochemical hub.

c) Key Players

The three major companies are described below.

PT Petro Oxo Nusantara (PT PON) procures some raw materials from the state energy company Pertamina and imports cheaper upstream products. PT PON is the only domestic producer of 2-ethylhexanol (2-EH), isobutyl alcohol (IBA), normal butyl alcohol (NBA) and other related products, contributing to the national interest. Currently, PT PON is government-owned, with Pertamina owning 68% and the Ministry of Finance 32%.[44]

PT. Chandra Asri Petrochemical is the largest integrated petrochemical company in Indonesia, which manufactures polypropylene, olefin, polyethylene, etc. Founded in 1992, the company's major shareholders are currently Barito Pacific Group and SCG Chemicals Co., Ltd. of Thailand.

PT. Kirang Pertamina International (KPI), a subsidiary of Pertamina, engaged in oil refining and petrochemical production. Demand for petroleum fuels and petrochemicals is expected to increase by 3% and 5% each year through 2030.[45]

d) Current related measures

The government hopes to continue narrowing the export-import gap by building the capacity of the domestic chemical industry. Since 2015, the government has offered up to 100% income tax reduction to qualifying chemical companies, but did not apply it to major projects in 2017. In order to promote investment, the government offers incentives such as tax credits and

[44] Indonesia The cost of self efficiency- Southeast Asia Chemicals, 2023
[45] NNA ASIA, Petroleum fuel and product demand to grow 3-5% annually until 2030, https://www.nna.jp/news/2264512, 2021.11.18

import duty exemptions, but these preferential treatments are said to be widely underutilized.

e) Potential/challenges in building value chains

The petrochemical product value chain can be considered to include the procurement of crude oil as a raw material, the production of naphtha in oil refining, the production of basic products such as ethylene, the production of derivatives such as plastics, and sales to related industries. The plastics then are used in related industries such as the plastics processing, and then as components in the manufacturing industries such as the automobile and pharmaceutical industries.

f) Potential and Challenges of Building Value Chains in Tri-Cities

The potential of East Kalimantan Province is the following existing facilities and planned facilities. It is important to incorporate these material procurement functions, and establish a manufacturing system for basic products, derivatives, and final products.

Naphtha production

The Pertamina refinery in Balikpapan City is the second largest in Indonesia, with a capacity of 260,000 barrels per day. Approximately 80% of its output produced are fuels such as gasoline, LPG, and approximately 20% are non-fuel products such as naphtha.

Ammonia Production

The Batuta Chemical Industrial Park (BCIP) is the latest and most integrated coal and petrochemical processing center in East Kutai Regency, East Kalimantan Province.
Other companies in the country include Bumi Etam Chemical, which produces ammonia from coal, Batuta Kimia Perdana, which produces an ammonium nitrate, and TBA, an aluminum smelter. [46]

Methanol Production

Sojitz Corporation's Indonesian operations include Kaltim Methanol Industries (KMI) in Bontang, East Kalimantan Province, is the only methanol producer in Indonesia. With domestic demand reaching approximately 2 Million tons, the construction of a new methanol plant is urgently needed. Methanol is needed in industries such as textiles, plastics, synthetic resins, pharmaceuticals, pesticides, and plywood, and is also used as an antifreeze and inhibitor in oil and gas activities. Sojitz is also said to be interested in investing approximately 5 Billion USD to develop a methanol and ammonia industry in the Bintuni Bay industrial region on the island of New Guinea.[47]

US company Air Products is developing a coal gasification facility for a methanol production facility in Bengalon, East Kalimantan. The company will invest 2 Billion USD to build, own and operate the air separation, gasification, syngas cleaning, utilities and methanol production assets. The company will be able to produce around 2 Million tons/year of methanol per year from around 6 Million tons/year of coal, and the project is expected to be operational in 2024, but may be withdrawn[40].

[46] BATUTA CHEMICAL INDUSTRIAL PARK
[47] ANTARA, Sojitz keen to develop methanol, ammonia industry in Indonesia https://en.antaranews.com/news/169894/sojitz-keen-to-develop-methanol-ammonia-industry-in-indonesia, March 13 2021

Based on the above considerations, the anticipated strengths, challenges, and necessary support activities for building a value chain for petrochemical industry development in the Tri-Cities are summarized in the table below.

Table 5-25 Tri-City Petrochemical Industry Value Chain Analysis

Oil extraction	Oil refinery	Basic Product Manufacturing	Derivatives Manufacturing	Outbound logistics	Related industries	Others
Declining oil production offshore Mahakam.	Pertamina supplies naphtha.	Utilize Pertamina refinery. Kaltime methanol in Bontang produce methanol.	Kariangau Terminal in Balikpapan. Palaran terminal in Samarinda. Ammonium nitrate manufacturing plant in East Kutai.	There shall be manufacturing needs for Functional chemical products such as electric battery.	Manufacturins is not strong in both Balikpapan and Samarinda. Service network in domestic and international.	
Support Activity ✓ Infrastructure: Production facilities connected with pipelines. ✓ Human resource Management: Human resource of coal/oil/gas and palm industries could be shifted. ✓ Technology Development: Pertamina research center and Balikpapan institute of technology. ✓ Procurement: Supply chain from naphtha, basic produces, derivatives, high functional products, and down to product manufacturing.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team

2) Oleo-chemical

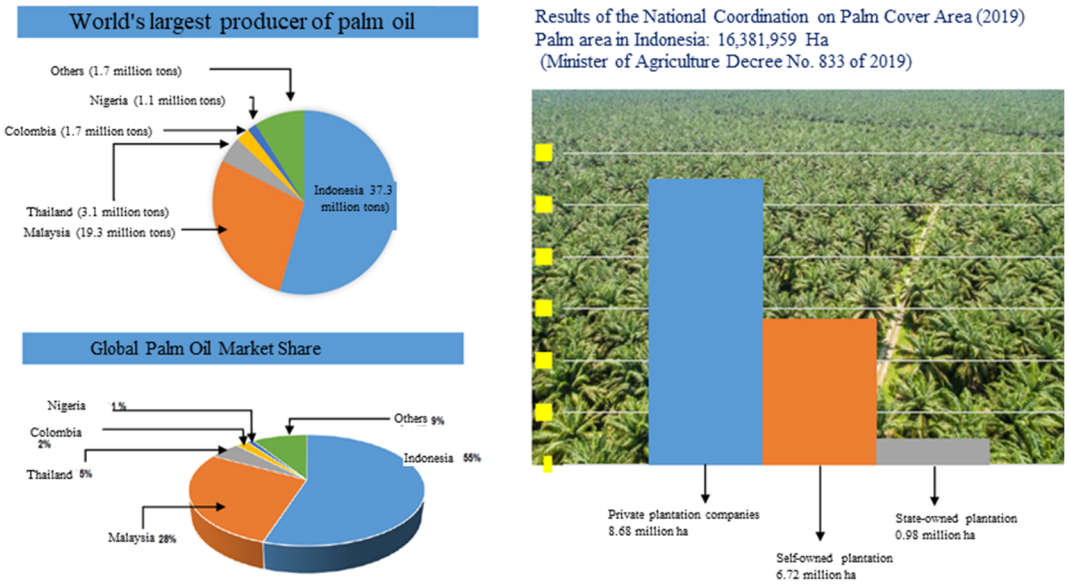
Summary

The oleochemical industry described in IKN Development is the palm oil chemistry industry. Palm oil is a vegetable oil extracted from the fruit of the oil palm and is widely used in our daily lives for instant noodles and snacks due to its low price.

a) Oleo-chemical Market

As shown in the figure below, Indonesia is the world's largest producer of palm oil, and together with Malaysia accounts for more than 80% of the world's production. Palm oil is an essential ingredient in Indonesian cuisine, and the palm oil industry that produces it is also an important and indispensable industry for the Indonesian economy, as well as an important source of income for rural workers and, therefore, for poverty reduction.[48]

[48] Rifin Azmul, Contribution of Palm Oil Industry to Indonesia's Economy, Input-Output Journal Vol. 20, No. 1, February 2012



Source: Ministry of Economy, Trade and Industry_
https://www.meti.go.jp/shingikai/enecho/shoene_shinene/shin_energy/biomass_sus_wg/pdf/017_02_01.pdf

Figure 5-33 World Palm Oil Production

Oil palm begins to bear fruit about 30 months after seeding and is ready for harvest in about 36 months. The peak yield is obtained for 7 to 18 years, and the life span is about 25 years. 18 to 30 tons of palm nuts can be harvested per hectare. The harvested palm fruit is divided into the white Kernel (seed) and the Red Fruit, both of which yield palm oil. The oil from the seeds is called palm kernel oil and is used to make margarine and soap. The production of palm oil in 2020 was 75.45 Million tons.

b) Key Players

This article provides an overview of five representative Indonesian palm oil manufacturers.

PT Sinar Mas Agro Resources and Technology (SMART): The largest oil palm plantation owner in Indonesia, was founded in 1962.

PT Astra Agro Lestari Tbk: The second largest oil palm plantation in Indonesia. Prior to producing oil palm, the company initially started its business in the cassava and rubber business industry, and in 1984, it developed land in Riau Province and switched to the palm oil business.

PT Salim Ivomas Pratama Tbk: The third largest oil palm plantation owner, founded in 1992, operates 28 factories across Sumatra and Kalimantan.

PT. Darma Satya Nusantara Tbk: The company produces palm oil and timber products for the global market.

PT. Perusahaan Perkebunan London Sumatra Indonesia Tbk.: The company owns 91,759 ha of oil palm plantations and operates 12 palm oil mills. Annual processing capacity is 2.7 Million tons.

c) Challenges in Building Value Chains

Problems have been raised regarding palm oil production, particularly the deforestation of tropical forests and peat swamp forests due to the development of palm oil plantations, forest fires and peat fires, loss of biodiversity, climate change, soil erosion, land issues, working

conditions, etc. In response to these issues, industry stakeholders have established a non-profit organization called the Roundtable on Sustainable Palm Oil (RSPO), which is working on certification activities to improve traceability regarding production and distribution.

d) Potential and Challenges of Value Chains in the Tri-Cities

Palm oil plantations in East Kalimantan Province account for about 10% of the country's total, and in the northern Berau province, more than half are corporate plantations. While continuing to develop plantations and maintaining the livelihoods of local farmers, there is also deforestation caused by plantation development, environmental conservation measures are also necessary[49].

It is believed that the Tri-City can utilize an existing palm oil refinery in Balikpapan City to move production downstream and form a B to B supply chain. As of June 2024, the Indonesian Ministry of Investment (BKPM) is preparing a fatty amine production project as a PPP project to promote the palm oil processing industry.

Based on the above considerations, the anticipated strengths, challenges, and necessary support activities for building a value chain for the development of the oleochemical industry in the Tri-Cities are summarized in the table below.

Table 5-26 Tri-City Oleo-chemical Industry Value Chain Analysis

Oil palm fields /Extraction	Oil refinery	Outbound logistics	Oil refinery	Downstream products manufacturing	Sales	Others
Conservation of tropical forests and peat swamp forests. Forest and peat fire prevention measures.	Utilization of existing refineries such as Apical.	Shipped from Kaliangau Container Port. Production in Tri-City.	Existing refineries on Java Island, etc.	Diversification of oil and fat products. Productization in Tri-City.	Small market as Tri-City.	
Support Activity ✓ Infrastructure: Supply chain certification. ✓ Technology Development: Productization in Tri-City. ✓ Human Resource Development: Pertamina research center and Balikpapan institute of technology. ✓ Marketing: Develop B to B customers.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team

(6) Low Carbon Energy (biofuels, synthetic fuels, coal gasification)

In IKN six economic clusters, low carbon energy focuses on biofuels, synthetic fuel、and coal gasification is added.

In relation to the Tri-City, due to its abundance of coal, gas and oil palm, it is an area that has potential alongside advanced chemicals among the six economic clusters.

1) Policy and forecast values for biofuels, coal gasification, and CCS/CCUS (Carbon Capture Storage Usage) within decarbonized energy

a) Decarbonization Policy

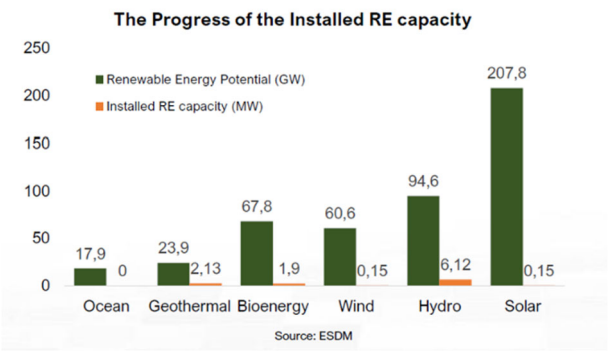
Indonesia has set a goal of achieving carbon neutrality by 2060 and is faced with the need to

[49] Undisciplined Environments, Rediscovering the palm oil business in East Kalimantan Province , https://undisciplinedenvironments.org/2019/10/24/rediscovering-the-palm-oil-business-in-kutai-barat-district-east-kalimantan-indonesia / October 24, 2019

review its current coal-based power generation.

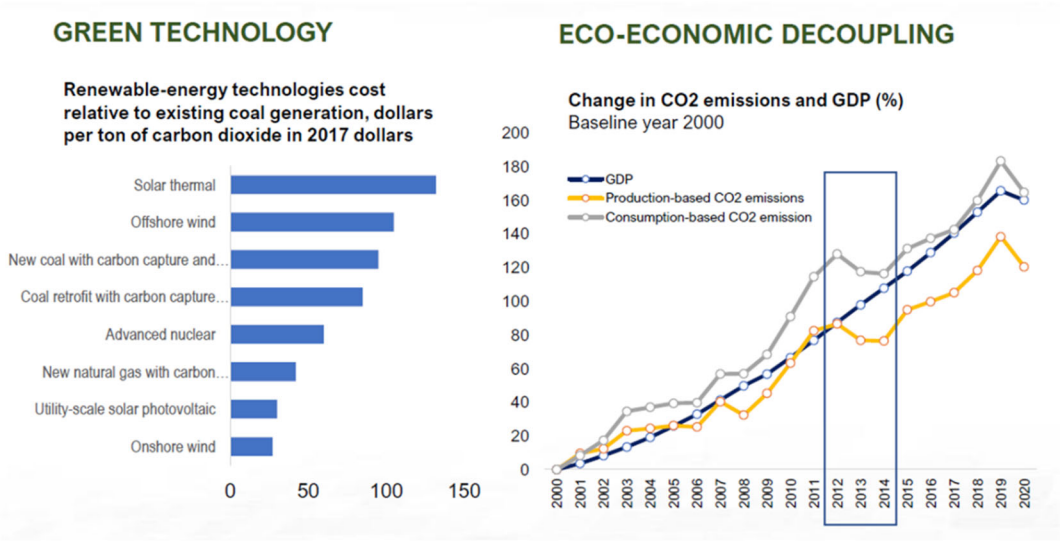
b) Renewable energy demand forecast

According to data from BAPPENAS (the figure on the right), for decarbonization by 2060, by 2040, 90% of electricity will come from solar, hydro, wind, bioenergy, geothermal, and tidal renewables, and coal, as it is, will no longer be used. In addition, carbon emissions must be reduced as the economy grows, but in terms of generation costs, solar PV and offshore wind are the most expensive, followed by coal power with associated CCS, and subsidies and other government support will be essential for a commercial base.



Source:BAPPENAS

Figure 5-34 Renewable Energy Requirement Capacity in 2060

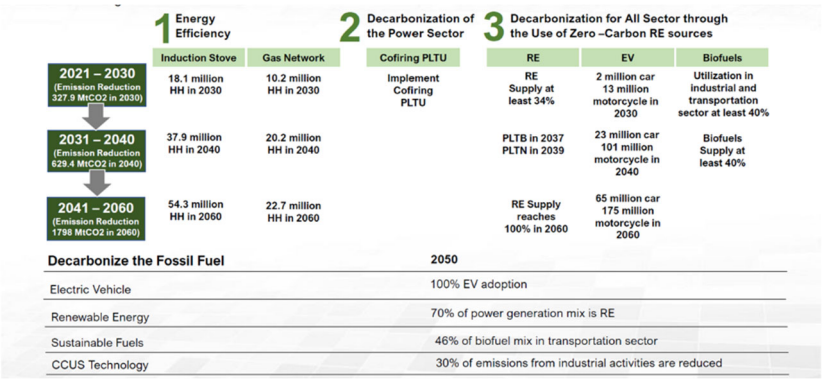


Source:BAPPENAS

Figure 5-35 Renewable energy costs (left) and GDP and CO2 emissions (right)

As shown in the figure below, as part of its fossil fuel replacement measures for 2060, the government has set targets of full adoption of EVs, 70% of electricity generated from renewable energy sources, 46% biofuel co-combustion in diesel engines in the transportation sector, and 30% decarbonization through CCUS in the industrial sector. Specific numerical targets are set for biofuels, but no plans are made for coal gasification. Government support which stimulates demand for blue or green coal gasification is needed.

Table 5-27 Scenarios for energy decarbonization transformation in the power, transportation, and industrial sectors



Source: BAPPENAS

c) Measures to develop Biofuel Market

The National Energy Policy, enacted in 2014, aims to achieve 23% renewable energy use across the economy by 2025 and 31% by 2050. The biofuel program aimed at achieving these targets involves gradually increasing the blending ratio of biofuels and stipulates planned targets for blending ratio of biodiesel and bioethanol in relation to energy consumption in the transport sector.

The introduction of E5 gasoline (regular gasoline blended with 5% bioethanol) in July 2023 restarted bioethanol consumption in Indonesia, but the premium-priced E5 has led to limited market penetration, with sales estimated at 2 Million liters in 2023. Meanwhile, Indonesia's new B35 biodiesel blending mandate will be implemented nationwide in August 2023, and biodiesel consumption is expected to increase by 25% to 13 Billion liters. Elsewhere, the Indonesian government continues to conduct tests of renewable diesel and sustainable aviation fuel (SAF)[50].

d) Measures and recent projects aimed at shaping Coal Gasification Market

As of 2019, the East Kalimantan Province Energy and Mineral Resources Agency stated that based on the components of coal, it can be processed into new energy sources through the processes of gasification and liquefaction, and mentioned coal-derived product Coal Bed Methane (CBM), which they hope will be widely used in many industries and homes and developed as a fuel for power plants. Below is information on recent projects in the country.[51]

- Construction of a 2.3 Billion USD coal gasification plant is scheduled to begin in January 2022 on the Island of Sumatra, Indonesia, with completion scheduled for 2025 or 2026. The plant is part of a 15 Billion USD investment planned by Pennsylvania-based Air Products and Chemicals, Inc., the largest overseas coal-related investment to date by an American company.[52]
- In April 2024, the Indonesian government announced that it is ready to produce dimethyl ether (DME) from coal gasification and announced its commitment to promote carbon emission reductions at the Conference of the Parties (COP)28 of the United Nations

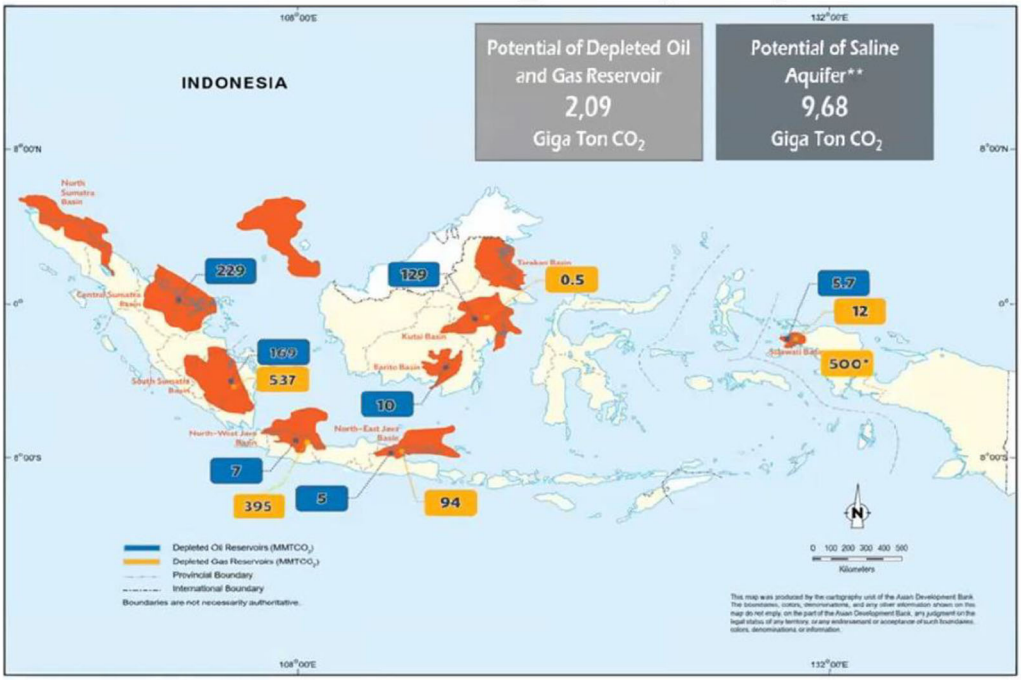
[50] Regular gasoline containing 5% bioethanol
[51] Kyodo News Prewire, East Kalimantan is a prominent investment destination for liquefied coal in Indonesia, https://kyodonewsprwire.jp/release/201911263986 , 2019.11.26
[52] Energy Monitor, A US company is quietly building a massive coal-to-gas plant – in Indonesia, https://www.energymonitor.ai/sectors/industry/a-us-company-is-quietly-building-a-massive -coal-to-gas-plant-in-indonesia/, June 7, 2022

Framework Convention on Climate Change.[53]

- April 2024, it was announced that a subsidiary of PT Bumi Resources (BUMI.JK), Indonesia's largest coal mining company, and Air Products and Chemicals (APD.N) of the United States will jointly invest in a methanol plant. Kaltim Prima Coal, a subsidiary of Bumi, will build the plant in Bengalong, East Kalimantan Province, with a capacity to produce 1.8 Million tons of methanol per year. [54]

e) Measures to create a CCS/CCUS (Carbon Capture and Storage) Market

Indonesia's potential for CO2 storage using CCS/CCUS is high, as shown in the figure below. It is estimated that abandoned oil and gas fields have a storage capacity of 2.09 Billion tons, and aquifers that can serve as storage are 9.68 Billion tons. However, the economic foundation for carbon emitters to engage in CCS has not yet been established. An emissions trading market (IDX Carbon) was opened in September 2023, but transactions were limited and only targeted coal-fired power generation projects. The Ministry of Energy and Mineral Resources is considering converting CO2 from oil and gas mining and refining projects into carbon credits using CCS, but this has not yet been introduced. Currently, carbon taxes are limited to coal-fired power generation, and the tax rate is 30 IDR per kilogram (about 2 USD/ton), the lowest in the world, and is scheduled to be introduced in 2025.



$MMTCO_2$ = million metric ton of carbon dioxide.

Source: Indonesia Upstream Development Omnibus, Japan Oil, Gas and Metals National Corporation 2022

Figure 5-36 **Indonesia's storage capacity for CO2**

However, the economic incentive for emitters to engage in carbon capture and storage (CCS) has not yet been established; the emissions trading market (IDX Carbon) opened in September 2023, but trading is limited and only for coal-fired power projects. The Ministry of Energy

[53] Science Portal ASEAN resumes coal gasification project in Indonesiahttps://spap.jst.go.jp/asean/news/240502/topic_na_03.html, 2024.05
Energy Monitor, A US company is quietly building a massive coal-to-gas plant – in Indonesia, https://www.energymonitor.ai/sectors/industry/a-us-company-is-quietly-building-a-massive -coal-to-gas-plant-in-indonesia/, June 7, 2022l

[54] Reuters, Indonesian Bumi Resources, US Air Products to start $2 bln methanol JV in May, https://www.reuters.com/business/energy/indonesian-bumi-resources-us-air-products-start-2-bln- methanol-jv-may-2022-04-27/

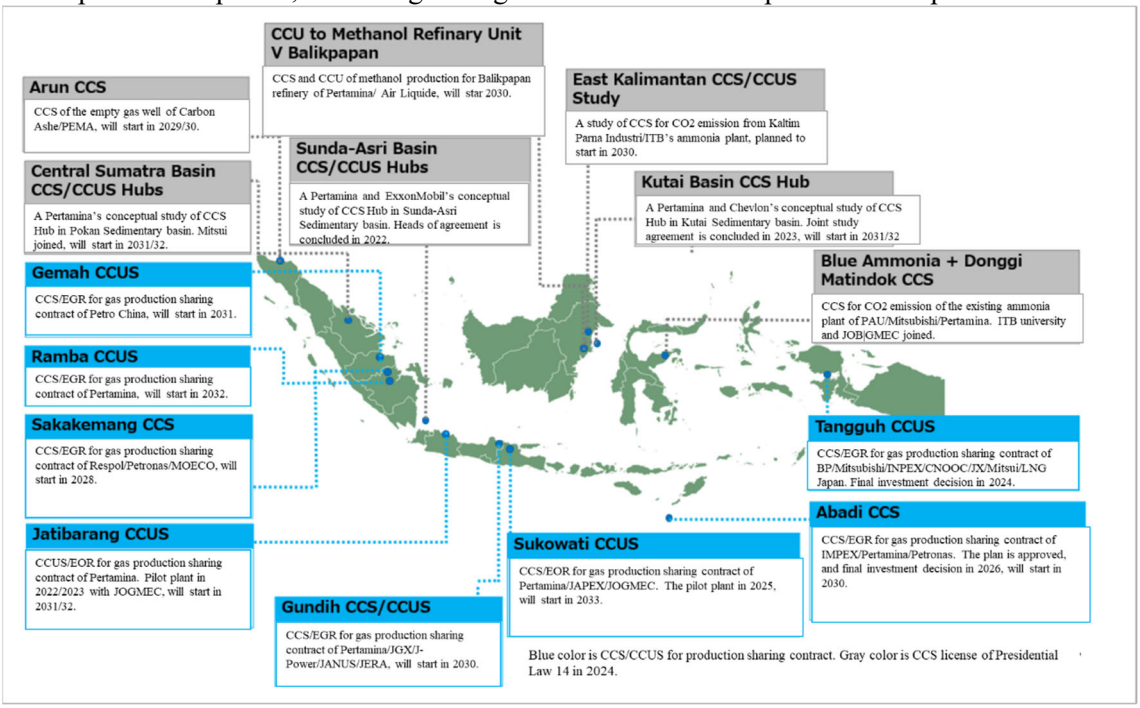
and Mineral Resources is considering carbon crediting of CCS with CO2 from upstream oil and gas projects, but this has not yet been introduced, and the carbon tax is limited to coal-fired power generation, with a tax rate of 30 IDR per kilogram (about 2 USD/ton), one of the lowest in the world, and is scheduled to be introduced in 2025.

■ Current related measures

Indonesian Presidential Decree No. 14 of 2024 on Carbon Capture and Storage, which was promulgated on January 30, 2024 as a government support measure for CCS projects, stipulates that CCS contractors will be given tax and non-tax incentives, including those who hold exploration permits, carbon transport permits, and storage business permits, but the specifics have not yet been made public. CCS projects would generate revenue through storage fees, which are paid as royalties to governments, but the details are unclear, and the factors involved in the economics of CCS implementation remain unclear.

■ Recent projects

According to the Ministry of Energy and Mineral Resources, there are currently 15 CCS/CCUS projects and studies underway in Indonesia, as shown in the figure below. The earliest commercial-scale investment decision is expected to be made on the Tangguh LNG project, which will begin injecting CO2 into the Borwata reservoir by 2030. A final investment decision (FID) is expected to be carried out by the end of 2024. 8 of the 15 projects involve Japanese companies, indicating the significant attention and presence of Japan.[55]



Source: Review of Indonesia CCS Social Implementation Movement and Business Environment Korewei Kato JOGMEC, 2024.8.29

Figure 5-37 CCS/CCUS projects under preparation in Indonesia and partner companies, etc.

[55] Kato Yoshitake, Review of Indonesia's Movement for Social Implementation of CCS and the Business Environment, JOGMEC, August 29, 2024

2) Key Players

a) Biofuel

As seen in the chart below, there are about 30 manufacturers in the country, and four in East Kalimantan Province, including PT Kutai Refinery Nusantara, PT Energi Unggul Persada, both of which are currently in operation, and two others in planning stages.

b) Coal Gasification

At present, the operators include Air Products and Chemicals, Inc. of the U.S. and its co-investor, Kaltim Prima Coal The leading coal gasification technologies and achievements worldwide as of 2022 are as follows.[56]

Fixed layer: Lurgi of Germany (synthetic oil production in South Africa), BGC/Lurgi of U.K. (fertilizer production in China)

Fluidized bed type: Rheinbrain (chemical production in Germany), Synthesis Energy System (methanol production in China)

Air fluid bed type: Shell (ammonia production in China, the Netherlands, and Korea), Air products (ammonia and hydrogen production in China and the U.S.)

Two Japanese companies are planning and conducting pilot plant tests in Indonesia.

Oxygen blowing method: Mitsubishi Heavy Industries (in operation in Japan)

Air blowing method: Mitsubishi Heavy Industries (Indonesia SNG project planning)

Air flow layer type：Nittetsu Engineering (pilot plant in Japan)

Circulating fluidized bed type：IHI (Indonesia pilot plant)

c) CCS/CCUS

Typical business stakeholders include the following energy majors, plant companies, and government-related agencies from various countries.

■Business plans in Indonesia

- Thangguh gas field CCS project: CO2 injection into the Borwata reservoir is scheduled to start by 2030, and the Final Investment Decision (FID) is expected to be made by the end of 2024 and detailed studies are in progress by British Petroleum and Chubu Power.
- Gundih Gas Field CCS/CCUS Project: A demonstration project for underground injection and storage of CO2 separated during natural gas production is underway as part of JICA's Science and Technology Research Partnership for Sustainable Development (SATREPS) program with the Japanese participation of JGC, J-Power, JANUS and JERA. The project is underway.
- Sunda-Asri CCS hub plan: In 2023, Pertamina announced a plan to build a new petrochemical plant in West Java and to inject emitted CO2, in which KNOC (Korea National Oil Corporation) will participate.

■ East Kalimantan Province business plan

- Kutai Basin CCS Hub: A carbon capture and storage (CCS) project in the Kutai Basin

[56] Survey on domestic and overseas lignite resource potential and trend survey on lignite hydrogen, JOGMEC, April 2022

being promoted by the Indonesian government in cooperation with bp and Chubu Electric Power Company, with a target start of injection in 2030.

- CCU to Methanol Refinery Unit V Balikpapan Project: CO2 emission capture from hydrogen production using naphtha at existing refineries and utilization of CCU for methanol production, targeting to start injection in 2030.
- East Kalimantan CCS/CCUS study: CCS study of CO2 emissions from an ammonia plant in which PT Pertamina (Persero) and Chevron New Energies International Pte. are participating.

3) Potential/challenges in Building Value Chains

With respect to the low-carbon energy value chain, biofuels are similar to the oleo-chemistry value chain discussed above. The sources of CO2 emissions from secondary product manufacturing during oil refining, LNG refining, and coal gasification are listed below, and the use of CCS/CCUS is required.

Oil refining: In addition to fuel products, hydrogen production from naphtha emits CO (see Figure below)

LNG production: CO2 is produced during pretreatment, cooling and liquefaction to remove impurities from natural gas.

Coal gasification: Coal is gasified and converted to CO before producing hydrogen, ammonia, and methanol.

4) Potential and Challenges of Value Chains in Tri-Cities

Based on the above considerations, and given that the coal industry is the sector in which conversion to a low-carbon economy is most anticipated among low-carbon fuel energy sources, the following table summarizes the anticipated strengths, challenges, and necessary support activities for building a value chain for industrial development related to coal gasification.

Table 5-28 Tri-City Coal Gasification Value Chain Analysis

Coal mining	Inbound Logistics	Coal gasification	Gas purification	Energy and Chemical Production	Sales and by-product process	Others
Existing coal mines along the Mahakam River. Improving coal mining recovery rates. Environmental measures for abandoned mines.	Coal is transported on the Mahakam River.	Coal is gasified at high temperature and pressure to produce synthetic gas (mainly carbon monoxide and hydrogen). Facility development in Samarinda.	Removing impurities from synthetic gas to produce high-purity gas.	The refined gas is used to generate electricity and produce chemical products (methanol, ammonia, etc.).	Developing the chemical industry market as a customer. Processing and reusing the by-products (sulfur, tar, etc.) that are generated.	
Support Activity ✓ Technology Development: Technical support from Japan. ✓ Infrastructure: Facility development in Palaran. ✓ Human Resource Development: Capacity development is Samarinda or transfer within Tri-City. ✓ Marketing: Marketing research in advance.						Notes: Blue: Strength Red: Challenges

Source: JICA Study Team

(7) Information Technology Industry

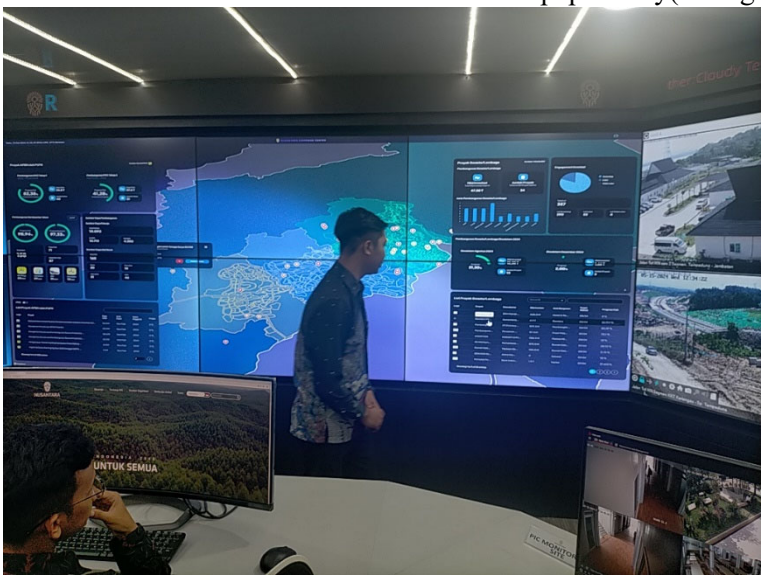
The promotion of automation, digitization and computerization in production sites, known as Industry 4.0, is one example. As the best and most up-to-date model city in the country, IKN is expected to introduce smart city technologies such as transportation infrastructure and environmental management that will be used for urban management within KIPP. USAID is supporting the development of a smart city master plan, and the Finnish government is supporting the smart city pilot environment and solutions. support for solutions.

As shown in the figures below, at the Technology House in IKN, technologies from Telkom Indonesia, Siemens, LG, Huawai, Honeywell, Hyundai, and others were introduced, but no Japanese companies were exhibiting as of October 2023.

Source: JICA Study Team

Figure 5-38 Technology showrooms (left: LG, right: Huawaei)

A temporary Command Center in the visitor's facility in IKN monitors the status of construction sites in IKN and the traffic situation in Balikpapan City(the figure below).



Source: JICA Study Team

Figure 5-39 IKN Command Center

The following is information on companies that have entered the market as of June 2024.

NEC cooperates with state-run telecommunications in smart city development.

Telekom Indonesia is building a Telekom Smart Office.

Minister of Communications and Information discusses with Finland the development of the National Data Center (PDN).

OIKN signs MOU with Motorola and Honeywell for smart city development.

(8) Education-related Industries

Within IKN, the city has plans to develop human resources in the industrial and economic sectors of IKN, with a focus on vocational training schools and universities. There is also potential for the development of an international school for embassy personnel and their families from various countries, and a research academy city centered on highly specialized research institutes and graduate universities in cooperation with the government's science and technology department. Both Balikpapan City and Samarinda City envision human resource development for the workers through vocational training and technical education, and if linked to facilities within IKN, they could attract potential human resources from all over the country. The Tony Blair Climate Change Organization of England is supporting the project.

As of June 2024, the following educational and research institutions have begun construction.

- Pertamina Sustainable Energy Center
- Private Nusantara Intercultural School
- Private Gunadharma University Nusantara Campus
- The private Al Azhar Nusantara Substitute is a cormorant.
- Pertamina Sustainability Hub
- PLN (State Power) Hub
- Renovation of Sepak Public Elementary School

5.3.4 JICA Study Section 8 related infrastructure investment

In terms of investment by Japanese companies, although different from industrial development, investment in PPP projects for infrastructure and lifeline development related to IKN and Tri-City is expected. Since the project will include not only facility construction but also medium- to long-term operation and maintenance of the facilities, it is expected to cover a period of 10 to 30 years. Of the eight items under JICA's consideration, connectivity, climate change/carbon neutrality, environmental management, electricity/energy, urban management, and living environment are related to the development of infrastructure and lifelines, and an overview will be provided from the perspective of potential investment projects. For specific details, please refer to Chapter 10.2 Project (Proposal).

(1) Connectivity

In 2030, a toll road is expected to connect IKN and Sepinggan Airport in Balikpapan City, making travel time approximately 50 minutes. The IKN side toll road is currently under construction as a project under the direct control of PUPR. Both Sepingan Airport in Balikpapan City and Bendala Airport in Samarinda City have expansion plans, and are seeking business entities to undertake the PPP projects including renovation, maintenance, and operation of the airport terminals. Rail transit is still at the conceptual stage, and its realization will likely depend on the demographics of Tri-Cities.

For public transportation within KIPP, there is a concept of access to major city facilities within 10 minutes, which could include last-mile transportation projects using EVs and

biofuel vehicles, based on express bus stops and major city facilities. Hyundai Industry of Korea has submitted an LOI for air mobility.

(2) Climate Change/Carbon Neutral

Indonesia's NDC commitment calls for a 29% reduction in greenhouse gas emissions and a 41% reduction with international support, and the ADB is supporting the development of a roadmap. The Ministry of Investment is planning a mega solar power generation PPP project in the IKN South region of K-IKN and is seeking investment companies, but solar power generation alone will not be successful. It will need to be combined with other low-carbon energy sources.

(3) Environmental Management

Since the Manggar final disposal site does not have enough land for landfill, there are plans to expand waste treatment and sanitation management facilities within IKN through a PPP scheme. In Samarinda City, both IKN and Balikpapan City are working together through a PPP scheme to secure water sources and purification functions at the Sepaku Semoi Dam, which is under construction, and the purification facilities are being developed with assistance from Korean government.

As of June 2024, BKPM is preparing a waste-to-energy infrastructure project as a PPP project to promote the chemical industry.

(4) Power & Energy

IKN aims to supply electricity from renewable energy sources and to use natural gas and hydrogen gas; IKN's industrial development plan proposes biofuels, coal gasification, and the development of a mechanical center. Two types of hydrogen gas production are considered: green hydrogen, which does not use fossil fuels, and blue hydrogen, which uses fossil fuels and stores CO2.

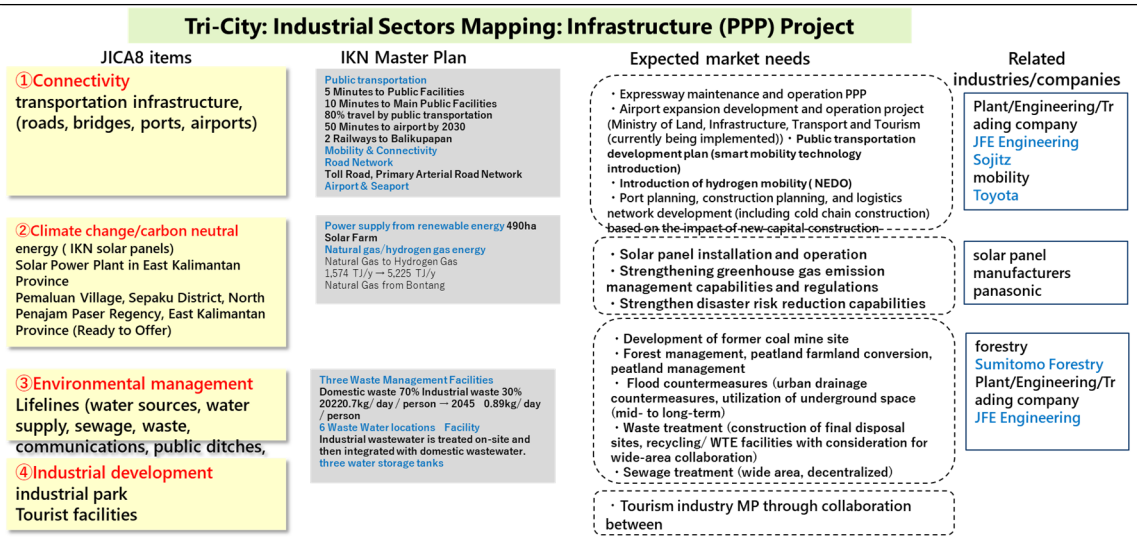
(5) Urban Management

The IKN is expected to include the introduction of the compact city and TOD concepts, the development of 5G information and telecommunications networks, and the management of urban facilities through smart cities, and a wide range of PPP projects in real estate, telecommunications, facility development, and maintenance are anticipated.

(6) Residential Environment

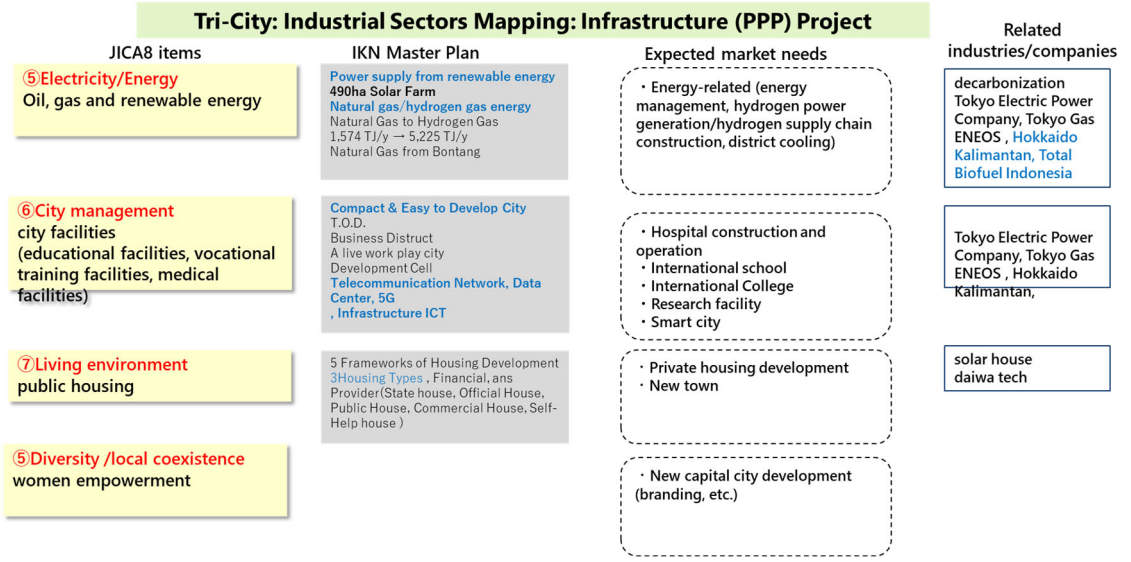
IKN's KIPP presents a residential classification by building type, divided into public service and private use. Residential and new town development investments in plots for private development are envisaged.

The relation of JICA’s eight themes with IKN development plans are shown below.



Source: JICA Study Team based on Presidential Decree No. 63/2022 Annex VI.

Figure 5-40 Infrastructure for investment in IKN on the 8 items considered by JICA1



Source: JICA Study Team based on Presidential Decree No. 63/2022 Annex VI.

Figure 5-41 Infrastructure for investment in IKN on the 8 items considered by JICA2

The following are IKN-related infrastructure projects in preparation from the 2024 BKPN PPP project guide.

Table 5-29 IKN-related Infrastructure PPP Projects

Project Name (Sector)	Summary
1. IKN access toll road (Connectivity)	It is planned from Balikpapan City to the Central Government Core Region of IKN (KIPP) and consists of six toll road segments with an initial estimated total length of 70.29 km. These six sections will form a highway network that is expected to provide 30-minute service (as KPI/Key Performance Indicator) from KIPP to SAMS Airport Sepinggan in Balikpapan City and vice versa.
2. 10 public apartments in IKN (Residential environment)	Apartment housing developed for government workers. It is located in subzone 1B of the Central Government Core Area. The project is planned on 10.21 ha of land and will be divided into three parcels. The apartments will consist of 10 towers and a total of 600 units.

3. 20 public apartments in IKN WP1B district (Residential environment)	The 20 housing units for civil servants in WP 1B are an unsolicited PPP project. Developed on 7 parcels of land with a total area of 21.3 ha, the project will provide 20 housing units with 1,078 housing units for civil servants.
4. 8 Civil Service Tower Condominiums (ASN) in the Western Government Civil Service Residential District (residential environment)	KIPP WP-1A A customized PPP housing development for civil servants in the New Capital City, including eight meticulously designed residential towers with a total of 266 residential units on a 6.83 ha site.
5. ASN West Housing (Residential environment)	ASN Residences is a residential development which consists of eight residential towers, each with 14 floors and a total of 208 units. Each unit is 190 square meters in size. Each floor is equipped with all necessary security and safety amenities, including sprinklers, smoke detectors, and fire alarms. Parking is available on a semi-basement level below the lobby floor.
6. Construction of 10 condominiums and 20 detached houses for state employees (living environment)	A residential development which includes construction of 10 apartments and 20 detached houses in the New Capital City located in WP 1B (apartments) district and WP 1C (detached houses) district under a non-solicited PPP scheme.
7. Tower apartment in WP 1A district for Ministry of Defense (Residential environment)	To support the needs of the IKN with its vision of becoming a globally sustainable city, a future engine of Indonesia's economy, and a symbol of national identity, the project is a residential development which will fulfill the need to provide housing for the first deployed members of the National Defense Forces (TNI) in the IKN.
8. 109 detached houses in WP 1B district for state use	Provide 109 national private institutional detached housing units located in WP 1B using an unsolicited PPP scheme. The project will be developed on two sites totaling 9.2 ha. 109 green and smart townhouses will be provided for civil servants.

Source: JICA Study Team

5.4 Private Investment Trends in the New Capital City Development

The Indonesian government has stated that 80% of the IKN development will be implemented as direct investment from the private sector and as public-private partnership (PPP) projects, and as indicated by OIKN, if a private company is interested in investing in IKN, the first step at present is to submit an LOI to OIKN, followed by discussions and NDA and signing a contract with OIKN or the OIKN management company (BUO). The status of LOI submissions and private sector investment trends are shown below.

5.4.1 Status of LOI Submission

The status of LOI submissions as of June 28, 2023 is shown below. The largest number of LOI submissions by sector was 55 for "Other Infrastructure," 35 for "Goods and Services," 29 for "Energy," and 25 for "Technology," among others.

Table 5-30 Number of firms submitting LOIs by sector (as of June 28, 2023)

Business Field	LOI
Goods and Services	35
Energy	29
Technology	25
Housing	17
Education	16
Consulting Firm	16
Utilities	15
Multi-purpose Building	13
Waste Management	10
Health Care	9
Connectivity	8
Office	4
Industrial Area	4
Other Infrastructure	55
Total	256

Original source is OIKN

Source: https://www.jetro.go.jp/view_interface.php?blockId=36158987

By country, the largest number of domestic firms were reported to be 116, while foreign firms included 27 from Japan, 23 from Singapore, 19 from Malaysia, 18 from China, and 9 from the United States.

In addition, according to an August 28, 2023 NNA article, 37 companies have signed nondisclosure agreements (NDAs), which are required to obtain detailed data to conduct feasibility studies, after submitting a letter of intent. So far, the report states that China's power giant State Power Investment Group (SPIC), Singaporean recycled building materials manufacturer Joe Green, and United Arab Emirates (UAE) recycling company Envirol for the installation of a wastewater treatment system have signed nondisclosure agreements.

According to reports as of November 5, 2024[57], the total number of LOIs submitted has reached approximately 500, which is double the number from about a year and a half ago. Most recently, the number of LOIs from investors has increased, accounting for about half of all LOIs, and the interest of these investors is shifting to areas outside of KIPP. According to

[57] VOI “Basuki Pursues Private Investment Opportunities to Accelerate IKN Development” https://voi.id/ja/news/431117

the JETRO Business Bulletin of August 16, 2024[58], as of August 12, 2024, the cumulative amount of investment in Nusantara funded by sources other than the national budget reached 56.2 Trillion IDR, and of this amount, 55 companies have already started construction have already started construction (6 companies in education, 3 in insurance, 10 in retail and logistics, 8 in hotels, 2 in energy and transportation, 14 in offices and banks, 9 in housing and green spaces, and 3 in media and technology).

5.4.2 Private Sector Investment Trends

Since the start of construction of the new capital, all the various infrastructure and presidential palace construction projects have been carried out as public work project investments by the Indonesian government. It is said that 20% of the construction of the new capital will be carried out by public investment and 80% by private investment, and although there have been various reports on private business investment, it is reported that construction of private projects has specifically begun in the new capital since September 2023. The following is an overview of private-sector projects that have been identified in newspaper articles and other sources.

All of the private investments in IKN development to date have been made by Indonesian companies, and while most of them are located in the KIPP area, some, such as the Pertamina Sustainable Energy Center, are located in Planning Area 5.

All of these projects were reportedly requested by President Joko Widodo and others to enter the area during his visit and meetings in 2022 and the first half of 2023, or LOIs were submitted, and it can be said that the government-led priority projects have reached the start of construction.

Table 5-31 Private Investment Trends in New Capital Cities (Update Required)

Field	Business Name, etc.	Start Date (of a Construction Project)	Amount of Investment	Remarks
Hospital	Abdi Warjo Hospital	Construction to begin on September 23, 2023	2 Trillion IDR (Approx. 19.3 Billion JPY)	PPU Regency 400 sickrooms The hospital will be developed as a semi-specialty hospital.
Sport	Indonesian Football Association (PSSI) National Training Center	Construction to begin on September 22, 2023	85.6 Billion IDR (FIFA support money) + 95 Billion IDR (treasury)	PPU Regency 34.5 ha Eight soccer courts and related facilities
Hotel	Hotel Nusantara (consortium led by Agung Sedayu Group)	Construction to begin on September 21, 2023	20 Trillion IDR (Approx. 193 Billion JPY)	Consortium including Sinarmas, Barito Pacific, Astra International, Adaro Energy, Indofood Suces Makmur, and Muria Group
Hotel	Hotel Vasanta (Real Estate Development Vasanta Group)	Construction to begin on September 23, 2023	N/A	-
R&D	Pertamina Sustainable Energy Center	September 22, 2023, Construction announced (MOU signed)	N/A	Research and education center for renewable energy and low-carbon technologies
Hotel	3 hotels: Four Points, The Westin, Tribute Portfolio by Pakwon	Memorandum of Understanding for cooperation signed on	N/A	-

[58] JETRO Business Bulletin “Cumulative investment in new capital city reaches 56.2 trillion rupiah” https://www.jetro.go.jp/biznews/2024/08/81a14eb88fce68fa.html

	Jati, Marriott	September 13, 2023		
Hospital	Mayapada Hospital (Mayapada Group)	October 3, 2023, Construction announced	500 Billion IDR (Approx. 4.8 Billion JPY)	Groundbreaking ceremony scheduled for 1 November 2023 in WP1B area, with completion target of July 2024, with intention to open in July of the same year
Energy	Solar power plant (Siam Cement)	October 3, 2023, Plan announced	N/A	Construction and business planning for floating solar power plants and ground-based solar power plants as renewable energy projects

Source: Prepared by the survey team from various press materials.

5.4.3 Trends in Japanese Companies

(1) Status of LOI Submission

On May 21, 2023, on the occasion of the G7 Hiroshima Summit, five Memoranda of Understanding (MoUs) and 24 Letters of Intent (LoIs) 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).

(2) Issues in Indonesian Investment

Generally speaking, issues faced by Japanese companies when investing in Indonesia Regarding the risks in the investment environment, "efficiency of tax system and tax procedures" was cited at 69.1%, followed by "status of legal system development (preferential treatment for foreign capital, regulations, etc.)" (67.7%), “Efficiency of administrative procedures (licenses, etc.)” (66.3%), and “Level of personnel costs” (59.4%).

Regarding the "efficiency of tax systems and tax procedures," in Indonesia, there is an obligation to pay income tax in advance on the imported amount depending on the item. Prepaid income taxes can be claimed for a refund if they are overpaid after the annual settlement of accounts, but filing a refund requires complicated procedures such as a tax audit, and it takes about six months to a year to receive a refund. The system has become a burden for many people. In other words, the extent to which raw materials can be procured domestically will have an impact.

Next, regarding the state of development of the legal system (preferential treatment for foreign capital, regulations, etc.) and the efficiency of administrative procedures (licenses, etc.), there are import regulations in various fields in Indonesia, and related laws and regulations are being revised rapidly. There are many things. Furthermore, the government's policy to prioritize domestically produced products (P3DN), which has been implemented since 2018, is thought to have a large impact.

(3) Challenges in Investing in IKN (Based on the Results of Interviews with Japanese Companies)

Through interviews with Japanese companies interested in IKN investment and the BKPM

Tokyo office, the challenges Japanese companies face when considering IKN investment can be broadly categorized into closed markets, government restrictions on foreign capital, and building a local value chain. In addition, requests from Japanese companies to the governments of both countries were also identified.

1) Challenges for Japanese companies

a) Closed market

- Difficulties in entering public works include the current lack of opportunities for foreign companies to participate at this point.
- It is difficult to understand the legal binding nature of LOIs, and there are concerns about the various conditions, such as whether or not LOIs are legally binding, when submitting LOIs to the New Capital Authority.

b) Government restrictions on foreign capital

- One of the hurdles is the requirement to use domestic materials as a condition for domestic business activities.
- There is a demand to shift from product sales to manufacturing, and there are concerns that investments will be required to create production bases for products instead of sales and orders.
- JVs with local companies based on the foreign capital ratio by industry will be essential.

c) Building a local value chain

- It is difficult to develop sales channels for products, and it is difficult for small and medium-sized enterprises to develop sales channels, so the BKPM Tokyo office is looking forward to the participation of general trading companies.
- It is difficult to select local partner companies.

2) Requests from Japanese Companies to the Japanese and Indonesian Governments

Request issues for Japanese government

- Promotion of each company's products and services by the Japanese government.
- Payment guarantees such as trade insurance and the Japanese government's compensation for recovery of funds.

Request issues for Indonesian government

- Relaxation of foreign capital restrictions
- Provision of the figures for a realistic planned population framework for IKN.

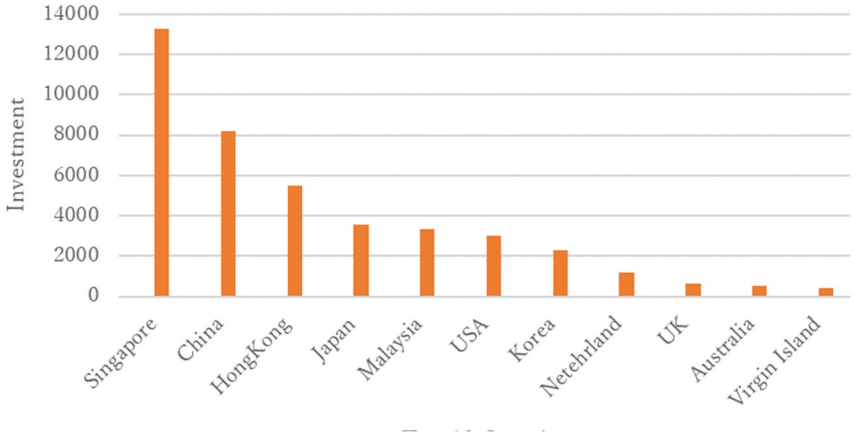
5.4.4 Investment Trends, Challenges and Promising Investment Areas for Japanese Companies in Indonesia

(1) Investment in Indonesia by Country in 2022

On January 24, 2023, the Ministry of Investment of Indonesia (BKPM) announced the actual amount of direct investment in 2022. The amount of investment by foreign-affiliated

companies for the full year of 2022 was 45.65 Billion USD, up 46.7% from the previous year. This was a record high, exceeding the government's target of 1,200 Trillion IDR. The total investment realized, including domestic and foreign investment, for the full year of 2022 was 1,207.2 Trillion IDR(approximately 10.8648 Trillion yen, 1 IDR= approximately 0.009 yen). Of this amount, foreign investment amounted to 654.4 Trillion IDR, accounting for 54.2% of the total realized investment amount.

As shown in the figure below, in terms of actual investment by country/region in the fourth quarter of 2022, Singapore-based companies invested 13,281.1 Million USD for the full year, accounting for approximately 30% of the total foreign investment. This was followed by those of Chinese, Hong Kong, and Japanese companies. The amount of investment realized by Japanese-affiliated firms was 3,562.8 Million USD, accounting for 7.8% of total foreign investment, ranking fourth, up from 5th place the previous year.

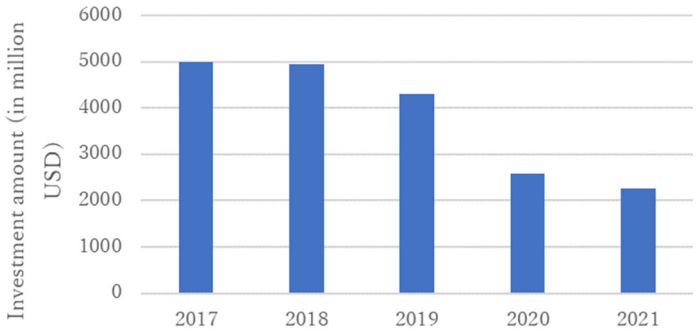


Source: JICA Study Team based on materials attached to JETRO Business Brief, February 9, 2023.

Figure 5-42 Investment in Indonesia by Country (2022, in Million USD)

(2) Japanese Investment in Indonesia

As shown in the figure below, investment from Japan was nearly5 Billion USD, 4.99 Billion USD in 2017 and 4.95 Billion USD in 2018; Due to the impact of COVID-19 since 2019, it halved to about 2.26 Billion USD in 2021 before recovering to 3.56 Billion USD in 2022, about 70% of the pre-COVID-19 level.



Source: JICA Study Team based on materials attached to JETRO Business Brief, February 9, 2023.

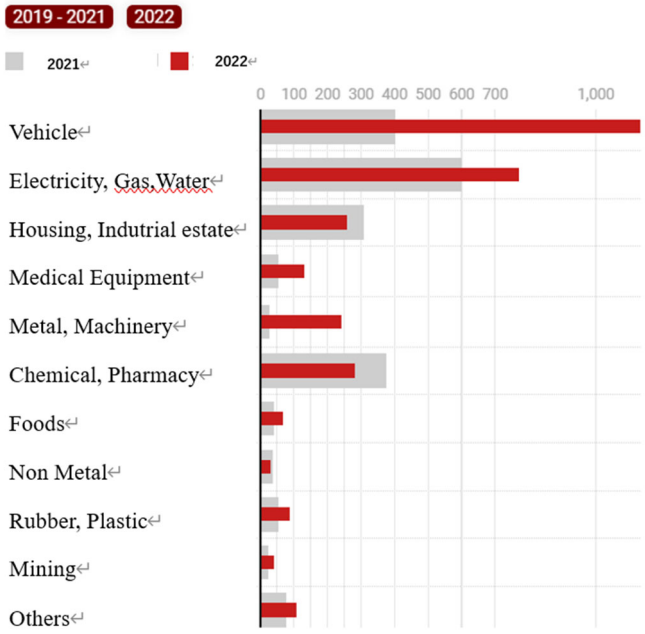
Figure 5-43 Trends in Japanese Investment in Indonesia

(3) Japanese Investment in Indonesia by Sector

According to the Ministry of Investment and Investment Coordination Agency (BKPM),

Japanese direct investment in Indonesia in 2021 (on an execution basis) was 2,263.2 Million USD, down 12.5% from the previous year. By industry, electricity, water, and gas, which accounted for 26.4% of total investment, declined 37.8% to 598.56 Million USD. Real estate, industrial parks, and office-related activities also declined 24.2% to 305.75 Million USD. On the other hand, chemicals and pharmaceuticals increased 3.4 times to 375.09 Million USD, accounting for 16.6% of total investment, while automobiles and transportation equipment increased 69.4% to 495.95 Million USD. (See the gray graph below.)

Although the number of new investments has not been large since the beginning of 2022, there have been increases in new investments in 2022, due to the establishment of new corporations in food manufacturing, logistics and warehousing, as well as M&A of local companies in the IT sector during 2021. The sectors with the largest Japanese investment for the entire year of 2022, excluding transportation equipment, oil & gas, and financial services, were basic metals, metal products, and non-machinery and equipment, amounting to 10,960.6 Million USD (24.0% of total investment by foreign firms). Other major investments included mining at 5.145 Billion USD (11.2%) and chemicals and pharmaceuticals at 4.5055 Billion USD (9.8%). (See the red graph below)



Source: Japan Indonesian Partnership Lounge:https://www.dashboard.kbritokyo.jp/jp/investasi-di-indonesia/realisasi

Figure 5-44 Japanese Investment by Sector (2021: gray graph, 2022: red graph)

(4) Japanese Company Locations and Investment Areas

According to the 2020 JETRO tally, there are 1,489 Japanese companies in Indonesia, 44.3% located in the Special Capital Region of Jakarta and 44.0% in West Java. By industry, 871 companies are in the manufacturing industry, including transportation machinery, electronic/electrical equipment, metal products, plastics, chemicals, and food. There are 618 non-manufacturing companies, many of which are in the commerce, construction, logistics, business services, finance and information industries. In 2021, 4,128 investment projects were

in West Java, 2,162 in the Special Capital Region of Jakarta, and 666 in East Java.[59]

5.4.5 Japanese Companies' Business Development Plan in Tri-City

(1) Current Business Development of Japanese Companies in Tri-City

This study obtained a list of about 197 major companies in Balikpapan City, Samarinda City, Kutai Kartanegara Regency, PPU Regency, etc. from the Indonesian Ministry of Investment (BKPM), but the names of Japanese companies were not found. The following is a list of four Japanese companies operating in East Kalimantan Province, two Japanese companies with which this study has project-base relationships, and one Japanese company operating in West Kalimantan Province.

1) Hokkaido Kalimantan Energi (Samarinda City)

Hokkaido Kalimantan Energi Samarinda City Plant, Sector: Biomass Fuel

The company was jointly established by Environmental Engineering Co., Ltd., a waste treatment company under the umbrella of the Sapporo-based construction company Nakayamagumi, and a local Hokkaido University graduate. The company has acquired 200,000 tons of the 300,000 tons of oil palm shells (PKS) generated annually from local plantations (see figure below). The company has a pilot business in Kota Kinabalu, Malaysia, and is considering handling wood pellets in the future.

Source: JICA Study Team

Figure 5-45 Hokkaido Kalimantan Energi Stock Yard

2) PT.TOTAL BIOFUEL INDONESIA (Pasar Regency)

Total Biofuels Indonesia, Sector: Biomass Fuels

A local subsidiary established by TTS Planning in Iizuka City, Fukuoka Prefecture. The company sees commercial opportunities in oil palm shells, which are used a fuel for biomass power generation and demand is growing both in Indonesia and abroad. In June 2023, the company began operating a stockpile of oil palm shells in East Kalimantan Province and supplying the product to the domestic market. In addition, between 2024 and 2025, the company is considering exporting 100,000 tons per year to a biomass power plant funded by TTS Planning, which began operations in Fukuoka Prefecture in August.

[59] List of Japanese Companies in Indonesia JETRO Jakarta Office 2020

3) **PT. NIPPON EXPRESS INDONESIA BALIKPAPAN OFFICE (Balikpapan)**

Nippon Express Indonesia Balikpapan Sales Office, Sector: Logistics

A local subsidiary of Nippon Express that opened in 2017. It mainly handles air freight imports of spare parts for local construction equipment manufacturers such as Komatsu and Scania. Local delivery is outsourced to a logistics company.

4) **PT. Kaltim Methanol Industri (KMI) (Bontang)**

Sector: Petrochemicals

A methanol production company located in Bontang, East Kalimantan Province, Indonesia. Established in 1991, the company is currently 85% owned by Sojitz Corporation of Japan, 10% by Humpuss Trading of Indonesia, and 5% by Daicel Chemical of Singapore.

5) **JANUS (Tokyo) project-based and associated with East Kalimantan Province**

Japan NUS Co. Ltd., Sector: Consulting

A Japanese environmental and energy consulting firm, primarily funded by JGC Corporation, studied the composition of marine debris and its impact on mangrove ecosystems in the coastal areas of East Kalimantan Province in 2023.

6) **IMPEX (Tokyo) Associated with East Kalimantan and Central Kalimantan Provinces on a project basis**

INPEX Corporation, Sector: Energy

The production sharing contracts for crude oil and natural gas in the Makaham and Impex Ataka fields offshore Samarinda City, which had been in operation since 2007, expired at the end of 2017 and were returned to the Indonesian government. The company is currently promoting three gas fields and one geothermal power project in Indonesia and has also supporting the Rimba Raya Biodiversity Reserve REDD project in Central Kalimantan Province, through which it has agreed with Infinite EARTH to acquire 5 Million tons of carbon credits over five years.

7) **Sumitomo Forestry (Tokyo) operates in West Kalimantan Province**

Sumitomo Forestry, Sector: Forestry, Housing

In 2022, Sumitomo Forestry acquired 100% of the shares of PT. BINA OVIVIPARI SEMESTA, which owns and manages 9,738 ha of mangrove forests, making it a wholly owned subsidiary. Under its long-term vision "Mission TREEING 2030," the Sumitomo Forestry Group has set a goal of "accelerating the recycling-oriented forest business" and aims to expand the area of forests it owns and manages in Japan and overseas to 500,000 ha by 2030. The group will manage mangroves as "protected forests," reduce CO2 emissions, and create blue carbon credits.

(2) 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.

1) Tri-City urban service facilities and housing

The Indonesian Ministry of Investment (BKPM) is currently seeking several PPP projects for housing within IKN. Aside from government officials, the population of IKN and Balikpapan City is expected to increase, including workers in urban services and new industries in IKN, and it is thought that there will be room for entry into urban development such as housing, commerce, and lodging facilities, as well as civic service industries such as education and healthcare.

2) Tri-City Infrastructure Development

BKPM is currently seeking proposals for PPP projects for regional toll roads. There appears to be room for entry into PPP projects in urban infrastructure such as roads, water supply and drainage, and waste treatment, as well as the development and operation of airports and, railways.

3) Renewable Energy Equipment

As for solar panels, price competition with China, government support, and foreign investment restrictions will be key. Furthermore, in the case of solar power generation system business, it is necessary to carefully examine various conditions, such as the electricity buyer and price of electricity, and demand in the region. As for electric motorcycles, it is expected that manufacturing facilities in Java will be repurposed, but it will be necessary to consider domestic demand that is commensurate with the investment, and the development of charging stations in the region and nationwide.

4) Integrative medicine

Although domestic demand for generic drugs is expected, it is necessary to assess the government's stance on local human resource development and foreign investment restrictions.

5) Sustainable Agriculture

Since there is no accumulation of agricultural technology, it is believed that there is room for entry if Japan’s agricultural technology and efficient production systems are introduced.

6) Ecotourism, Medical Tourism

The approach will vary depending on whether the target is Japanese, foreign, or domestic, but the premise is an increase in domestic and international flights to Balikpapan City and Samarinda City. Ecotourism can be implemented as a set with IKN tourism if it combines existing tourism resources with lodging, food and beverage, and transportation, but medical tourism requires confirmation of the medical level and capacity of existing medical facilities and those under construction in IKN.

7) Advanced Chemistry

With regards to petrochemicals, the IMPEX and Sojitz have experience of methanol production in Bontang, making it an area where Japanese companies can easily expand their operations. In the field of oleo-chemicals, Japanese companies that have already expanded into Indonesia are expected to enter the market for the purpose of supplying products to the domestic market.

8) **Low Carbon Fuel Energy**

Japanese companies have already entered the biofuel market through the use of oil palm shells, and domestic demand is expected to grow in line with government policy, making it possible for the market to be expanded horizontally. Two Japanese companies are currently conducting demonstration tests on coal gasification in Indonesia, and the project is considered to be in the feasibility study stage. There are also three plans for CCS/CUUS in East Kalimantan Province, and as Japanese companies are also involved, the projects are considered to be in the decision-making stage.

9) **Smart Cities and Digital Centers**

Although there have been demonstrations at command centers and technology houses, and support expressed by various countries, it is believed that there is still room for entry at the level of considering specific proposals such as transportation and disaster prevention, through collaboration with Telkom Indonesia, for example.

10) **Education in the 21st Century**

Since government officials feel a strong need for vocational training school-like human resource development institutions, this could be an opportunity for the government to work in cooperation with the Ministry of Industry and the Ministry of Education to enter the human resource development business as well as to advance the standardization of Japanese technology.

Table 5-33 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.	Highways, 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.	IKN Mega Solar PPP by BKPM.

		Transmission Grid Business. Solar housing development.	
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 oleochemistry)	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 measures. Business SF Verification.	CCS/CCUS business development in gas fields.	Three projects are underway in East 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, Huawai, 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 Study 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

(1) Summary of General PPP-related Laws and Regulations

The funding required for infrastructure development in the National Middle-Term Development Plan (RPJMN) 2020-2024 is estimated to be 6,445 Trillion IDR. It is estimated that only about 37% of this required amount can be met by the national government budget (APBN) and the local government budget (APBD). In order to meet these infrastructure needs, including the development of the New Capital City, PPP projects are being promoted.

In Indonesia, the legal system for private investment in infrastructure included Law No.15/ 1985 on electricity and No.13/1987 on toll roads, which were enacted in the 1980s, and private investment of over 20 Billion USD, mainly in electricity, telecommunications, and transportation, during the 20 years until the Asian Currency Crisis.

In 2005, Presidential Decree No.67/2005 on PPP was promulgated, which laid the foundation for the current PPP system by introducing a public guarantee system, a public financing system, and Viability Gap Funding (VGF, financial support provided by the Ministry of Finance). Subsequently, Presidential Decree No.38/2015 expanded the sectors eligible for government support in PPP projects and introduced the Availability Payment (AP), a system whereby the Government Contracting Agency (GCA) commits to a fixed payment to the private sector, the IIGF (a 100% Treasury funded public guarantor) guarantees the GCA's performance under the contract.

(2) PPP System Related Laws and Regulations

1) PPP Scheme Framework

a) Presidential Decree No.38/2015 on Public-Private Partnerships on Infrastructure

It contains general provisions for national development assistance through PPP schemes to improve the national economy, social welfare, and international competitiveness. This Presidential Decree mandates BAPPENAS, LKPP, Ministry of Finance, and Ministry of Home Affairs to prescribe technical regulations for the establishment of PPP schemes.

b) Regulation of BAPPENAS No.7/2023 on the Implementation of PPP in Infrastructure Development

The Regulation on the Implementation of PPP in Infrastructure Development, which repealed the previous Regulation of BAPPENAS No.4/2015 and Amended Law No.2/2020. The main points of this regulation are as follows

- Project formation process for both Solicited and Unsolicited projects (simplified compared to conventional methods)
- Definition of Government Contracting Authority (GCA) and stakeholders that can support PPP projects (e.g., establishment of PPP nodes, use of process advisors, etc.)
- Role of Indonesia PPP Joint Office in PPP project support (facilitation and acceleration of PPP project implementation, monitoring and evaluation, etc.)

- List of infrastructures that can be provided under the PPP scheme (expanded from 19 to 22 sectors)
- Creation of new provisions for the PPP process, including small PPP procedures, empanelment of the Preparatory Authority, deferral of the Financial Close period, modification of PPP contracts, and the PPP transition process.

c) Regulation of LKPP No.19/2015 on Guidelines for Business Formation of PPP Schemes in Infrastructure Development.

These rules apply to Unsolicited projects and preparing institutions.

d) Regulation of LKPP No.29/2018

Solicited Guidelines for the procurement of entities in PPP infrastructure projects, with a particular focus on clearer guidelines for two-stage bidding.

2) Framework for availability payment schemes in PPP projects

a) Regulation of the Minister of Finance No.260/2016 on Availability Payments for PPP Schemes in Infrastructure Supply (Amended Regulation of the Minister of Finance Regulation No.190/2015 on Availability Payments for PPP Schemes in Infrastructure Supply)

b) Regulation of the Ministry of Home Affairs No.96/2016 on Availability Payments Using Local Budgets (APBD) in PPP Schemes for Infrastructure Development and Circular of the Ministry of Home Affairs No.120/3890/SJ on Explanations on the Implementation of Cooperation with Third Parties in Local Governments.

The Regulations and Circulars regulate KPDBU, PPP schemes for local governments; state-led PPP schemes are called KPBU in Indonesian language.

3) Framework for Government Guarantees for PPP Projects

The framework for government guarantees in PPP projects consists of the following three major rules.

a) Presidential Decree No.78/2010 on Government Guarantees for PPP Infrastructure Projects

b) Regulation of the Ministry of Finance No.260/2010 and amended Minister of Finance Regulation No. 8 of 2016 regarding Guidelines for Government Guarantees.

c) Regulation of the Ministry of Finance No.183/2018 on the Management Reserve Fund Guarantee Program for the Implementation of Government Guarantees

4) Framework for Government Support for PPP Projects

The framework of government support for PPP projects consists of three main rules.

a) Regulation of the Minister of Finance No.223/2012 and amended Minister of Finance Regulation No.170/2018 on the Provision of Viability Gap Funding (VGF) in PPP Infrastructure Provision

b) Regulation of the Minister of Finance No.143/2013 and amended Minister of Finance Regulation No.170/2015 on Guidelines for VGF Provision in PPP Infrastructure Provision.

c) Regulation of the Minister of Finance No.180/2020 on Project Development Facility (Project Formation) in PPP Infrastructure Development

5) Other relevant rules

In addition, the following other relevant rules exist.

a) Government Regulation No. 27/2014 and amended Government Regulation No.28/2020 on the Management of National and Regional Assets

(3) PPP System Target Sectors

The following 22 sectors of infrastructure development are covered under the PPP program (the number of sectors covered has increased from 19 to 22 with the introduction of the new program since 2023). Note that the IIGF guarantee covers areas other than prison facilities. However, 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 5-32 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, agro tourism, 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.
Connecti vity	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.
Other	Infrastructure related to government facilities	Government facilities, etc.

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

(4) Ministries/Agencies in Charge of General PPP System in Indonesia

The implementation of PPP projects in Indonesia will require collaboration with the following government organizations

- KPPIP (Committee for Acceleration of Priority Infrastructure): Composed of the Coordinating Minister for Economic Affairs, the Coordinating Minister for Maritime and Investment Affairs, the Minister of Finance, the Minister of BAPPENAS, the Minister of ATR/BPN, and the Minister of Environment and Forestry, the Commission is responsible for strategic planning, policy coordination, and monitoring.
- BAPPENAS (Ministry of National Development Planning/ National Development Planning Agency) : responsible for promoting PPP policies, verifying the marketability and profitability of PPP project operations, and contractual relations.
- CMEA (Coordinating Ministry for the Economy): oversees the Ministry of Public Works and Housing, ATR/BPN, the Ministry of Environment and Forestry, etc., and is responsible for organizing conferences such as the Infrastructure Summit, and capacity building on PPP.
- CMMIA (Coordinating Ministry for Maritime and Investment Affairs): oversees the Ministry of Transportation and the Ministry of Energy and Mineral Resources, and is responsible for policy development and cross-ministry coordination regarding infrastructure development, including ports, airports, railroads, and power facilities.
- MOF (Ministry of Finance): in charge of developing and improving mechanisms and systems of financial support for PPP projects
- MOHA (Ministry of Home Affairs): partially responsible for review and approval of local government PPP projects requiring Availability Payments (AP) and central government support and government guarantees
- LKPP (National Procurement Agency): responsible for supporting and supervising PPP bidding procedures

- GCA (Government Contracting Agency): Government agency that plans, prepares, and implements PPP projects
- BKPM (Ministry of Investment)
- ATR/BPN (Ministry of Agrarian Affairs and Spatial Planning/National Land Agency)
- IIGF (Indonesia Infrastructure Guarantee Fund): A public guarantee agency established at the end of 2009, wholly owned by the Ministry of Finance
- Other infrastructure financial institutions

(5) PPP Types

1) Solicited

Infrastructure projects initiated by the government and under the cooperation from entities required by the government are called “solicited”. As defined in Presidential Decree No.18/2015, PPP is a cooperation between the government and an entity to provide infrastructure for the public benefit, with reference to specifications set in advance by the minister/agency head/regional head/state-owned enterprise/regionally owned enterprise, and with due consideration of risk sharing between the parties, some or all of the resources of the entity.

2) Unsolicited

Unsolicited PPP projects, which are initiated by private entities, may be implemented for the same types of infrastructure as solicited PPP projects. Unsolicited PPP projects must meet the following requirements;

- Be technically integrated with the sector master plan
- Be economically and financially feasible
- The proposed project entity has sufficient financial capacity to raise the funds necessary to implement the infrastructure provision

(6) Implementation Procedure of General PPP Projects

The following is the normal procedure for implementing PPP projects in Indonesia.

① The ministers/heads of the ministries/agencies involved in the project submit proposals to KPPIP.
② KPPIP evaluate technical and financial feasibility.
③ The risk management division of the Ministry of Finance check the risk and cost.
④ Approval by the Minister of Finance.
⑤ Consultation with the National Parliament on the draft budget of the project.
⑥ Approval by the National Parliament.
⑦ The ministers/heads of the ministries/agencies involved in the project initiate bidding procedures.
⑧ Determination of project implementor
⑨ Explanation of the bidding process by the ministers/heads of the ministries/agencies involved in the project to the risk management division of the Ministry of Finance.
⑩ Final decision by the Minister of Finance

⑪ Contract

(7) PPP System for Local Governments

In addition to the state-led PPP ("KPBU") as stipulated by Presidential Decree No.67/2005 and Presidential Decree No.38/2015, the local government-led PPP ("KPDBU") was introduced in Indonesia by Government Regulation No.96/2016. KPDBU is expected to be a means to solve the financing problem in the context of the growing need for infrastructure development in local areas to promote economic growth, while the availability of the local government budget (APBD) is insufficient to meet the maintenance level in the National Middle-Term Development Plan (RPJMN) as well as the national budget. This is expected to be a solution to the challenge.

In KPDBU, the head of the region acts as GCA; KPDBU is implemented in the following phases;

a. Planning phase
    a) Budget planning
    b) Business Clarification
    c) Budgetary provision
    d) Decision on whether to proceed with the plan or not
    e) Submission of the plan to BAPPENAS
    f) Classification confirmation
b. Preparatory phase
    a) Pre-FS
    b) Submit a request of the government assistance/guarantee
    c) Submission of a draft of implementation sites
c. Transaction phase
    a) Market sounding
    b) Finalization of implementation sites
    c) Finalization of implementing entity
    d) Signing of implementation agreement
    e) Financial close

However, according to information as of 2021, 17 projects used government assistance (PDF) (4 of which were cancelled), 12 projects did not use PDF, and only 3 projects reached the stage of starting provision. There are issues in the use of KPDBU, such as the lack of consistency with the legal system on the part of central government ministries and agencies and lack of support from the central government.

(8) PPP Projects in Indonesia

The progress of the overall PPP project from 2022 to 2023 and again from 2023 to 2024 is shown below.

Source: Public Private Partnership Infrastructure Project Indonesia, BAPPENAS 2023 (upper part); Public Private Partnership Infrastructure Project Indonesia, BAPPENAS 2024 (lower part). BAPPENAS 2024 (lower part)

Figure 5-46 PPP Book Project Evaluation (Overall PPP Project Progress)

	Solicited			Unsolicited		
	Return of Investment	Total Project	Total Capital Expenditure	Return of Investment	Total Project	Total Capital Expenditure
Under Preparation	AP : 3 projects		USD 1,361.20 million	AP : 10 projects		USD 3,111.54 million
	User Charge : 17 projects		USD 13,913.21 million	User Charge : 4 projects		USD 1,172.93 million
	Other Form : 8 projects		USD 364.88 million	Other Form : -		-
	Under Review* : 2 projects		USD 371.34 million	Under Review* : -		-
Ready To Offer	AP : 1 project		USD 222.60 million	AP : 2 projects		USD 201.34 million
	User Charge : 4 projects		USD 4,065.88 million	User Charge : 5 projects		USD 3,323.54 million
	Other Form : 1 projects		USD 32.88 million	Other Form : -		-
Agreement Signing	AP : -		-	AP : 2 projects		USD 8.06 million
	User Charge : 3 projects		USD 2,056.91 million	User Charge : 3 projects		USD 3,132.47 million
	Other Form : -		-	Other Form : -		-
Construction	AP : 1 projects		USD 127.21 million	AP : -		-
	User Charge : 4 projects		USD 2,620.36 million	User Charge : 4 projects		USD 3,858.75 million
	Other Form : -		-	Other Form : -		-
Operation	AP : 8 projects		USD 1,131.44 million	AP : 1 project		USD 141.27 million
	User Charge : 12 projects		USD 7,762.23 million	User Charge : 5 projects		USD 3,242.36 million
	Other Form : -		-	Other Form : -		-
TOTAL	**AP : 13 projects**	**64 projects**	**USD 2,842.44 million**	**AP : 15 projects**	**36 projects**	**USD 3,462.21 million**
	User Charge : 40 projects		**USD 30,418.58 million**	**User Charge : 21 projects**		**USD 14,730.04 million**
	Other Form : 9 projects		**USD 397.76 million**	**Other Form : -**		**-**
	Under Review* : 2 projects		**USD371.34 million**	**Under Review* : -**		**-**
			USD 34,030.14 million			**USD 18,192.25 million**

*Project is under FBC preparation and in process for determining the investment return.

Source: Public Private Partnership Infrastructure Project Indonesia, BAPPENAS 2024

Figure 5-47 PPP Project Implementation Status as of 2024

5.5.2 Overview and Issues of PPP Schemes and Other Financing Schemes Applicable to New Capital Development Projects

(1) PPP System Applicable to New Capital Development Projects and Differences from the General PPP System

The following four main laws and regulations have been enacted as New Capital PPP-related legislation for the projects of the New Capital Development.

1) Government Regulation No.17/2022 on the management of the budget of funds for the preparation, development and transfer of the capital city and the implementation of IKN operations
2) Regulation of BAPPENAS No.6/2022 on Guidelines for the Implementation of PPP in IKN
3) Regulation of LPKK No.1/2023 on the Procedures for the Implementation of the PPP Project Entity in IKN
4) Regulation of Ministry of Finance No.220/2022 on Government Support for PPP and Creative Financing Schemes to Promote Infrastructure Development in IKN

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 5-33 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: JICA Study Team

Table 5-34 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

(2) Financing System in New Capital City PPP-related Legislation

As mandated by Government Regulation No.17/2022, the Ministry of Finance has issued Regulation of Ministry of Finance No.220/2022 to provide support for cooperation with GCA and creative financing in the context of accelerated infrastructure development in IKN.

Regulation of Ministry of Finance No.220/2022 consists of the following;

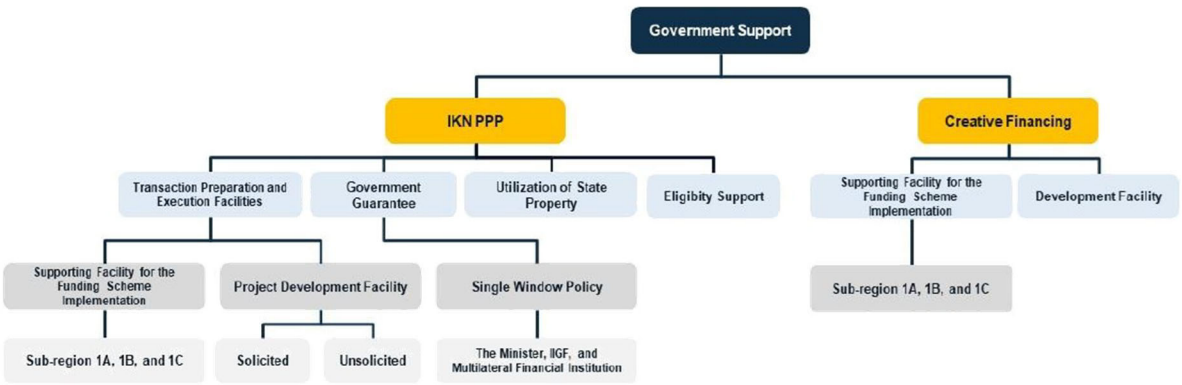
(i) Support functions for the implementation of the financing schemes

(ii) Project Development Fund ("PDF")

(iii) Government support for PPP projects in IKN

(iv) Availability Payment (AP) Scheme

(v) Infrastructure finance providers



Source: Ministry of Finance Regulation No.220/2022

Figure 5-48 Financial System in New Capital City PPP-related Legislation

The details of each support program stipulated in the Regulation of Ministry of Finance No.220/2022 are shown below.

1) Support functions for the implementation of the financing schemes

a) Funding Scheme

Funding for the preparation, development, and transfer of IKN may come from (i) the national budget or (ii) through the following sources in accordance with the legal system and legislation

(i) PPP

(ii) Transfers of entities whose capital is owned in whole or in part by the State

(iii) Government securities

(iv) Fundraising support schemes or international funding

(v) Use of BMN (state-owned assets) and/or assets owned by OIKN

(vi) Creative financing

It should be noted that creative financing will be decided by the Minister of Finance and subsequently delegated to the Directorate General for Financing and Risk Management (DGFRM). To support the financing scheme, the National Government will provide government support. The government support may be provided to projects in accordance with the legislation on the IKN Master Plan and the details of the IKN Master Plan.

In addition, the government support includes

1) Transaction preparation and execution support, including assistance in implementing financing schemes and project development
2) Government Guarantee
3) Use of BMN
4) Viability Gap Fund (VGF)

b) Support for implementation of financing schemes

Pursuant to Ministry of Finance Regulation No.220/2022, the government support provided by the Ministry of Finance for IKN's PPP financing scheme is in the form of support for the implementation of the financing scheme. Support for the implementation of the financing scheme will be provided for activities including

a. Preparation of surveys, preparation of land acquisition planning documents or site selection

b. Preparation to comply with legal systems related to PPP in the New Capital City

c. Research and documentation on priority projects targeted to be implemented in the government area of IKN

d. Preparation of a study and recommendation document on funding sources and funding schemes to be used in the framework of the financing of IKN infrastructure provision

In the initial stage, an application for the use of the financing scheme implementation support shall be submitted in the form of a letter from the Head of OIKN to the Ministry of Finance. In connection with such implementation, the Ministry of Finance may designate a state-owned enterprise to implement the relevant assistance.

2) Project Development Fund (PDF)

Pursuant to Regulation of Ministry of Finance No.220/2022, PDF is provided to support IKN infrastructure development to be implemented through the IKN-PPP financing scheme The purpose of the PDF provision is:

(i) Prepare project documentation as required during the project development phase

(ii) Execution of the transaction

(iii) Contract performance (infrastructure development and provision)

The PDF procurement phase also consists of:

(i) Application

(ii) Examination

(iii) Implementation

(iv) Determination of deliverables

In addition, PDFs are provided through the following steps:

(i) Preliminary Preparation Phase

(ii) Preparation Phase

(iii) Transaction Phase

(iv) Contract performance Phase

3) Government Support for IKN PPP

Applications for government assistance can be submitted at the same time as the PDF application, in a letter addressed to the Ministry of Finance.

a) Clawback (refund) waiver

The infrastructure guarantee under the IKN-PPP scheme is an Indonesian government guarantee implemented by the Ministry of Finance together with IIGF. The Government Guarantee will be implemented by (i) the Ministry of Finance and IIGF on an infrastructure risk-by-infrastructure risk basis when the Ministry of Finance and IIGF guarantee different infrastructure risks in one IKN infrastructure supply, or (ii) the Ministry of Finance and IIGF guarantee the same infrastructure risk in one IKN infrastructure supply when the Ministry of Finance and IIGF guarantee the same infrastructure risk, the amount of the guarantee for the

infrastructure risk to be guaranteed will be split between the Ministry of Finance and IIGF.

In order to optimize the functioning of IIGF, the Ministry of Finance may provide assistance as specified in the Ministry of Finance Regulation on the scope of administration of government guarantees by IIGF. The Ministry of Finance may also provide liquidity support to IIGF.

The government guarantee processes for IKN infrastructure development projects are implemented through a single executor mechanism (single window policy) by IIGF. The single executor mechanism by IIGF includes the following

(i) Guarantee granting processes

(ii) Processes for monitoring and controlling risks claims and payments

The government guarantees for the provision of IKN infrastructure through the IKN-related PPP will be given for infrastructure risks arising from

(i) by any act or omission of GCA or other governmental organizations than GCA in any matter showing that GCA or other governmental organizations than GCA has the power or authority to do such act pursuant to the laws and regulations

(ii) by policies of GCA and other governmental organizations than GCA

(iii) by unilateral decision of GCA or other governmental organizations than GCA

(iv) failure of GCA to fulfill the obligations determined by IBE (Project Implementer) under the IKN-related PPP agreement.

b) Use of BMN

In order to increase the feasibility of infrastructure projects in IKN through the IKN-related PPP, the Ministry of Finance may provide assistance in the use of BMN (national asset).

(i) Rent

(ii) Borrowing

(iii) Utilization Cooperation

(iv) Build-Operate-Transfer (BOT) or Build-Transfer-Operate (BTO)

(v) Cooperation on infrastructure supply/cooperation on infrastructure development

c) Viability Gap Fund

The Viability Gap Fund ("VGF") is government support through financial contributions provided by the Ministry of Finance to IKN-related PPP projects, with two objectives

(i) Reduce the risk of insurance premiums during the construction period and encourage private sector participation in the IKN infrastructure development;

(ii) Deliver quality services, on target and on time

VGF will be awarded for IKN infrastructure procurements only for a certain portion of the total infrastructure construction cost (an amount sufficiently small relative to the total). The total infrastructure construction costs are subject to the following

(i) Construction costs

(ii) Equipment costs

(iii) Installation costs

(iii) Interest on borrowings applicable during the construction period

(iv) Tax expenses

(v) Other costs associated with construction (excluding land acquisition costs)

In addition, the VGF criteria that must be met in the procurement of IKN infrastructure through the IKN-related PPP are as follows

(i) Solicited Project

(ii) implemented by the IBE

(iii) implemented in accordance with the IKN-PPP Agreement, which provides for an asset transfer scheme at the end of the cooperation period and/or its administration from the IBE to the GCA.

(iv) based on a pre-feasibility study

4) Availability Payment (AP) Scheme

The AP scheme is applied in IKN-related PPP. The purpose of implementing the AP scheme in IKN-related PPP is twofold

(i) Provide quality services to the public on a continuous basis

(ii) To optimize the budget of GCA (with respect to cost-effectiveness)

When submitting an application for the AP scheme, the following documents must be provided

(i) Conformity of IKN infrastructure with the details of the IKN Master Plan

(ii) Provision of IKN infrastructure by IBE, selected through a fair, open and transparent processes

(iii) Confirmation of AP implementation

In addition, the following provisions apply when applying the AP scheme.

(i) AP schemes may be combined with other investment return schemes.

(ii) For the AP funding provision, revenue from other projects may be considered.

Therefore, IKN-related PPP schemes that use AP as an investment return scheme are entitled to the government support.

The application of the AP scheme will be implemented by GCA to IBE through the IKN-related PPP contract; if the IKN infrastructure procurement applies the AP scheme, the IKN-PPP contract must include at least the following clauses

(i) objective and measurable output specifications and performance indicators for services

(ii) the agreed AP amount formula which is the basis for the calculation of GCA's obligation to IBE

(iii) an effective monitoring system for the performance indicators referred to in (i)

(iv) Incentive and penalty schemes for GCA/IBE

5) Infrastructure Finance Providers

To accelerate the development of IKN infrastructure, the Ministry of Finance may designate companies engaged in infrastructure financing under the guidance of the Ministry of Finance as Infrastructure Finance Providers. The Ministry of Finance may also work with institutions engaged in investment management as Infrastructure Finance Providers.

The Infrastructure Finance Provider will play a role in financing IKN infrastructure development through the IKN-related PPP scheme in order to speed up the implementation of IBE and creative financing.

CHAPTER6 Recommendations on Tri-City Development Concept

Based on the information in Chapter 2-6, 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.

In this chapter, the following items were organized based on the contents of the proposed Tri-City development concept: (1) Positioning of Tri-City Development, (2) Study Procedure of Tri-City Development, (3) Development Challenges on Tri-City, (4) Directions from Related Long-Term Development Plans, (5) Tri-City Development Concept (draft), (6) Study on Implementation Structure (draft), and (7) Study on Tri-City Collaboration Projects (draft). The Tri-City Development Concept (draft) presented in this chapter was studied based on discussions with related organizations and reflecting collected opinions as much as possible. On the other hand, opinions that were raised during the September and October 2024 discussions with related organizations that should be continuously considered were organized as (8) Opinions for Future Consideration of Tri-City Development.

6.1 Positioning of Tri-City Development

6.1.1 Legal Background of Tri-City Development

The necessity and direction of the Tri-City development are described in Law No.3/2022 and Presidential Regulation No.63/2022, which states that the role of the New Capital City as an "Economic Superhub" will be realized through the Tri-City strategy. It is also stated that "IKN, Balikpapan City, and Samarinda City will form a complementary triangle of economic development". Presidential Regulation No.63/2022 also indicates that the East Kalimantan Economic Transformation Master Plan will be formulated. According to the Presidential Regulation, the new capital will be a new hub for government functions and green growth, Samarinda City will aim to transform existing situation into a sustainable energy, and Balikpapan City will be a hub for interregional logistics and commercial distribution, including a petrochemical cluster. On the other hand, there is currently no concrete Tri-City Development Plan.

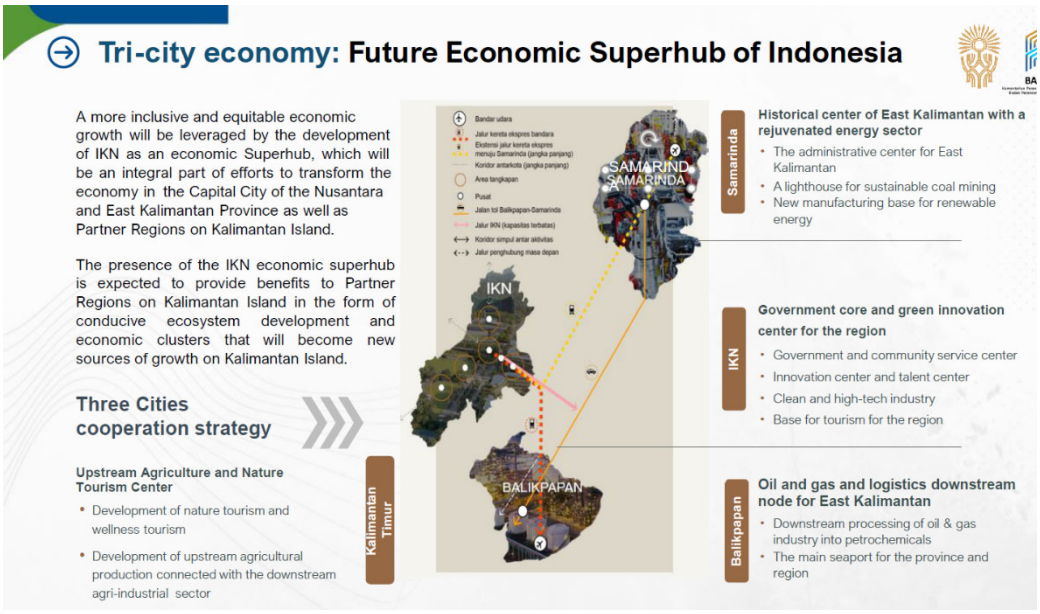
6.1.2 Existing Tri-City Development Concept

The following figure illustrates the existing Indonesian government's concept of collaboration among the three cities. The New Capital City will be developed as Indonesia's "Economic Superhub" and will become a center for green innovation in the government's core region. East Kalimantan Province is expected to become a center for agriculture and nature-based tourism, whereas Samarinda City becomes a center for history and energy industries, and Balikpapan City becomes a center for oil, gas, and logistics.

According to BAPPENAS, it is also envisioned that IKN will play an important role in the development of next-generation industries such as education, research, and advanced agriculture, while Samarinda City will focus on renewable energy and green economy.

Balikpapan City is expected to focus on circular economy such as integrated pharmaceutical industry and advanced chemical industry.

The existing Tri-City Development Concept has examined the characteristics and roles of each city and the direction it should take, mainly from the aspect of industrial development. However, how the three cities should work together to promote regional development has not been sufficiently examined.



Source: BAPPENAS

Figure 6-1 Existing Direction of Tri-City Collaboration

6.1.3 Gaps between Development Plans of Tri-City

The following table shows the gaps between the existing development plans of the three cities and points to consider in future studies. While qualitative references to the impact of the New Capital City development are made in the plans of Balikpapan City and Samarinda City, the assumed increases in population, transportation and infrastructure demand, and land prices have not been fully considered or reflected, and quantitative analysis and other measures are considered necessary.

Since there is a gap between the development goals of the new capital and neighboring cities, it is important to work together as a Tri-City to realize the future vision of the new capital, and to consider the development goals of Balikpapan City and Samarinda City taking account of the development goals of the new capital. It is also important to consider and implement effective and efficient projects that can be implemented through inter-city cooperation, as this has not been considered extensively in existing plans.

Table 6-1 Gaps between Existing Development Plans in Three Cities

Points	Challenges	Points to be Considered
Consideration of IKN Impacts	• The IKN Development Plan and its impacts, such as population and traffic increase, land price and so on, have not been well reflected on those existing plans (East Kalimantan Province Regional Middle-Term Development Plan (RPJMD) 2024-2026 and Regional Spatial Plan (RTRW) 2023-2042, Balikpapan City RPJMD 2021-2026 and RTRW 2012-2032, and Samarinda City RPJMD 2021-2026 and RTRW 2022-2042). • It is concerned that late countermeasures against IKN impacts could escalate various urban issues.	• To consider the numerical impacts of the IKN Development at the city and the regional level, and to plan and implement projects that maximize ripple effects of the IKN Development. • It is essential to consider population and demand increase caused by the IKN Development in the urban development plan (housing), land use plan, transport plan and infrastructure plan (water supply, electricity, etc.) and projects.
Gaps of Goals and Policies	• The gaps of development goals and target indicators between IKN and surrounding cities are significant. (For example, the KPI regarding 10minutes city.)	• It is important to close the gaps of development goals among IKN, Balikpapan City, and Samarinda City, and the IKN Development Goals should be collaboratively addressed through the development of Tri-City.
Less Collaborative Actions	• The projects that should be implemented with collaboration of IKN, Balikpapan City, and Samarinda City have not been sufficiently considered in existing regional development plans and the IKN Development Plan.	• To identify the projects that could be more effective and efficient implemented by Tri-City, and to cooperatively implement those projects.

Source: JICA Study Team

6.1.4 Necessity of Tri-City Development Concept and Plan

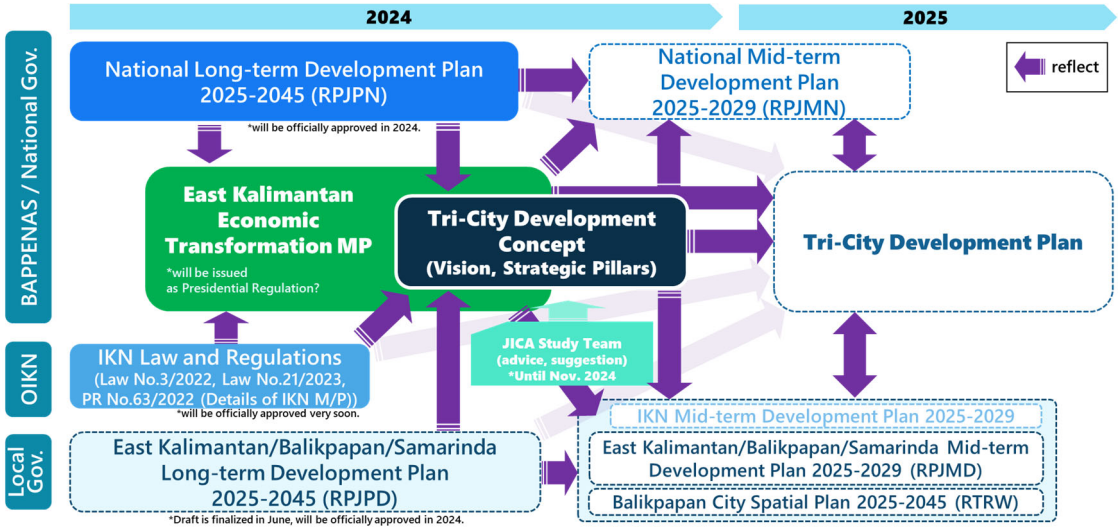
The legal framework related to Tri-City development indicates that IKN, Balikpapan City, and Samarinda City will form a mutually complementary triangle of economic development in order to realize an Economic Superhub. While the existing concept of Tri-City collaboration is considering the characteristics and roles of the three cities, it has not sufficiently considered how the three cities can work together to create added value as a Tri-City. Although the existing concept focuses on industrial and economic development, it is necessary to consider future visions and specific policies and initiatives in other sectors, such as spatial planning, infrastructure development, and the environment, from the perspective of Tri-City collaboration.

Additionally, the existing development plans for East Kalimantan Province, Balikpapan City, and Samarinda City do not adequately consider quantitative impacts of the IKN Development. The three cities should have a common understanding of the impact of the IKN Development, share a vision and strategy for future development as a Tri-City, and work together on actions to realize the future vision and resolve development challenges. To this end, it would be indispensable to formulate the Tri-City Development Concept and Tri-City development Plan.

6.1.5 Relationship between Tri-City Development Concept and Related Plans

Figure 6-2 below shows the relationship between the Tri-City Development Concept and related plans, The Tri-City Development Concept, as the Tri-City Development Vision and

the Strategic Pillars, provides the future development direction of the Tri-City development. The Tri-City Development Vision indicates the ideal image of Tri-City that should be realized in the future. Strategic Pillars show future fundamental and strategic directions of development for Tri-City. Tri-City Development Concept is intended to be reflected in the Tri-City Development Plan which will be considered by the Government of Indonesia. The Tri-City Development Plan will be a comprehensive development plan for long-term development through coordination and cooperation with the three cities and surrounding areas, and will include development policies, strategies, action plans, and priority projects. The detailed contents of the plan will be discussed with the relevant organizations. Regarding the target areas, the IKN, Balikpapan City, and Samarinda City will be firstly considered as they are mentioned in the law to detail the concept of Tri-City as a part of the economic superhub of IKN, while the Penajam Paser Utara (PPU) and Kutai Kartanegara regencies seem to be considered in the future.

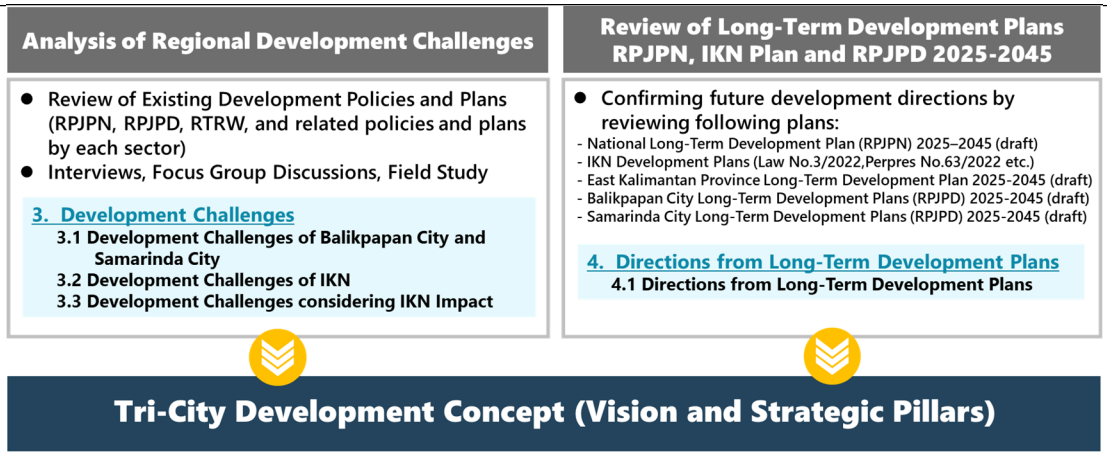


Source: JICA Study Team

Figure 6-2 Relationship between Tri-City Development Concept and Related Plans

6.2 Study Procedure of Tri-City Development

As shown in the figure below, 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, Balipapan City, and Samarinda City referring the contents described in Chapters 2 through 6.



Source: JICA Study Team

Figure 6-3 Study Flow of Tri-City Development Concept

6.3 Development Challenges on Tri-City

6.3.1 Development Challenges of Balikpapan City and Samarinda City

Based on the sectoral review of existing plans and related policies in Balikpapan City and Samarinda City in Chapter 2 and field surveys, the table below summarizes the main challenges that Balikpapan City and Samarinda City face even without considering the impact of the IKN Development. In this study, the four sectors (economy, urban life, environment and resilience, and Connectivity) were used for the consideration referring the other urban development plans such as Development Master Plan for the Sydny Metropolitan Area, to ensure the consistency and ease of understanding.

Table 6-2 Major Development Challenges of Balikpapan City and Samarinda City

Sector	Balikpapan City	Samarinda City
Economy	• Development of Kariangau Industrial Area (development of roads and securement of electricity, water, gasoline) • Developing the plan for Katingau Industrial Area, Promotion of private business with HRD • Developing and sharing long term plans for creating a hub for petrochemical industries by the local governments and private sector (Pertamina, Apical etc.) • From resource-oriented industries to green, sustainable and high value-added industries, promotion of biofuel production for palm oil industry • HR development for new industries	• Breaking away from dependence on coal industry to gas industry using advanced technologies • Creation of new industry using potential of Palaran port, Samarinda airport, and MSMEs • Abandoned coal mine reclamation and reuse for plantations • Study on utilization of ex-mining sites, such as solar and green energy generation sites for Palaran industrial zone • Transformation to sustainable green economy such as promotion of eco-and-medical tourism in Kamping Ketupat village and new medical facilities through Tri-City collaboration • Human resource development for new industries
Urban Life	• Managing rapid urbanization and increasing QOL • Transport measures and public transport • Improving water, drainage, wastewater facilities • Informal housing measures • Promote 3R, Extending the life and Expansion of landfill site, maintain and improve environmental index values	• Smart development of Palaran area • Traffic management and public transport • Improving water, drainage, wastewater facilities • Informal housing measures and increasing QOL • Inclusion of diversity, coexistence of traditions, • Promote 3Rs, improvement of waste

	• Inclusion of diversity, coexistence of traditions, culture and rural areas	management capacity, sanitation, maintain and improve environmental index values
Environment and Resilience	• Preserve natural environment, forest management • Flood/disaster management: Necessity of flood/disaster prevention measures in urban development, such as securing green areas, considering the deterioration of flood hazards in the future, and flood prevention measures in the Mahakam River Basin overall • Drainage measures • Peatland management	• Preserve natural environment, forest management • Flood/disaster management: Necessity of flood/disaster prevention measures in urban development, such as securing green areas, considering the deterioration of flood hazards in the future, and flood prevention measures in the Mahakam River Basin overall • Drainage measures • Peatland management
Connectivity	• Transport countermeasures and public transportation improvement (Railways, improvement of interurban bus service etc.) • Development of transportation hub in line with urban development plan (Developing transport hubs and improvement of public transport services in northern areas of urbanized area, and coastal areas) • Countermeasures to address traffic congestion (Improvement of intersections, road structures, promotion of TOD, pedestrian network) • Developing ports/airports, regional water facilities (Expantion of Semayang port, Kariangau port, Sepinggan airport, development of facilities and infrastructure for passengers and logistics etc.) • Promotion of renewable energy • Improving raw water and water supply system	• Traffic management and public transport (Development of Railways/LRT, improvement of interurban bus service etc.) • Development of transportation hub in line with urban development plan (Developing transport hubs and improvement of public transport services in Palaran area and northern downtoen area in northern part of Mahakam River) • Countermeasures to address traffic congestion (Improvement of intersections, road structures, promotion of TOD, pedestrian network) • Developing ports/airports (Expantion of Palaran port, APT Pranoto airport, development of facilities and infrastructure for passengers and logistics etc.) • Promotion of renewable energy • Improve energy supply

Source: JICA Study Team

6.3.2 Development Challenges from Perspective of Regional Development in IKN

(1) Outline of IKN Development Plan

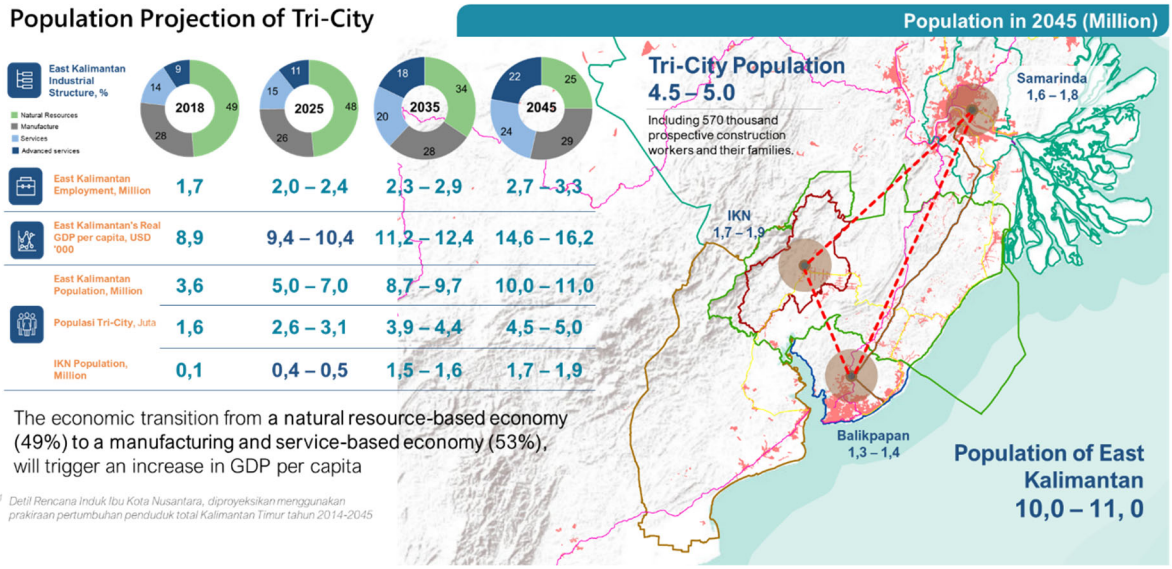
Based on the review of existing policies and development plans in Chapter 2, challenges on regal framework on IKN and surrounding areas in Chapter 3, and outline of legal background related to the IKN Development in Appendix 2, an overview of the New Capital Development Plan is recapitulated below as basic information for the Tri-City Concept study.

The new capital development area consists of 252,660ha of land area and 322,449ha including marine area, of which KIPP (6,671ha) is being developed first as the government core area. The development area of the New Capital City is divided into nine development areas including KIPP, and development is planned to be carried out in phases. The plan calls for the construction and relocation of government buildings by 2024; the strengthening of core areas and the development of residential, office, and commercial areas by 2029; the development of educational and healthcare facilities and cutting edge technology industries by 2034; the completion of major infrastructure development and the strengthening of the three-city ecosystem by 2039; and the formation of a city with a population of approximately 1.9 million

by 2045.

The vision for the development of IKN is "World City for All," which aims to make it a globally sustainable city, an engine of new economic growth for Indonesia, and a symbol of national identity. The Tri-City partnership is also considered an enabler. Twenty-four development indicators (KPIs) have been established for the development of IKN, and urban development is being promoted with the aim of achieving these indicators. A phased sectoral development plan is also being considered.

Regarding the future population projection, related local governments have been reviewing their population growth through the revision of Regional Long-Term Development Plan, considering influences of the IKN Development. The following figure shows the future population projection for the Tri-City area as of the 2023 survey. Balikpapan City and Samarinda City are also expected to experience rapid population growth by 2045.(National Capital Master Plan, BAPPENAS, 2020)



Source: JICA Study Team referring information of BAPPENAS 2023 (To be updated in regional development plans)

Figure 6-4 Future Population of Tri-City Area

(2) Main Regional Development Challenges on IKN

The main development on IKN from a regional development perspective are shown in the figure below. In the economic sector, formulating attractive and strategic industrial clusters in cooperation with the surrounding areas, developing the investment environment, fostering human resources, and promoting infrastructure projects that support industries need to be addressed. With regard to urban life, as the new capital aims to realize a 10-minute city and a smart city, and so on, it would be key challenges to reduce interregional disparities with the goals and actual conditions of the surrounding areas, and to improve the quality of life, including the surrounding areas and existing communities.

In terms of the environment and resilience, it is considered to be challenges to promote development that is consistent with the preservation and harmonization of the rich natural environment and biodiversity of the surrounding areas, and to aim for a low-carbon city and region together with the surrounding areas. It is also considered important to manage and

utilize ex-coal mining sites and peat lands not only in IKN, but also in cooperation with the surrounding areas. From the viewpoint of connectivity, infrastructure networks such as transportation networks and energy networks that link the new capital to the surrounding areas are needed. It is important to envision the future of the region, including not only the New Capital City but also the surrounding areas, and strategically promote the development of development areas, major facilities, and infrastructure projects in each sector in a coordinated manner.

Table 6-3 Development Challenges of IKN from Regional Development Perspective

Sector	Regional Development Challenges for IKN
Economy	• Attracting and fostering targeting industries • Investment promotion activities • Coexistence and collaborative/harmonized development of industries with surrounding areas • Develop local workforce and building world-class educational and institutional institutions • Promote PPP investments in infrastructure projects
Urban Life	• Realize "10 min. City" and "Smart City" • Reduce QOL disparities in the region • Supply affordable housing • Strengthen social facilities and services • Proper waste management • Coexistence and co-prosperity with local communities
Environment and Resilience	• Realize forest city through development in harmony with nature • Preserve green space and protect biodiversity • Achieve "Net Zero Emission" • Reduce flood and landslide risks and increase regional resilience • Manage peatland and ex-mining sites
Connectivity	• Realize express transit connection between IKN/KIPP and strategic airport • Strengthen connectivity by developing regional infrastructure and transport network • Promote renewable energy and energy transition

Source: JICA Study Team

6.3.3 Development Challenges considering IKN Development

(1) Challenges of Balikpapan City and Samarinda City considering IKN Development

Based on the review of existing plans and related policies of Balikpapan City and Samarinda City in Chapter 2, 2.4 and 2.5, impacts and rippled effects of the IKN Development in Chapter 4, studied result in Chapter5 and 6, development challenges of Balikpapan City and Samarinda City considering the phased development plan of IKN and its impacts are summarized in the table below, by sector and time frame (short-term: 2024-2029, medium-term: 2030-2034, long-term: 2035-2045). In addition to development challenges that should be coordinated to realize the development goals of IKN, there are many other challenges that should be addressed through Tri-City cooperation from the early stage, taking account of IKN's development impacts. There are concerns that delays in addressing issues related to the economic sector and connectivity will lead to delays in achieving the new capital and regional development goals. There are also concerns that delays in addressing issues in the urban living sector and the environment and resilience sector will lead to urban environmental degradation. Therefore, it would be significant to consider and implement measures to address these challenges as early as possible as Tri-City development.

Table 6-4 Development Challenges of Balikpapan City considering IKN Development

Sector	Short-Term 2024-2029	Middle-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 wtih 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, 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	• 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 and Resilience	• Preserve natural environment and bio-diversity, and forest management • Develop climate change/flood/disaster risk reduction(DRR) strategy and measures • Peatland management	• Preserve natural environment and bio-diversity, forest management • Promote and investing climate change and disaster/flood risk reduction measures • Peatland management	• Preserving natural environment and bio-diversity, forest management • Promote and invest climate change and disaster/flood risk reduction measures • Peatland 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: JICA Study Team

Table 6-5 Development Challenges of Samarinda City considering IKN Development

Sector	Short-Term 2024-2029	Middle-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 wtih 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 and 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: JICA Study Team

(2) Wide-Regional Development Challenges regarding Tri-City Development

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, based on the contents related to the current status and issues organized in Chapters 2 to 6. 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 6-6 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's 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 and 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 the 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 the 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: JICA Study 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 figure. The Tri-City Development Concept was discussed with reference to these directions and keywords.

Table 6-7 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 the IKN's development, Collaboration, Enhancing investment, Sustainable environment, balance between urban development and environmental preservation

Source: JICA Study Team

6.5 Tri-City Development Concept (draft)

6.5.1 Proposal of Tri-City Development Concept (draft)

On the basis of foregoing consideration by the previous session, the key elements of the Tri-City development agenda would be: creating green, sustainable, and balanced industrial clusters and increasing regional potential and investment; improving quality of life through inclusive, diverse, and smart urban development and management; protecting the natural environment, green spaces, and biodiversity, and resilience to climate change and natural disasters; and enhancement of transportation and logistics connectivity, development of wide-area infrastructure, and promotion of energy transitions.

Based on the related Long-Term Development Plans, the following directions are being pursued: realization of an "Economic Superhub" through green, sustainable, innovative and creative economic transformation; promotion of sustainable, integrated and equitable urban development with environmentally friendly facilities and infrastructure; realization of socio-cultural and ecological resilience, biodiversity and environmental conservation, and a low-carbon society; enhancing regional connectivity through the development of integrated and environmentally friendly infrastructures.

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

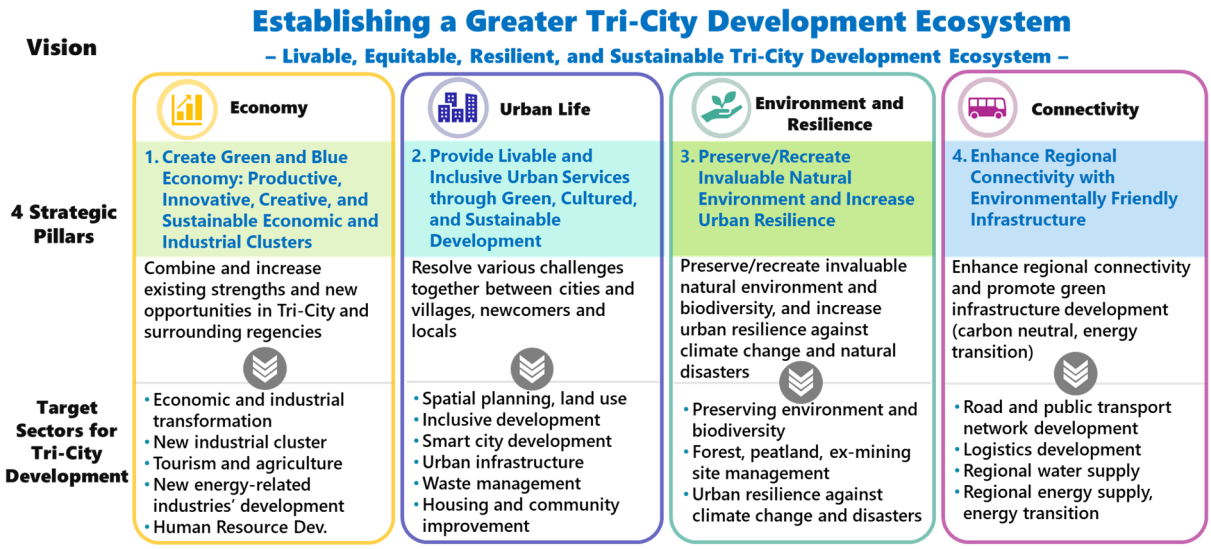
- Resolve various challenges together between cities and villages, newcomers and locals

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: JICA Study Team

Figure 6-5 Proposed Tri-City Development Concept: Vision and Four Strategic Pillars (draft)

The main differences (With/Without) envisioned when promoting development that takes the Tri-City development concept into account are shown in the figure below.

If development is promoted without considering the Tri-City development concept, the economic sector will not be able to sufficiently share roles and collaborate in the formation of industrial clusters and value chains, development of investment environment, and human resource development, resulting in a delay in the development of the regional economy. In the urban life sector, there are concerns that the rapid population growth and expansion of the urban area will be insufficiently addressed, leading to deterioration of the quality of life due to worsening traffic congestion and delays in the development of an appropriate living environment. In addition, in the environment and resilience sector, there is concern about a relative increase in the risk of environmental destruction, climate change, and natural disasters. In the connectivity sector, there are concerns about reduced accessibility to urban services and transportation hubs, and inefficient infrastructure development. To address these concerns and promote regional development integrated with the New Capital City development, Tri-City development should be promoted.

Table 6-8 Differences between With/Without Tri-City Development Concept

Sector	**Without** Tri-City Development Concept	**With** Tri-City Development Concept
Economy	• Lose opportunity to transform industry and attract private investment, and scale down of Economic Super Hub using IKN industry clusters • Lack of proper industrial locations for regional value chain formation of IKN 6 industry clusters • Less energy transition • Lack of consolidated logistics network	• Role sharing of industrial functions, establishment of industrial clusters among cities/areas, and maximization of economic growth as Economic Super Hub (manufacture, logistics/value chain, law materials, green economy, energy, food security etc.) • Promoting energy transition, green economy and innovation with regional (incentive) system, and utilizing resources and existing strengths in Tri-City
	• Lack of skilled human resources for accelerating industrial development and transformation • Difficulties in providing vocational training in a single city	• Securement of high-skilled human resources to develop different industrial clusters through the cooperation of IKN, Balikpapan City and Samarinda City
Urban Life	• Rapid population inflow will cause urban sprawl in uncontrolled manner, traffic congestions, deterioration of QOL, and population dispersion in Tri-City • Excessive population burden on Balikpapan City	• Developing sustainable region and significant infrastructures to manage the increase of population and demand caused by the IKN Development • Creating livable urban environment and attracting private investors in Tri-City (e.g. TOD (Transit Oriented Development) around new railway station/transport hub)
	• Lack of affordable housing supply would result in formation of informal settlements around IKN	• Promoting effective system for affordable housing supply (e.g. incentives to engage private sector developers)
	• Increasing regional disparity of QOL and local economy between cities and villages, migrants and locals	• Balanced regional development with provision of sufficient social and urban services that reduces QOL disparities in Tri-City and ensure social diversity.
	• Running out of landfill capacity for waste disposal in Balikpapan City and Samarinda City	• Integrated regional waste management policy and system beyond boundaries of municipal administration to realize circular economy.
Environment and Resilience	• Unbalanced development and increasing risk of environmental destruction • Less green growth	• Protection of natural environment and biodiversity • Expand advanced, green and sustainable development and technologies in Tri-City
	• Less urban resilience against climate change and disasters without regional cooperation	• Risk reduction of climate change and disaster damages through cooperative preparedness
Connectivity	• Unsustainable inter-city traffic across Tri-City region affects social services and QOL of residents and commuters in IKN, Balikpapan City and Samarinda City	• Collaborative planning on regional transport corridors at the regional scale
	• Inefficient and less harmonized infrastructure development (water and energy supply system) • Incorrect demand assumption among cities	• Strategic, effective and efficient development of regional infrastructure among Tri-City (airports, logistics and ports, road and public transport network and hubs, regional water supply, and energy supply system etc.)

Source: JICA Study Team

6.5.2 Direction of Tri-City Development (Image)

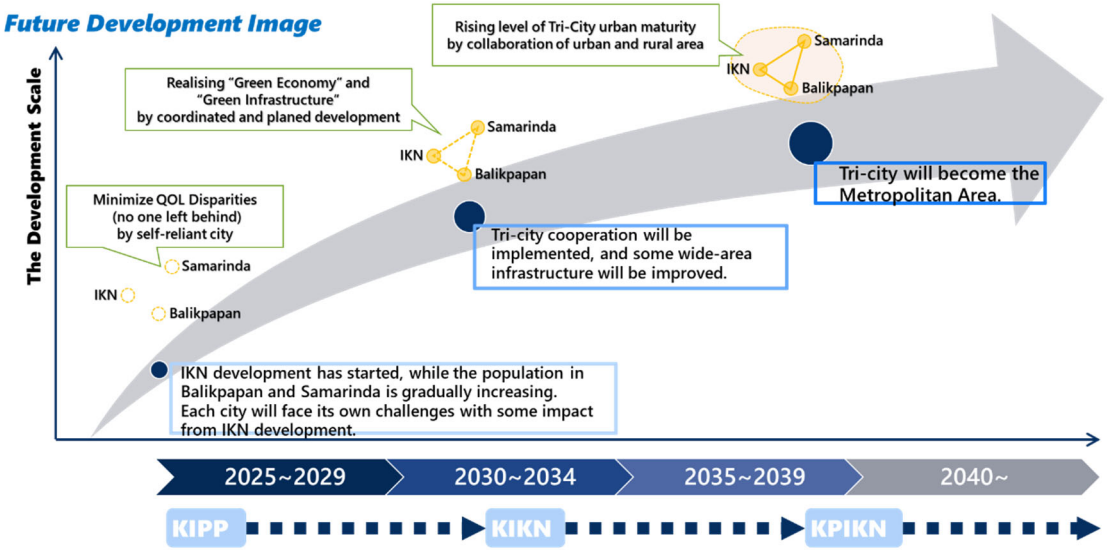
(1) Direction of Collaboration and Role Sharing among Three Cities (Image)

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.

(2) Direction of Tri-City Development (Image)

The following is an image of the roadmap for promoting collaboration among the three cities. By promoting initiatives in the three cities, the cities can be organically linked to form an aerial metropolitan area. In the short term, the roadmap shows the stage where 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. In the medium term, the project will strengthen inter-city cooperation through the development of green infrastructure that physically connects the three cities and the formation of a green economy. In the long term, it shows the stage of forming a mature city that includes both urban and rural areas as an area encompassing the three cities.



Source: JICA Study Team

Figure 6-6 Tri-City Development Roadmap (Image)

The table below shows an image of phasing efforts from the perspectives of housing and living environment, industrial and economic development, and connectivity in each of the five-year periods.

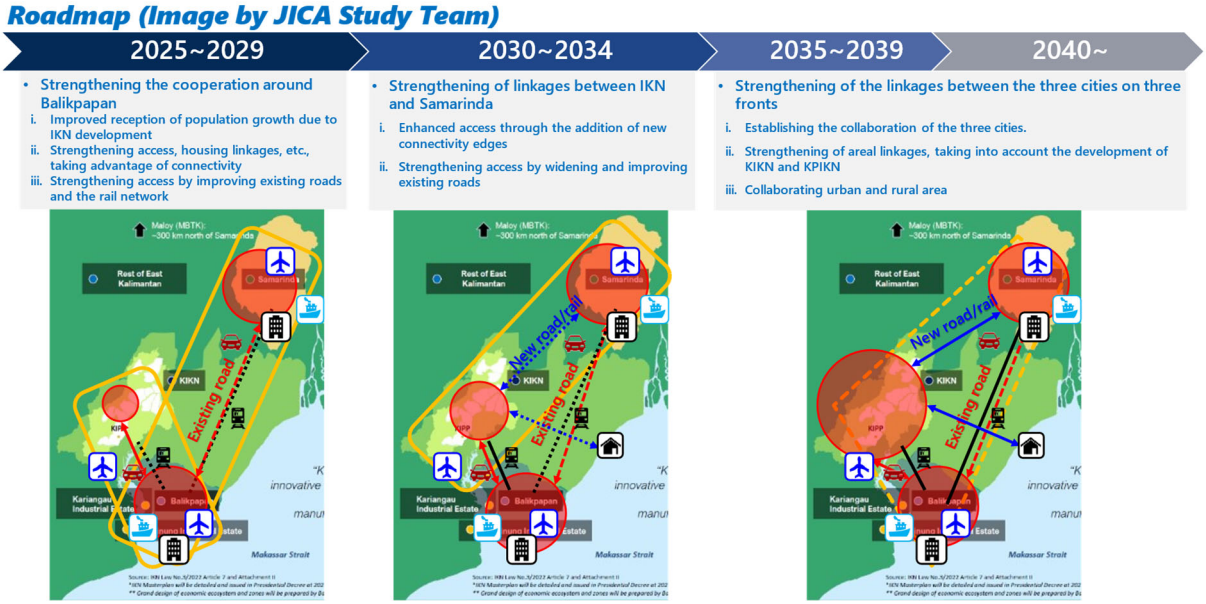
Table 6-9 Direction of Phasing Efforts for Tri-City Development (Image)

	Phase 1 (2022-2024)	Phase 2 (2024-2029)	Phase 3 (2030-2034)	Phase 4 (2035-2039)	Phase 5 (2040-2045)
Population Frame ①IKN ②Balikpapan ③Samarinda	Total 1.93 million people / 2024 ① 0.26 million people ② 0.72 million people ③ 0.95 million people ( ) shows changes from the previous phase / unit : million	Total 2.24 million people (+0.31) ① 0.41 million people (+0.15) ② 0.78 million people (+0.06) ③ 1.05 million people (+0.1)	Total 2.79 million people (+0.55) ① 0.78 million people (+0.37) ② 0.84 million people (+0.06) ③ 1.17 million people (+0.12)	Total 3.47 million people (+0.68) ① 1.24 million people (+0.46) ② 0.92 million people (+0.08) ③ 1.31 million people (+0.14)	Total 4.42 million people (+0.95) ① 1.97 million people (+0.73) ② 0.96 million people (+0.04) ③ 1.49 million people (+0.18)
Housing and Infrastructure ①IKN ②Balikpapan ③Samarinda	① Construction workers' housing/new housing developments, WTP, water/sewage pipeline network, transmission/distribution network. ② Existing ③ Existing	① Residential/office/commercial developments inside and outside KIPP, existing settlement developments, solar power generation, data centers ② Avoiding residential sprawl for population growth along the toll road to IKN ③ Moderate development for gradual population growth	① Existing settlement developments, low- and middle-income housing, data centers, water intakes/storage facilities ② Planed residence for population growth along the existing road ③ Same as Balikpapan	① Existing settlement developments, low- and middle-income housing, multipurpose dams/water treatment plants/water storage facilities ② Planed residence for population growth ③ Residence for population growth along the railway and the new road	① Existing settlement developments, water treatment plants/storage facilities ② Planed residence for population growth ③ Same as above
Economic base and industrial development ①IKN ②Balikpapan ③Samarinda	① Attracting anchor tenants and talent ② Existing ③ Existing	① Development of six industrial clusters and two feasible clusters ② Balanced development with consideration for green economy. ③ Industrial conversion with consideration for green economy.	① Investment in and capacity building, diversification and enhancement of six industry clusters and two enabling clusters ② Establishment of industrial base(Renewable Manufacturing, Advanced Chemical, Low carbon energy) ③ Same as above (Pharmaceuticals and agri-industry, tourism)	① Strengthening, diversifying and enhancing the capacities of the six industry clusters and two enabling clusters ② Developing educational and skilled human resource for six industry clusters. ③ Same as above	① Strengthening of six industry clusters and two feasible clusters ② Enhancing educational and skilled human resource for six industry clusters. ③ Same as above
Large-scale Projet (Conectivity etc.) ①IKN ②Balikpapan ③Samarinda	① Spaku Semoi Dam, Sepauk Intake, VVIP Airport ② --- ③ APT Pranoto Airport development	① Balikpapan-KIPP Railway, Toll road ② Seppingan Airport development、MICE Hotel / facility ③ Palaran development / Transfer of state administrative functions, BRT	① Balikpapan-KIPP Railway, Batu Lepek Dam ② Waterfront reclamation development, Kariangau / Semayang port extension and maintenance ③ Bulk and container port, inner/outer ring road	① IKN-Peripheral regional railways, KPIKN-Surrounding area roads ② Balikpapan-PPU toll road, Kariangau / Semayang port extension and maintenance ③ Skytrain	① IKN-Peripheral regional railways, KPIKN-Surrounding area roads ② --- ③ ---

Source: JICA Study Team

At the beginning of the development and relocation of the new capital, it will be necessary to strengthen the function of connecting KIPP and Balikpapan City, which are relatively close to each other. In line with this, since population growth and infrastructure, such as living infrastructure, housing, etc., shortages are assumed in Balikpapan City, development will be promoted in response to changes in the environment. In the medium term, Balikpapan City and Samarinda City will be physically connected by rail and other means to expand the three

cities and strengthen their collaboration. In the long term, by developing IKN later and strengthening the connectivity between KIPP and Samarinda City, the three cities will be formed as a Tri-City area with an aerial extent.



Source: Prepared by JICA research team

Figure 6-7 Phased Approach of Tri-City Development (Image)

6.5.3 Example of Key Performance Indicators for Tri-City Development

As an example of goal setting to realize the future vision and strategic pillars, the Key Performance Indicators (KPIs) for quantitative achievement of development goals were proposed, while considering consistency with the upper-level plans and various master plans.

Establishing KPIs for Tri-City development requires careful consideration of a variety of factors in light of measuring the progress and effectiveness of Tri-City urban partnership projects. In general, setting KPIs requires consideration of: strategic alignment (e.g., alignment with vision and strategic goals); clarity (e.g., clear definitions, measurable indicators); feasibility (e.g., availability of data, allocation of resources); time schedule; comprehensive coverage; and avoiding undue burden during evaluation, benchmarking (comparative analysis, historical data).

It is also important that the KPIs for Tri-City development are consistent with the development goals and KPIs of East Kalimantan Province and the three cities. Besides, the indicators should be able to measure the achievement of Tri-City's collaborative projects. The examples of KPIs based on the vision and four strategic pillars were indicated in the following figure. On top of that, the followings are just examples based on a simple study, and further detailed study is needed to set more concrete KPIs for Tri-City Development based on targets of related development plans and numerical and qualitative analyses.

Create Green and Blue Economy: Sustainable, Innovative, and Creative Industrial Cluster	Promote Diverse And Inclusive Development With Equal Opportunities	Preserve/Recreate Invaluable Natural Environment and Increase Urban Resilience	Enhance Regional Connectivity with Environmentally Friendly Infrastructure
Over 10 million tourists visit the three cities annually by 2045.	Regionally Integrated Water Supply Infrastructure Network with Sufficient Capacity for 100% of Projected Population in 2045	Redevelopment, Repurposing or Reforestation of XX% of Discontinued Open Coal Mines to Functional Uses	Commuting between Tri-City to Achieve 30% Modal Share in Multimodal Public Transportation Network of Inter-City Railways, BRTs, and Other Systems
Total amount of new business investments in the three cities exceeds XXX mil. USD in total by 2045.	Regionally Integrated Waste Disposal Infrastructure Network with Sufficient Capacity for 100% of Projected Population in 2045	XX% of Roadways and Utilities Infrastructure in the Region have Redundant Backup System when Incapacitated by Emergency	Intercity Railway Service between Balikpapan and Samarinda will Connect Two City Centers in XX Min. IKN to be Linked in XX Min.
The total value of commercial transactions between the three cities exceeds USD 100 million per year by 2045.	Access to University Education or Vocational Training for 100% of Eligible Post-Highschool Students with Sufficient Grade	Achieve XX% Regional Self-Sufficiency on Food Supply in Partnership with the Tri-City Region, PPU and Kutai Kartenagara	Airports in Balikapapan and Samarinda will be Linked via Airport Express Bus in 1 Hour; Share of International Flights to be XX%

Source: JICA Study Team

Figure 6-8 KPIs for Tri-City Development (Examples)

6.6 Study on Implementation Structure (draft)

Examples of implementation structure, which is important for the promotion of Tri-City development, were examined and proposed to the Indonesian government, and discussions were held. Although the implementation structure (draft) was considered based on a strong request from BAPPNAS, the details of the specific implementation structure are expected to be discussed during the formulation of the Tri-City Development Plan after this study. The implementation structure here is for reference only, and needs to be elaborated and institutionalized based on discussions in line with approaches and concept of Indonesian government, including enactment of related laws, regulations and decision-making processes.

(1) Necessity of Implementation Structure

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.

(2) Indonesian Case Study as Reference

An existing Indonesian case study is shown in the following figure, which is the implementation structure of the Jakarta Metropolitan Region (The Jabodetabekpunjur urban area spatial planning coordination team) led by Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency (ATR/BPN), who is the head of coordination team , coordinating spatial planning, formulating action plans, and evaluating programs.

The coordination team is largely divided into a coordination team and an implementation team, and a PMO (Project Management Office) is organized under ATR/BPN, which leads the coordination team, to support various activities. Under the implementation team, sector-specific working groups have been established to coordinate the resolution of individual issues.

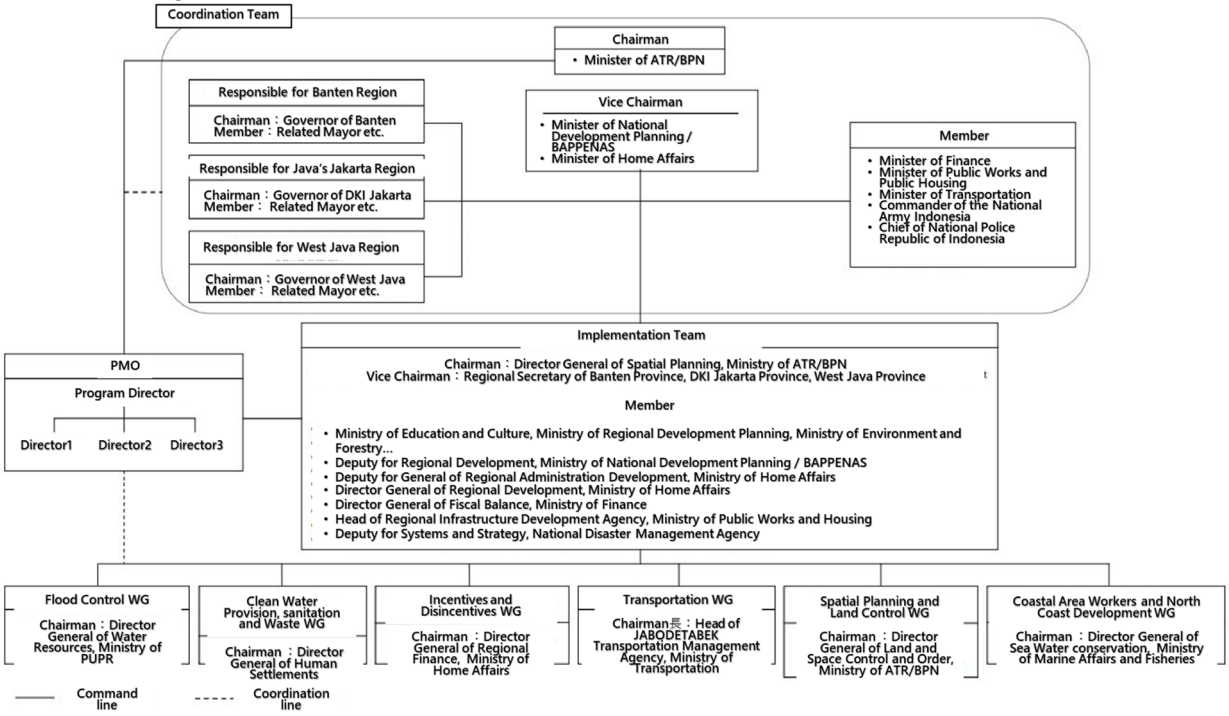
According to the Indonesian government, There are some challenges and issues related to the coordination of Jabodetabekpunjur area.

Firstly, different governance authority across stakeholders which requires harmonization and synergy.

Secondly, there are limited resource at the central and regional levels, only DKI Jakarta government that has a stable fiscal capacity. Other provincial and district/city governments in Jabodetabekpunjur have quite significant fiscal limitations. As concern to all regional heads, this will be closely related to budget politics in each region.

Thirdly, investments and interventions that are not yet fully aligned between each stakeholder at the central government and regional government levels. Each stakeholder usually has its own priorities and politics. However, specifically for strategic issues, it is necessary to go hand in hand in terms of investment and intervention, through a jointly agreed action plan or master plan.

The organizational structure is shown below.



Source: JABODETABEKPUNJUR Organizational Structure, edited by JICA Study Team

Figure 6-9 ATR/BPN Led Organizational Structure in Jakarta Metropolitan Area

(3) Administrative Structure and Coordinating Ministry in Indonesia

Under the new cabinet, which was inaugurated in October 2024 in Indonesia, as shown in the following table, there are seven Coordination Ministries (KEMENKO: Coordination Ministry) that coordinate interagency efforts and various plans.

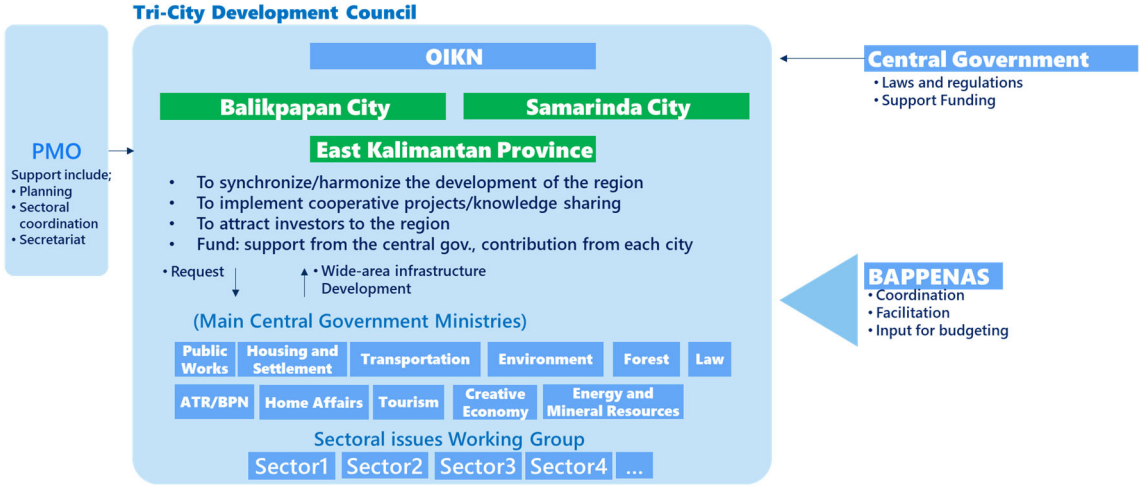
Table 6-10 Framework of KEMENKO (Coordination Ministry)

Coordinating Ministry	Related Ministries
Coordinating Ministry for Political and Security Affairs	Ministry of Home Affairs, Ministry of Foreign Affairs, Ministry of Defense, Ministry of Communication and Digital Affairs
Coordinating Ministry for Legal, Human Rights, Immigration, and Corrections Affairs	Ministry of Law, Ministry of Human Rights, Ministry of Immigration and Corrections
Coordination Ministry for Economic Affairs	Ministry of Manpower, Ministry of Industry, Ministry of Trade, Ministry of Energy and Mineral Resources, Ministry of State-Owned Enterprises, Ministry of Investment and Down streaming, Ministry of Tourism
Coordinating Ministry for Human Development and Cultural Affairs	Ministry of Religious Affairs, Ministry of Primary and Secondary Education, Ministry of Higher Education, Science, and Technology, Ministry of Culture, Ministry of Health, Ministry of Women Empowerment and Child Protection, Ministry of Population and Family Development/National Population and Family Planning Agency, Ministry of Youth and Sports
Coordinating Ministry for Infrastructure and Regional Development	Ministry of Agrarian Affairs and Spatial Planning/National Land Agency, Ministry of Public Works, Ministry of Housing and Settlement, Ministry of Transmigration, Ministry of Transportation
Coordinating Ministry for People's Empowerment	Ministry of Social Affairs, Ministry of Migrant Workers Protection, Ministry of Villages and Underdeveloped Regions Development, Ministry of Cooperatives, Ministry of Micro, Small, and Medium Enterprises, Ministry of Creative Economy
Coordinating Ministry for Food Affairs	Ministry of Agriculture, Ministry of Forestry, Ministry of Maritime Affairs and Fisheries, Ministry of Environment

Source: JICA Study Team

(4) Basic Concept of Implementation Structure

In order to implement Tri-City Development in a comprehensive manner, as shown in the following figure, the basic concept envisaged the establishment of a council including the central and local governments to coordinate efforts such as planning coordination, project implementation, and investment promotion.



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

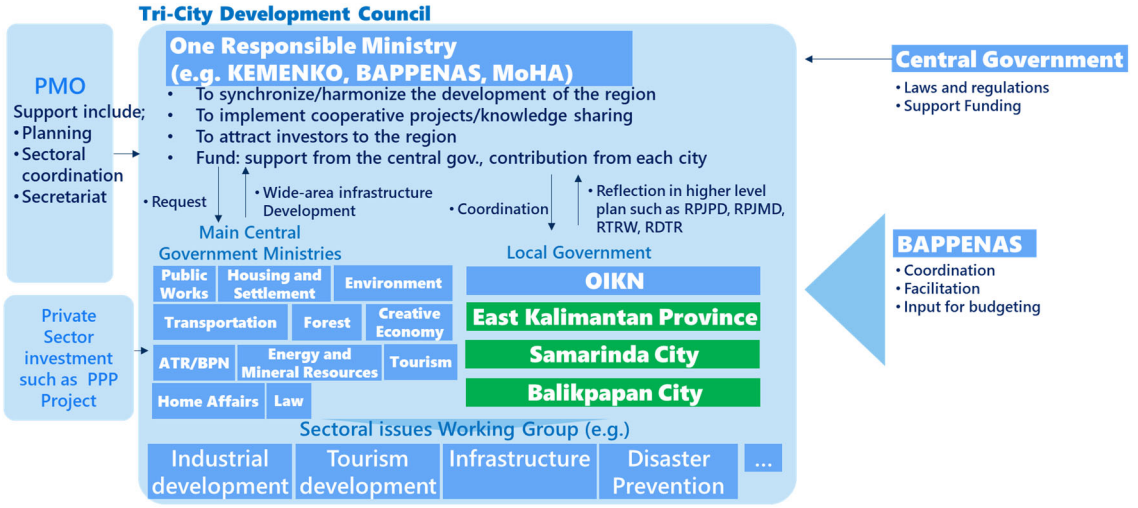
Source: JICA Study Team

Figure 6-10 Basic Pattern of Implementation Structure

1) Option 1: Responsible Ministry Lead Type

In addition to the Basic Pattern described above, we considered two implementation system options. First, this option is to establish a council led by a ministry responsible for a particular field, based on the example of the Jakarta Metropolitan Area as shown in the following figure. The responsible ministry is assumed to be KEMENKO (Coordination Ministry) or BAPPENAS, which is positioned in the Indonesian administration, and is assumed to be the institutions that coordinate the existing ministries and local governments including budget allocation and funding as well as planning coordination.

According to BAPPENAS, the KAMENCO (Coordinating Ministry for Infrastructure and Regional Development) can be considered as an organization that coordinates planning of Tri-City corporation.



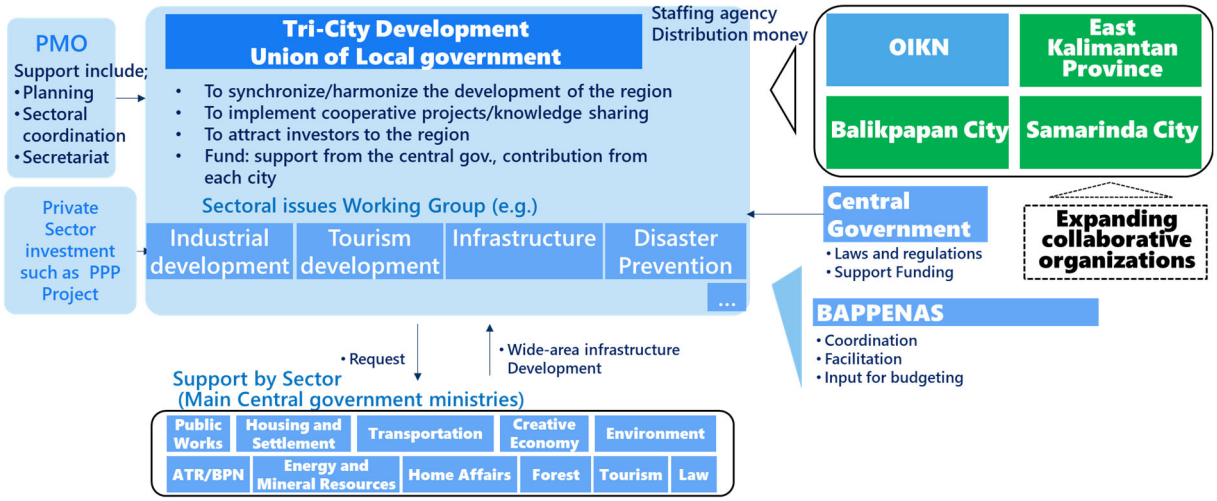
*Ministry name is reflected the reorganization by the new cabinet (October 2024)

Source: JICA Study Team

Figure 6-11 Option 1: Responsible Ministry Lead Type

2) Option 2: Union Type

Option 2 is shown below. This type is based on the concept of establishing an independent and self-supporting organization, with reference to the example of wide-area administration, Local Government Union, in Japan, which is envisioned as an organization that achieves a wide range of administrative objectives through multiple administrative processing and serves as a foundation for the transfer of authority. A Union of Local Government in Japan can be established by prefectures, municipalities, and special wards, and their purpose is to promote comprehensive and systematic wide-area administration through the preparation of wide-area plans and the necessary liaison and coordination with respect to those agencies that are deemed appropriate to be handled over a wide area.



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

Source: JICA Study Team

Figure 6-12 Option 2: Union type

(5) Comparison of Implementation Structure Examples

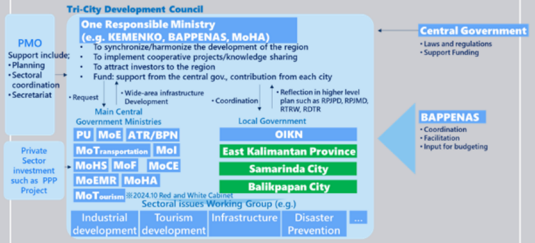
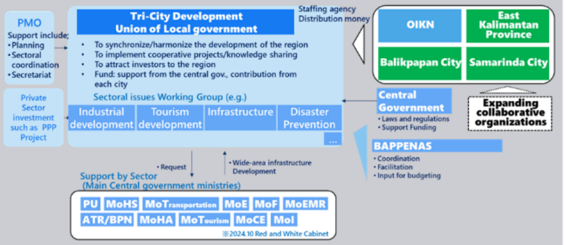
The advantages and disadvantages of implementation structures were compared in terms of the required legal systems and flexibility, including the surrounding areas. The result of the comparison is shown in Table 6-11.

One advantage of Option 1 is that it is similar to the Jakarta metropolitan area case study, and thus is considered more acceptable to relevant Indonesian institutions. In addition, since the project is led by a government agency, it may be easier to obtain government budgets and subsidies for project implementation. In addition, Option 1 might be easier to establish than Option 2, as it may be possible to stipulate in a ministerial regulation of the lead government ministry or agency. As disadvantages, it is assumed that the function of reflecting and coordinating the opinions of the local governments concerned would be limited, and that the function may be biased toward specific fields.

The advantage of Option 2 is that the local governments concerned, including OIKN, will take the initiative in establishing an independent body to take charge of planning, coordination,

and project promotion, which is expected to make it easier to reflect intentions of the local governments and to make various adjustments in a more neutral manner. One drawback is that it may be limited in terms of cooperation with related ministries and agencies, budget acquisition, and project implementation. In addition, it is assumed that a presidential regulation would be required for its establishment, and enactment of related legislation might be more difficult than Option 1.

Table 6-11 Comparison of Advantages and Disadvantages of Implementation Structures

	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: JICA Study Team

6.7 Study on Tri-City Collaboration Projects (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, which are: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type4) wide-area infrastructure development projects to strengthen connectivity among the three cities. A long list (draft) of Tri-City collaboration projects proposed in this study is shown in the table below. Tables from the next page also provide draft ideas of each project outline. 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 6-12 Long List of Tri-City Collaboration Project (draft)

Strategic Pillars	Tri-City Development (tentative name) Collaborative Project
1.Creatinga 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. Samarinda APT Pranoto Airport Expansion and Operation Project** **5. Balikpapan-New Capital City 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 City 13. Project to Improve Maintenance and Management Capacity in the New Capital City Power Transmission and Distribution System 14. Infrastructure Development Support Project in IKN Next Development Area

*Bold with underline indicates the projects the related feasibility study and/or planning has been started/implemented (As of October 2024)

Source: JICA Study Team

Table 6-13 Tri-City Collaborative Projects (Draft) 1/6

No.	Project Name	Project Summary	Sector	Location	Implementing Agency	Collaboration Type*
1-1	Tri-City Tourism Industry Revitalization Support	Develop and promote tourism routes within Tri-City, and develop tourism resources, transportation, and lodging facilities for this purpose.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 2
1-2	Tri-City New Industry Creation/Human Resource Development Program	Provide support for the establishment and operation of institutions that assist in business start-up and human resource development related to new start-up industries such as energy, pharmaceuticals, chemicals, and manufacturing.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 2
1-3	Project for SME Development	A project to support the development of small and medium-sized enterprises within Tri-City, analyzing the current issues of small and medium-sized enterprises, and studying and implementing support measures.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 3
1-4	Tri-City Integrated Pharmaceutical Industry, Advanced Chemical Industry Development Support Project	To share the role of the value chain to develop integrated pharmaceutical and advanced chemical industries within Tri-City and to develop related facilities and attract companies.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 2
1-5	Tri-City Education Industry Promotion/Cooperative Program Construction Support Project	To promote the education industry within the Tri-City, the project aims to create partnerships and synergies between newly established educational and research institutions, mainly IKN, and existing educational institutions in Balikpapan City and Samarinda City including from the standpoints of teachers and students.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 2
1-6	Tri-City Sustainable Agriculture Development Project	Focusing on the promotion of agricultural production along the coast, especially in the IKN, the project aims to establish a sustainable value chain for agricultural and fishery production, distribution, and food production within Tri-City.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 3
1-7	Energy Transition Promotion Project (CCS/CCUS Facility Development)	As part of the promotion of energy transition, a model project for the introduction of CCS/CCUS facilities will be studied. Based on the CO2 storage potential in East Kalimantan, the outline of the entire value chain from CO2 separation and capture to transport and storage, as well as the storage area, storage volume, emission source, and transport method for individual projects, will be studied.	Energy	East Kalimantan Province	Ministry of Energy and Mineral Resources (MOEMR), OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, BAPPENAS	Type 1

*Collaboration type of project: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type 3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type 4) wide-area infrastructure development projects to strengthen connectivity among the three cities
Source: JICA Study Team

Table 6-14 Tri-City Collaborative Projects (Draft) 2/6

No.	Project Name	Project Summary	Sector	Location	Implementing Agency	Collaboration Type*
1-8	Tri-City Hydrogen/Natural Gas Utilization Plan Formulation Survey	With the reduction of greenhouse gas emissions in mind, the potential for utilizing hydrogen and natural gas will be investigated, and the necessary infrastructure and its development will be planned to promote the use of each.	Energy	IKN, Balikpapan City, Samarinda City	MOEMR, OIKN, Ministry of Industry (MOI), Balikpapan City, Samarinda City, , East Kalimantan Province, BAPPENAS	Type 1
1-9	Hydrogen Power Generation/Hydrogen Supply Chain Construction Project	To study and demonstrate hydrogen power generation technology and hydrogen transportation technology to promote the utilization of hydrogen.	Energy	East Kalimantan Province	MOEMR, OIKN, MOI, BAPPENAS, Balikpapan City, Samarinda City, East Kalimantan Province	Type 1
1-10	Tri-City Low Carbon Fuel Energy Industry Development Support Project	Establishment of a low-carbon fuel research institute. As for biofuels, study and research on gasification supply network. As for coal gasification, formulate a PPP project that links the introduction of technology and the existing coal industry.	Energy	IKN, Balikpapan City, Samarinda City	MOEMR, OIKN, MOI, BAPPENAS, Balikpapan City, Samarinda City, East Kalimantan Province	Type 1
1-11	Tri-City Sustainable Blue Economy Project	Promote sustainable marine coastal resource management by promoting economic activities that take into account wellbeing of communities and environmental protection in Tri-City and surrounding areas.	Industrial development	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, Ministry of Marine Affairs and Fishery	Type 1
2-1	Tri-City Urban Management Capacity Improvement Project	Based on the IKN Development Plan and impacts, appropriate land use planning and management will be studied in Tri-City, as well as development policies and measures for housing and public facilities that take into consideration the accessibility and urban inclusiveness of vulnerable groups, human resource development and urban services.	Urban planning	IKN, Balikpapan City, Samarinda City	OIKN, BAPPENAS, Balikpapan City, Samarinda City, East Kalimantan Province	Type 1
2-2	Tri-City Smart City platform Development Support	Review smart city initiatives in each city, identify initiatives that can be shared among the three cities, and aim to provide smart services through collaboration among the three cities (e.g., building a common data platform, traffic monitoring system, etc.)	Urban planning	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, BAPPENAS	Type 2
2-3	Tri-City Urban Water Supply Environment Improvement Project	A project to improve the environment by resolving issues within the city related to water supply, with the aim of raising the level of the community by sharing leading examples such as OIKN with the surrounding community.	Water (esp. cool, fresh water, e.g. drinking water)	Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, PUPR	Type 3

*Collaboration type of project: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type 3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type 4) wide-area infrastructure development projects to strengthen connectivity among the three cities
Source: JICA Study Team

Table 6-15 Tri-City Collaborative Projects (Draft) 3/6

No.	Project Name	Project Summary	Sector	Location	Implementing Agency	Collaboration Type*
2-4	Tri-City Urban Drainage Environment Improvement Project	A project to improve the environment by resolving issues within the city related to wastewater, with the aim of raising the level of the community by sharing leading examples such as OIKN with the surrounding community.	Water (esp. cool, fresh water, e.g. drinking water)	Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, PUPR	Type 3
2-5	Tri-City Urban Sewage Environment Improvement Project	A project to improve the environment by resolving issues within the city related to sewage systems, with the aim of raising the level of the region by sharing leading examples such as OIKN with the surrounding community.	Water (esp. cool, fresh water, e.g. drinking water)	Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, PUPR	Type 3
2-6	Tri-City Road Environment Improvement Project	This project aims to improve the road environment within the city, including road greening, securing disaster prevention space, and road layout, etc. The project aims to raise the level of the community by sharing leading examples such as OIKN to the surrounding area.	Transportation	Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, PUPR	Type 3
2-7	Tri-City Waste Management Capacity Improvement Project through Wide-area Collaboration	In order to establish optimal coordinated waste treatment in the Tri-Cities, the project aims to formulate a waste treatment policy in the Tri-Cities and to build consensus and establish a waste treatment implementation and management system for the sharing of waste treatment infrastructure.	Environment	East Kalimantan Province	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, BAPPENAS	Type 2
2-8	Tri-City Slum Community Improvement Project	Examine housing supply policies and plans based on future housing demand, as well as frameworks and systems for policy promotion, and promote policies related to appropriate housing supply and residential environment development for residents, including those in low-income brackets.	Urban planning	IKN, Balikpapan City, Samarinda City	PUPR, OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 3
2-9	Tri-City Social and Culture Inclusion Project	Preserve and inherit traditions of the region's unique tribes, cultures and indigenous communities, and promote social and cultural harmony and inclusive development.	Society and culture	IKN, Balikpapan City, Samarinda City, East Kalimantan Province	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, Ministry of Social Affairs	Type 2
3-1	Biodiversity Management Project	Based on the IKN biodiversity management master plan (March 2024, supported by ADB), consider and implement specific initiatives (e.g., biological monitoring using apps, DB construction, and proposals for specific initiatives for coexistence with organisms).	Environment	IKN, Balikpapan City, Samarinda City	OIKN, MOEF, Balikpapan City, Samarinda City, East Kalimantan Province	Type 2

*Collaboration type of project: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type 3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type 4) wide-area infrastructure development projects to strengthen connectivity among the three cities
Source: JICA Study Team

Table 6-16 Tri-City Collaborative Projects (Draft) 4/6

No.	Project Name	Project Summary	Sector	Location	Implementing Agency	Collaboration Type*
3-2	Forest Management, Ex-Coal Mining Site Redevelopment, and Peatland Management Project	Study strategies and measures related to forest management and conservation, utilization of former coal mining sites for other uses and promotion of mangrove forest conservation, peatland conversion to agricultural land, and ecosystem conservation in the Mahakam River watershed and other areas.	Environment	IKN, Balikpapan City, Samarinda City	OIKN, MOEF, MOEMR, Balikpapan City, Samarinda City, East Kalimantan Province	Type 1
3-3	Climate Resilient Tri-City Development Project	Examine hardware and software measures to reduce disaster risks within Tri-City, develop Tri-City resilience guidelines, and implement measures.	Disaster prevention	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, BNPB/BPBD, PUPR, BAPPENAS	Type 1
4-1	Tri-City Transportation Master Plan	Study and formulate a Tri-City Urban Transportation Master Plan based on future traffic demand projections, taking into account the impact of the IKN Development and relocation of the capital city, and promote the development of a comprehensive urban transportation system.	Transportation	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, MOT, PUPR, BAPPENAS	Type 1
4-2	Tri-City Comprehensive Logistics Master plan	Study and formulate a comprehensive logistics master plan for the Tri-City metropolitan area based on future logistics demand forecasts, taking into account the impact of the IKN Development and capital relocation and regional economic development trends, and promote the development of a comprehensive logistics network including ports and aviation.	Transportation	IKN, Balikpapan City, Samarinda City	OIKN, Balikpapan City, Samarinda City, East Kalimantan Province, MOT, PUPR, BAPPENAS	Type 1
4-3	Balikpapan Sepinggan Airport Expansion Development and Operation Project	Study and promote the Balikpapan Airport expansion and business plan based on future passenger and logistics demand projections in light of the impact of the IKN Development and capital relocation and regional economic development trends.	Transportation	Balikpapan City	MOT, OIKN, Balikpapan City, East Kalimantan Province	Type 4
4-4	Samarinda APT Pranoto Airport Expansion Development and Operation Project	Study and promote the APT Pranoto Airport expansion and business plan based on future passenger and logistics demand projections in light of the impact of the IKN Development and relocation of the capital city and trends in regional economic development.	Transportation	Samarinda City	MOT, OIKN, Samarinda City, East Kalimantan Province	Type 4
4-5	Balikpapan-New Capital City Connecting Railway Project	Balikpapan City - KIPP rail development plan, TOD plan around the rail station, and project operation plan will be discussed and promoted.	Transportation	IKN, Balikpapan City	MOT, OIKN, PUPR, BAPPENAS, Balikpapan City, East Kalimantan Province	Type 4

*Collaboration type of project: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type 3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type 4) wide-area infrastructure development projects to strengthen connectivity among the three cities
Source: JICA Study Team

Table 6-17 Tri-City Collaborative Projects (Draft) 5/6

No.	Project Name	Project Summary	Sector	Location	Implementing Agency	Collaboration Type*
4-6	Samarinda City-Airport and Samarinda City-IKN Railway/LRT Development Project	Study and promote the project by studying the plans for the development of railroads between Samarinda City and APT Pranoto Airport and between Samarinda City and IKN.	Transportation	IKN, Samarinda City	MOT, OIKN, PUPR, BAPPENAS, Samarinda City, East Kalimantan Province	Type 4
4-7	Samarinda-IKN Second Toll Road Project	Study, plan, project feasibility, and project plan for the construction of a second Toll Road between Samarinda City and IKN.	Transportation	IKN, Samarinda City	PUPR, OIKN, MOT, BAPPENAS, Samarinda City, East Kalimantan Province	Type 4
4-8	Balikpapan-IKN Bypass Road Development Project	Study, planning, schematic design, project feasibility, and project plan for the development of a bypass road (shortcut) for the access road between Balikpapan City and KIPP.	Transportation	IKN, Balikpapan City	PUPR, OIKN, MOT, BAPPENAS, Balikpapan City, East Kalimantan Province	Type 4
4-9	Regional Water Supply Infrastructure Development Project	Project to link supplies to IKN and Balikpapan City in particular in order to balance raw water supply	Water (esp. cool, fresh water, e.g. drinking water)	IKN, Balikpapan City, Samarinda City (Sepaku Semoi Dam, Batu Lepek Dam, Mahakam River etc.)	PUPR, OIKN, Balikpapan City, Samarinda City, East Kalimantan Province	Type 4
4-10	New Industrial Port Development Project	Project to study development plans for a new industrial port, taking into account industrial and development trends and plans for IKN and surrounding areas.	Transportation	IKN, Balikpapan City, Samarinda City	MOT, OIKN, PUPR, BAPPENAS, Balikpapan City, Samarinda City, East Kalimantan Province	Type 4
4-11	Regional Power Supply Network Strengthening Project (High-voltage Transmission Line Development between Kayan and IKN)	Develop a master plan for the development of a transmission network of approximately 500 km between Kayan and IKN, which is necessary for IKN to utilize the power generated by Kayan hydropower in North Kalimantan.	Energy	East Kalimantan Province	MOEMR, OIKN, BAPPENAS, Balikpapan City, Samarinda City, East Kalimantan Province	Type 4
4-12	Power Transmission and Distribution Master Plan for 100% Renewable Energy Power Supply in the New Capital City	In order to achieve the 100% renewable energy source ratio stipulated in the IKN Development Plan, the types of renewable energy sources to be used in the IKN, their ratios, and the supply methods for each type of source will be studied and a renewable energy source plan will be developed.	Energy	IKN	MOEMR, OIKN, BAPPENAS, Balikpapan City, Samarinda City	Type 4

*Collaboration type of project: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type 3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type 4) wide-area infrastructure development projects to strengthen connectivity among the three cities
Source: JICA Study Team

Table 6-18 Tri-City Collaborative Projects (Draft) 6/6

No.	Project Name	Project Summary	Sector	Location	Implementing Agency	Collaboration Type*
4-13	Project to Improve Maintenance and Management Capacity in the New Capital City Power Transmission and Distribution System	In the IKN, where ensuring infrastructure resilience is an important theme, the project aims to improve the maintenance and management capacity of the underground power transmission and distribution network, which lacks a maintenance and management plan.	Energy	IKN	MOEMR, OIKN, BAPPENAS, Balikpapan City, Samarinda City	Type 4
4-14	Infrastructure Development Support Project in IKN Next Development Area	Study the basic infrastructure development plan to realize the development concept in each development zone in IKN other than KIPP	Urban planning	IKN	OIKN, PUPR, BAPPENAS, Balikpapan City, Samarinda City	Type 4

*Collaboration type of project: Type1) project that should be collaborated for total optimization, Type2) projects that should be implemented by establishing a common implementation system, Type 3) projects that aim to solve development challenges by collaborating to strengthen the knowledge and capacity of each city, and Type 4) wide-area infrastructure development projects to strengthen connectivity among the three cities
Source: JICA Study Team

6.8 Opinions for Future Consideration of Tri-City Development

The Tri-City Development Concept described above has been considered reflecting the collected opinions through discussions with relevant organizations as much as possible. On the other hand, during the discussions with related organizations in September and October 2024, opinions, points to keep in mind, and suggestions were obtained that should continue to be considered in future Tri-City development studies. The collected opinions are summarized in the table below as a reference for future Tri-City development considerations.

As for the opinions on general matters for the Tri-City Development, the importance of following things was suggested: to study KPI, to study collaborative actions based on the data analysis, to further consider the development of suburban and village areas, Palaran area, Kariangau industrial area from the Tri-City perspective. Regarding implementation structure to promote Tri-City development, the followings were raised to be studied in near future: financial scheme and related laws and regulations to promote collaborative projects and operation and management structure of infrastructure. In addition, about the Tri-City collaborative projects, the importance of the study on detailed collaborative projects on the basis of ongoing plans and actions by related municipalities and agencies, and priorities.

Table 6-19 Opinions for Future Consideration of Tri-City Development 1/3

Category	Summary of Opinions
General Opinions on Tri-City Development	• The relationship with spatial planning at the national, provincial and local levels is also important and how they can work together should be considered. (BAPPENAS) • KPIs are very important and will continue to be considered. (BAPPENAS) • Tri-City efforts need to be incorporated and coordinated as a project of each municipality as well. (East Kalimantan Province) • Regional infrastructure development should also be coordinated with anticipated infrastructure development schedule by each local government. (East Kalimantan Province) • It would be good if the issues could be considered in conjunction with the five-year phases of the Regional Middle-Term Development Plans. (East Kalimantan Province) • It is important to decrease the disparity between urban and rural areas. IKN is positioned as an urban area, however there are specific cultures within the Tri-City, and it is necessary to ensure these specific cultures in the regional development. (OIKN) • In Tri-City development, it is important to consider based on detailed data analysis. It is also important to consider how to harmonize the connectivity among the three cities and the characteristics of each city. Besides, it is important to consider the concept of wide-regional economic/development corridors. (Indonesia Planning Association (IPA) / Dr. Andy) • For the four cities in the diamond shape, including Samboja, it is important to have a concept that corrects the geographical and urban-rural balance. It would also be good if synergies can be considered in terms of the connection of natural areas such as forests, rivers, wetlands, etc. and the urban metabolism of each city. (IPA/ Dr. Andy)

Source: JICA Study Team

Table 6-20 Opinions for Future Consideration of Tri-City Development 2/3

Category	Summary of Opinions
General Opinions on Tri-City Development	• It is important to change the course of the region's inclination toward infrastructure investment into the work toward strategic goals such as the creation of human resources, administrative reforms, and the formation of an innovation economy. It is desirable to make the development of human resources, rather than natural resources, a priority for regional development. In order to generate technological innovation, it is necessary to create new advanced industries instead of relying on the coal mining industry and other natural resource industries. (Bandon Institute of Technology (BIT) / Prof. Hudalah) • It is desirable to consider the incorporation of other small and medium-sized surrounding cities to be able to work together in areas such as energy, food, and water security as an integral part of the three cities. (BIT/ Prof. Hudalah) • From a Tri-City perspective, it is important to consider how to develop the suburban village areas of Balikpapan City and Samarinda City, the Palaran area, and the Kariangau industrial area. (OIKN)
Implementation Structure	• By establishing a planning platform through a three-city partnership, duplicate infrastructure development, etc., can be avoided. (East Kalimantan Province) • Regarding the implementation structure, it is important to keep in mind the legal aspects, geographical dynamism, capacity of existing relevant institutions, and the vision and leadership of the plan. (BIT/ Prof. Hudalah) • Option 2 is preferable because it is easier to share what role each city will play in accomplishing the mission, and although an institutional framework needs to be considered to promote Tri-City collaboration, it is best to position the cities as partners. (Samarinda City) • Option 1 is preferred, as it is considered smoother if the system is placed directly under a central ministry. (Balikpapan City) • Regarding the structure of the Tri-City collaboration, a framework regarding the legal system needs to be considered. (OIKN) • As for the implementation structure, Option 1 is preferable, but we need to have a clear understanding of the precedent situation in Jakarta. (East Kalimantan Province) • Option 2 is better for the implementation structure. It is important to proceed not only with planning but also with prompt project implementation, and being able to decide priorities, etc. by themselves is significant. There are aspects of the Jakarta case that are not sufficiently functioning in terms of project implementation. In the initial stage, a strong presence of the central government is necessary, but as time passes, it would be better for the local government to take the initiative and for OIKN to work together with the local government on Option 2. (OIKN) • Option 2 is good in terms of stable budget, but option 1 also has advantages for specific project implementation, etc. (BAPPENAS) • The legal system is concerned that if not covered by a presidential regulation, the legal foundation will be weakened in the case of cross-ministry projects. (East Kalimantan Province) • It is important to consider budget procurement schemes and infrastructure management and implementation systems. (OIKN)
Tri-City Collaboration Project	• Toll Road between Samarinda City and IKN needs to be discussed. Samarinda-Kutai Kartanegara road construction might be in 2030-2040, and coordination with PUPR will be necessary for the road network planning. As it might be important to develop a road through Tenggarong located in the center of Kutai-Kartanegara Regency, the network plan for the three cities will be important. (BAPPENAS) • Maritime traffic will also a subject to be discussed. (BAPPENAS) • Regarding the Kaliangau Container Terminal, it is assumed that the port will still have sufficient capacity for the next five years. However, it is insufficient to consider new ports development. The role of Kaliangau port is also important in terms of Tri-City development. (BAPPENAS)

Source: JICA Study Team

Table 6-21 Opinions for Future Consideration of Tri-City Development 3/3

Category	Summary of Opinions
Tri-City Collaboration Project	• How to develop renewable energy and how to produce hydrogen will be important. (BAPPENAS) • It is important to systematically promote the undergrounding and mapping of the power distribution network. A concrete development plan will be needed taking account of interconnection systems including overhead transmission outside the IKN and underground transmission within the IKN. (BAPPENAS) • A master plan for tourism in IKN has been prepared, and it would be good to consider a tourism plan for the entire Tri-City area. The IKN plans to emphasize sports tourism, and may utilize the stadiums in Samarinda City and Balikpapan City, and may also benefit from Japanese expertise in the development of Tourism Village. (BAPPENAS) • Feasibility study and examination of water withdrawal from Mahakam River is important. (East Kalimantan Province) • The sharing of water resources within the watershed needs to be considered and planned comprehensively, especially Samarinda City, located upstream, and Balikpapan City, located downstream, and the IKN. (OIKN) • It is important to consider the priorities of the project. (Balikpapan City) • For SMEs, the challenge is how to improve their production areas so that they can more aggressively export their products. (OIKN) • It is important to consider the role sharing among three airports. (OIKN) • As OIKN is going to formulate a Regional Transportation Master Plan, Tri-City development needs to be considered in coordination with the planning study. (OIKN) • Collaborative projects on preservation of existing culture are important. (OIKN) • Blue Economy perspectives, fisheries-related projects, and conservation of marine resources are important. (BAPPENAS, OIKN, Balikpapan City) • In order to realize the development policy of introducing 100% renewable energy to IKN, it is necessary to consider how to incorporate Kayan hydropower in North Kalimantan, hydropower in South Kalimantan, and other solar and wind power generation. (OIKN) • It is desired to consider a phased development of the Smart City, and collaboration on Smart City development need to be promoted in Tri-City. (OIKN) • It is important to consider how informal settlements can improve the living environment in coastal areas, etc. and how to prevent their formation. (OIKN) • The Climate Change Resilient Village Program is being promoted as a national level policy, and it is important to consider this in the Tri-City collaborative planning. (OIKN) • It is important to consider the current status of tourism super hubs in the three-city partnership. (OIKN) • How to develop industries in cooperation with neighboring cities and how to develop the skills of the workforce will be essential. As a basic idea, it is assumed to develop advanced industries by attracting R&D and higher education institutions. In the process, education on socio-cultural and community empowerment also need to be strengthened. (OIKN) • It is important to develop a contiguous environmental conservation plan for the entire Mahakam watershed, including Samarinda City and Balikpapan City. (OIKN) • Conservation of Balikpapan Bay and other areas also requires inter-city collaboration since the boundaries are adjacent to other municipalities. (OIKN) • Although waste management, slums, transportation, and sanitation are key challenges, it is expected that this Tri-City initiative will promote projects to resolve these issues. (Samarinda City)

Source: JICA Study Team

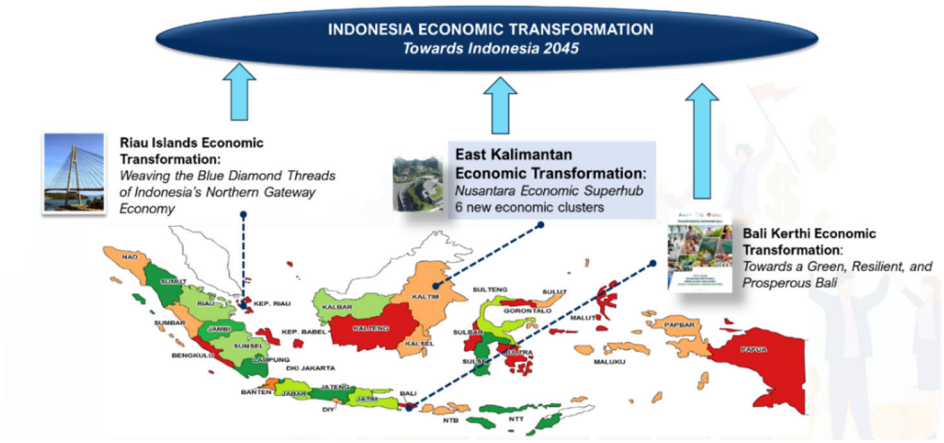
CHAPTER7 Recommendations on East Kalimantan Economic Transformation Master Plan

As mentioned in section 2.3, Indonesia is promoting reforms in three sectors—social, governance, and economic—under its long-term national development plan towards 2045. As part of this effort, the "East Kalimantan Province Economic Transformation Master Plan" is being formulated in conjunction with the capital relocation. Initially scheduled for release in December 2024, there has been a delay of several months. Based on the materials received from BAPPENAS 2024, the background of Indonesia's Long-Term Development Vision 2045 and the key points of the East Kalimantan Province Economic Transformation Master Plan will be outlined in this chapter.

The survey team made two recommendations regarding the East Kalimantan Province Economic Transformation Master Plan. Based on inter-regional industrial linkage analysis, the first recommendation is to avoid concentrating economic ripple effects on Java Island and to foster agriculture, forestry, fisheries, and manufacturing industries, which are expected to have relatively large economic ripple effects in regions other than Java. The recommendation includes revising supply chains by diversifying and localizing the procurement of raw materials and intermediate goods in collaboration with state-owned and major private enterprises. Regarding policies for industrial transformation through energy transition, it is recommended, based on case studies of transitions from coal industries to other energy industries in other countries, to implement comprehensive compensation and support for shrinking industries along with policies to guide emerging industries.

7.1 High-Level Plan: Indonesia Long-Term Development Vision 2045

As shown in the figure below, Indonesia's Economic Transformation Master Plans have been formulated aiming for realizing the higher-level plan, the Indonesia Long-Term Development Vision 2045, targeting Bali (2021) and the Riau Islands (2022), adjacent to Singapore, with East Kalimantan Province being the third location.

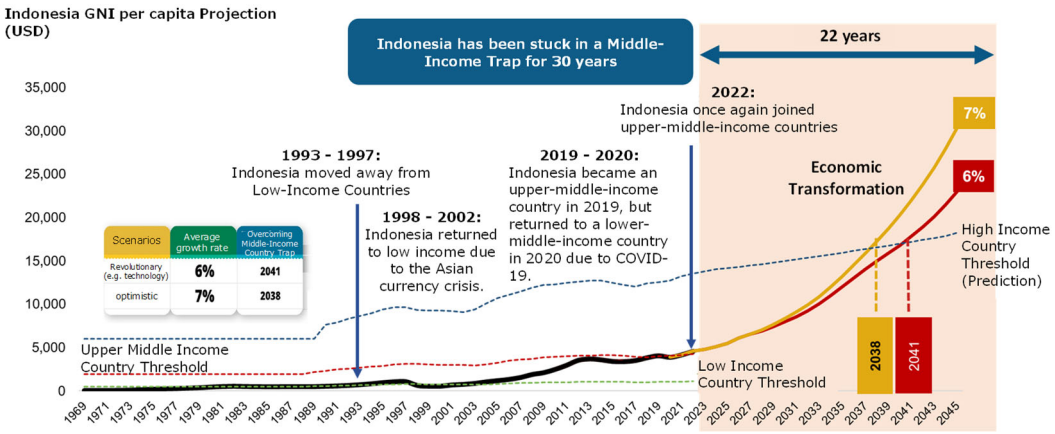


Source: BAPPENAS 2024

Figure 7-1 East Kalimantan Economic Reform as Part of Indonesian Economic Reform (Repost)

7.1.1 GNI (Gross National Income) per Capita Target

As shown in the figure below, Indonesia, which had been categorized as a low-income country since 1993 but became a middle-income country in 2019 aims to move beyond the middle-income status and become an upper-middle-income country by 2041, or even a high-income country (worth $13,846 or more defined by the World Bank in 2024). To achieve this, a minimum annual economic growth of at least 6% is necessary, and the Economic Transformation Master Plan plays a crucial role in this effort.

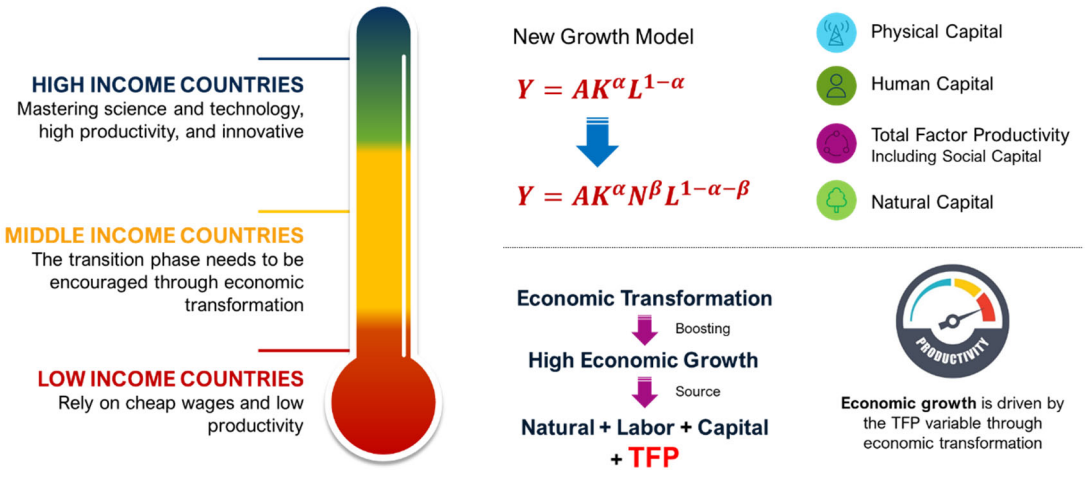


Source: BAPPENAS 2024

Figure 7-2 Indonesia GNI per Capita Projection

7.1.2 Towards New Growth Model

As shown in the figure below, for Indonesia to become a high-income country, it is believed that it needs to develop a new growth model, moving from resource-driven growth to productivity-led growth. The elements to be considered from the perspectives of physical capital, human capital, social capital, and natural capital, as shown in the figure below, will be reflected in the East Kalimantan Province Economic Transformation Master Plan.

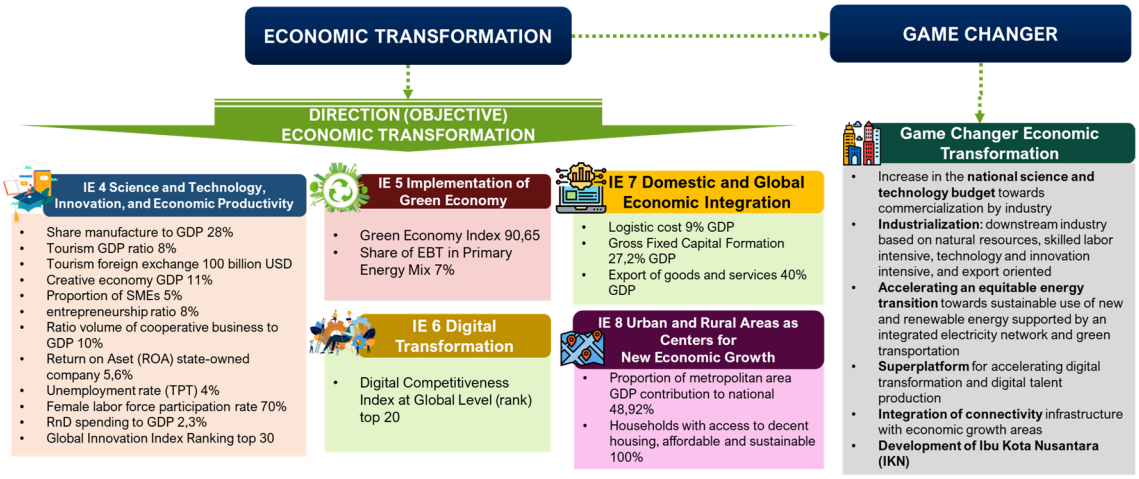


Source: BAPPENAS 2024

Figure 7-3 Approaches to Become High-Income Country

7.1.3 Driving Forces for Achieving Economic Transformation

As shown in the figure below, 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 ripple effects from the relocation of the new capital.



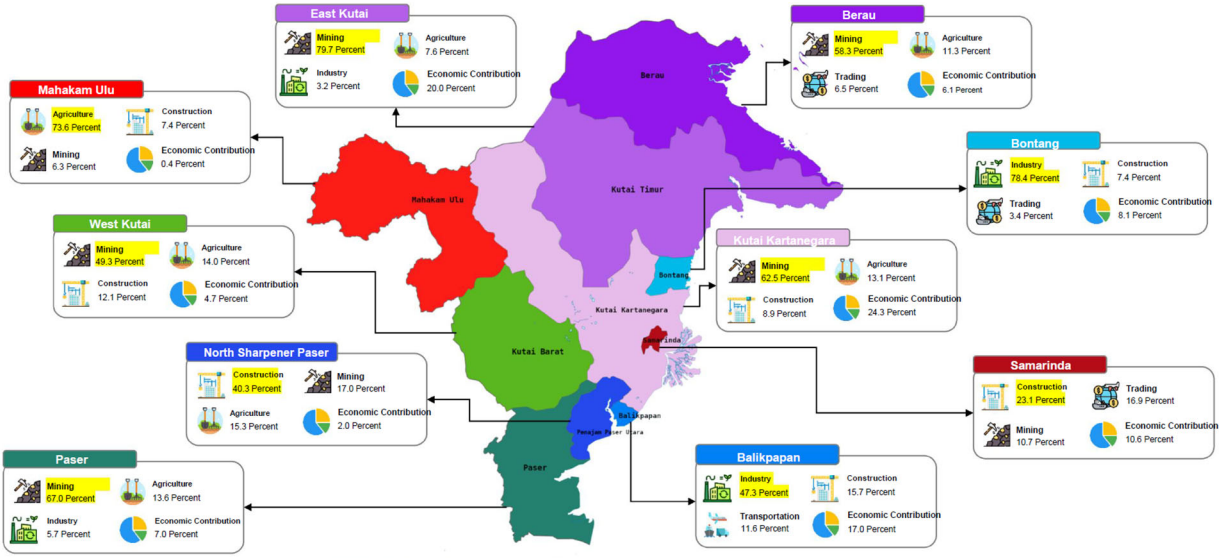
Source: BAPPENAS 2024

Figure 7-4 Driving Forces for Economic Transformation

7.2 Outline of East Kalimantan Economic Transformation Master Plan

7.2.1 Target Area

As shown in the figure below, the entire East Kalimantan Province and all its municipalities will be included in the target area.



Source: BAPPENAS 2024

Figure 7-5 Municipalities of East Kalimantan Province and Industrial Structure

7.2.2 Steps for Realizing Economic Transformation Roadmap in East Kalimantan Province

The following steps have been worked toward creating Nusantara Economic Super Hub and six new economic clusters as part of economic transformation in East Kalimantan Province. As of September 2024, most of the on-site visits have been almost completed.

(1) Preparation: Analysis of Region's Strategic Challenges regarding Economic Structure

The interim report states that strategic issues will be identified by the following methods.

1. Growth diagnostic analysis: Growth diagnostic is a tool to identify the main issues (binding constraints) that hinder the economic growth of the region.

2. Other quantitative analysis: Analysis of key sectors, regional potential, location quota and shift share, etc.

(2) Field Visit: Field Visit and Survey of Stakeholders

Identify strategic issues by the following method.

1. Qualitative analysis: Primary data collection, Conduct Focus Group Discussions (FGD) and in-depth interviews with all stakeholders (local government, private sector, SMEs, etc.).

(3) Preparation of Report: Formulation of Economic Transform Roadmap in East Kalimantan Province

Formulate a roadmap for economic transformation in East Kalimantan Province.

1. Take in the opinions of all stakeholders.

2. Formulate economic transformation strategy for East Kalimantan Province.

(4) In-depth Interview: Approval of Action Plan from Stakeholders

Get approval of action plan from all stakeholders for the economic transformation strategy for East Kalimantan Province.

(5) Finalize Draft Report

Finalize the economic transformation roadmap for East Kalimantan Province.

1. Incorporate opinions from all stakeholders.

2. Finalize economic reform strategy for East Kalimantan Province.

(6) Launch of Economic Reform Roadmap in East Kalimantan Province

The report of the East Kalimantan Economic Transformation Master Plan was originally scheduled to be published in December 2024. As of September 2024, BAPPENAS has completed visits to local municipalities and interviews with local companies and is in the process of formulating the report, with a delay of 2-3 months.

7.3 Recommendations on East Kalimantan Economic Transformation Master Plan

7.3.1 Recommendations based on inter-regional input-output analysis

(1) Outline of Input-Output Table and Input-Output Analysis

An input-output table is a matrix of production, transactions, consumption, government spending, investment, and other final demands among economic entities (industry, consumers, government, and investors) in a country, city, or region in the year, and enables us to read the industrial structure and economic and social conditions of the area.

The analysis by matrix calculation using the input-output table is called Input-Output Analysis, which enables the analysis of economic ripple effects such as production inducement effect calculated as the output of this article.

(2) Summary of 34 Interprovincial Input-Output Tables for Indonesia, 2016

1) Basic Information

JICA Study Team conducted an inter-industry analysis using the "Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021" ("2016 IRIO Tables") prepared by BPS and provided by BAPPENAS.

The 2016 IRIO table organizes economic transactions and factor inputs and final demand among the 34 provinces of Indonesia (now 37 provinces after Papua was divided into three provinces at that time) from January 2016 to December 2016 in the form of an interregional input-output table. Table 7-1 below shows the regional classification and Table 7-2 shows the industry sector classification. Two types of data are available on the BPS website: 52 industry sector classifications and 17 industry sector classifications.[59] In this study, calculations will be conducted using data from the 17 industry sector classifications, which are easier to calculate, assuming multiple scenarios.

Note that the data in the file published on the BPS website is different from the regular input-output table, and therefore, large-scale editing of the data is required to conduct an input-output analysis. Therefore, we receive and use the data in normal format from the BPS through BAPPENAS.

Table 7-1 IRIO Table Regional Classification (34 States)

No.	Province Name	No.	Province Name
1	ACEH	18	NUSA TENGGARA BARAT
2	SUMATERA UTARA	19	NUSA TENGGARA TIMUR
3	SUMATERA BARAT	20	KALIMANTAN BARAT
4	RIAU	21	KALIMANTAN TENGAH
5	JAMBI	22	KALIMANTAN SELATAN
6	SUMATRA SELATAN	23	KALIMANTAN TIMUR
7	BENGKULU	24	KALIMANTAN UTARA
8	LAMPUNG	25	SULAWESI UTARA
9	KEP. BANGKA BELITUNG	26	SULAWESI TENGAH
10	KEP. RIAU	27	SULAWESI SELATAN

[59] https://www.bps.go.id/en/statistics-table/1/MjEyNyMx/indonesian-inter-regional-input-output-table-domestic-transactions-at-producers-price-by-34-province-and-17-industrial-origin--2016--million-rupiah-.html

11	DKI JAKARTA	28	SULAWESI TENGGARA
12	JAWA BARAT	29	GORONTALO
13	JAWA TENGAH	30	SULAWESI BARAT
14	YOGYAKARTA	31	MALUKU
15	JAWA TIMUR	32	MALUKU UTARA
16	BANTEN.	33	PAPUA BARAT
17	BALI	34	PAPUA

Source: Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

Table 7-2 2016 IRIO Table Industry Sector Classification (17 industry sector right side are used)

52 Industries		17 Industries	
I-01	Food Crop Agriculture	1	Agriculture, Forestry and Fisheries
I-02	Agriculture Seasonal Horticulture, Annual Horticulture, and Others		
I-03	Annual and Seasonal Plantations		
I-04	Livestock		
I-05	Agricultural and Hunting Services		
I-06	Forestry and Logging		
I-07	Fisheries		
I-08	Oil, Gas and Geothermal Mining	2	Mining and Quarrying
I-09	Coal and Lignite Mining		
I-10	Metal Ore Mining		
I-11	Other Mining and Quarrying		
I-12	Coal and Oil and Gas Refining Industry	3	Processing Industry
I-13	Food and Beverage Industry		
I-14	Tobacco Processing Industry		
I-15	Textile and Apparel Industry		
I-16	Leather, Leather Goods and Footwear Industry		
I-17	Wood, Wood and Cork Products and Goods Industry		
	Woven from Bamboo, Rattan and the Like		
I-18	Paper and Paper Goods Industry, Printing and Recording Media Reproduction		
I-19	Chemical, Pharmaceutical and Traditional Medicine Industry		
I-20	Rubber, Rubber Goods and Plastics Industry		
I-21	Non-metallic minerals industry		
I-22	Base Metal Industry		
I-23	Manufacture of Metal Products, Computers, Electronic Goods, Optical and Electrical Equipment		
I-24	Machinery and Equipment Industry Ytdl		
I-25	Transportation Equipment Industry		
I-26	Furniture Industry		
I-27	Other Manufacturing Industries, Machinery and Equipment Repair and Installation Services		
I-28	Electricity	4	Electricity and Gas Procurement
I-29	Gas Procurement and Ice Production		
I-30	Water Supply, Waste Management, Waste and Recycling	5	Water Supply, Waste Management, Waste and Recycling
I-31	Construction	6	Construction
I-32	Trade in Cars, Motorcycles and Reparations	7	Wholesale and Retail Trade; Repair of Cars and Motorcycles
I-33	Wholesale and Retail Trade, Not Cars and Motorcycles		
I-34	Rail Transportation	8	Transportation and Warehousing
I-35	Land Transportation		
I-36	Sea Transportation		
I-37	River, Lake and Ferry Transportation		
I-38	Air Transportation		
I-39	Warehousing and Supporting Services Transportation, Post and Courier		
I-40	Accommodation Provision	9	Provision of Accommodation and Drinking Meals
I-41	Provision of Drinking Food		
I-42	Information and Communication Services	10	Information and Communication
I-43	Financial Intermediary Services Other than Central Banks	11	Financial and Insurance Services
I-44	Insurance and Pension Funds		

I-45	Other Financial Services		
I-46	Financial Support Services		
I-47	Real Estate	12	Real Estate
I-48	Company Services	13	Company Services
I-49	Government Administration, Defense and Compulsory Social Security	14	Government Administration, Defense and Compulsory Social Security
I-50	Education Services	15	Education Services (Education)
I-51	Health and Social Services	16	Health and Social Services (Health)
I-52	Other Services	17	Other Services

Source: Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

2) Data Summary

The 2016 IRIO table shows economic conditions as of 2016, which is about seven years from the time this report is going to be submitted in 2024.

In the meantime, the Indonesian economy has maintained a high economic growth rate, except for the recession caused by COVID-19, with nominal GDP increasing from 931.88 Billion USD in 2016 to 1.37 Trillion USD in 2023, an increase of about 1.47 times.[60] However, the analysis using the 2016 IRIO table has some validity, as there has been no significant change in its industrial structure and no significant ranking changes in the gross production of each state. Below is a summary of the data in the 2016 IRIO table, focusing on transactions with East Kalimantan Province, the province covered by this study.

a) Industrial Structure of East Kalimantan Province, Indonesia

For Indonesia as a whole, the processing industry (manufacturing in general), construction, and wholesale/retail/automobile repair are the top output sectors as indicated in the table below. In East Kalimantan Province alone, the industrial structure is extremely dependent on mining (coal, oil, minerals, etc.) and processing industries.

[60] https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2023&locations=ID&start=2015

Table 7-3 Industrial Production Value of East Kalimantan Province, Indonesia

Year 2016

	Agriculture, Forestry, and Fisheries	Mining and Quarrying	Processing Industry	Electricity and Gas Procurement	Water Supply, Waste Management, Waste and Recycling	Construction	Wholesale and Retail Trade; Repair of Cars and Motorcycles	Transportation and Warehousing	Provision of Accommodation and Drinking Food	Information and Communication	Financial Services and Insurance	Real Estate	Company Services	Government Administration, Defense and Compulsory Social Security	Education Services	Health and Social Services	Other Services
Total Production in Indonesia (Billion Rupiah)	1,861,299	1,178,563	7,192,736	606,768	32,058	2,980,401	2,383,269	1,489,043	954,433	771,456	711,576	756,040	602,788	763,798	618,174	310,077	492,309
Percentage in the Total Production in Indonesia (%)	7.9%	5.0%	30.3%	2.6%	0.1%	12.6%	10.1%	6.3%	4.0%	3.3%	3.0%	3.2%	2.5%	3.2%	2.6%	1.3%	2.1%
Production in East Kalimantan (Billion Rupiah)	53,114	335,435	244,275	8,615	666	89,513	47,648	44,751	13,402	13,226	10,631	10,404	7,805	14,155	9,971	5,097	5,693
Percentage in the Production in East Kalimantan (%)	5.8%	36.7%	26.7%	0.9%	0.1%	9.8%	5.2%	4.9%	1.5%	1.4%	1.2%	1.1%	0.9%	1.5%	1.1%	0.6%	0.6%

Source: JICA Study Team based on Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

b) Transfers from East Kalimantan Province to various provinces

In the table below, as with transfers, the top exports in all sectors are to Java, mainly Jakarta, West Java, Central Java, and East Java.

In agriculture, forestry, and fisheries, electricity and gas, information and telecommunications wholesale and retail, and automobile repair, the top transfers are to Sumatera, Kalimantan, Sulawesi, and Eastern Indonesia.

There is more regional variation in the destination than in the source.

Table 7-4 Transfers in and out from East Kalimantan Province to Each Province (Billion IDR)

		11. Aceh	12. Sumatera Utara	13. Sumatera Barat	14. Riau	15. Jambi	16. Sumatera Selatan	17. Bengkulu	18. Lampung	19. Kep. Bangka Belitung	21. Kep. Riau	31. DKI Jakarta	32. Jawa Barat	33. Jawa Tengah	34. DI Yogyakarta	35. Jawa Timur	36. Banten	51. Bali
64. Kalimantan Timur	AGRO	0	0	0	0	0	248	0	2	0	0	0	38	831	0	1,677	100	1
	MINING	4	2	3	81	0	59	4	84	31	122	138	5,740	15,961	0	13,212	5,383	1
	PROCESSING	1	35	121	555	0	16	0	265	0	0	3,234	1,140	84	16	11,448	1,548	2,518
	ELE/GAS	1	68	7	12	1	0	2	2	0	12	37	2	4	15	43	8	9
	WATER/WASTE	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CONSTRUCTION	1	1	0	0	0	1	0	0	0	0	2	1	0	0	1	2	0
	VEHICLE	0	3	4	19	0	18	0	10	0	0	111	169	392	1	830	168	71
	TRANSPORT	24	158	79	101	78	102	49	170	19	79	1,098	925	592	39	1,064	274	94
	HOTEL/RESTAURANT	12	19	1	12	11	19	5	15	3	1	66	25	22	20	24	41	27
	COMMUNICATION	2	69	3	64	6	52	8	26	3	15	112	278	139	20	13	22	18
	FINANCE	25	211	35	99	29	127	28	20	5	21	183	156	130	32	263	121	27
	REAL ESTATE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	B2B SERVICE	7	20	9	6	0	16	1	5	1	1	28	6	31	5	11	2	1
	GOVT SERVICE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EDUCATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HEALTH	0	1	1	1	0	0	0	0	0	0	4	8	5	1	2	1	13
	OTHER SERVICES	1	1	1	1	1	0	0	1	0	0	1	3	2	0	4	1	1

		52. Nusa Tenggara Barat	53. Nusa Tenggara Timur	61. Kalimantan Barat	62. Kalimantan Tengah	63. Kalimantan Selatan	64. Kalimantan Timur	65. Kalimantan Utara	71. Sulawesi Utara	72. Sulawesi Tengah	73. Sulawesi Selatan	74. Sulawesi Tenggara	75. Gorontalo	76. Sulawesi Barat	81. Maluku	82. Maluku Utara	91. Papua Barat	94. Papua
64. Kalimantan Timur	AGRO	0	0	596	435	372	31,620	188	0	0	90	53	0	0	0	0	336	0
	MINING	1,888	731	1,290	497	77	95,854	82	547	367	6,925	552	135	41	639	34	0	0
	PROCESSING	912	1	1,233	3,076	4,581	95,169	2,818	5,576	1,071	5,330	603	174	334	2	0	1	3,769
	ELE/GAS	0	0	0	1	1	7,013	0	1	0	0	1	0	1	0	0	0	0
	WATER/WASTE	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0
	CONSTRUCTION	0	0	3	1	0	13,817	0	0	0	0	0	0	0	1	0	0	0
	VEHICLE	59	11	223	159	190	16,146	117	146	29	319	45	7	12	8	1	25	84
	TRANSPORT	73	114	79	190	180	19,383	110	49	137	238	143	15	33	126	30	85	165
	HOTEL/RESTAURANT	6	10	14	4	15	3,229	4	8	11	16	4	1	3	2	5	4	41
	COMMUNICATION	5	10	7	29	38	7,096	11	2	5	28	8	2	1	15	2	12	17
	FINANCE	16	19	43	112	57	5,332	13	25	9	34	16	14	6	9	10	2	4
	REAL ESTATE	0	0	0	0	0	1,577	0	0	0	0	0	0	0	0	0	0	0
	B2B SERVICE	3	5	1	7	4	6,456	1	1	10	21	5	1	1	5	1	7	3
	GOVT SERVICE	0	0	0	0	0	722	0	0	0	0	0	0	0	0	0	0	0
	EDUCATION	0	0	0	0	0	384	0	0	0	0	0	0	0	0	0	0	0
	HEALTH	6	0	1	4	25	560	1	2	7	0	3	1	1	0	0	0	3
	OTHER SERVICES	1	0	58	1	20	1,124	0	1	1	5	1	0	0	0	0	0	0

Source: JICA Study Team based on Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

c) Transfers from various provinces in East Kalimantan Province

As indicated in the table below, all industries are dominated by transfers from Java, mainly Jakarta, West Java, and East Java, in full force.

There is a large influx from North Kalimantan and Central and South Sulawesi in sectors such as agriculture, forestry, fisheries, construction, lodging, and food services.

In the mining and processing industries, there is a certain amount of migration from North Sumatera and Bali, as well as from Maluku and other areas in the east.

Table 7-5 Transfers from Various Provinces in East Kalimantan Province (Billion IDR)

	64. Kalimantan Timur																Unit: Billion Rupiah
	AGRO	MINING	PROCESSING	ELE/GAS	WATER/WASTE	CONSTRUCTION	VEHICLE	TRANSPORT	HOTEL/RESTAURANT	COMMUNICATION	FINANCE	REAL ESTATE	B2B SERVICE	GOVT SERVICE	EDUCATION	HEALTH	OTHER SERVICES
11. Aceh	2	54	6	1	0	4	12	3	2	4	1	0	2	7	4	1	1
12. Sumatera Utara	17	433	77	13	0	27	96	25	27	27	13	6	14	32	25	8	8
13. Sumatera Barat	5	159	22	1	0	16	36	9	8	19	2	0	5	37	18	3	3
14. Riau	1	15	3	0	0	1	3	2	0	2	0	0	0	2	2	0	1
15. Jambi	3	75	12	1	0	5	20	7	1	9	2	1	2	9	7	1	2
16. Sumatera Selatan	6	92	58	2	0	16	65	9	2	23	6	1	8	23	22	2	4
17. Bengkulu	1	47	4	1	0	3	10	2	1	1	1	0	1	5	2	1	1
18. Lampung	7	314	31	1	1	25	67	19	13	14	2	0	5	40	16	4	3
19. Kep. Bangka Belitung	0	9	2	0	0	1	1	1	0	1	0	0	0	2	1	0	0
21. Kep. Riau	6	108	26	2	0	12	20	9	3	4	3	1	5	18	7	3	2
31. DKI Jakarta	243	2,952	1,051	99	7	4,876	1,064	486	128	463	159	38	298	428	309	97	100
32. Jawa Barat	282	8,606	1,313	28	11	1,850	616	497	179	93	45	5	299	263	218	64	92
33. Jawa Tengah	73	387	95	7	1	65	74	28	13	19	10	2	24	62	40	11	16
34. DI Yogyakarta	29	230	103	4	1	32	108	19	8	52	12	2	20	79	71	11	15
35. Jawa Timur	112	2,193	7,291	22	3	2,544	869	138	90	217	79	14	86	281	235	53	53
36. Banten	111	785	321	12	4	1,002	198	88	28	43	17	3	34	101	45	25	17
51. Bali	20	187	99	2	1	38	49	15	33	38	5	1	7	80	100	16	31
52. Nusa Tenggara Barat	20	84	104	2	0	13	17	4	60	7	1	1	2	31	21	5	5
53. Nusa Tenggara Timur	66	92	310	2	0	23	22	8	218	10	2	1	3	13	7	12	8
61. Kalimantan Barat	54	190	251	2	0	34	43	13	167	11	3	1	4	32	16	12	7
62. Kalimantan Tengah	13	179	784	3	0	7	44	11	2	3	3	1	3	9	6	1	2
63. Kalimantan Selatan	23	190	703	3	0	92	33	11	10	10	3	1	4	22	10	3	5
64. Kalimantan Timur	11,451	92,561	101,317	7,424	234	29,932	14,767	21,311	5,850	3,836	1,789	2,467	2,442	4,357	2,066	1,995	1,720
65. Kalimantan Utara	68	1,025	1,979	45	1	2,336	106	79	43	14	6	1	14	47	12	8	30
71. Sulawesi Utara	4	163	38	2	0	273	16	9	3	7	2	2	3	12	10	2	3
72. Sulawesi Tengah	143	605	657	2	0	2,041	22	22	176	10	2	10	4	28	21	14	20
73. Sulawesi Selatan	127	479	535	5	1	399	68	49	258	22	9	3	22	46	31	46	23
74. Sulawesi Tenggara	2	56	8	1	0	5	13	5	2	5	1	0	2	6	3	1	3
75. Gorontalo	1	14	4	0	0	1	4	1	2	0	0	0	0	1	1	0	0
76. Sulawesi Barat	78	230	164	1	0	93	7	6	86	1	1	0	2	8	4	9	9
81. Maluku	12	72	205	1	0	198	15	7	6	11	2	0	3	7	4	1	1
82. Maluku Utara	7	27	47	1	0	33	6	2	18	1	1	0	1	3	2	1	1
91. Papua Barat	1	10	2	0	0	1	3	1	0	2	0	0	1	2	2	0	0
94. Papua	2	70	7	1	0	7	14	5	3	4	1	0	2	11	5	1	1

*Blue colors indicate top 5 provinces except for East Kalimantan Province
Source: JICA Study Team based on Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

d) Production Inducement Effects of Government Spending (100 Million IDR)

As shown in the table below, there are a number of sectors in and outside East Kalimantan Province that would experience an increase in production of more than 1 Million IDR (vertical axis) if all sectors in East Kalimantan Province (horizontal axis) were subject to government spending of 100 Million IDR each.

Government spending on electricity and gas, construction, lodging and food and beverage in East Kalimantan Province has induced production in mining, agriculture, forestry, fisheries, and processing industries in North Kalimantan and agriculture, forestry, fisheries, and processing industries in Central and South Sulawesi.

It is suggested that plans for the supply of electricity to the new capital from North Kalimantan and food, building materials, etc. from Sulawesi are being drawn up based on existing economic ties.

Table 7-6 Production Inducement Effects of Government Spending

		64. Kalimantan Timur																
		Govt Consumption 100 Million Rupiah cause the following productions																
		AGRO	MINING	PROCESSING	ELE/GAS	WATER/WASTE	CONSTRUCTION	VEHICLE	TRANSPORT	HOTEL/RESTAURANT	COMMUNICATION	FINANCE	REAL ESTATE	B2B SERVICE	GOVT SERVICE	EDUCATION	HEALTH	OTHER SERVICES
31. DKI Jakarta	PROCESSING	0.18	0.33	0.30	0.85	0.52	4.09	0.99	0.46	0.43	0.57	0.47	0.94	1.03	0.90	1.37	0.83	0.88
31. DKI Jakarta	VEHICLE	0.21	0.30	0.25	0.51	0.31	1.05	0.40	0.37	0.55	0.31	0.18	0.25	0.51	0.51	0.47	0.45	0.48
31. DKI Jakarta	COMMUNICATION	0.18	0.19	0.18	0.42	0.33	0.24	0.54	0.32	0.24	2.56	0.51	0.10	0.97	0.52	0.48	0.40	0.26
31. DKI Jakarta	B2B SERVICE	0.15	0.35	0.18	1.11	0.44	0.40	0.41	0.27	0.23	0.93	0.52	0.15	1.84	0.89	0.70	0.46	0.35
32. Jawa Barat	PROCESSING	0.58	3.31	1.23	2.14	2.13	1.79	1.47	1.51	1.00	0.83	0.58	0.43	4.84	1.71	2.22	1.37	1.42
32. Jawa Barat	VEHICLE	0.42	0.71	0.51	0.94	0.63	1.55	0.63	0.73	1.09	0.35	0.25	0.36	0.99	0.73	0.68	0.78	0.84
35. Jawa Timur	MINING	0.36	0.62	2.84	0.73	0.68	0.73	0.60	1.18	0.71	0.31	0.14	0.19	0.41	0.38	0.27	0.77	0.37
35. Jawa Timur	PROCESSING	0.23	0.37	0.51	0.47	0.47	3.20	1.78	0.41	0.84	1.23	0.68	0.76	0.90	1.56	2.20	0.88	0.84
53. Nusa Tenggara Ti	AGRO	0.15	0.02	0.16	0.04	0.04	0.05	0.05	0.07	1.73	0.03	0.01	0.01	0.03	0.14	0.11	0.32	0.17
61. Kalimantan Barat	AGRO	0.12	0.02	0.12	0.03	0.04	0.04	0.04	0.05	1.32	0.03	0.01	0.01	0.02	0.12	0.10	0.25	0.11
64. Kalimantan Timur	AGRO	106.69	1.16	10.69	2.21	2.54	6.03	2.32	4.45	19.47	1.13	0.62	1.38	1.42	2.62	2.20	6.40	7.96
64. Kalimantan Timur	MINING	3.09	109.27	24.13	54.30	9.54	10.62	5.34	10.41	6.18	2.96	1.68	2.56	3.80	4.04	2.39	6.75	3.85
64. Kalimantan Timur	PROCESSING	11.71	8.66	96.39	18.40	21.81	19.84	18.73	39.26	23.08	8.98	4.05	5.10	11.72	11.15	7.00	24.89	11.17
64. Kalimantan Timur	ELE/GAS	0.45	0.40	0.89	187.45	14.98	0.71	1.90	2.13	1.25	1.78	1.68	0.48	1.10	3.64	1.47	1.55	3.41
64. Kalimantan Timur	WATER/WASTE	0.00	0.00	0.00	0.01	98.42	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.01	0.02	0.02	0.04	0.13
64. Kalimantan Timur	CONSTRUCTION	0.65	3.05	0.84	2.45	1.26	92.73	1.93	1.47	0.60	0.57	1.45	19.44	0.81	1.06	0.94	0.79	1.56
64. Kalimantan Timur	VEHICLE	1.59	2.07	1.77	3.37	1.98	5.75	98.69	2.63	4.11	1.13	0.94	1.34	2.95	2.56	2.00	2.85	3.34
64. Kalimantan Timur	TRANSPORT	1.89	3.60	1.76	3.26	2.38	1.52	4.26	99.06	2.79	4.80	0.89	0.41	5.81	10.63	3.82	2.47	1.47
64. Kalimantan Timur	HOTEL/RESTAURANT	0.27	0.27	0.37	0.36	0.34	0.31	0.93	0.36	99.97	0.66	0.33	0.09	0.35	4.86	3.76	2.72	1.07
64. Kalimantan Timur	COMMUNICATION	0.91	0.76	0.83	1.64	1.56	0.55	2.67	1.56	0.99	113.59	2.74	0.33	4.72	2.20	2.14	1.87	1.08
64. Kalimantan Timur	FINANCE	0.35	1.04	0.46	6.70	0.81	0.30	2.21	0.70	0.33	0.37	102.47	1.35	2.02	0.98	0.48	1.39	1.16
64. Kalimantan Timur	REAL EASTATE	0.06	0.15	0.08	0.33	0.12	0.08	0.86	0.09	0.16	1.83	2.91	99.88	1.29	0.88	1.70	0.54	2.19
64. Kalimantan Timur	B2B SERVICE	0.49	1.30	0.48	4.88	1.71	0.27	1.17	0.78	0.37	3.35	2.17	0.29	105.87	3.45	2.61	1.53	1.07
64. Kalimantan Timur	GOVT SERVICE	0.26	0.12	0.11	0.38	0.99	0.05	0.05	0.08	0.07	0.02	0.20	0.02	0.20	99.25	0.16	0.45	0.05
64. Kalimantan Timur	OTHER SERVICES	0.01	0.05	0.04	0.09	0.05	0.04	0.07	0.07	0.05	0.06	0.47	0.02	0.07	0.07	98.81	0.53	0.56
64. Kalimantan Timur	HEALTH	0.06	0.07	0.08	0.07	0.14	0.06	0.09	0.07	0.05	0.04	0.08	0.14	0.22	0.05	0.27	99.09	1.07
64. Kalimantan Timur	OTHER SERVICES	0.65	0.06	0.15	0.14	0.36	0.09	0.20	0.21	0.82	0.12	0.79	0.05	0.40	0.40	0.30	0.66	102.39
65. Kalimantan Utara	AGRO	0.13	0.10	0.34	0.13	0.11	1.37	0.14	0.19	0.30	0.05	0.05	0.29	0.08	0.15	0.07	0.18	0.52
65. Kalimantan Utara	MINING	0.06	0.23	0.46	1.08	0.18	0.14	0.10	0.20	0.12	0.06	0.03	0.04	0.07	0.08	0.05	0.13	0.08
65. Kalimantan Utara	PROCESSING	0.09	0.17	0.30	0.22	0.14	1.83	0.25	0.26	0.16	0.06	0.07	0.39	0.15	0.33	0.09	0.12	0.14
72. Sulawesi Tengah	AGRO	0.32	0.05	0.27	0.07	0.08	0.37	0.08	0.12	1.44	0.05	0.03	0.09	0.05	0.18	0.19	0.34	0.36
72. Sulawesi Tengah	PROCESSING	0.03	0.08	0.08	0.07	0.06	2.04	0.06	0.08	0.08	0.03	0.04	0.52	0.04	0.10	0.10	0.09	0.08
73. Sulawesi Selatan	AGRO	0.18	0.05	0.19	0.06	0.07	0.19	0.06	0.09	1.13	0.05	0.03	0.05	0.08	0.15	0.18	0.52	0.23
73. Sulawesi Selatan	PROCESSING	0.14	0.10	0.15	0.10	0.10	0.44	0.08	0.11	1.36	0.06	0.06	0.11	0.20	0.21	0.21	0.72	0.30

Source: JICA Study Team based on Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

(3) Summary of Analysis Methods

From the perspective of "what kind of rippled effects will the IKN Development and development in East Kalimantan Province have not only in East Kalimantan Province but also in other provinces?", an inter-industry analysis based on the following two scenarios to identify its production inducement effects by province and by industrial sector was conducted.

Table 7-7 Settings for Analysis

Scenario	Summary	Setting		
1)Production Inducement Effects of Public Investment in IKN Development in FY2023 and FY2024 by PUPR	Calculation of production inducement effects using the Ministry of Public Works and National Housing (PUPR) expenditures related to the IKN Development in FY2023 and FY2024 as inputs.	Assuming PUPR's FY2023 IKN-related budget is spent within East Kalimantan Province Assuming an increase in government spending in each industrial sector as follows		
		Water Resources:	1.13 Trillion IDR =>	Increase in final demand for water supply and waste treatment sector goods
		Roads:	9.72 Trillion IDR =>	Increase in final demand for construction sector goods
		Construction:	11.58 Trillion IDR =>	Increase in final demand for construction sector goods
		Housing:	4.20 Trillion IDR =>	Increase in final demand for real estate sector goods
		Assumes PUPR's FY2024 IKN-related budget will be spent within East Kalimantan Province Assuming an increase in government spending in each industrial sector as follows		
		Water Resources:	1.58 Trillion IDR =>	Increase in final demand for water supply and waste treatment sector goods
		Roads:	16.67 Trillion IDR =>	Increase in final demand for construction sector goods
		Construction:	11.44 Trillion IDR =>	Increase in final demand for construction sector goods
		Housing:	5.76 Trillion IDR =>	Increase in final demand for real estate sector goods
2)Production Inducement Effect of Total Investment in IKN Development	Production Inducement effects of investment expenditures for the IKN Development through 2045	Investment spending for the IKN Development until 2045 is assumed to be implemented within East Kalimantan Province, as shown in the following table		

Source: JICA Study Team

Table 7-8 IKN Development Investment Expenditures through 2045

OIKN Assumed IKN-related investment*.		input-output analysis	
Investment Areas	Investment Scale	Industrial Sector	Investment Expenditures (median of "investment size" on the left)
Green Open Space	22-26.4 Trillion IDR⇒	Agriculture, Forestry and Fisheries	24.2 Trillion IDR
Complex facility	47-65.9 Trillion IDR⇒	Construction	56.45 Trillion IDR
Housing	155.9-172.1 Trillion IDR⇒	Real estate	164 Trillion IDR
Education	14.8-29.9 Trillion IDR⇒	Education Service	22.35 Trillion IDR
Religious facilities	49-74 Trillion IDR⇒	Health and Social Service	61.5 Trillion IDR
Medical care	9.1-18.6 Trillion IDR⇒	Health and Social Service	13.85 Trillion IDR
Culture	13.8-27.7 Trillion IDR⇒	Education Service	20.75 Trillion IDR
Transport	0.48 Trillion IDR⇒	Transportation and Warehousing	0.48 Trillion IDR
Social Development	0.42-0.84 Trillion IDR⇒	Health and Social Service	0.63 Trillion IDR
Sport	0.24-0.48 Trillion IDR⇒	Health and Social Service	0.36 Trillion IDR
Renewable Energy	0.15-0.36 Trillion IDR⇒	Electricity & Gas Procurement	0.26 Trillion IDR

Source: JICA Study Team

(4) Analysis Results

1) Production Inducement Effects of Public Investment in IKN Development in 2023-2024

Table 7-9 below shows the production Inducement effects of IKN development public

investment in FY2023 and FY2024. 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, 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.

Table 7-9 Production Inducement Effects of IKN Development Public Investment

Unit: Million Rupiah of Y2016.

	Ripple effects generated by 2023 PUPR water resource linkage expenditures (1,130,000)	Spillovers generated by 2023 PUPR road and construction expenditures (21,300,000)	Spillovers generated by 2023 PUPR housing-related expenditures (4,200,000)	total amount
Total for all regions (including East Kalimantan)	1,945,019	36,019,265	5,913,105	**43,877,389**
Total for all regions (excluding East Kalimantan)	**148,236**	**6,422,055**	**332,652**	**6,902,943**
Total of other provinces in Kalimantan(excluding EK)	12,577	966,591	43,596	**1,022,764**
Percentage of total of other provinces in Kalimantan*.	**8.48%**	**15.05%**	**13.11%**	**14.82%**
Sulawesi Total	9,924	1,116,198	56,390	**1,182,512**
Sulawesi Ratio	**6.69%**	**17.38%**	**16.95%**	**17.13%**
Sumatra Total	10,942	228,911	15,702	**255,555**
Sumatra Ratio	**7.38%**	**3.56%**	**4.72%**	**3.70%**
Eastern Indonesia Total	13,861	1,268,316	64,422	**1,346,599**
Eastern Indonesia Ratio* (%)	**9.35%**	**19.75%**	**19.37%**	**19.51%**
Java and Bali Island total	110,857	3,958,237	208,931	**4,278,025**
Ratio of Java and Bali*.	**74.78%**	**61.64%**	**62.81%**	**61.97% of the total**

	Ripple Effects Expected from 2024 PUPR Water Resources Consolidated Expenditures (1,580,000)	Ripple effects expected from 2024 PUPR road and construction related expenditures (28,110,000)	Ripple effects expected from 2024 PUPR housing-related expenditures (5,760,000)	total amount
Total for all regions (including East Kalimantan)	2,719,584	47,535,284	8,109,401	**58,364,269**
Total for all regions (excluding East Kalimantan)	**207,268**	**8,475,303**	**456,209**	**9,138,780**
Total of other provinces in Kalimantan(excluding EK)	17,585	1,275,628	59,789	**1,353,002**
Percentage of total of other provinces in Kalimantan*.	**8.48%**	**15.05%**	**13.11%**	**14.81%**
Sulawesi Total	13,876	1,473,067	77,334	**1,564,278**
Sulawesi Ratio*.	**6.69%**	**17.38%**	**16.95%**	**17.12%**
Sumatra Total	15,300	302,097	21,535	**338,932**
Sumatra Ratio*.	**7.38%**	**3.56%**	**4.72%**	**3.71%**
Eastern Indonesia Total	19,380	1,673,820	88,350	**1,781,551**
Eastern Indonesia Ratio* (%)	**9.35%**	**19.75%**	**19.37%**	**19.49%**
Java and Bali Island total	155,003	5,223,758	286,535	**5,665,295**
Ratio of Java and Bali*.	**74.78%**	**61.64%**	**62.81%**	**61.99% of the total**

***excluding East Kalimantan**

Source: JICA Study Team

2) Production Inducement Effect of Total Investment in IKN Development

Table 7-10 below shows the production-inducing effects of total investment in IKN development. The approximately 364.8 Trillion IDR of IKN-related investment (private and public) in East Kalimantan 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.

Table 7-10 Production Inducement Effects of Total Investment in IKN Development

Unit: Million Rupiah of Y2016.

Investment Industry Sector (Investment Scale)	Agriculture, forestry and fisheries (24,200,000)	Electricity & Gas (255,000)	Construction (56,450,000)	Transportation & Warehousing (479,000)	Real estate (164,000,000)	Education (43,100,000)	Healthcare and Social Security (76,335,500)	Total amount (364,819,500)
Total for all regions (including East Kalimantan)	32,900,302	774,958	95,459,508	839,886	230,892,674	66,133,431	131,520,352	558,521,112
Total for all regions (excluding East Kalimantan)	**1,650,227**	**45,474**	**17,019,952**	**57,452**	**12,989,277**	**10,071,246**	**13,575,222**	**55,408,850**
Total of other provinces in Kalimantan (excluding EK)	184,189	6,150	2,561,693	6,753	1,702,332	489,928	1,091,914	6,042,959
Percentage of Kalimantan and other provinces (excluding EK)	**11.16%**	**13.52%**	**15.05%**	**11.75%**	**13.11%**	**4.86%**	**8.04%**	**10.91%**
Sulawesi Total	272,314	2,856	2,958,187	4,361	2,201,885	679,706	2,056,386	8,175,695
Sulawesi Ratio*.	**16.50%**	**6.28%**	**17.38%**	**7.59%**	**16.95%**	**6.75%**	**15.15%**	**14.76%**
Sumatra Total	86,266	3,654	606,667	3,620	613,138	1,023,397	989,482	3,326,224
Sumatra Ratio*.	**5.23%**	**8.03%**	**3.56%**	**6.30%**	**4.72%**	**10.16%**	**7.29%**	**6.00%**
Eastern Indonesia Total	359,317	3,950	3,361,335	5,944	2,515,529	1,053,763	2,671,492	9,971,331
Eastern Indonesia Ratio* (%)	**21.77%**	**8.69%**	**19.75%**	**10.35%**	**19.37%**	**10.46%**	**19.68%**	**18.00%**
Java and Bali Island total	1,020,455	31,720	10,490,257	41,134	8,158,277	7,504,159	8,822,334	36,068,337
Ratio of Java and Bali*.	**61.84%**	**69.75%**	**61.64%**	**71.60%**	**62.81**	**74.51%**	**64.99%**	**65.09%**

Source: JICA Study Team based on Interregional Input-Output Tables of Indonesia 2016 for Fiscal Year 2021

(5) Advice and Recommendations

The results of the economic analysis based on the 2016 IRIO table showed that if government spending and various investments associated with the development of IKN were to be made in East Kalimantan and if final demand in East Kalimantan were to increase, this would have a significant production inducement effect (ripple effect) on the industrial sector through the production and trade of intermediate goods and final consumer goods, and that this effect would not be limited to East Kalimantan but would extend to the whole of Indonesia. Therefore, the development of IKN has the effect of promoting the growth of the Indonesian economy, and should be further promoted.

However, as the results of the analysis using the 2016 IRIO table, which is based on the current industrial structure and supply chain, show, approximately 70% of the ripple 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.

Therefore, the EKETMP should consider the following points in order to change the situation inferred from the analysis results.

1) EKETMP should promote investment in industries that have a greater ripple effect on areas other than East Kalimantan: agriculture, forestry, fisheries, manufacturing, etc.

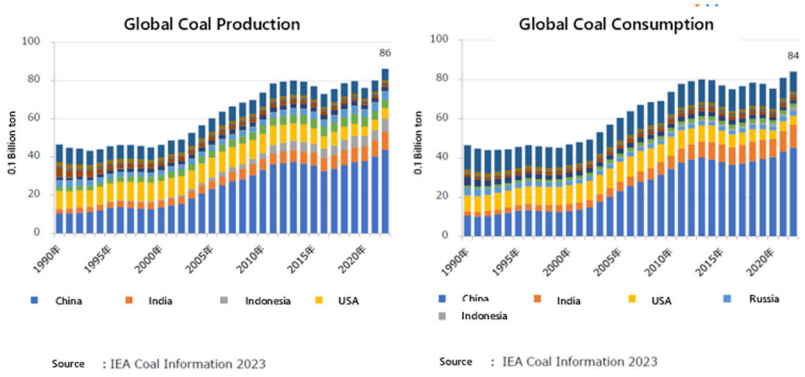
2) EKETMP should aim to promote a "review of the supply chain" that includes diversification and localization of raw materials and intermediate goods procurement, in cooperation with the state-owned companies that currently drive the industry (such as Pertamina, the state-owned oil company and its group companies, which have bases in East Kalimantan) and major private companies, and to aim for an industrial structure that will have a production inducement effect throughout Indonesia.

7.3.2 Case Study on Measures for Industrial Transformation in Various Countries

The main objective of the industrial transformation in East Kalimantan Province is the decarbonization of the energy industry, and policies targeting industries that will be downsized, along with the development of new industries, are crucial. Among the primary energy resources of oil, natural gas, and coal, oil production in East Kalimantan Province has decreased and is hardly being exported. Natural gas, being lower in carbon than coal and oil, is expected to be used as a transitional fuel resource towards renewable energy conversion for the time being. Regarding coal, despite its high carbon emissions, its low cost has led to continued active production and consumption. However, considering the future direction of coal use regulations in other countries, a transition away from the coal industry will eventually be necessary. This could become the most significant challenge, hence policies for transitioning from the coal industry are focused. To transform the industrial structure of Tri-City, which heavily relies on coal among natural energy resources, into one centered on low-carbon and renewable energy, the government should refer to the policies implemented by Japan, China, and Germany during their transitions from the coal industry to the oil or renewable energy industries. The effectiveness of these policies has been examined and compiled into recommendations. Additionally, an overview of Indonesia's coal industry has been organized for reference.

(1) Global Coal Industry Overview

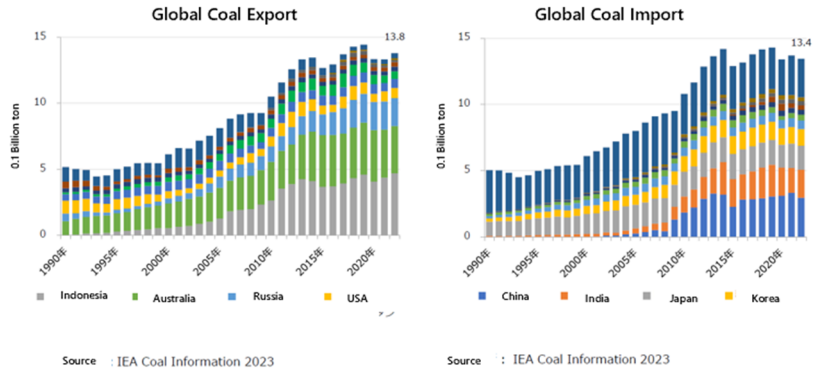
As shown in the figures below, since the 2020s, about half of the world's coal has been produced and consumed by China and India.



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure7-6 World Coal Production and Consumption

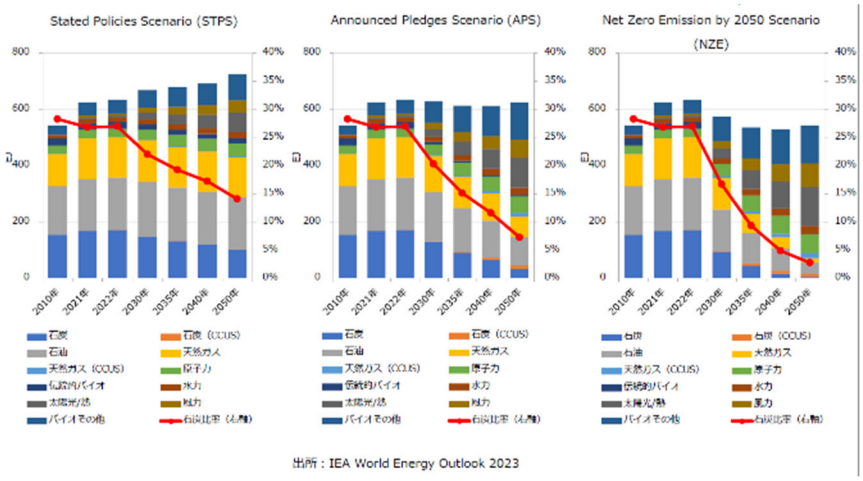
As shown in the figures below, since 2005, Indonesia has been covering the coal import demands of China and India.



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure7-7 World Coal Exports and Imports

As shown in the figures below, by 2050, coal's current energy share of over 25% is expected to fall to just under 15%, around 7%, or around 3%, depending on the three scenarios globally: the Stated Policies Scenario (an extension of current policies, the STEPS scenario), the Announced Pledges Scenario (a scenario based on national pledges), and the Net Zero Emission by 2050 Scenario, respectively.



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure7-8 Global Energy Consumption Share Forecast

(2) Transition of the Japanese Coal Industry

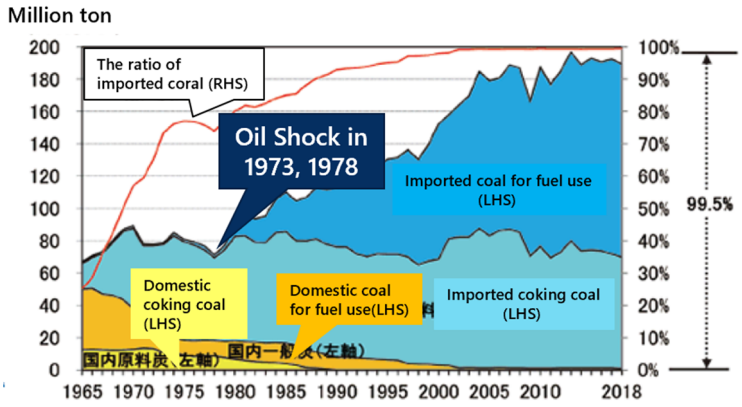
This section describes the policies as well as the measures centering on the legal systems that the Japanese government adopted to transition from the coal industry to the oil industry during the energy revolution of the 1960s, which saw a shift from the coal energy to the oil energy.

1) Coal Industry in Japan

In the mid-1960s, more than half of Japan’s coal consumption was domestically produced, but the demand for coal rapidly declined due to the energy revolution caused by cheap oil production. The shift to oil was caused by several factors: coal mines were deep; coal was not relatively inexpensive and was of low quality for both coking and heat source use.

As shown in the figures below, after the two oil shocks in 1973 and 1978, oil prices soared,

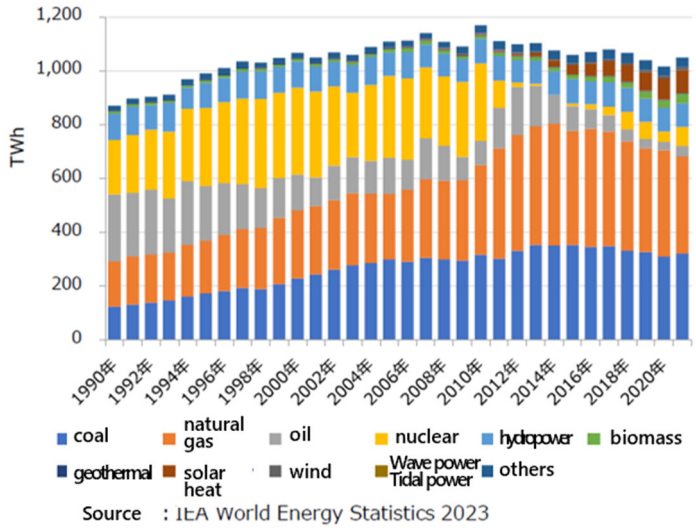
however, coking coal had been imported steadily from the United States and Australia, while coal for thermal power generation started to be imported from Australia, Indonesia, and China, and consequently, domestic coal mining capacity was lost.



Source: Ministry of Economy, Trade and Industry Energy White Paper 2023

Figure7-9 Coal Consumption in Japan

As shown in the figure below, coal continued to be used as a power generation energy source in the 1990s after the oil shocks, but it was replaced by imports.



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure7-10 Japan's Power Generation by Source

2) Structural Transition from the Coal Industry to the Oil Industry

In the 1960s, the use of cheap and convenient oil increased, and by the 1970s oil accounted for 80% of primary energy. During the energy transition from coal to oil, policies and legal measures were implemented to facilitate this shift. Previously, oil imports were restricted by the foreign currency quota system, however, the following measures were taken to prioritize the import of heavy oil and strengthen the refining industry in the consuming area (Japan).

- Under pressure from foreign countries, oil imports were liberalized, and foreign exchange controls were abolished.

- The Petroleum Industry Law was enacted to maintain the domestic petroleum refining industry, respond to oil majors, and maintain order in the petroleum industry with respect to Japan's petroleum refining industry, which is dependent on imports. The contents include the formulation of petroleum supply plan, licensing system for petroleum refining industry and specified facilities, notification system for petroleum import and sales business, notification system for production and import plans, establishment of standard sales price for petroleum products, and establishment of Petroleum Council.
- The Industrial Structure Research Committee report set out policies to promote energy security measures, ensure the safety of Japan's oil refining industry, and ensure affordable prices for petroleum products.

3) Measures for the Closure of Coal Mines in the coal industry

When the Japanese government decided to shift its energy source from coal to oil, the Coal Industry Rationalization Act was enacted in 1955 out of consideration for the existing coal industry, and the following compensation measures were taken.

a) The outline of the Coal Industry Rationalization Act (1955) is as follows:

- Employment adjustments were made while continuing the production until the mid-1960s.
- In addition to build-up measures centered on the introduction of technologies such as vertical pile drilling, scrappage measures such as the closure of inefficient coal mines were also implemented.
- The coal Mining Development Corporation and the Coal Mining Council were established to deliberate on coal policy. Under the leadership of the council, financing for modernization of plant production and logistics at factories, subsidies for mine closures, the setting of official coal prices, the increase of coal-fired power plants were carried out. Approximately 1 trillion yen was invested from 1955 to 1973 to secure income for former employees.

b) Measures for Re-employment and Human Resource Development

Based on the Coal Industry Rationalization Act and the government’s support regulations for mine workers, titled "Measures for Unemployment due to the Rationalization of the Coal Mining Industry", the following legal measures were implemented to facilitate wide-area job placement and improve industrial location conditions

- In 1959, the "Act on Temporary Measures for Discharged Workers in Coal Mines" was enacted due to the need for legislation, and the Association for Support of Discharged Workers in Coal Mines was established to support the re-employment of displaced coal miners in general.
- In 1961, the "Act on Temporary Measures for the Promotion of Coal-Industrial Areas" was enacted, and land development projects and loan programs were implemented to support companies in coal-producing areas. The mobility of the labor force was the cornerstone of employment policy, and the level of the employment rate of new job seekers was high, backed by strong labor demand associated with high economic growth. In reality, there were many unemployed

people with strong attachments to their local communities in the coal-producing areas.

4) Efforts to Attract and Create of the Petroleum Industry

The following measures were taken as policies and legal systems for the new petroleum industry:

- Standardized prices were first established in 1962 in response to deteriorating market conditions caused by increased competition.
- In 1967, the Japan Petroleum Development Corporation was established to support the establishment of overseas oil development companies through various subsidies, including Arabian Oil Co.
- Priority was given to the approval of new integrated refineries (complexes) rather than standalone refineries.
- The Basic Act on Pollution Control and the Air Pollution Control Act of 1968 lowered the sulfur content in heavy oil and popularized unleaded gasoline.

5) Summary of Japanese Government Policies

The policies of the Japanese government during the transition from the coal industry to the oil industry can be summarized as follows:

■ Policies for Promoting the Oil Industry

Support for the oil refining industry through the Petroleum Industry Law, including preferential approval for combined refineries and oil development companies.

■ Policies for the Declining Coal Industry

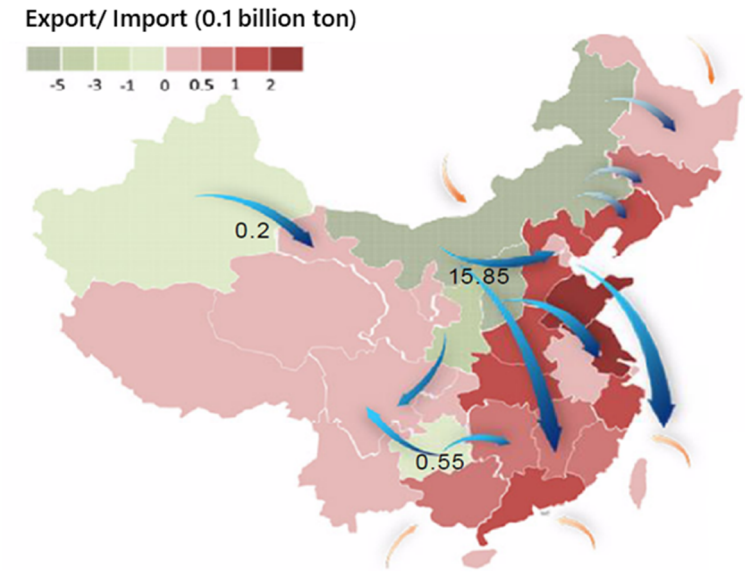
Rationalization of coal mining companies, financial support for closed mining companies, and ensuring the welfare of employees.

(3) Transition of the Coal Industry in China

Describe the situation where China, the world's largest coal producer and consumer, is transitioning from the coal industry to the renewable energy industry due to carbon neutrality policies since 2020, following production adjustment measures in the mid-2010s.

1) Coal Industry in China

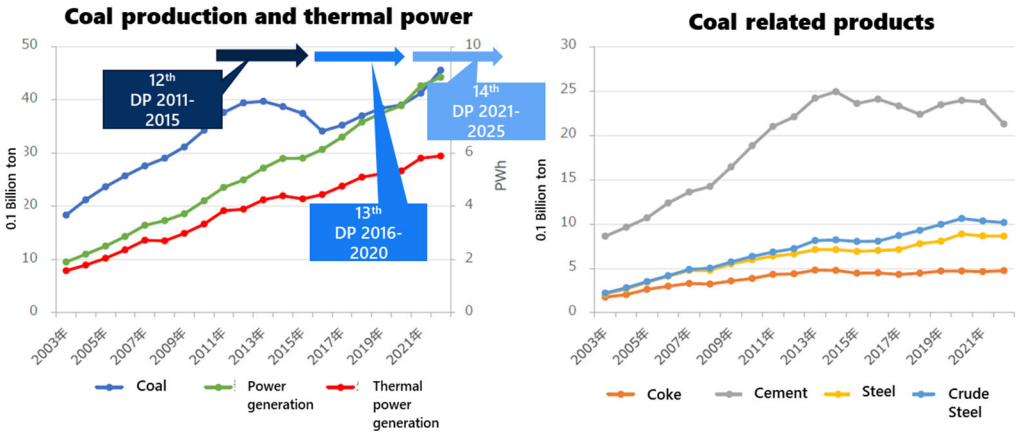
As shown in the figure below, the main production areas are three western provinces: western Inner Mongolia Autonomous Region, Shanxi Province, and Shaanxi Province. In recent years, production in the Xinjiang Uygur Autonomous Region has also increased. Most of the coal is consumed in the eastern coastal regions.



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure 7-11 Coal Transfer Plan for 2020

As shown in the figures below, the coal production declined temporarily between 2011 and 2016, but then significantly increased due to the continuous rise in electricity demandand the subsequent increase in thermal power generation (below left figure). Coking coal is extensively used for steel production (below left figure).



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure 7-12 China's Electricity Generation(left) and Petroleum-Related Product Production(right)

2) Structural Transformation from the Coal Industry

Whereas Chinese carbon neutral policy currently being implemented is based on the 3060 Double Carbon Initiative, specific industrial transformation policies and legal systems reflect the policy flow from the following five-year development plans since the 13th in 2016.

a) The 13th Five-Year Development Plan (2016-2020)

In the 13th Five-Year Development Plan (2016-2020) the coal mining industry was restructured to eliminate excess production capacity.

Measures included rationalizing facilities with illegal, obsolete, inefficient, and facilities with

environmental and safety problems, and implementing unemployment insurance, early retirement, reassignment, job training and compensation for mine closure costs.

In 2020, China declared 2060 Double Carbon initiative at the UN, and set two goals to achieve CO_2 peak-out by 2030 and carbon neutrality by 2060. In order to avoid increased dependence on oil and natural gas imports, the policy aims to change energy mix with high CO_2 emissions, improve air pollution, and establish an international standing contributing to carbon neutrality, and achieve economic growth.

b) The 14th Five-Year Development Plan (2021-2025)

The 14th Five-Year Development Plan emphasizes measures aimed at achieving carbon neutrality in response to the 2060 dual carbon policy. It focuses on reducing air pollution and greenhouse gases by transitioning from coal and oil-based power generation to solar and wind power generation.

The goals of 14th Five-Year Development Plan for 2021-2025

- Energy consumption per unit of GDP to be reduced by 13.5% (overall period)
- CO2 emissions per unit of GDP to be reduced by 18% (overall period) □
- Total energy production capacity to be 4.6 Billion tons or more in standard coal equivalent (as of 2025)

Energy and Environment Goals of the 14th Five-Year Development Plan

- Improving energy efficiency, moving from fossil fuels to renewable energy
- Develop new power energy storage and power grid for solar and wind power
- Introduce green energy markets and market prices, and expand from onshore to offshore wind power generation
- Implementation of renewable energy consumption allocation to various ministries
- Abolition of subsidies for offshore wind power generation

3) Measures for the Closure of Coal Mines in the Coal Industry

As a measure to close coal mines and compensate workers in the transition from the coal industry, the State Council issued a notice titled "Opinions on Eliminating Excess Capacity, Overcoming Difficulties, and Realizing Development in the Coal Industry" to eliminate excess capacity in 2016, and implemented the following policies:

- In the three to five years by 2020, coal production capacity will be reduced by 500 Million tons due to the closure of coal mines, but instead production will be transferred to new coal mines with a production capacity of 500 Million tons to improve production efficiency.
- No new coal mines will be allowed to be built between 2016 and 2018.
- The number of working days per year for coal miners was reduced from 330 to 276 days, resulting in a 16% decrease in production.
- Early retirement of closed coal mine workers was encouraged, and 1.3 Million coal industry workers were laid off, with unemployment insurance provided in accordance with the Labor Law, along with guaranteed special incentive subsidies.
- Special subsidies were granted to coal and steel companies with a large number of layoffs according to the scale of layoffs, totaling 100 billion yuan in special incentive subsidies. 300 million yuan was given to each closed coal mine, and an additional 300 million yuan was given at the city level within the province. In Shandong Province,

workers received financial support of 2.06 billion yuan from the national budget and 95 Million yuan from Shandong Province. This is equivalent to 38,000 yuan per worker, or about US$5,300.

- Vocational training was provided for reassignment and job changes, and although 56,660 workers were laid off in Shandong Province, all are said to have found new jobs.

4) Measures for Attracting and Creating a Low-Carbon Energy Industry

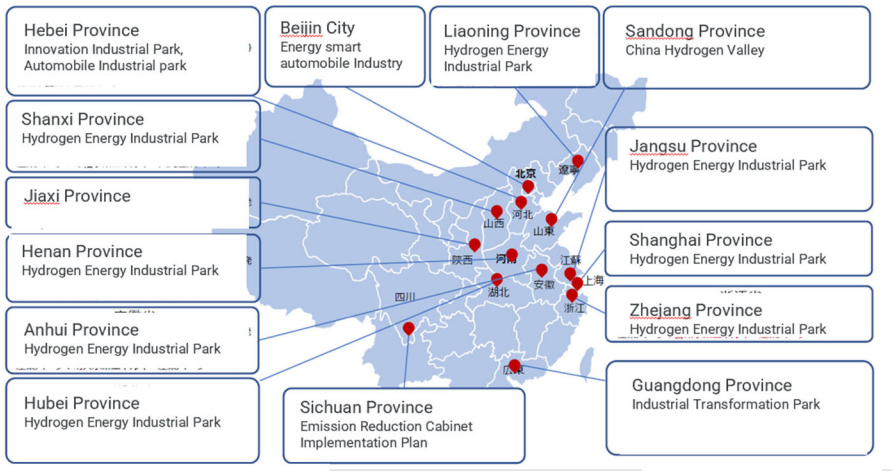
a) Ten Action Plans for a Low-Carbon Society

The following 10 action plans were formulated in 2021 as measures to peak carbon emissions by 2030.

- Reduce the use of coal, gas and oil and switch to green, low-carbon energy.
- Improve energy efficiency to save energy and reduce carbon emissions.
- Peak out carbon use in the industrial sector.
- Promote urban development in carbon peaking regions.
- Green, low-carbon transportation.
- Low-carbon efforts through a circular economy.
- Develop innovative green, low-carbon science and technologies such as hydrogen energy.
- Develop carbon dioxide capture capabilities.
- Raise public awareness of green, low-carbon initiatives.
- Achieve organized regional peaks in carbon emissions.

b) Designation of National Hydrogen Fuel Cell Vehicle Model Cities

As shown in the figuresbelow, in China, the city-level initiatives are being pursued, including the National Hydrogen Fuel Cell Vehicle Model Cities in Beijing, Guangzhou and Shanghai, the Beijing Hydrogen Energy Industry Development Plan, the Guangzhou Hydrogen Energy Industry Development Plan, and the Shanghai Hydrogen Energy and Fuel Cell Vehicle Industry Development Plan.



Source: China's Energy and Environment Related Policies and Opportunities to Enter the Chinese Market, Takahiko Miyao, NEDO, 2021.10

Figure 7-13 Hydrogen Technology-Related Plans at the City Level in the 14th Five-Year Plan

5) Summary of Chinese Government Policies

During the transition from the coal industry to the low-carbon energy industry, the Chinese government's policies can be summarized as follows:

■ Policies for Promoting the Low-Carbon Energy Industry:

・ Development of new energy storage and power grid infrastructure for solar and wind power generation under the 14th Five-Year Development Plan.

・ Promotion of hydrogen-related projects at the city level based on the 10 action initiatives of the 3060 Double Carbon policy.

■ Policies for Downsizing the Coal Industry:

・ Rationalization of inefficient coal mines to reduce excess production capacity in the 2010s.

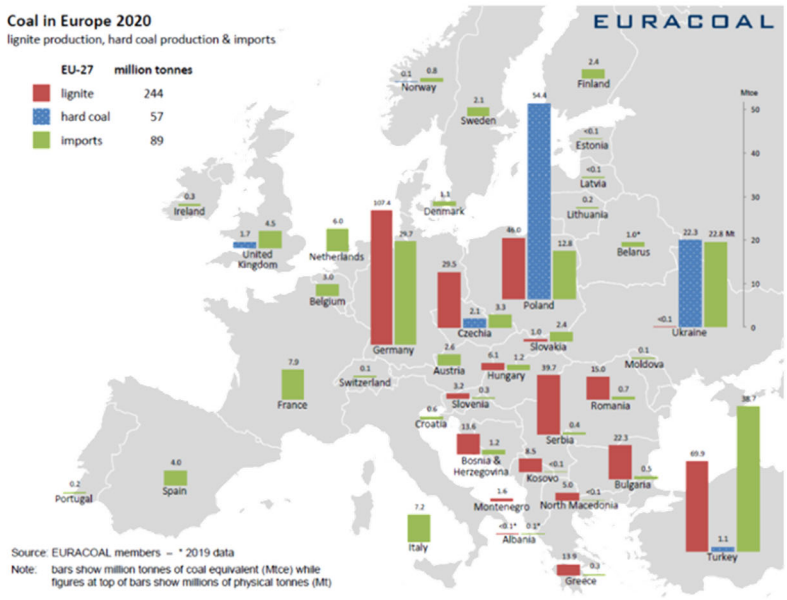
・ Gradual reduction of coal consumption in the 2020s to reduce greenhouse gas emissions while ensuring employee welfare.

(4) The Transition of the German Coal Industry

Germany, one of the largest coal-producing countries in Europe, has rapidly transitioned to renewable energy since the 2010s, and this section describes the policy and measures behind this transition.

1) Coal Industry in Germany

As shown in the figure below, in the European coal industry in 2020, Germany produced low-quality lignite, while Eastern Europe, such as Poland and Ukraine, produced high-quality black coal. Germany's Ruhr coalfield is known as the world's largest coal mine and has supported Germany's industrial development. However, since the end of the 1950s, the coal industry began to decline due to the shift to cheap imported coal and the transition from coal to oil as a fuel.

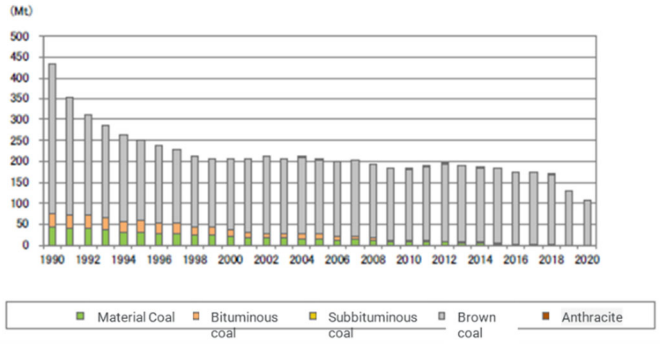


Source: Japan Organization for Metals and Energy Security, "Study on Coal Supply and Demand in Europe and

Trends in Coal and Environmental Policies and others." R4

Figure 7-14 Overview of Coal Production and Imports in Europe

As shown in the figure below, black coal production ended in 2018 and lignite production has been declining since 2018.



Source: Japan Organization for Metals and Energy Security, "Study on Coal Supply and Demand in Europe and Trends in Coal and Environmental Policies and others" 2022

Figure 7-15 German coal production by type (in Million tons)

2) Measures and Legal Framework for Structural Transformation Away from the Coal Industry

a) Evolution of Policies and Legal Framework

Germany is phasing out nuclear power generation while transitioning from coal to oil and renewable energy. Since the Chernobyl nuclear power plant accident in 1986, Germany has extended operation while choosing to phase out nuclear power, but following the Fukushima Daiichi nuclear power plant accident in 2011, it has decided to phase it out completely in 2023 and is accelerating its shift to renewable energy. However, the energy transition policy is being affected by electricity supply and demand, with gas supplies from Russia being halted due to the Ukrainian war and coal-fired power plants being restarted.

■ **Climate Protection Plan 2050**

Carbon neutral policies were comprehensively defined in the Climate Protection Plan 2050 enacted in 2016, and were enacted as federal climate protection in 2019. It was further revised in 2021 as the "Climate Protection Emergency Program 2022". Following this, the Coal-Fired Power Generation Phase-Out Act was enacted in 2020, and coal-fired power generation was completely abolished in 2023.

■ **Climate Protection Emergency Program 2022**

The overview of the Climate Protection Emergency Program 2022 includes the following goals:

- Reduce greenhouse gas emissions by 65% by 2030 and 88% by 2040 compared to 1990 levels.
- Aim to achieve climate neutrality (net zero) by 2045, making greenhouse gas emissions negative.
- Fix emissions in six fields.
- Provide financial support to the buildings, transportation, industry, and energy

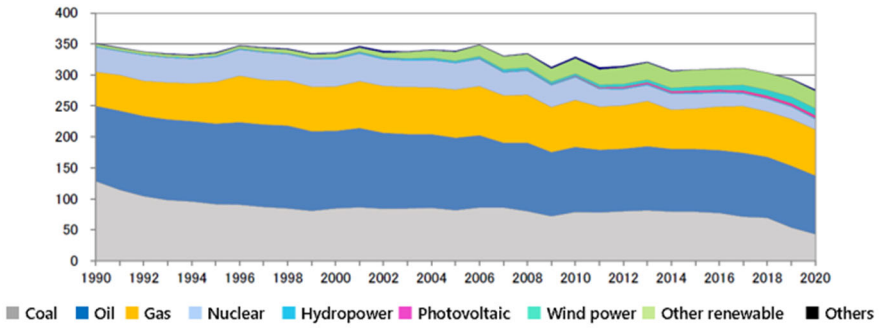
sectors.

■ **Renewable Energy Act 2021**

In 2021, the Renewable Energy Act was enacted, aiming for a 65% share of renewable energy in the power generation sector by 2030 and achieving climate neutrality (net zero) in the domestic power supply and demand by 2050.

b) Trends in Energy Consumption and Power Generation Breakdown

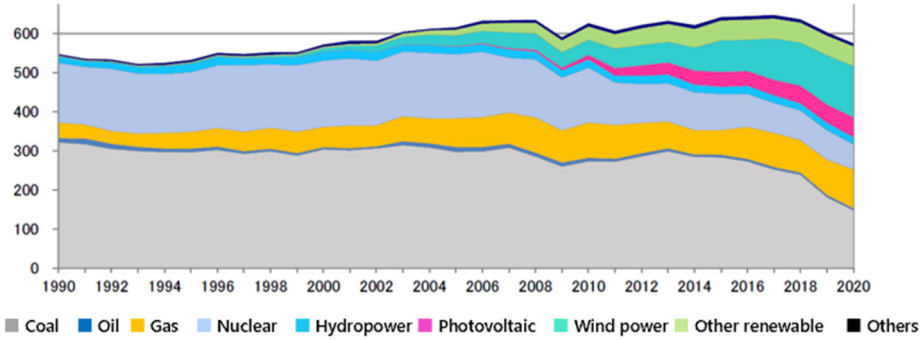
As shown in the figure below, currently, since the 2010s, there has been a shift in primary energy from fossil fuels to renewable energies such as hydro, solar, and wind power. As of 2020, the energy share of coal was 15.6%, while renewable energy was 16.3%.



Source: Japan Organization for Metals and Energy Security, "Study on Coal Supply and Demand in Europe and Trends in Coal and Environmental Policies and others" 2022

Figure 7-16 Primary Energy Consumption by Energy Type

As shown in the figure below, regarding power generation energy share, as of 2020, coal accounted for 25.7%, while renewable energy accounted for 43.6% (wind power 22.8%, solar power 8.8%), indicating a rapid increase in the share of natural energy.



Source: Japan Organization for Metals and Energy Security, "Study on Coal Supply and Demand in Europe and Trends in Coal and Environmental Policies and others." 2022

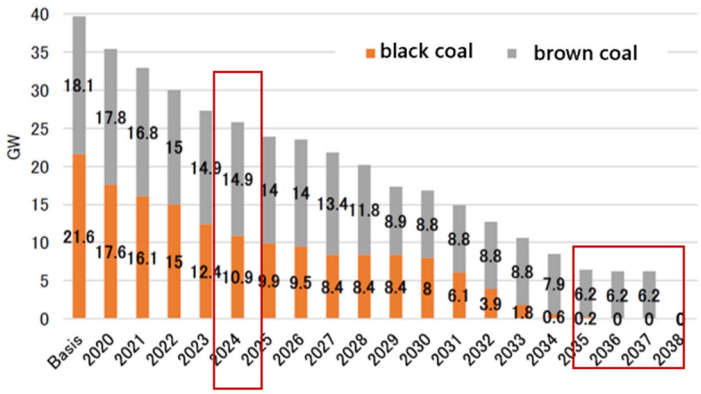
Figure 7-17 Power Composition by Energy Type

3) Measures for Coal Mine Closure

a) Coal-Fired Power Generation Phase-Out Act 2020

As shown in the figure below, in order to transform the coal mining industry, the Act on the Abolition of Coal-Fired Power Generation was enacted in 2020, and it was decided that black coal production will be discontinued by 2036, lignite production will be discontinued by 2038, and coal-fired power generation will be discontinued. Laws such as the Energy

Business Act, Renewable Energy Act, Cogeneration Systems, and Greenhouse Gas Emissions Trading Act have been revised in line with the purpose of abolishing coal-fired power generation.



Source: Japan Organization for Metals and Energy Security, "Study on Coal Supply and Demand in Europe and Trends in Coal and Environmental Policies and others" 2022

Figure 7-18 German Coal Production Forecast

Towards the concrete closure of coal mines, the Coal Region Structural Strengthening Act and the Coal Region Investment Act provided financial support to areas affected by the decline of the coal industry. Specifically, the following measures were implemented through the action plan of the Coal-fired Power Plant Abolition Act.

- The closure of lignite coal-fired power plants will target companies in each block, starting with the wealthy western region and progressing to the poorer eastern region.
- For black coal-fired power plants, a bid was held for compensation costs for closure, and incentives were created to allow companies to receive higher compensation for early closure.
- Compensation will be provided at the regional, corporate, and employee levels.

4) Re-Employment Measures and Human Resource Development Initiatives

As compensation for workers at closed coal mines, the Coal Power Plant Abolition Act (KVBG) provides up to five years of bridging allowance from federal budget funds to workers aged 58 and over who will lose their jobs by the end of 2043 due to the abolition of coal-fired power plants, from the end of their employment until the statutory pension age. In addition, the federal government relocated government offices to coal-producing regions to revitalize the regions.

5) Efforts to attract and create new industries

a) Transition to Next-Generation Energy Regions

In order to rebuild the economy of former coal mine sites, they have promoted investment by establishing demonstration laboratories for energy conversion as next-generation energy regions, improving access to technologies and intelligence centers, universities, and research institutes through the Industrial Structure Strengthening Act, providing funds and subsidies,

and preparing political, legal, and economic frameworks and vast tracts of land. The following are some examples:

- Helmstedt Mine: 489 ha, planned employment for 90,000 people: For energy, recycling, automotive, agriculture sectors and utilization of existing companies
- Lusatia Mine: 12,000 km^2, planned employment for 1 Million people: For energy, railway, chemical, pulp sectors.
- Central German Mine: 10,500 km^2, planned employment for 2 Million people: For biotechnology, chemistry, microelectronics, optics, hydrogen, synthetic resins sectors.
- Rhine Mine: 5,000 km^2, planned employment for 2.5 Million people: For thermal storage power plant, blockchain demonstration lab sectors.

b) Fuel Conversion Project to Future Gas and Hydrogen Power Generation

Thermal power plants are being gradually updated to facilities that can use renewable energy in the future.

■ Gas and Hydrogen-Compatible Thermal Power Plant

Stuttgart-Muenster Power Plant (Joint Facility of Leipzig and Nuremberg): The turbines at this power plant, operated by EnBW, use a combined cycle gas turbine (CCGT) that can utilize hydrogen gas in the future. This natural gas power plant reduces CO2 emissions by 50% compared to coal-fired power and is supported by wind turbines for power supply. It is planned to use green hydrogen gas between 2031 and 2033.

■ Green hydrogen plant

In 2021, Hamburg heat supply company announced that it would build a green hydrogen plant on the site of a closed coal-fired power plant in collaboration with Shell, Mitsubishi Heavy Industries, and Vattenfall.

6) Summary of German Government Policies

During the transition from the coal industry to the low-carbon energy industry, the German government's policies can be summarized as follows:

■ Policies for Promoting the Low-Carbon Energy Industry:

- Support for the renewable energy industry by providing favorable market conditions under the Renewable Energy Act 2021.
- Support for funding, market establishment, and research under the National Hydrogen Strategy 2020.

■ Policies for Downsizing the Coal Industry:

- Support for the closure of coal mines, considering regional economies and worker reemployment under the Federal Climate Protection Act.
- Support for transforming coal regions into new investment areas for renewable energy.

(5) Lessons Learned from Coal Industry Transformation in Three Countries

Based on the measures taken during the transition from the coal industry to the oil industry or

renewable energy industry in the three countries, the following table summarizes some points that can serve as reference for the energy transition that Tr-City faces. In these countries, the transition did not occur spontaneously but was guided by government leadership through both industrial promotion measures for new industries and social security measures for shrinking industries. When East Kalimantan Province conducts transitions from fossil fuels, including coal, to renewable energy in the future, such dual measures will be necessary.

Table 7-11 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.

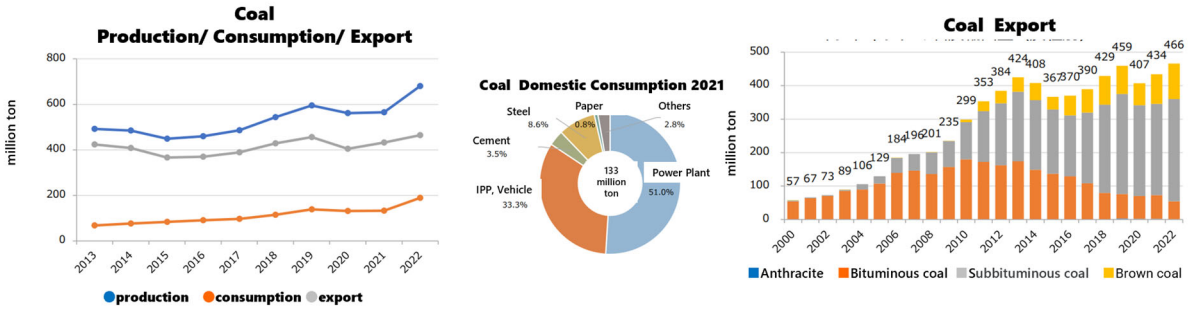
Source: Prepared by JICA Study Team based on the above information

(6) Summary of Indonesia's Coal Industry

As basic information for Tri-City's future energy transition, an overview of Indonesia's coal industry is described in this section.

In Indonesia, coal production and exports began around 2000 and are gradually increasing until 2022. Due to the slump in the international coal market, production and export volumes temporarily decreased from 2014 to 2015, but have been increasing again since 2016(below left).

Currently, about half of domestic coal consumption is lignite for power generation, but large amounts of coal are also consumed by independent power producers (IPPs), vehicles, and the cement and steel industries (below center).



Source: Japan Organization for Metals and Energy Security, "Current Status of Coal Producing and Consuming Countries," 2023

Figure 7-19 Coal Production, Consumption, and Exports in Indonesia

1) Carbon-neutral and energy policy

Below are some representative examples and summaries of Indonesia's carbon neutral and energy policies that affect the coal industry.

a) National Energy Policy (KEN), 2014

- Energy consumption per GDP will decrease by 1% annually until 2025.
- Exports of domestically produced coal and natural gas will be phased out and eventually stopped completely in anticipation of increased domestic demand.

b) The National Energy Plan (RUEN) 2017

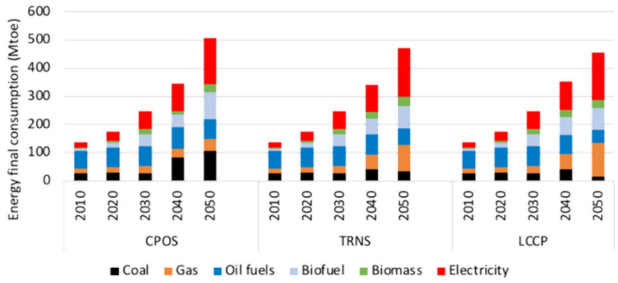
- Coal production will be less than 400 Million tons in 2019, and exports will be halted by 2046 in favour of domestic consumption.
- Clean coal technologies, including gasification, and ultra-supercritical coal-fired power plants (USC) will be introduced.

c) Electricity Supply Business Plan (RUPTL 2021-2030) (September 2021)

To achieve carbon neutrality, the plan is to utilize biomass co-firing, CCUS/CCS (carbon capture, utilization, and storage), hydrogen, etc., and to transition to low-carbon fuels and clean power generation technologies.

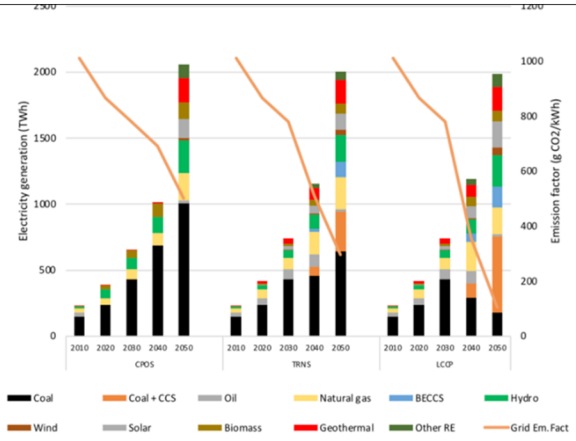
d) Long-Term Strategy for Low Carbon & Climate Change Resilience towards 2050 (Jul. 2021)

As shown in the figures below, coal-fired power will provide the majority of domestic electricity for the next 30 years, but the date for achieving carbon neutrality has been moved forward to 2060. Three scenarios are assumed for energy (**Figure 7-20**) and the share of coal consumption in power generation (**Figure 7-21**) under a low-carbon scenario in compliance with the Paris Agreement.



Source: Indonesia Long-Term Strategy for Low Carbon and Climate Resilience 2050

Figure 7-20 Energy Demand Projections in Indonesia



Source: Indonesia Long-Term Strategy for Low Carbon and Climate Resilience 2050

Figure 7-21 Power Generation Composition Forecast in Indonesia

CHAPTER8 Recommendations on Balikpapan City's Urban Development

In this chapter, based on the city's existing policies and plans on land uses, infrastructure, urban development, and budgeting (reviewed in Chapter 2), as well as on the current development issues and challenges (summarized in Chapter 4), recommendations on Balikpapan City's urban development and management are formulated. The recommendations for city herein are intended to be widely applicable as practical case studies for the policy consideration in the IKN Development as well as in the Tri-City development.

8.1 Issues and Challenges in Balikpapan City's Urban Development

8.1.1 Challenges on Industrial Development

Regarding the issues and problems related to industrial development, the current issues of how to develop the Kariangau industrial area and promote MSMEs, and future issues from the perspective of industrial structure in coordination with IKN's industrial development plan are described.

(1) Underdevelopment of infrastructure and lifelines in the Kariangau industrial area

The Kariangau industrial area has been developed around the main roads and private port facilities. Although the road network seems to have been developed to some extent, the roads from the main roads to the coast are steep and unpaved. There are some places where it is difficult to drive in rainy weather, and many problems with the underdeveloped connecting roads are apparent. In addition, the water source is groundwater from wells, and electricity is purchased from a power plant, so the power supply and water supply systems are insufficient In addition, the gasoline supply network for trucks, which are the core of the logistics system, is limited, so long lines of large vehicles have become a regular occurrence at the fuel stations in the region. As such, there are many problems from the perspective of industrial productivity, such as the provision of insufficient land preparation and infrastructure development for industrial use. As for the Kariangau Industrial Park planned by the city of Balikpapan, it is located along the highway from the new capital, and access will be possible only after the highway is completed, so there is no clear time for companies hoping to move into the area to open their doors.

(2) Promotion of MSMEs

The current dominant players in the natural resource industries in the city include oil refining by Pertamina and other Jakarta-based companies, manufacturing for coal mining-related machinery, and palm oil refining. The locally owned industries, on the other hand, are limited to small-scale food processing and fisheries. This uneven economic structure, whereby the economic benefits of the locally excavated natural resources are not sufficiently reaching the communities, is a source of discontent for the local residents.

(3) Formulation of industrial development policy consistent with the new capital's industrial plan

In the six economic clusters that are targeted in the New Capital Plan, new industries expected from Balikpapan City, a partner city, include renewable energy equipment manufacturing, pharmaceuticals and advanced chemicals, and manufacturing in the low-carbon energy field. In addition, the East Kalimantan Provincial Medium-Term Development Plan 2024-2026 lists

the strengthening of rubber, manufacturing and shipbuilding in the Kariangau Industrial Park, basic chemicals, agriculture and food processing, tourism and MICE industries, etc. in the city. In addition, the Draft Balikpapan City Regional Long-Term Development Plan 2025-2045, which was formulated in resonance with the New Capital's industrial plan, advocates downstreaming of products through technological innovation, food and biochemicals, tourism, and the creation of renewable energy, etc., and the basis for the measures of several higher-level plans is unclear, and the priorities and growth scenarios for each industry are also dependent on the growth of the New Capital, so the formulation of an industrial development policy with the initiative of Balikpapan City is a challenge.

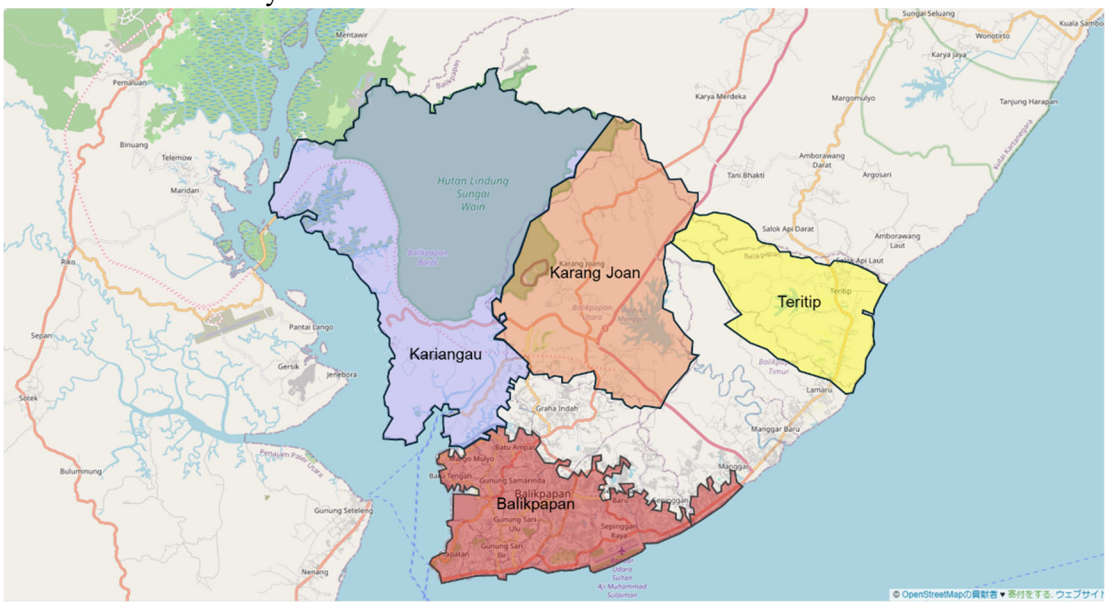
8.1.2 Challenges on Urban Development Management

(1) Increased Automobile-Dependency in Urban Sprawl

In the Balikpapan City Regional Spatial Plan, the following areas have been designated as the "Strategic Areas for Economic Perspective": ①Kariangau Industrial Area (north of the city), ②Karang Joan New Urban Area (northeast), ③Coastal Redevelopment Area (southeast), and ④Teritip New Urban Area (east) (Refer to map below). Such allocation of the new nodes in all directions from the city seems to promote the urban sprawl without spatial vectors and focus.

The Karang Joan New Urban Area is adjacent to the Kariangau Industrial Area - a major hub for industrial revitalization in the New Capital Region. The new urban area aims to support the growth of the Kariangau Industrial Area as an adjoining hub of commerce, services, and administrative activities in the northern part of Balikpapan City. As such the area is designated to be a gateway to IKN. The Teritip New Urban Area is positioned as a new growth center in the coastal rural areas to the east of Balikpapan City. The area is to be a center for commerce, tourism, services, and education.

Notably, there are no plans for development of public transportation corridors to these new development areas in the current mid-term and long-term plans of Balikpapan City. As such, the current spatial plan arguably assumes the automobile-dependent urban sprawl in all directions of the city suburb.



Source: Prepared using OpenStreetMap

Figure 8-1 Strategic Areas around the City of Balikpapan

(2) Mismatch in Private-Sector Suburban Development and Public-Sector Infrastructure Development

In the inner suburban areas to the east of the city center (inside the Balikpapan-Samarinda toll road running southward to the coast), numerous large-scale residential development projects are ongoing at high pitch by the private-sector developers (Refer to photos below for examples of ongoing housing development) . On the other hand, installation of public urban infrastructure in support of these developments has not kept pace. This mismatch has led to excessive overload and chronic traffic congestion on the surrounding road network, as well as significant increase in the number of localized flooding incidents caused by inadequate stormwater drainage capacity. Particularly, in the inner suburban areas, large-scale residential sub-divisions are lined up along a limited number of collector roads. During the morning and evening commuting peak hours, a large number of private cars flow onto these limited collector roads from the residential sub-divisions, causing daily traffic congestion. Additionally, the development of public transportation services such as bus routes has not kept pace to alleviate the traffic demand, necessitating dependence on multiple cars and motorcycles per household. This excessive automobile dependency has led to a downward spiral of worsening environmental impact and quality of life issues. In order to improve the 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.

Source: Photo taken by JICA study team

Figure 8-2 Large-Scale Residential Development Project in the Inner Suburb

Source: Photo taken by JICA study team

Figure 8-3 New Housings for Middle Class in the Inner Suburb

(3) Low Density and Low Utilization in the Urban Center

In Balikpapan City, due to the cultural tendency to favor low-rise housing over high-rise buildings, the city has a low-density urban form that spreads horizontally across the undulating hilly terrain. Compared to other comparable cities in the country and abroad, a significant number of unused lands, vacant properties, and abandoned buildings are observed in the established urban areas, indicate weak redevelopment pressure at the city center. A number of causes for this underutilization can be hypothesized from economic, administrative and environmental perspectives according to available literature. The economic causes

include: excessive dependence on the fossil fuel industry and its suppressive effects on the development of more comprehensive economy in the city[61]; and negative effects of fluctuating oil prices that have adversely impacted the local real estate market.[62] The administrative causes include: non-enforcement of the idle land tax and the resultant stagnation of the real estate market[63]; and difficulty of obtaining land use change approval.[64] These administrative dynamics are common challenges in other parts of Indonesia, but the particularly conservative attitude on the land and development regulation in the city has had negative impacts. In any case, promoting suburban expansion while the real estate utilization rate remains low at the city center will exacerbate urban sprawl, leading to inefficiencies in infrastructure investment and dispersed industrial activities. Therefore, in order to curb disorderly suburban development, it is crucial to first create a healthy demand for redevelopment in the established urban core.

8.1.3 Challenges on Environmental and Disaster Prevention

(1) Insufficient Waste Management Functions

TPA Manggar, the sole sanitary landfill site in Balikpapan, is a critical facility for the proper waste management in the city. Of the total of seven compartments at the landfill, five sections have already reached full capacity, leaving only two usable compartments for the foreseeable future. As such the landfill is expected to be full by 2026. The figure below shows the status of the final disposal site in question.

Search for a candidate site for the next landfill site has been terminated due to strong resident opposition at the targeted sites. Despite the city's promotion of measures and activities related to 3R practices, waste banks, composting, and demonstration on biomass utilization (RDF) to reduce waste, an effective extension of life span for the city's final waste disposal site has remained elusive. Currently, Balikpapan City is conducting a feasibility study on the introduction of a waste pyrolysis plant - proposed by a Korean company and the World Bank through PPP scheme. This technology aims to implement landfill mining that involves excavating waste from the existing landfills and incinerating and pyrolyzing to reduce its volume so that the longevity of the landfill site may be prolonged. There are, however, significant challenges in economizing the PPP project through feasible revenue sources, such as electricity sales and waste treatment service fees. Obtaining permits for such operation is another significant challenge as waste incineration is prohibited in the country as a basic principle. Properly evaluating the level of technology required for the appropriate treatment is also difficult. Other financial, technical, and human resource issues persist.

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[61] "Balikpapan and its challenges in becoming a post-oil city", by Mehra, S., November 1, 2023, in Just Ecological Political Economy, University of Helsinki: https://blogs.helsinki.fi/helsusglobalsouth/2023/11/01/balikpapan-and-its-challenges-in-becoming-a-post-oil-city/?utm_source=chatgpt.com

[62] "Indonesia Market Focus: Balikpapan & Samarinda", June 8, 2015, DBS Group Research-Equity: https://www.dbs.com.sg/treasures/aics/pdfController.page?pdfpath=%2Fcontent%2Farticle%2Fpdf%2FAIO%2F150609_insights_Indonesia_Balikpapan.pdf&utm_source=chatgpt.com

[63] "Understanding Progressive Taxation on Idle Land in Indonesia: An Overview of Implementation and Impact", by Rasyiddin, M. R., 15 November, 2024, in Kompasiana: https://www.kompasiana.com/muhammadrifqirasyiddin6784/6736452ec925c4134e2a65c2/understanding-progressive-taxation-on-idle-land-in-indonesia-an-overview-of-implementation-and-impact?page=all&page_images=2&utm_source=chatgpt.com

[64] "Alteration of Spatial Zoning in DKI Jakarta", April 21, 2023, IndonesiaRealEstateLaw.com: https://indonesiarealestatelaw.com/alteration-of-spatial-zoning-in-dki-jakarta/?utm_source=chatgpt.com

Source: JICA Study Team

Figure 8-4 Layout Plan for the Seven Disposal Plots at the City's Landfill

Source: JICA Study Team

Figure 8-5 Existing Landfill Site for Balikpapan City

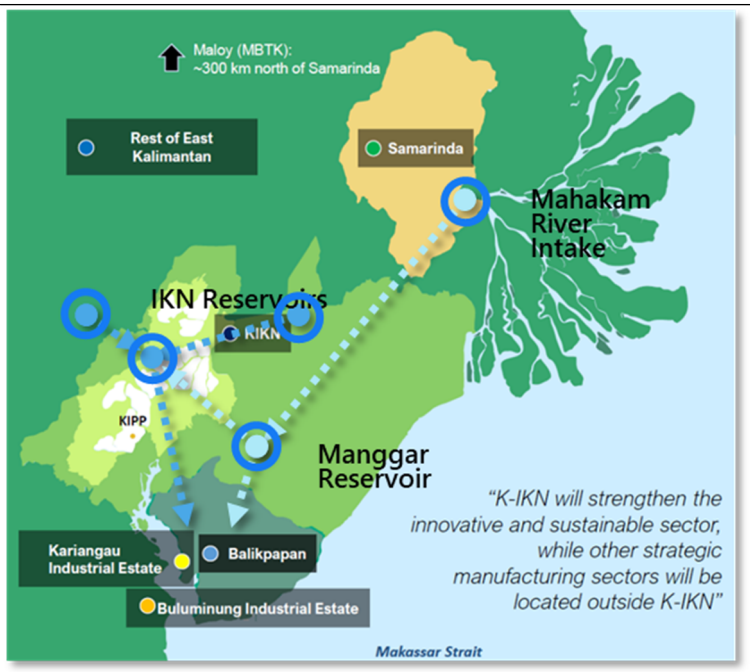
(2) Deficiency in Water Supply Capacity

As for the water supply in Balikpapan, there are significant challenges such as inadequate water storage capacity and water loss in distribution due to leaks in the aging pipelines. As the primary source of raw water is groundwater via wells, the sustainability of water supply is an important policy issue for Balikpapan. East Kalimantan Province Regional Middle-Term Development Plan also indicates the need for the construction of a cross-regional drinking water supply system (SPAM).

The Sepaku Semoi Dam is expected to be a regional source of raw water supply, with an allocation of 1,000 liters/sec to be provided for Balikpapan City. Although volume this is expected to be sufficient to meet the demand of the city until around 2030, further into the future the plans for securing raw water supply to the expanding IKN region, including the Batu Lepek Dam, are uncertain at this point.

On the other hand, a feasibility study is underway to draw water from the Mahakam River as a supplemental source of raw water to supply IKN and Balikpapan. The project aims to respond to the projected increase in future water demand as the urban area expands and the population increases. Tri-City Interregional Water Supply System Image is shown below.

Regarding the water loss due to leaking pipelines, it is necessary to formulate an infrastructure renewal/renovation plan and to carry out phased maintenance and improvement projects.



Source: Prepared by JICA Study Team from the hearing result of three cities

Figure 8-6 Tri-City Interregional Water Supply System Image

(3) Uncontrolled Development in the Disaster High-Risk Areas

In various parts of Balikpapan, the severity, frequency and extent of flood damage are worsening rapidly due to increasingly severe rain falls (Refer to photos below of flooding incident and an example of high-risk land preparation observed in the suburban area). The city's hard infrastructure is vulnerable to both external floods (area flooding from rivers) and internal floods (localized flooding from stormwater systems, etc.). Additionally, there are significant issues with lack of development regulations to restrict building in high-risk areas. Balikpapan City has kept a historical database on its past flood events, but the lack of administrative capacity is evident in digitizing and utilizing the databases for formulating effective proactive disaster prevention measures. In formulating the spatial plans for Balikpapan City, it is of urgent necessity to strengthen administrative capacity to identify development restriction areas, such as environmental protection zones and high-risk areas for flooding and landslide disasters, and to incorporate and enforce these regulations in the high-level spatial plans.

Source: JICA Study Team

Figure 8-7 Flooding after severe rain from

Source: JICA Study Team

Figure 8-8 High-risk land preparation work

city's main drainage way to primary road **at the new sub-divisions**

8.1.4 Challenges on Connectivity

Chapter 4, Section 4.2.1 (1) "Issues and Challenges Related to Connectivity in Balikpapan City" summarizes the existing challenges related to connectivity in Balikpapan City in relation to the New Capital City development. Based on these analyses, the following factors are the priority agenda to be addressed by the city.

(1) Unchecked Formation of Auto Mobile-Dependent Living Sphere

In Balikpapan City, an automobile-dependent living spere has steadily formed with typically negative consequences. An urgent rethink is needed to re-orient toward promotion of public transportation-oriented strategy. Commuting traffic from the suburbs to the city, as well as that from the city to IKN should be carefully considered to formulate an integrated strategy for the development of sustainable public transportation network. Formation of new living nodes will emphasize linkage with the New Capital City. IKN has set aggressive development agenda such as the "10-minute city" and "80% public transportation share," and it is advisable for Balikpapan City to aim for a similar level of transportation service to ensure regional integration.

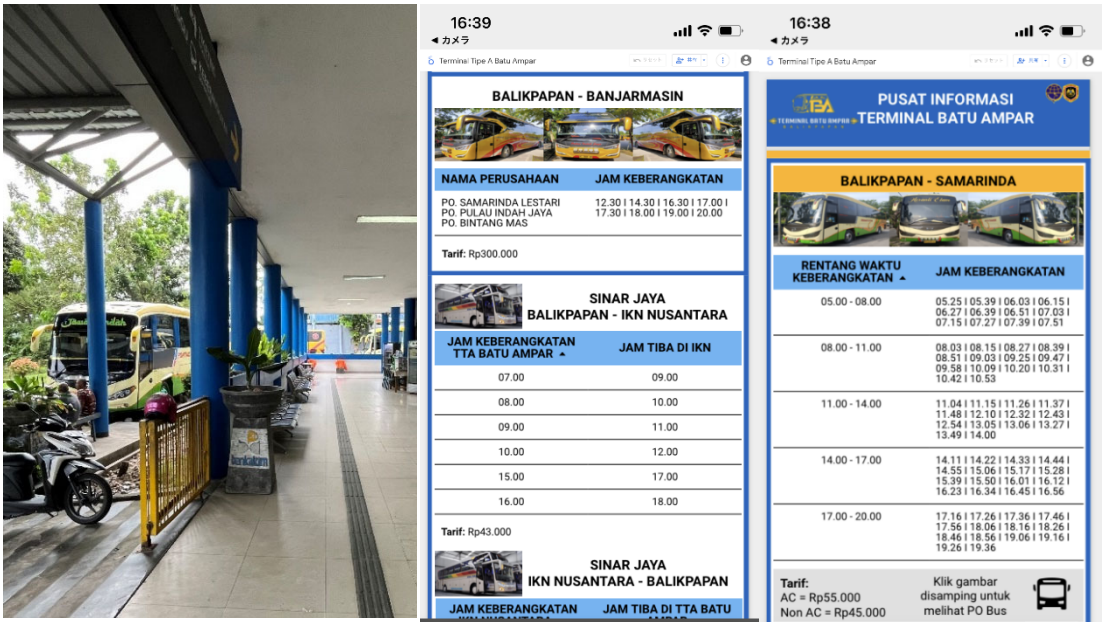
Regarding the intra-city transportation, it is critical to promote redevelopment at the city center, to establish strategic development corridors in the suburbs, and to form an integrated living sphere with the New Capital City and Samarinda City via highly accessible transportation services. The priority 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 to promote green corridor development including walking and cycling, for the sustainable development of the region. Efficiently investing the limited public funds to improve urban infrastructure on priority development axes, promoting industrial development, and ensuring the quality and safety of citizens' lives are challenges for the healthy growth of the city.

(2) Deterioration of Roadway Congestion by Traffic Demand Overload

In Balikpapan City, a steady population growth is expected for the foreseeable future based on the natural population trends. And further traffic demand is anticipated due to the New Capital City Development Project, raising concerns about worsening traffic congestion. Additionally, from the perspective of the wide-area road network, the construction of highways between the New Capital City and Balikpapan City is progressing, and multiple interchanges (IC) are planned within Balikpapan City. There are concerns about the concentration of automobile traffic and worsening congestion near these ICs, making it important to analyze future demand and consider appropriate development plans and traffic congestion mitigation measures.

(3) Improvement on Public Transport System

Current form of public transportation services in the city is woefully insufficient to meet the demand. Strategic development of public transportation networks and systems is required to alleviate road traffic congestion and to create an environmentally friendly and accessible transportation system. Since August 2024, the city bus service (Trans Balikpapan) has partially commenced operation within the city, and the service aims to quickly cycle up to full-scale operation and to begin service expansion to other areas as demand is confirmed. Additionally, plans for the regional public transport services are to be formulated to respond to expected increase in intercity traffic demand. Strategic planning is necessary for the optimal placement of intercity bus terminals and planned railway lines and stations, as well as surrounding urban developments. Particularly, it is essential to comprehensively configure a hierarchical public transportation system that includes trunk public transportation corridors and feeder lines in conjunction with the surrounding urban development plans.



Source: JICA Study Team

Figure 8-9 Balikpapan Bus Terminal and Inter-City Bus Routes and Schedule

(4) Strengthening of Port and Airport Capacity

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 context of the New Capital City Development. It is also important to develop and improve the road conditions linking the ports and industrial hubs to achieve an environmentally friendly and efficient logistics network system.

8.2 Recommendations and Advises for Urban Development in Balikpapan City

Aiming to comprehensively resolve the challenges in urban development hereto described, the following policy recommendations were formulated.

8.2.1 Recommendations on Industrial Development

(1) Improvement of Industrial Areas and their Infrastructure

1) Strengthening industrial infrastructure at Kaliangau Industrial Area

Comprehensive and planned strengthening of road infrastructure and lifelines in the Kariangau industrial region is an essential investment in attracting more industry. In developing basic infrastructure, it is necessary to build an effective maintenance system that relies primarily on public funds rather than relying on private capital, and to eliminate concerns for new companies. Regarding wide-area logistics to support industry, a general cargo port is planned to be developed at Kariangau Port, and logistics functions will need to be improved by developing an appropriate road network. Regarding air cargo, cargo flights are currently in service at Sepinggan Airport, but in the future, it will be necessary to consider increasing domestic and international transport capacity and building a cold chain.

2) Active promotion of the Kariangau Industrial Park

By presenting a schedule for the opening of infrastructure development projects in the Kariangau Industrial Park, it is necessary to organize the specifications of the lifelines that will be supplied and incentives for companies that move in, and to promote efforts to attract companies.

(2) Promotion of MSMEs

Currently, the food and fishery processing industries based on local consumption is the basic form of local industry. Diversification of industrial value chains into wider and higher commercial dimensions is to be aimed for the inclusive benefits of both urban and rural residents. It is necessary to inject strategic public-sector support for the formation of a diverse industrial ecosystem focusing on small and medium-sized manufacturing and service industries.

(3) Expansion and diversification of industries in line with the new capital's industrial development plan

1) Expansion and diversification of existing industries

a) Eco- and medical tourism

Since the opening of the new capital city, the number of visitors to Balikpapan has increased not only from the people involved in the new capital city project, but also from the general public. From the perspective of strengthening the tourism industry infrastructure, it is urgent to improve accommodation, transportation, MICE functions, etc. The aim now shall be to diversify regional destinations and to formulate longer-stay packages by guiding inbound tourists to other destinations in the region, such as the mangrove forests and the coastal resorts in the Samboja. On another front, the successful creation of a new MICE hub will require coordination with the New Capital Authority on the use of the VVIP airport, as well as formulating various incentives to attract MICE operators to potential sites at the newly

reclaimed coastal area, or along the toll road to IKN, or in the strategic areas linking Samalinda-Balikpapan toll road to IKN. It is necessary to define the strengths of each area and the target market segment, to analyze the future demand, and to carry out promotional activities to incentivize domestic and international operators.

b) Advanced petrochemicals

On petrochemical sector, promoting the diversified production of plastics and synthetic rubber using the existing naphtha byproducts at the Pertamina refinery is to be pursued. Understanding the activities and byproducts of Pertamina's industrial processes and providing incentives such as land rent and taxes for the collaborators will lead to successful attraction of the smaller companies for value-added downstream processing at the Kariangau Industrial Park.

c) Advanced oleo chemistry

Balikpapan City is a processing and export base for palm oil. It is advisable to extend the existing palm oil industry to processing of derivative end products, such as soap, detergent, edible oil, margarine, and chocolate, thereby building a total industrial cycle with added value processing. The existing palm oil processing companies such as Apical are to be encouraged to diversify their product lines.

d) Low carbon energy

Currently, the creation of new energy hubs for biofuels, synthetic fuels, and coal gasification is designated to Samarinda City in the IKN plan, taking advantage of the city's proximity to the existing coal mines in the region. Balikpapan City, however, is arguably more suited for such transformation as the existing coal shipping ports and the petrochemical and oleochemical industrial bases already have convertible facilities and equipment for such new energy production. The existing palm oil processing companies can be induced to partially convert their system into biofuel production or to invest in new facilities, with appropriate support by public subsidies. In addition, incentives can be given to coal exporters for promotion of coal gasification projects, aiming to create a low-carbon and carbon-free energy industry.

2) Consideration of new industry creation

a) EV two-wheeler and solar panel manufacturing

Introduction of new manufacturing industries requires large-scale investment. Careful consideration on national policy, international competition, and the targeted selection of domestic and foreign companies will be necessary to formulate strategy for investor incentives.

b) Pharmaceutical industry

Taking advantage of the strong petrochemical industry and the local production capacity for various herbs, an industrial shift to a more advanced and value-added pharmaceutical sector is to be aimed. It is necessary to carefully determine the market position of the new-comers in the international competition and the potential strengths of the local industry, and to promote the formulation of comprehensive incentive package including infrastructure development and tax exemptions.

c) Sustainable agriculture

Technical support and economic incentives for the established palm oil refining industry to

consider diversifying into the biofuel production are to be formulated. The feasibility of converting existing industrial processes and machinery to a new bioenergy industry needs to be comprehensively analyzed and planned on various aspects, including technical, economic, human resource, and raw material procurement. Institutional mechanism for promoting the creation of new industries through public-private collaboration is to be necessary.

8.2.2 Recommendations for Urban Development Management: Uncontrolled Suburban Residential Development

(1) Mapping of the Underutilized Real Estates and Redevelopment Strategy

Increasing the urban density at the center and curbing the suburban sprawl are aimed by active promotion of infill redevelopment projects within Balikpapan City's center. This will lead to fostering of healthy economic environment and creation of a compact city form. Firstly, the survey of infill redevelopment potential within the city through public-private cooperation is to be conducted by mapping idle public and private land plots and unused properties. Particularly, with regards to the redevelopment opportunity for public land within the city, it is important to focus on attracting and allocating essential public service facilities, such as healthcare, education, and parks, in preparation for the further population influx and densification. In implementing such strategic public-sector redevelopment projects, possibly under PPP scheme, the ultimate and lasting goal is to improve the quality of life in the surrounding neighborhoods, to stimulate economic activities, and to create a positive spiral that will induce further redevelopment projects by the private sector.

Especially for the large and idle public plots in the city, the redevelopment potential is expected to be significant due to concentration of the surrounding population. It is necessary to set a high public interest KPIs for effective utilization based on long-term urban planning goals. These redevelopment projects on public land plots are expected to have significant positive effects on activating the real estate market and elevating the land value in the city center, thereby accelerating small to medium-sized infill redevelopment by various private businesses.

Next, comprehensive measures to reform the property and inheritance tax systems in order to prevent idle land and underutilization of real estate is necessary. Enhancement of financial tools like housing loans that individuals can use, and improvement of 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. In Japan, there are many such examples of PPP and PFI projects with the aim to achieve structural reorganization for compact city development and revitalization of shrinking cities. These experiences can b of great utility to the challenges in Balikpapan.

8.2.3 Recommendations on Environment and Disaster Prevention

(1) Efforts to extend the life of waste treatment facilities

As mentioned, extending the life of TPA Manggar, Balikpapan City's final landfill, is a top priority in promoting proper waste management in the city. Minimizing the amount of waste delivered to the landfill is an important part of the immediate solution. Balikpapan City has set an ambitious goal of zero waste in the Balikpapan City Regional Spatial Plan 2012-2032,

and strengthening 3R initiatives to achieve this goal will contribute to minimizing the amount of waste. Therefore, it is important to pay attention to fundamental issues in strengthening 3R initiatives. For example, even after encouraging proper waste separation and educating people to separate recyclable and non-recyclable waste and dispose of them in different collection containers, this survey observed the opinions that residents lose motivation to separate waste when they see the waste disposal method of Balikpapan City, where the garbage of both containers are mixed together for collection and transportation. Hence, reviewing these existing habits could be an important improvement.

In addition, as the population of Balikpapan City is expected to increase due to the relocation of the new capital, individual efforts to reduce waste will not be sufficient, and additional capacity at the landfill site is also needed as a measure. However, as mentioned in section 3.2.2, it is risky because it requires a high level of financial, technical, and human resources to achieve appropriate implementation and operation. In this regard, since it is assumed that a waste incineration facility will be installed in IKN, it can be proposed that the possibility of inter-city cooperation, such as bringing waste from Balikpapan City to the incineration facility, incinerating it, and burying only the incinerated ash in a landfill site in Balikpapan City. Such an approach would not only be applicable to waste generated in the current situation, but also to waste excavated from landfill sites, and would allow Balikpapan City to implement landfill mining without as much risk as the above PPP project. Furthermore, the initial population of IKN is small and the amount of waste to be incinerated is not expected to reach the capacity of the incineration facility, so increasing the amount of waste to be incinerated by bringing in waste from Balikpapan City will also contribute to solve issues such as electricity production and inefficient use of incineration facilities. In order to realize this initiative, dialogue with IKN is important, and Balikpapan City's willingness to engage in dialogue and acceptance of IKN's social responsibility are required.

(2) Challenges to optimize and diversify tap water supply functions

Regarding infrastructure facilities, including water supply functions, it is essential to closely link them with urban area and population estimates. It will be required to plan for expansion, demand distribution and optimization of functions considering the future impact of the IKN Development. It is indispensable to formulate an integrated plan that “eliminates regional inequalities through the construction of a cross-regional drinking water supply system (SPAM)” as indicated in higher-level plans in conjunction with spatial planning. Therefore, it is proposed to formulate plans and establish systems to optimize raw water supply across regions, including IKN, based on the status of existing facilities and the progress of ongoing feasibility studies.

In Balikpapan City, raw water supply is not uniform, and water supply areas are divided by the placement of water treatment plants. Therefore, it is necessary to understand the condition of aging infrastructure and water loss due to leaks, and to formulate and implement planned and phased renovation plans to diversify water supply functions and provide sustainable urban infrastructure.

In addition to securing and optimizing raw water supply, it is proposed to establish a system for sharing practical techniques for extending the life of existing facilities and appropriate renewal and reconstruction by sharing know-how with Samarinda City and surrounding cities, which face similar challenges such as aging pipelines and facility updates.

The first step in this initiative is to form a conference body to enable ongoing discussions on the implementation of wide-area waste treatment at a time when the organization that is considered to be the waste treatment management entity of IKN has been clarified. Based on a examination of the feasibility of the legal system in that conference body, it is considered necessary from the perspective of establishing a system to proceed with the formulation of a plan that describes the specific roles and responsibilities, agreements to be made by the conference body, and goals.

(3) Strategy for High Risk Areas of Flooding and Landslide

In Balikpapan City, the severity, frequency, and extent of localized flooding caused by seasonal heavy rains are worsening and expanding year by year. This is said to be due to a combination of factors, including the intensification of precipitation patterns caused by climate change, the expansion of paved areas due to rapid urbanization, and deforestation in upstream areas. Additionally, the rapid development of residential areas on the hilly and undulating terrain has led to an increase in landslides, caused by inappropriate embankment and excavation in conjunction with the intensified precipitation pattern.

Under such high-risk environment, introduction of some effective enforcement measures to regulate the uncontrolled urban sprawl is necessary. Updating of the high-risk area mapping for flood and landslide by the city authorities in 2022 should be the basis for new development regulations. Promotion of comprehensive urban disaster prevention measures, including the reforms in the enforcement of development regulations and the planning of disaster prevention infrastructure. Although the Balikpapan City authorities manage an advanced database on historical disasters, it is currently not being utilized for urban disaster prevention measures. It is believed that Japan's expertise can be greatly utilized to support the entire system of measures from the designation of disaster risk areas to development regulations and infrastructure development.

Furthermore, in formulating Balikpapan City’s infrastructure development plans on disaster prevention, appropriate emphasis should be given to the "sponge city" concept and the "green infrastructure" projects introduced in planning of the IKN Development, including: flood damage mitigation by mangrove forests; rainwater drainage and pollutant filtration through near-natural waterways; storage and reuse of rooftop rainwater; and improving rainwater percolation rates by reducing paved surfaces. It is expected that many new practical insights obtained in East Kalimantan Province and Balikpapan City can be transmitted globally, and the establishment of research institutions and public relations systems for this purpose is to be pursued.

8.2.4 Recommendations on Promoting Connectivity

(1) Integrated Transport and Urban Development Planning

As previously mentioned, various initiatives are underway in Balikpapan City, such as the construction of expressways for accessing the new capital, planning for the railway-based mass transit, and the formulation of a comprehensive urban transportation master plan covering the new capital, Balikpapan City, and Samarinda City. Integration of urban development planning and transportation planning should be a strategic priority for

Balikpapan City, while also taking into account the impact of the New Capital City Development and future transportation demand. The integrated planning shall consider the following aspects: promotion of TOD (Transit-Oriented Development) policies; development of road- and rail-based mass transit corridors linking key nodes, establishment of multimodal feeder lines (bus routes, light rail, etc.); development of last-mile mobility; creation of safe and comfortable walking environment (Walkable City); and introduction of ICT technology, MaaS (Mobility as a Service), and smart mobility.

(2) Intra-City Road Network Development

As described in Chapter 4, the construction of an expressway from Balikpapan City to KIPP is being promoted. In the section near the existing urban area, the project needs to be implemented while securing land and coordinating with the existing infrastructure. In addition, drainage infrastructure is inadequate and some areas within the city are flooded during heavy rains, causing flooding and obstruction of road traffic around drainage channels. Therefore, it is necessary to improve the traffic environment to make it more disaster resilient. In addition, as mentioned above, it would be indispensable to develop road network integrated with future urban development and urban structure plan in order to respond to the increase in traffic demand caused by population growth and the IKN Development.

(3) Development of Public Transport and Promotion of TOD

A study is underway by MOT to develop a rail-based mass-transit service between Balikpapan City and KIPP. Careful considerations are required to formulate an accurate transport demand forecast based on the projected impact of the IKN Development. In addition, while a railway service between Balikpapan City and Samarinda City is expected to be further away in the future, it is important to commence study on the inter-city transport demand that considers the impact of the IKN Development. In addition to the planned railways, it is important to strengthen the city's public transportation system to reduce road traffic congestion and improve the urban environment. Furthermore, spreading out initiatives to promote the use and convenience of public transportation, such as Trans Balikpapan by MOT, would be essential. It is crucial to strategically plan and implement transportation system and policies to promote TOD in the area surrounding new stations, and to realize convenient transportation environment considering railway development from the entire city and regional perspective.

(4) Port Capacity Expansion and Strengthening of Logistics Network

The planning for the expansion and capacity improvement of Kariangau and Semayang Ports has been underway in Balikpapan City. Revisions and updates to these ongoing planning are necessary in order to take into account the latest development plans for IKN’s own port functions. In order to sustain industrial development in the region, it is highly recommended to strategically develop logistics hubs and establish logistics networks from a broad regional perspective, such as Tri-City.

(5) Capacity Expansion and Efficient Operation of Sepinggan Airport

The expansion and development projects are being considered for Sepinggan Airport by the Ministry of Transportation (MOT). The New Capital City Development may bring rapid demand increase in inter-regional traffic to and from other islands and overseas cities. It is critical to incorporate accurate demand projection to the airport's development plan. Additionally, consideration is needed for the strategic role-sharing and region-wide collaboration with IKN's new VVIP airport and Samarinda City's APT Pranoto Airport.

APPENDIX 1
CHAPTER1 Seminar on the Relocation of Indonesia's Capital City

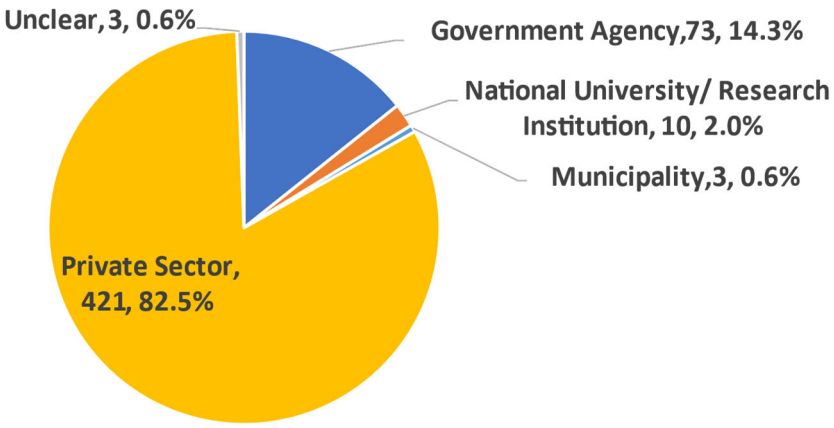
1.1 Seminar Outline

The table below provides an overview of "Seminar on the Relocation of Indonesia's Capital City", which was held for the purpose of sharing the results of this survey and gaining an understanding of the opinions of Japanese companies and others.

Table 1-1 Seminar Summary

Item	Summary		
Seminar Title	Seminar on the Relocation of Indonesia's Capital City ~The Latest Local Situation and Trends in the Development of East Kalimantan~		
Date & Time	Friday, December 8, 2023, 16:30-18:00 (JST)		
Location	Online		
Organizer	Japan International Cooperation Agency (JICA)		
Joint Sponsorship	Embassy of Japan in Indonesia, JETRO, Jakarta Japan Club (JJC)		
No. of Participants	510 (665 Applicants)		
Speaker	Contents	Institution / Department	Name of Speaker
	Opening Remarks	Embassy of Japan in Indonesia	Minister, Hajime Ueda
		JICA Indonesia Office	Chief Representative, Takehiro Yasui
		JETRO Indonesia Office	Vice President Director, Akihisa Matsuda
	Capital Relocation Plan Overview	JICA Study Team on "Data Collection Survey on East Kalimantan Province including New Capital City for Regional and Urban Development Support"	Mr. Yasuo Kannami
	Progress Update on the Construction of the New Capital	JICA Study Team on "Engineering Survey for New Capital City Development in Indonesia"	Mr. Kodai Sumiya
	Private Investment Trends in New Capital City Development	JICA Study Team on "Data Collection Survey on East Kalimantan Province including New Capital City for Regional and Urban Development Support"	Mr. Yasuo Kannami
	Introduction of Scheme for Supporting Overseas Expansion of Private Companies	JICA Indonesia Office	Senior Representative, Nozomu Ono
		JETRO Indonesia Office	Vice President Director, Akihisa Matsuda
		Trade and Economy Bureau, Ministry of Economy, Trade and Industry	Assistant Division Manager, Aya Miyai
		JBIC	Mr. Shota Ando
		JOIN	Mr. Masaki Takahashi
		UR	Section Manager, Junkichi Kano
		AOTS Jakarta Office	Director Kazuko Saito
		NEXI	Mr. Katsuyoshi Goto
	Closing Remarks	Cabinet Secretariat, Cabinet Office	Counselor, Fumio Yamazaki
Host	Chihiro Fukuda, Director, Southeast Asia Division 1, Southeast Asia and Pacific Department, JICA		
Lecture Structure	Time (JST)	Contents	
	16:30-16:40	Opening Remarks	
	16:40-16:50	Lecture 1: Overview of the Capital Relocation Plan	
	16:50-17:05	Lecture 2: Progress Update on the Construction of the New Capital	
	17:05-17:25	Lecture 3: Private Investment Trends in New Capital City Development	
	17:25-17:45	Schemes on Supporting Overseas Business of Private Companies	
	17:45-18:00	(Q&A session) / Closing Remarks	

The following table shows the results of the seminar participants' organizational affiliations, broken down into “Private Sector”, “Government Agency”, “National University/ Research Institution”, and “Municipality”. (n=510)



1.2 Pre-Seminar Questionnaire

1.2.1 Summary of Pre-Seminar Questionnaire

A pre-questionnaire survey was conducted among those who applied to participate in the seminar, asking about the status of business development in the New Capital City and business fields of interest. A summary of the survey and the questions asked are shown in the table below.

Table 1-2 Summary of Pre-Seminar Questionnaire

Item	Summary
Date of Reply	November 20, 2023 - December 6, 2023
Number of Respondents	650
Method of Response	Online

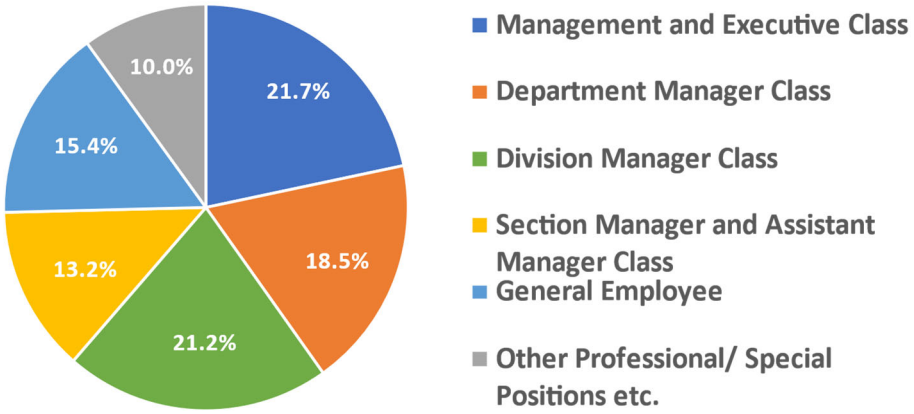
Table 1-3 Questions in the Pre-Seminar Questionnaire

	Questions	Options
Q1	Name	-
Q2	Organization name	-
Q3	Position	1. Management and Executive Class 2. Department Manager Class 3. Division Manager Class 4. Section Manager and Assistant Manager Class 5. General Employee Class 6. Other Professional/ Special Positions etc.
Q4	Email Address	-
Q5	E-mail Address (for confirmation)	-
Q6	Type of industry you belong to	1. Construction (Including Construction Consultants) 2. Automobiles/ Transportation Equipment 3. Mechanical/ Electronic/ Optical Products 4. Rubber/ Plastic Products 5. Chemicals/ Pharmaceuticals 6. Other Manufacturing Industries 7. Electricity/ Gas/ Water Supply 8. Non-Metallic Mineral Products 9. Ports/ Airports 10. Logistics/ Warehousing 11. Telecommunications 12. Mining / Mineral Resources 13. Forestry/ Timber 14. Fisheries 15. Fibers 16. Paper Manufacturing/ Printing 17. Food/ Plantations/ Livestock 18. Leather Goods/ Shoes 19. Food Products 20. Trade/ Business 21. Real Estate/ Industrial Parks/ Office Buildings 22. Hotels/ Restaurants 23. Finance 24. Consulting Services 25. Other Services
Q7	Status of your company's expansion into Indonesia	1. Has a local subsidiary (PT) in Indonesia 2. Has a representative office in Indonesia 3. Has both a local subsidiary and a representative office in Indonesia 4. Has not expanded offices in Indonesia
Q8	Status of studies related to business	1. Exploring business opportunities and gathering information

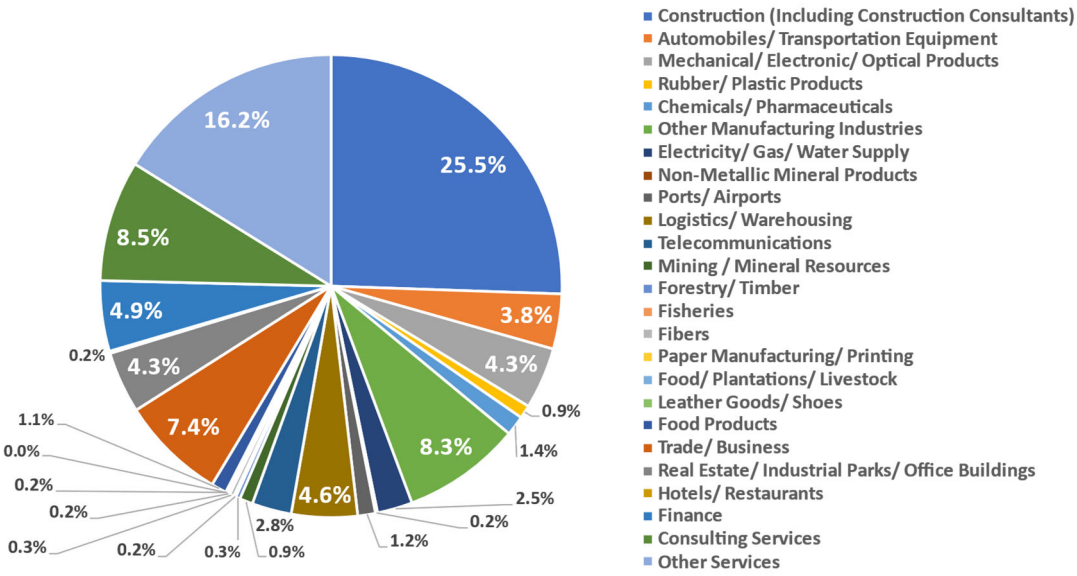
	Questions	Options
	development in the New Capital City or cities surrounding the New Capital City	2. Not considering business development in the region as of now 3. Considering specific projects/ businesses 4. Others
Q9	If you are exploring, gathering information on, or considering business development opportunities in the previous question: specific areas of consideration	1. New capital area 2. Surrounding cities (Balikpapan City, Samarinda City) 3. Surrounding cities (Including all of Kalimantan Island) 4. Wider area including the New Capital City and the above-mentioned surrounding cities
Q10	Projects of interest for investment in the New Capital City (Select all that apply)	1. Infrastructure Development (roads, water, sewage, railways, etc.) 2. Energy (renewable energy, etc.) 3. Automotive (four-wheeled vehicles, two-wheeled vehicles, EVs, batteries, etc.) 4. Smart City Development 5. Agriculture and Fishery 6. Food Services and Other Services 7. Real Estate/ Hotels 8. Resources (gas, oil, etc.) 9. Logistics (shipping, land transportation, etc.) 10. Finance (banking, insurance, etc.) 11. Telecommunications 12. Others
Q11	Areas of interest regarding New Capital City Development Trends (Select all that apply)	1. Policy trends in investment regulations and incentives 2. Infrastructure development trends 3. Local and third-country company trends 4. Japanese government trends 5. Support schemes from the Japanese government 6. Funding status
Q12	Questions, etc. you would like to ask at this seminar (Open ended response)	-

1.2.2 Results of Pre-Seminar Questionnaire

(1) Respondent's position (n=650)

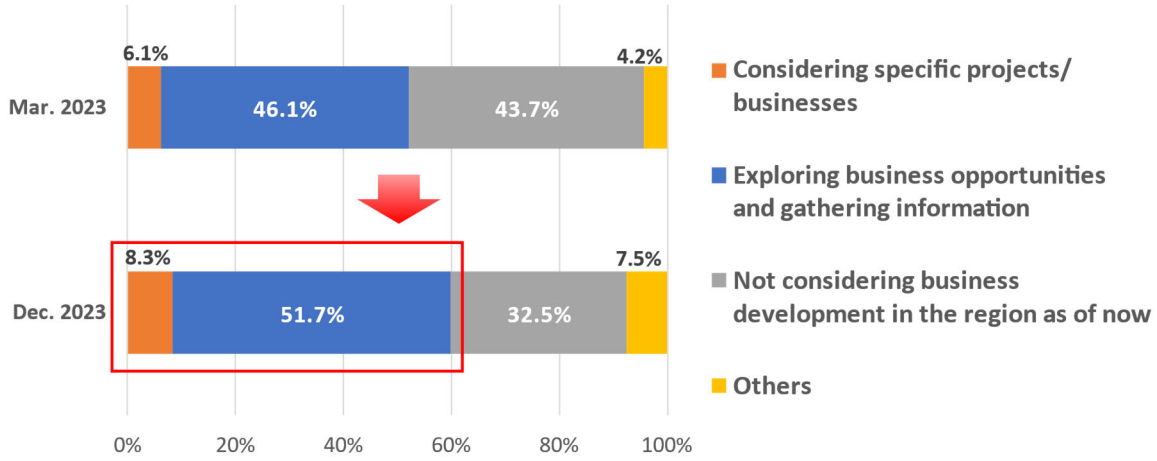


(2) Respondent's industry (n=650)



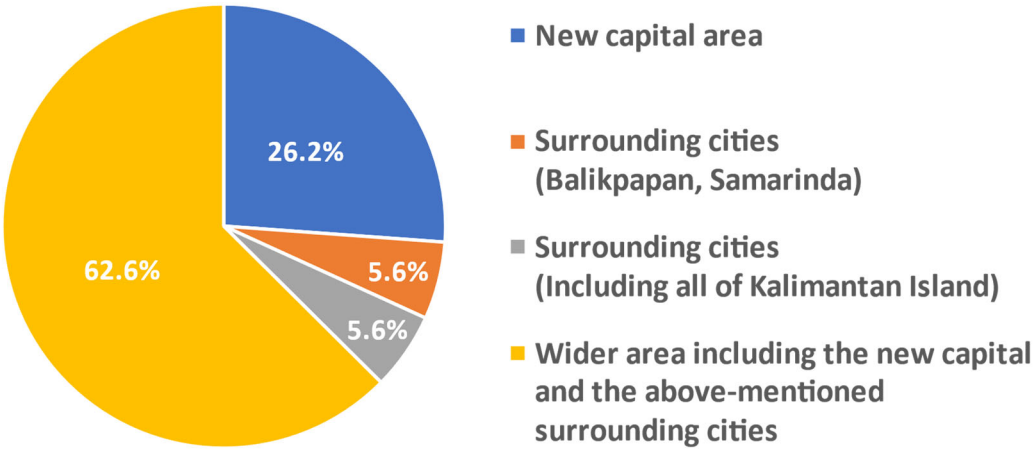
(3) Status of expansion in Indonesia (n=650)

(4) Status of consideration for business development in the New Capital City or cities surrounding the New Capital City (March 2023 vs. December 2023)

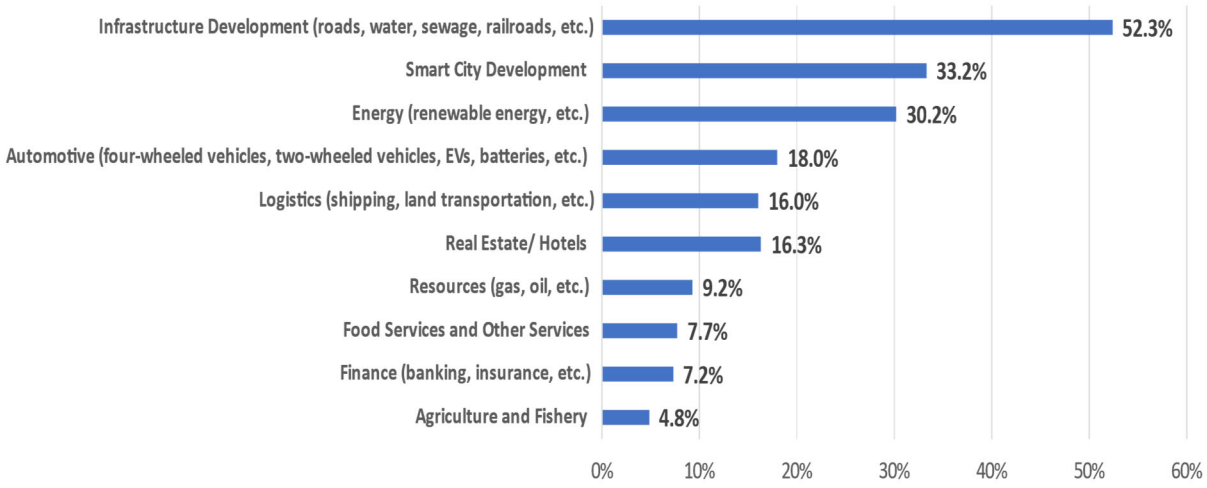


The results for March 2023 are from the pre-seminar survey conducted at the previous seminar.

(5) Those who answered "under consideration" in the previous question: specific areas under consideration (n=390)



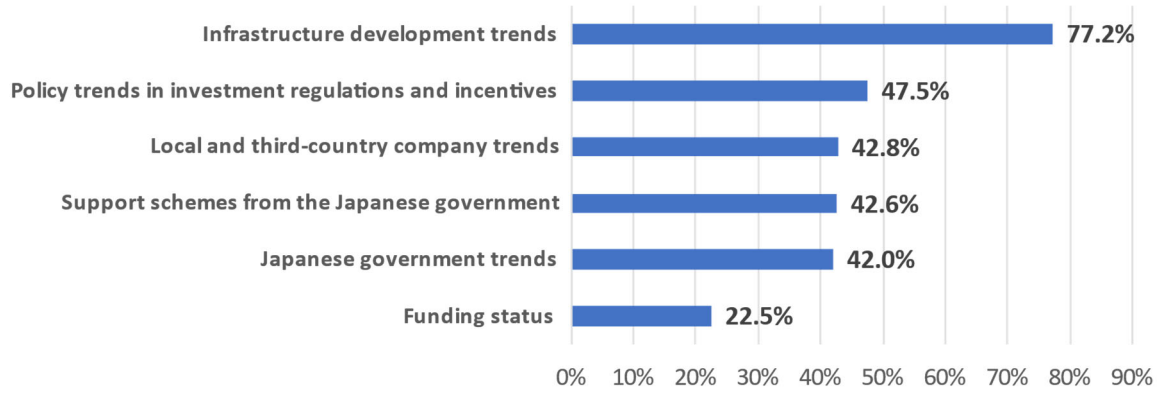
(6) Areas of investment and business interest in the New Capital City (n=650, select all that applies)



The areas of interest of respondents who answered “Others” were as follows:

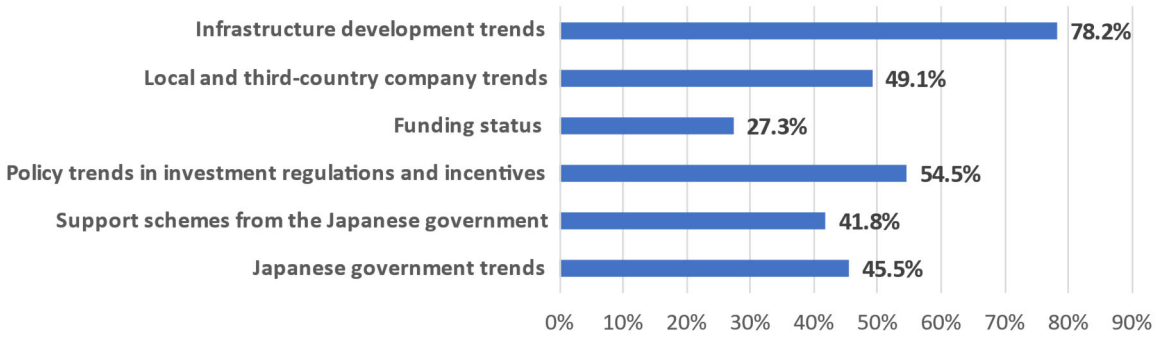
- Visualization technologies for disaster prevention
- Inundation analysis (e.g. hazard maps)
- Disaster prevention/earthquake early warning, crime prevention/ emergency notification systems
- Education, school education, research education
- Educational and research institute
- Consulting
- Audit, tax, sustainability
- IT-related
- Outsourcing
- Large shopping malls
- Legal and government liaison
- Equipment supplier
- Port consulting
- Government business
- Environment
- Afforestation and carbon
- Waste
- Housing interior materials
- Architectural design and urban planning, construction projects
- Construction and building materials
- Building construction
- TOD
- Road traffic congestion reduction
- Offices
- Trends related to hospitals and other medical institutions
- Peatland management

(7) Areas of interest in the New Capital City Development Trends (n=650, select all that applies)

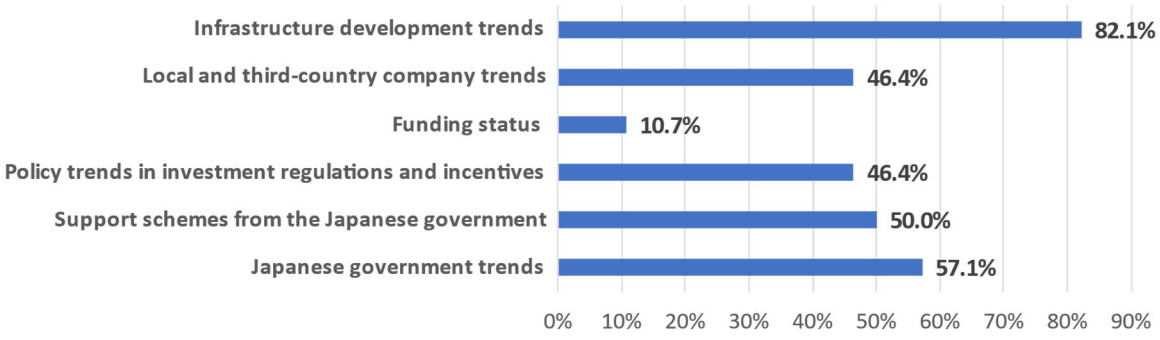


1.2.3 Cross Tabulation of Survey Results

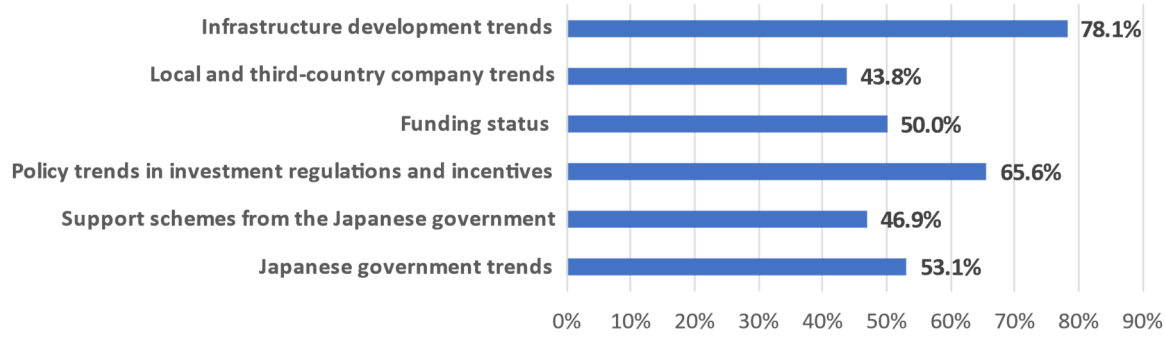
(1) Consulting Services (n=55, select all that applies)



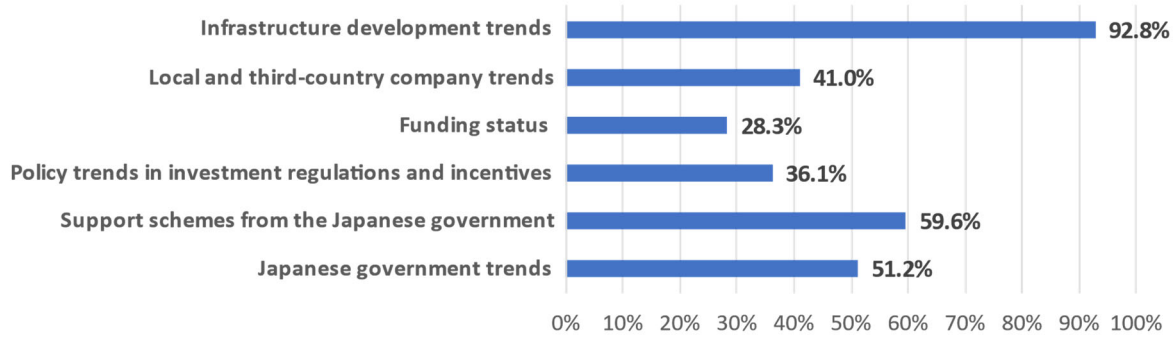
(2) Mechanical/ Electronic/ Optical Products (n=28, select all that applies)



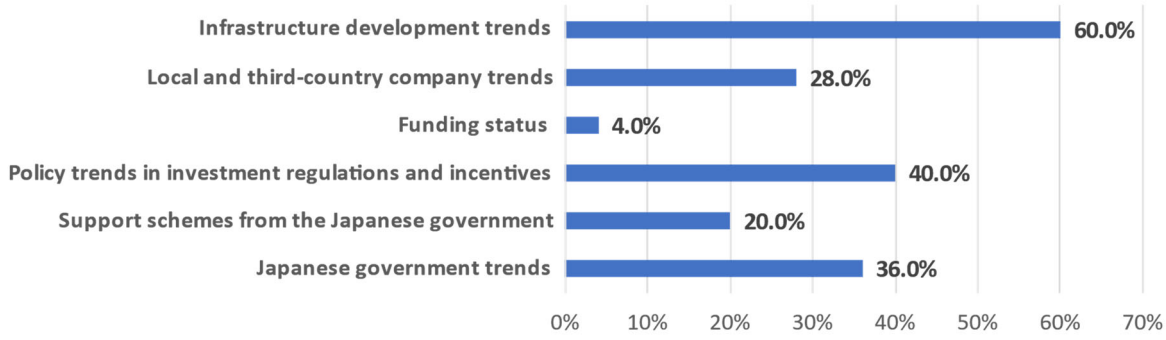
(3) Finance (n=32, select all that applies)



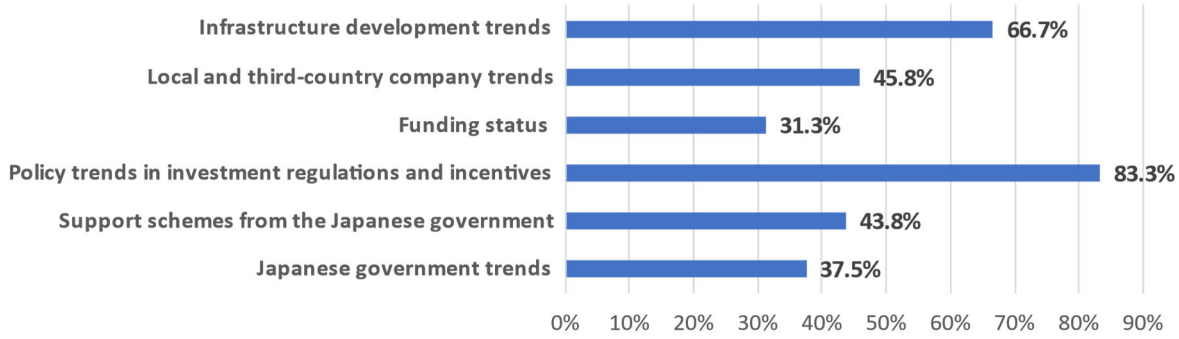
(4) Construction (Including Construction Consultants) (n=176, select all that applies)



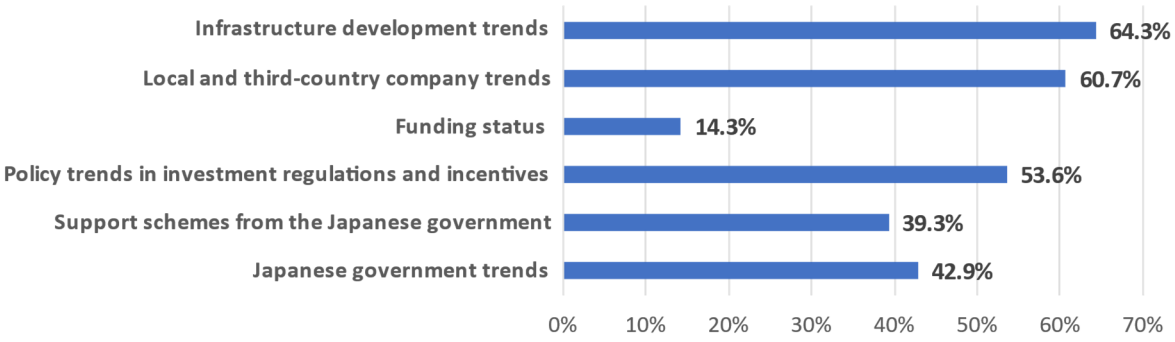
(5) Automobiles/ Transportation Equipment (n=25, select all that applies)



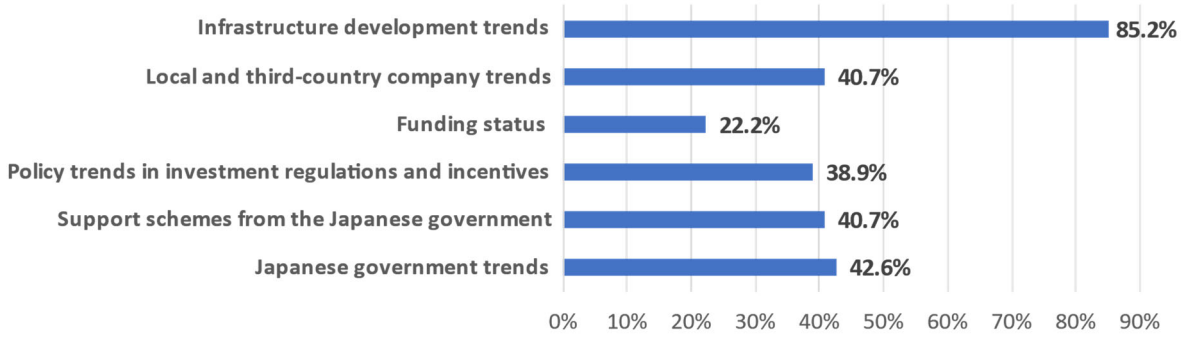
(6) Trade/ Business (n=50, select all that applies)



(7) Real Estate/ Industrial Parks/ Office Buildings (n=28, select all that applies)

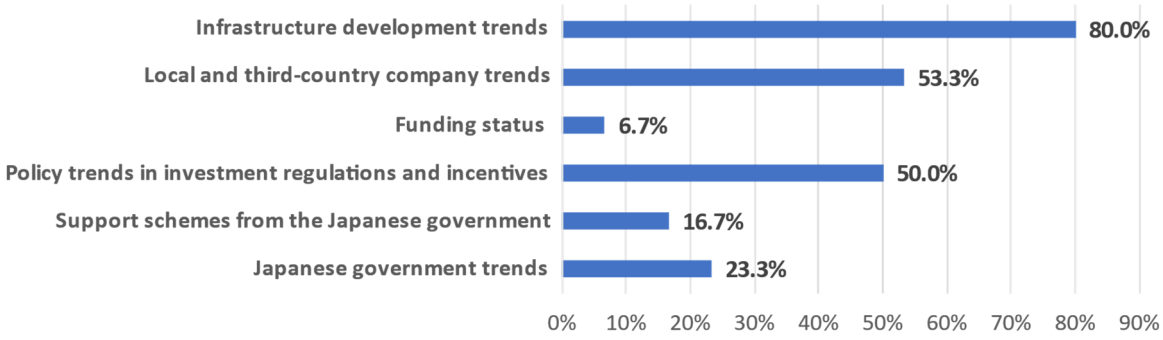


(8) Other Manufacturing* (n=54, select all that applies)



*Other manufacturing industries: Manufacturing industries other than automobiles and transportation equipment, machinery, electronic and optical products, rubber and plastic products, chemicals and pharmaceuticals

(9) Logistics/ Warehousing (n=30, select all that applies)



1.2.4 Questions that you would like to ask at this seminar

The table below shows the results of the pre-seminar questionnaire regarding "Questions or issues you would like to discuss at the seminar".

Table 1-4 Results of "Questions I would like to ask at this Seminar"

Classification	Contents
Infrastructure /Development Status of the New Capital	− We would like to confirm the schedule for the capital relocation and the status of preparations on the Indonesian side. − We would like to review the infrastructure development plans and progress related to the construction of the New Capital City. (transportation infrastructure, water and sewage facilities, housing developments (for workers and civil servants), hotels, hospitals, etc.) − We would like to know the Indonesian government and its support ratio for financing infrastructure investment. − We would like to know the status of the readiness of funds/financing (within the Indonesian government) (investment amount and composition of funding sources, etc.). − We would like to confirm the status of plans for new industrial parks, commercial facilities, etc. in the surrounding area. − We would like to know about plans for disaster prevention and emergency information systems in the New Capital City Development. − Regarding after the relocation of the capital, what is the number of visitors from outside Kalimantan and what means of travel is expected?
Trends as a Country	− Please tell us what will happen to the Japanese Embassy as a result of the relocation of the capital. − We would like to confirm the stance of the Japanese government (Ministry of Foreign Affairs, Ministry of Land, Infrastructure, Transport and Tourism, etc.) and recent developments (e.g., which ministry will be the counterpart to the new Capital Agency). − We would like to know the reality of the relocation of the capital and what the Indonesian government is doing about it. − We would like to know which functions of Indonesian government agencies are scheduled to be relocated and when. (I would also like to know about the relocation of the Ministry of Labor and the Directorate General of Immigration) − We would like to know the position of the company in the long-term strategy toward carbon neutrality, etc. − We would like to know the industrial sectors that are expected to develop in the New Capital Area and eastern Kalimantan in the future. − How has the authority of OIKN changed with the recent amendment to Law No. 3 of 2022, and how has it increased the certainty of the realization of the relocation of the capital? − We would like to confirm the impact of the presidential election. − There has been some criticism from NGOs and others regarding the negative impact on the ecosystem of infrastructure development in the region. There is talk of aiming for a "Green City," but do you have any concrete plans for a "Nature based Solution (NbS)"? − We would like to confirm the efforts from the perspective of the SDGs regarding the relocation of the capital. − Please tell us how you plan to ensure the dominance of information and telecommunications in ASEAN as a new capital city (important middle- to long-term policies and policies).
Jakarta After the	− How will Jakarta change as a city? (e.g., will there be a shift to greater efficiency and

Relocation	higher functionality)
Trends in Corporate Expansion and Support Systems	− We would like to know the status of foreign companies outside of Japan that have entered the market. − We would like to know about the Japanese government's efforts and support plan. − Please tell us about the status of private investment, the scale of business, and the trends of Japanese and local companies and related organizations. − Please tell us about the status and plans of the private companies that have already decided to attract or are participating in the project. − We would like to know about trends in the expansion of automobile and related companies, including foreign companies. − We would like to know about the consultants, general contractors and owners involved in the construction of the building. − We would like to know about the relocation of companies from Java to Kalimantan and the opening of new offices. − Please tell us about the trends and participation of Chinese companies in development (districts, industry sectors, types of companies/state-run or privately owned, start-up companies, etc.). − Regarding the status of investment schemes including PPP, please tell us if there are any opportunities for Japanese companies to participate in PPP projects. − We heard that the trucks used for infrastructure construction are all made in China, is this true? If so, please tell us why. − We would like to know about the possibility of introducing shared cycle service, shared battery replacement service, and battery storage system. − If there are opportunities for Japanese companies to participate in infrastructure PPP projects, we would like to know about deal formation and risk mitigation methods. − Please tell us about your support for the launch of smart city, GX-related, and smart factory businesses in Indonesia.

1.3 Post-Seminar Questionnaire

1.3.1 Summary of Post-Seminar Questionnaire

After the seminar, a questionnaire survey of the participants was conducted, asking about participants' interest in relocating to the capital city and their intentions for business development. The following is a summary of the post-seminar survey and questions asked.

Table 1-5 Summary of Post-Seminar Questionnaire

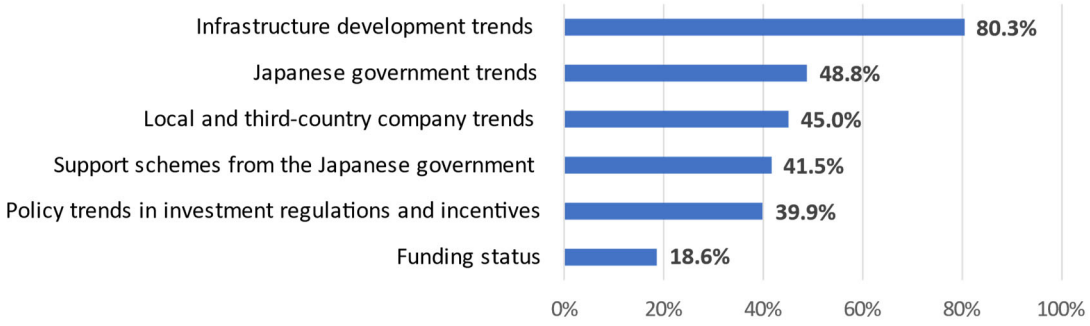
Item	Summary
Date of reply	December 8 - 15, 2023
Number of Respondents	371
Method of response	Online

Table 1-6 Questions Asked in the Post-Seminar Questionnaire

	Questions	Options
Q1	Name	-
Q2	Email Address	-
Q3	Matters of interest/questions after attending the seminar	1. Policy trends in investment regulations and incentives 2. Infrastructure development trends 3. Local and third-country company trends 4. Japanese government trends 5. Support schemes from the Japanese government 6. Funding status 7. Others
Q4	If interest/question: Specific interest/question	-
Q5	Changes in interest in business development in the New Capital City and surrounding cities as a result of seminar participation	1. We want to consider specific projects/ businesses 2. We want to consider relocating/establishing an office 3. We want to consider the area as a development base/experimental site for new technologies 4. We want to explore opportunities for business expansion 5. The seminar hasn't changed our interest from before 6. Others
Q6	If you would like to consider or explore business development: Specific areas you would like to consider	1. New capital area 2. Surrounding cities (Balikpapan City, Samarinda City) 3. Surrounding cities (Including all of Kalimantan Island) 4. Wider area including the New Capital City and the above-mentioned surrounding cities
Q7	Questions or comments about the capital relocation in general and the content of today's seminar (Open ended question)	-
Q8	What would be significant in considering business development in the New Capital City and surrounding cities (Select all that apply)	1. Regular information sharing on business progress 2. Investment incentives from Indonesian government 3. Matching with promising local partners 4. Securing land for business use 5. Japanese government's support for individual projects (surveys and studies) 6. Japanese government's support for individual projects (financing) 7. Japanese government's support for individual projects (assurance) 8. Japanese government's support for individual projects (start-ups) 9. Others

1.3.2 Results of Post-Seminar Questionnaire

(1) Matters of interest or questions after attending the seminar (n=371)



(2) Specific Interests/Questions, if any (n=96)

1) Specific Interest

Classification	Contents
Infrastructure Development and Maintenance	**Infrastructure in General** − Infrastructure (roads, water, drainage, electricity, gas, telecommunications, etc.) development status and schedule − Local infrastructure construction issues − Information on materials and technologies for construction work using cement and concrete in infrastructure development − Environmental infrastructure − Opportunities for Japanese companies to participate in PPP projects and specific ways to participate **Roads and Traffic** − ITS/transportation systems (passenger cars, public transportation, slow mobility, etc.) − Status of transportation infrastructure (airports, etc.) planning − Traffic signal control system − Subway construction plan − About the toll road project − Progress in the development of transportation infrastructure, including roads, airports, ports, bus routes, and transportation nodal facilities **Electricity and Energy** − Interested in participating in infrastructure projects such as renewable energy, water and sewage − Re-energy related (energy creation, energy conservation, energy storage) **Waste** − Infrastructure development plans for domestic and industrial waste disposal − WtE (Waste-to-Energy) and waste disposal issues − We would like to know if there are concrete plans for infrastructure development with regard to domestic and industrial waste disposal, and if not, we would like to propose investments. **Architecture and Urban Development** − Housing − How to propose interior building materials to construction and real estate involved in the relocation of the capital − Information on local design firms and urban planning firms involved in the construction of the New Capital City, and whether or not there are opportunities for participation by overseas design firms with respect to future construction. − Demand for housing for workers in the New Capital City development. We are currently developing and promoting low-income housing and disaster housing in Indonesia. We are interested in the demand for housing for workers as an application of this product. − As a new capital city of Asia, we would like to learn (together with city planners from

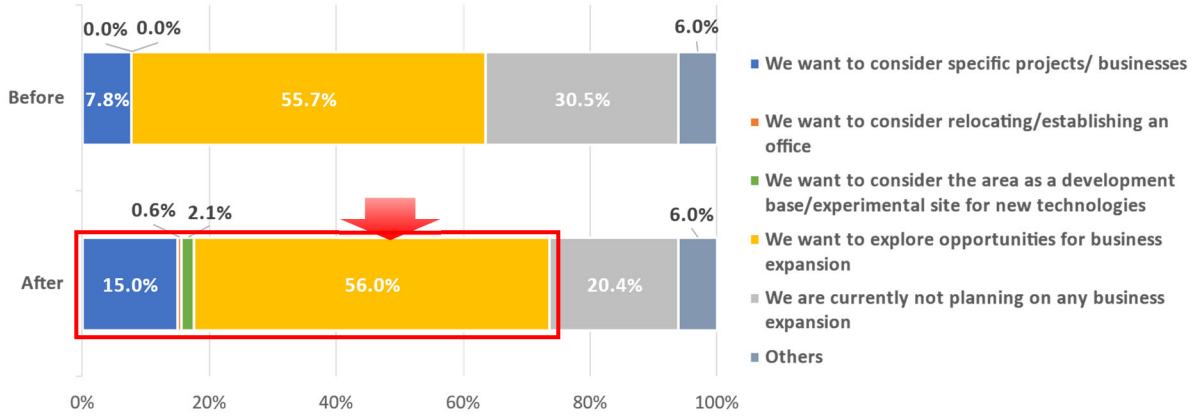
	other parts of Asia) what kind of urban development practices are being implemented. − Disaster prevention measures, incorporating earthquake early warning into buildings, from the design stage are important. **<u>Others</u>** − Climate change and sustainability related measures − Disaster prevention measures − IT, telecommunications infrastructure, smart cities − Specifics of smart cities − New business opportunities related to smart cities − Trends in smart surveillance systems as urban and transportation infrastructure − Data center development − Local thoughts on smart city conversion, needs for automated delivery, etc., GX/DX, and risk-taking for new mechanisms.
Investment Opportunities	− Process after signing the LOI for OIKN − Feasibility of relocating the capital and availability of substantial investment opportunities for Japanese firms − Status of non-Japanese overseas investments and their progress, as well as overseas investments in civil engineering projects. − Specifics of investment and tax incentives − Priority projects of the partner government − Regulations and promotion measures by the local and Japanese governments related to trade operations of Japanese companies in the countries in which they operate
Relocation of the Capital	− Future development plans and relocation from Jakarta − Status of the extent to which ministries are actually relocating real functions − Status of formulation of urban and regional development master plans in Tri Cities and needs for new formulation, etc. − The Indonesian government's investment ratio in the New Capital City Project is said to be 20% of the total project cost, so what are the specific projects to be covered by the Indonesian government, and what is the schedule for the implementation of these projects? The projects to be funded by the Indonesian government are assumed to be so-called public works projects that will be the basis and premise for implementing other projects such as infrastructure development, so it will be very difficult to make implementation plans for other projects without confirming the progress schedule. − We have the impression that the relocation of the capital city will take precedence, and that the population and infrastructure required for a large city will be developed later. We are particularly concerned about the population statistics and its outlook, which will be closely related to the expansion of companies, so we will continue to closely monitor public information.
Trends in Japan	− Various support systems available to Japanese companies to promote their projects − Energy infrastructure in the New Capital City and support policies for Japanese SMEs involved in the development of the New Capital City − Establishment of local subsidiaries, training for key personnel, and government support related to these activities − Japanese government support schemes are of continuing interest − Future research and support by JICA and possible yen loan projects − PPP and yen loan operations by the Japanese government for the development of basic infrastructure such as roads, water and sewage systems, etc. − Although you have explained the progress of the survey and the relocation of the capital, we would like you to share with us the specific efforts and support of the Japanese government, as well as the efforts of Japanese companies, to the extent that they can be made public. − We are a manufacturer that handles public materials, and there is a possibility that products made by Japanese manufacturers or Japanese manufacturers in cooperation with local or third country manufacturers will be involved in the construction of roads, railways, airports, etc. for ODA or local government orders related to the relocation of the nation's capital.
Trends in Indonesia	− Correlation with the results of the next presidential election

2) Questions

Classification	Contents
Infrastructure Development and Maintenance	**Infrastructure in General** − With the increasing number of orders for project rights, including construction, financing, and operation, the promotion of "infrastructure and system exports," in which Japanese companies receive orders for integrated infrastructure and systems, has become an urgent issue. Are there any measures that can be taken to resolve this issue? − We saw a picture of the capital relocation site and it looked like a jungle. What is being done with the wood and other materials that are cut down during land clearing? **Roads and Traffic** − We would like to hear about your future logistics outlook at the new location in the capital. − Does OIKN have a concept, plan, intention, or timeline for rail, new transit systems, BRT, or other public transit systems? − Does OIKN have any plans or development intentions for urban development around transportation nodes, train stations, and stations? − With regard to railway development, are there any coordination discussions between the Ministry of Transportation's Directorate General of Railways, the New Capital Agency, and other related agencies? − Are the rail lines planned by the Ministry of Transportation's General Directorate of Railways and the infrastructure planned by the New Capital Agency consistent? − It seems difficult to generate sufficient revenue from rail development alone, but do you have any plans to integrate it with development along the rail line? − Do you have specific information on the willingness of foreign companies to participate and donors from other countries? − Are there any yen loans envisioned for the transportation sector? If so, are there any schemes such as STEP loans or high-spec loans being contemplated? − What is the intention of Japanese companies to participate in the construction of railways and urban development around stations? **Architecture and Urban Development** − Time when multi-grade buildings begin to be planned in earnest. **Others** − We would like to have information on the schedule for water release and reservoir maintenance after the dam construction, and what kind of flood control measures (construction of flood monitoring and warning system) are being taken. − Description and preparer (name of company) of master plan for water and wastewater
Investment Opportunities	− Are there any particular areas in which you would like Japanese companies to be involved? − After concluding the LOI, the plan is to proceed with one-on-one procedures between the company and the New Capital City government. Japanese companies generally do not proceed to the conclusion of a confidentiality agreement or MOU on a one-on-one basis unless they are provided with extensive information on the investment feasibility of their business area. Therefore, we would like to confirm the possibility of OIKN to consider schemes other than the one presented here.
Relocation of the Capital	− When and how will the transfer of functions of Indonesian government agencies proceed?
Trends in Third Countries	− We would like to know the status of foreign companies outside of Japan that have entered the market.
Trends in Japan	− Will Japanese automakers enter the market or not? − It was mentioned that Indonesian government is considering local government budgets, PPPs, and private investment as sources of funds for development projects related to the relocation of the capital, but is Japanese side thinking of using ODA grant aid in the future for infrastructure development and other projects?
Trends in Indonesia	− Is there a possibility that the relocation of the capital will gradually change the center of the economy?

(3) Changes in interest in business development in the New Capital City and surrounding cities as a result of seminar participation

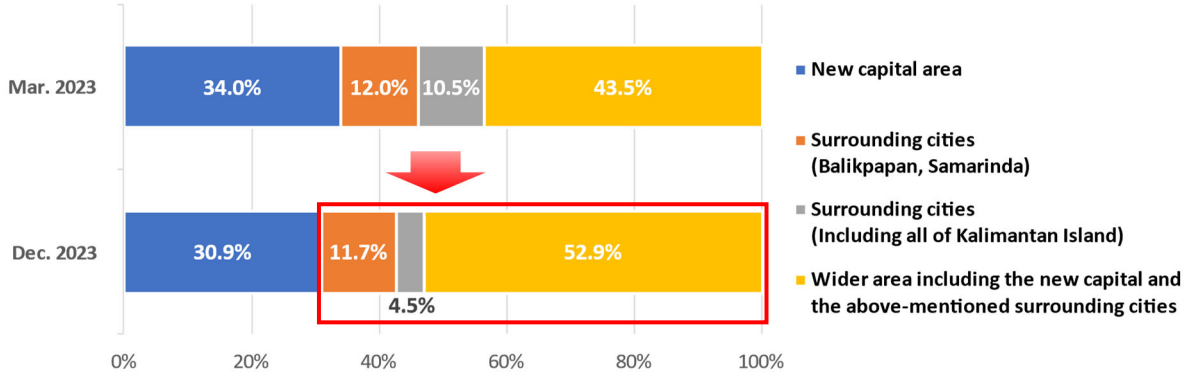
With regard to the intention to develop business after the seminar, the percentage of respondents who said they "want to consider specific projects/ businesses" and "want to explore opportunities for business expansion" increased compared to before the seminar.



n=334 (pre-seminar survey results), n=334 (post-seminar survey results); only those who responded to both surveys were counted.

(4) Areas to be considered specifically by respondents who would like to consider or explore business development

Compared to the previous survey on specific areas of consideration for respondents who would like to consider or explore business development, the percentage of respondents who would like to consider not only the New Capital Area but also a wide range of areas including surrounding cities has increased.



n=191 (March 2023), n=223 (December 2023), March 2023 is the result of a post-seminar questionnaire at the previous seminar.

(5) Questions/comments about the capital relocation in general and the content of today's seminar (n=47)

1) Opinions and Comments

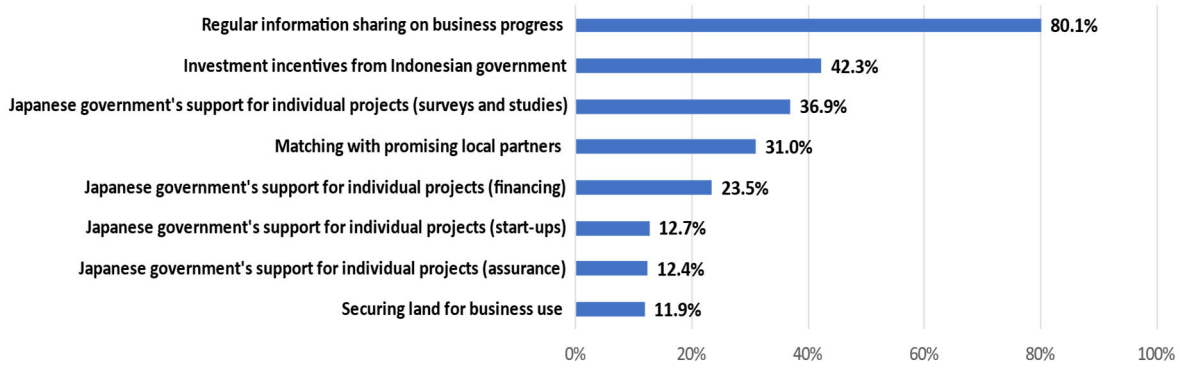
Classification	Contents
About New Capital City Development	− We learned a lot about the latest progress of buildings and infrastructure related to the New Capital City. We heard that everything is going according to plan, but we are wondering if it will be ready in time for the Independence Day in August next year. − It seemed to me that we have made a lot of progress since last year. − The explanation of the relocation from the very beginning helped me to understand the details from the introduction. − Nippon Koei's explanation was helpful to understand the progress with the visuals. − The photos gave me a good idea of the latest developments in the New Capital City. Thank you very much. We hope you will continue to provide us with regular opportunities to share information with you.
Corporate Participation	− We were gathering information at the time of 2020 and it was more advanced than we had thought. We would like to rethink whether there is anything our business can utilize. − Thank you for systematically providing us with useful information to consider and acquire business opportunities. In light of the nature and capabilities of our business areas, we will explore the possibility of collaborating with companies that lead individual businesses. − As a leasing company, we would like to further consider how we can get involved in the business. − It would have been even more gratifying to know what needs exist in the context of media, digital, communications, etc. − You explained that 25 LOIs have been submitted by Japanese companies, but we would like to know the business fields in which Japanese companies are interested.
Participants' Outlook	− The perspective of promoting IKN for Indonesia (promoting investment from Japan) is admirable. However, from the perspective of “Japan's national interest and national defense,” how should this IKN be positioned? We would like to see the perspective of “Japan's national interest and national defense. − We believe that they are proceeding with environmental assessments and other procedures, but we were honestly surprised to hear how much progress has been made in the construction work even though not much time has passed since the decision was made to relocate the capital. At a time when ASEAN is just now taking new measures to combat climate change, we hope that this new city will be at the forefront of climate change countermeasures, and that it will also be a strong, well-designed, and people-centered city. − Regarding the relocation of the capital city, he commented, “It may be necessary to investigate the impact of the presidential election, advanced and experimental infrastructure facilities, competitive trends with foreign companies and local needs, and soft needs such as sensoring, traffic control, delivery, environmental protection, and sanitation. Currently, the company specializes in civil engineering and construction demand, and feels that it is difficult to match up with such start-ups, which are mainly involved in the construction of the New Capital City and have not uncovered needs from Japan in the business stage of providing a new urban vision. − We believe that the Indonesian government is also actively promoting the project because of a lack of budget, so they are talking to foreign capital, etc., but can the Indonesian government actually be trusted? After the Shinkansen project, I am afraid that they will betray us in the end. I am concerned that the Indonesian government will eventually betray us.
About the Seminar	− Learning about the current status of the New Capital City and the various government supports, We became even more interested in projects in and around the New Capital City. − It was meaningful for us to be introduced to the concept and outlook on the development of OIKN as well as the progress of the project. − It was very helpful to have the latest information on the local situation and the support scheme of the Japanese government. I hope you will promote such efforts. − We feel that we were able to gather information efficiently from multiple institutions and companies in one opportunity.

	− We were surprised by the photos of the construction site and the aggressive construction site progress. − The presentation of each organization's support scheme was interesting and informative. The short, pitch-style presentation format was also good. I know it took a lot of effort to coordinate the various organizations, but I hope the event will be continued in the next and future editions. − There was a lot of content, not only about the current status of IKN, but also about fundraising. However, I think the time was a little tight. − The support schemes of JOIN, UR, AOTS, NEXI, etc. were very useful as we were not aware of them. − It was meaningful to confirm that there are many projects financed by Japanese government agencies. I would like to re-read the materials later and consider which specific projects could be eligible. − We would have liked to have seen a few more examples of the application of JOIN projects to specific cases. − The overview of the capital city relocation plan and its progress was easy to understand and informative. The second half of the presentation, related to the support scheme, was very rich in content, but the speed of the presentation was so fast that it was difficult to keep up with the content. − We were introduced to a wide range of topics, but some of them were a little indigestible. − Lack of time and no Q&A session was disappointing

2) Question

Classification.	Contents
About New Capital City Development	− We would like to know which energy sources are most likely to be envisioned for the energy infrastructure to be developed in the New Capital City.
Corporate Participation	− We would like to see if we can draw on the flexibility of the steps set forth by OIKN in obtaining specific information that individual companies would like to know.
About the Seminar	− For some reason, we couldn't get into the first half of the web conference, and since there is so much going on, could you please make the archive available to the public?

(6) Significant things in considering business development in the New Capital City and surrounding cities (n=371)



1.4 Organize questions and answers during surveys and seminars

The following is a summary of the questions obtained from the questionnaires conducted before and after the seminar, as well as the questions that were asked during the seminar and the answers to those questions.

(1) Status of infrastructure and development related to the New Capital City

1. We would like to confirm the timeline for the development of the New Capital City, infrastructure plans and progress.

See lecture/presentation materials.

2. We would like to know the status of funding and financing readiness for the New Capital City infrastructure development (investment amount and financing source composition, etc.).

The total investment in the New Capital City Development is estimated at IDR 467 trillion, of which 19% is expected to be fully direct government investment, 54% major infrastructure projects are expected to be PPPs, and the remaining 26% are expected to be general private investments. Most of the infrastructure projects in the preceding government core areas are being progressively funded by the government. On the other hand, as for PPP projects and projects that expect private investment, according to PUPR and other related organizations, we have heard that the situation is such that many projects are under study or are scheduled to be studied for specific funding sources in the future. According to the announcement by the Undersecretary for Financing and Investment of OIKN, the amount of realized private investment in Nusantara is currently 35 trillion rupiah (approximately 334 billion yen, or 7.5% of the 467 trillion IDR required for the New Capital City development) (as of November 20).

3. With the Indonesian government's investment ratio in the New Capital City Project said to be 20% of the total project cost, what specific projects will be covered by the Indonesian government and what schedule will be used for those projects?

See lecture/presentation materials.

4. We would like to confirm the status of plans for new industrial parks and commercial facilities in the surrounding area.

According to Balikpapan City, Balikpapan City is reportedly developing the Kaliangau Industrial Park (133.8 ha) along the main road under construction connecting Balikpapan City and the New Capital City and is currently attracting production facilities and business establishments such as logistics, automotive, chemical, pharmaceutical, machinery, construction, and lumber. In addition, Balikpapan City is planning to proceed with reclamation and development of the coast, which may attract commercial facilities to the area. In addition, according to the City of Samarinda, the redevelopment of the city's downtown area and a plan to develop the Palaran area as an area-wide urban development project in conjunction with the construction of a new port on the right bank side of the Mahakam River are under consideration, which is expected to promote the expansion and investment of industrial and commercial facilities.

5. Regarding after the relocation of the capital, what is the number of visitors from outside Kalimantan and what means of travel is expected?

We have not been able to obtain specific estimates of the number of visitors from outside the island. For example, the Balikpapan Airport (Sepinggan Airport), which is the busiest airport in the area surrounding the New Capital City, is expected to receive approximately 5.1 million passengers per year (2019), while the Semayang Port in Balikpapan City, another major port for passenger ship traffic to and from the island, will receive approximately 510,000

passengers per year (2019). The number of passengers at Balikpapan City's Semayang Port (Semayang Port), which is also the main port for passenger ships to and from the island, is approximately 510,000 (2019). In addition, a new VVIP airport is planned to be built in the vicinity of the New Capital City for use by government officials, and future expansion of the airports in Balikpapan City and Samarinda City is also under consideration.

6. We would like to know what is being done with the wood that was cut during land clearing in the New Capital City Development Area.

According to the Ministry of Environment and Forestry, since the forests in the development area are basically production forests, it is desirable to mill a certain size of timber and use it for building materials, etc. For this reason, the developer sells a certain size of timber, and the government purchases some of the trees that are not large enough to be sold. Therefore, it appears that the developer will sell a certain size of timber, and the Indonesian government will purchase some of the trees that are not large enough to be sold and use them for afforestation.

7. We would like to know where you procure construction materials and how you transport them.

Everything from asphalt and cement to stone and sand is basically procured from outside Kalimantan. The source of procurement is up to each contractor, and the goods are basically transported by ship.

8. We would like to know about plans for disaster prevention and emergency information systems in the New Capital City Development.

In the development of the Government Core Area, stormwater drainage infrastructure and EWS (Early Warning System) are planned by PUPR.

9. Please tell us about the schedule for water release and reservoir maintenance after the construction of the dam (for the New Capital City Development), and what kind of flood control measures (construction of a flood monitoring and warning system) are being taken.

The schedule for water release after the dam construction is being coordinated by the nunnery.
The reservoir is under construction with the goal of partial completion by the end of 2024.
For flood control, a river structure (check dam) with a gated spillway for a flood of probability year 1/100 year magnitude is under construction on the Nun side.

10. Please let me know the contents of the Water and Sewerage Master Plan (for the New Capital Development) and who prepared it.

It is prepared by the Ministry of Public Works and National Housing. No public information is available regarding the contents of the plan.

11. What is the progress of construction of roads, bus routes and transportation nodal facilities related to the New Capital City Development?

Please refer to slides 8 and 10 of Presentation #2 for road information.
Regarding bus routes and transportation nodal facilities, according to Chapter 6 of Presidential Decree No. 63/2022, a timeline is being planned for the New Capital Area (see left diagram on slide 4 of presentation material 2), which will be developed in phases starting with phase 2 until 2039.

12. Does the OIKN have a concept, plan, intention, or schedule for rail, new transit system, BRT, or other public transit system?

According to the Indonesian government (Ministry of Transportation), public transportation in the Government Core Area (KIPP) will be operated by rail, (automated) BRT, and (automated) minibus. The BRT and minibus will be expanded in stages in line with road improvements within KIPP, with completion scheduled for 2045.
As for the rail plan, there are some transportation plans within KIPP that indicate the possible

routes and station locations, but the Ministry of Transportation and others are currently conducting a study to promote the project between the New Capital Area and Balikpapan City.

13. With regard to railway development, are there any coordination discussions between the Ministry of Transportation's Directorate General of Railways, the Nusantara Capital Region Authority, and other related agencies?

It is not clear to what extent the government is consulting on the development of the railway. On the other hand, we have heard that a study team has been formed by OIKN, PUPR, Ministry of Transportation, BAPPENAS, and other related government agencies to discuss and coordinate the development and construction of the New Capital City.

14. Is the infrastructure planned by the Nusantara Capital Agency consistent with the rail line planned by the General Directorate of Railways of the Ministry of Transport?

As mentioned in our response 12 to your question, the Ministry of Transportation and others are currently conducting a study on the railway plan for the New Capital City development in order to promote the project. The Indonesian government (Ministry of Transportation) is studying the transportation plan within KIPP based on the contents of the IKN Development Plan (Presidential Decree No. 63/2022, etc.), and the railway project is expected to be promoted in line with and coordinated with the related plans.

15. With regard to the development of intra- and inter-city railways, what is the intention (willingness) of the provincial government, neighboring cities, and other local governments with regard to priorities and construction timing?

According to the Indonesian National Railway Master Plan (2020) and the East Kalimantan Province Regional Spatial Structure Plan (2023-2042), the North Kalimantan Province - Samarinda City - Balikpapan City - New Capital City Development Area -The section from PPU Province through Paser Province to the boundary with South Kalimantan Province is considered to be the section where the inter-city rail line will be developed. Of these, the study for the realization of the New Capital Development Area (Government Core Area) - Balikpapan City has been prioritized. Detailed priorities and construction dates have not yet been announced, as the Ministry of Transportation and other agencies are currently conducting studies to promote the project. The City of Samarinda is willing and considering the development of a local rail system, but a specific project plan and schedule have not yet been determined.

16. Does OIKN have any plans or development intentions for urban development around transportation nodes, railway stations, and stations?

Regarding the railway project for the development of the New Capital City, as mentioned in response 12 of the question, the Ministry of Transportation and others are conducting a study to promote the railway project between the New Capital Area and Balikpapan City, but no announcement has been made at this time regarding the transportation node and station location for this section, or the policy for development around the station.
Within KIPP, the Indonesian government (Ministry of Transportation) is studying a plan that shows the location of the railway line and railway station and the assumption of TOD, but no construction work, etc. is underway at this time. Based on the results of the study on the access railway from Balikpapan City, it is expected that the railway plan within the New Capital Area and the surrounding development plan will be materialized in the future.

17. What are your assumptions about the population of the metropolitan area when the relocation of the capital is completed?

In terms of population, the New Capital Area is expected to have a population of approximately 1.9 million, and the Tri-City including Balikpapan City and Samarinda City will have a population of approximately 5 million in 2045 when the relocation of the capital is completed.

18. Are there any plans to build a subway or not?

Development plans within PUPR's Government Core Area (KIPP) suggest the future possibility of an elevated rail line or subway system, but a study is required. At this time, we are not aware of any specific plans for subway construction.

19. We would like to know the status of port development, future logistics prospects, and the possibility of improving existing ports and constructing new ports when the capital is relocated. (Including Balikpapan port) (3 items)

According to the Indonesian government (Ministry of Transportation), the ports that are expected to support the development of the New Capital City are the Sumayan Port (Balikpapan City) operated by Pelindo for passenger traffic and the Kariangau Terminal Port (KKT: Terminal Kaltim Kariangau) (Balikpapan City) operated by Pelindo and the East Kalimantan provincial government for logistics. Terminal Kaltim Kariangau) (Balikpapan City), operated by Pelindo and the East Kalimantan Provincial Government. These ports are planned to be expanded and improved to accommodate future increases in logistics demand.
In addition, the Ministry of Transportation is conducting a study on the construction of a new tourist port and a study on the construction of a new port related to the development of a new capital city in 2022 and will continue to study plans for the construction of a new port in 2023.
PUPR also plans to build a port for construction materials.

20. Are there concrete plans for infrastructure development with regard to domestic and industrial waste disposal?

The master plan for the development of the New Capital City (BAPPENAS, 2020) outlines the treatment flow and possible infrastructure development related to domestic waste. As an overview, pipeline transportation facilities, relay facilities, WtE (incineration), composting facilities, biogas facilities, and final disposal facilities are planned to be introduced, and it is stated that treatment facilities should be concentrated in one location to reduce environmental impact.
On the other hand, no specific plans have been identified for industrial waste. For example, for items that have already been decided to be introduced, such as photovoltaic power generation, the need for treatment of waste after its useful life has only been mentioned.

21. We would like to know when multiple grade buildings will begin to be planned in earnest.

Within the Government Core Area (KIPP), Indonesian companies (private capital) have already begun to develop hotels, commercial facilities, condominiums, international schools, and other facilities. The Nusantara Capital City Government has also informed us that some foreign companies have already conducted feasibility studies (FS) in the areas of housing, education, and others.
In the middle to long term, Chapter 6 of the New Capital City Development Plan (Presidential Decree No. 63/2022) divides the development of the New Capital City into five phases of five years each until 2045, with the following facility development plan

- Government facility (Presidential Palace): Phase 1
- Government facilities (Vice Presidential Residence, Presidential Office, State Department Secretariat, Cabinet Secretariat Office, etc.), housing for government officials: Phase 1 - 2
- Housing for construction workers, development of new housing for general use, and updating of existing housing and residential areas: Phase 1
- Development of existing villages: Phases 2-5
- Low- and moderate-income housing: Phases 3-4

22. We would like to know which energy infrastructure is most likely to be developed in the New Capital City. (2 items)

According to the RUPTL, 100% of the New Capital City's needs will be met by renewable

energy sources, with solar power in and around the New Capital City and hydroelectric power in North and South Kalimantan as the main sources of generation.

(2) Trends in the Japanese Government

23. Which ministry will be the counterpart to the Nusantara Capital Agency?

Since the corresponding Japanese agency crosses over to several ministries and agencies, the relevant ministries and agencies work together to respond to the inquiries. If you have a specific inquiry, please contact the ministry or agency in charge.

24. We would like to know about ODA trends (yen loans, possible schemes, etc.). (7 items)

The Indonesian government is in the process of carrying out basic infrastructure work in the highest priority development areas with the national budget in the first phase until 2024.
Of the total project cost of the New Capital City Development, the national budget will account for approximately 20%, with the remainder to be covered by private investment and PPP utilization, and at this time there is no confirmed intent from the Indonesian government to borrow yen loans.
On the other hand, we will continue to exchange views with the Indonesian government on the possibility of providing technical cooperation and yen loans, including infrastructure development and soft support not only for the New Capital City but also for the surrounding areas, and will consider this as necessary.

25. Since there are an increasing number of orders for project rights, including construction, financing, and operation, is there any solution to promote "infrastructure and system exports," in which Japanese companies receive orders for integrated infrastructure and systems?

In addition to the support schemes introduced in this seminar, the Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism, JICA, NEDO, and other government agencies offer publicly solicited support programs to promote overseas infrastructure and systems exports by Japanese companies and public-private partnerships, and we hope you will consider taking advantage of them. Please consider taking advantage of these programs. Please refer to the presentation materials (Introduction of Support Schemes for Private Sector Overseas Business Expansion) and the websites of each organization for details of the support schemes for each company.

(3) Trends in Third Countries

26. Do you have specific information on donors from other countries, etc.?

Korea is providing technical assistance for water purification treatment at the Sepaku Semoi Dam. The Asian Development Bank (ADB) is also reported to have provided technical assistance to date in the amount of US$2.4 million (equivalent to 37.22 billion rupiah) for three projects (13 components). The World Bank (WB) and the U.S. Agency for International Development (USAID) also appear to be providing technical assistance.

(4) Business Expansion Trends

27. We would like to know the current status and plans of companies that have already decided to attract private companies and companies that are participating in the project. (3)

In September 2023, construction began on a hotel, hospital, commercial facilities, national training center for soccer, and other facilities with the participation of 10 domestic companies. Construction of a hotel, commercial facilities, condominiums, an international school, and other facilities with the participation of 10 domestic companies began simultaneously on November 1, 2023.
As for foreign companies, two Korean companies (ABC Enterprise and Korea Land and Housing) have signed NDAs with OIKN, and a Saudi Arabian company has announced its

intention to invest $6 billion in the renewable energy sector. In addition, according to the Nusantara Capital Agency, some companies are conducting feasibility studies in KIPP (Government Core Area). Among them, in the housing sector, six Indonesian companies (Summarecon: Summarecon, Trintiland: Trintiland, PT. Nindya Karya: Nindya Karya, Intiland: Intiland, Rockfields: Rockfields, Ciputra: Ciputra), two Malaysian companies (Maxim and IJM), a Chinese company (CITIC Construction), and in the education sector, one of Indonesia's existing universities, Universitas In the education sector, one of Indonesia's existing universities, Universitas Multimedia Nusantara, is developing a university, and two educational institutions (Cikal and Sekolah Murid Merdeka) are conducting feasibility studies in the KIPP government core area for integrated K-12 education. In the area of research and development, PERTAMINA, an Indonesian state-owned company, has announced the construction of the PERTAMINA Sustainable Energy Center as a research and education center in the New Capital City development area.

28. We would like to know the current status of private investment, the scale of business, and the trends of Japanese and local companies and related organizations. (4 items)

See lecture/presentation materials.

29. We would like to know about trends in the expansion of automobile and related companies, including foreign companies.

At this time, Hyundai of South Korea has announced its participation in the Urban Air Mobility program, and the companies that submitted LOIs with specific technology proposals are exhibiting their proposals in local showrooms (known as “technology houses”). Hyundai exhibited a model of a flying car, and China's Huawei exhibited a traffic management system using smart cameras.

30. We would like to know about the consultants, general contractors and owners involved in the construction of the building.

Only Indonesian domestic companies are eligible to participate in projects developed by the Indonesian government (Ministry of Public Works and National Housing: PUPR) with a national budget, and the results can be searched on the website (https://lpse.pu.go.id).

31. We would like to know about the relocation of companies from Java to Kalimantan and the opening of new offices.

We are not aware of any private companies relocating their companies or opening new offices from Java to Kalimantan.

32. We would like to know about the trends and participation of Chinese companies in development (districts, industry sectors, types of companies/state-run or privately owned, start-up type, etc.). (3 items)

According to the Nusantara Capital Authority, CITIC Construction is reportedly conducting a feasibility study in the residential sector in the Government Core Area.

33. We heard that the trucks used for infrastructure construction are all made in China, is this true? If so, please tell us why.

Trucks used for construction on access roads and in the government core area are not exclusively made in China; many trucks from Japanese manufacturers are in operation.

(5) Investment Support Program

34. Regarding the status of investment schemes including PPP, please tell us if there are any opportunities for Japanese companies to participate in PPP projects. (2 items)

Commercialization through PPP schemes is now open to foreign companies, including

Japanese companies. Although there are some restrictions on foreign companies investing in Indonesia, such as a lower limit on the total investment amount, the application of government guarantees and simplified and expedited procurement procedures have improved PPP project risks, which had been a concern when investing in Indonesia.
In addition, the Indonesian government is promoting private sector-led (Unsolicited) PPP projects, and to facilitate this, the Indonesian Chamber of Commerce and Industry (KADIN) serves as an introduction window when looking for local Indonesian companies in areas such as transportation, water resource management, and smart cities. The contact information is listed below.
<Contact person for the Indonesian Chamber of Commerce and Industry>.
Name: Ms. Hardini Puspasari
Position: Coordinator of PPP Task Force, KADIN
WA: +62 813-8080-8099
Email: hpuspasari@gmail.com

35. Please tell us about your support for the launch of smart city, GX-related, and smart factory businesses in Indonesia.

In the IKN, both of these contents are included in the priority areas and are expected to receive preferential investment treatment (various tax reductions and exemptions, relaxation of foreign investment entry regulations, etc.) for IKN as described in the revised Capital Relocation Law No. 3 of 2022 and Government Regulation No. 12 of 2023. In the smart city-related area, the development and introduction of applications that realize the smart city concept and the development of integrated basic infrastructure that enhances the availability of smart city-related content are required. The GX and Smart Factory projects are also expected to be included in these smart city-related technologies and projects. In particular, the Nusantara Capital City Authority (OIKN) has been stipulated to grant land and infrastructure to investors, as well as business rights for up to 95 years (with one additional renewal possible) to support the development of manufacturing and other businesses in the area.

(6) Investment opportunities, methods, etc.

36. Please let us know if there are any specific projects or areas in which Japan can invest or participate, regardless of public or private projects. (4 items)

Based on the local situation and survey results, examples of businesses and sectors in which Japanese companies are expected to invest and participate include (but are not limited to) the following
<New Capital City Development Area>
- Urban facility development (residential, school, commercial, etc.) in the KIPP area
- Urban transportation infrastructure in the Tri-City area (road, rail, airport, track transportation, soft)
- Urban infrastructure (energy, environment, lifelines) in Tri-City area, etc.

<Balikpapan City>
- Urban development and TOD, residential and commercial facilities, MICE facilities, etc.
- Smart city field (transportation, environment, etc.)
- Urban development on reclaimed coastal land
- Environmental services such as waste, water, sewage and wastewater, and green infrastructure
- Energy
- Education, human resources development, etc.

<City of Samarinda>
- Urban development, residential and commercial facilities, etc.
- Medical services, education and human resources development
- Transportation infrastructure (public transportation, Samarinda-Bontang highway, rail and track transportation, etc.)

- Environmental services such as waste, water, sewage and wastewater, and green infrastructure
- Energy

37. We would like to know about the possibility of involvement of Japanese manufacturers or products made by Japanese manufacturers or Japanese + local or third-country partners in infrastructure projects ordered by the local government related to the relocation of the capital.

We believe that there is ample potential to be involved with products that are market-competitive for the needs of the existing surrounding cities, including the New Capital City. Since the procurement of products will be done by contractors, we would appreciate it if you could actively promote our products to the contractors.

38. We would like to know about the possibility of introducing a shared cycle service, shared battery replacement service, and battery storage system.

In the development of the New Capital City, the renewable energy and transportation sectors are priority areas for investment and development. In addition, the New Capital Development Plan (Presidential Decree No. 63/2022) aims to make the Government Core Area a city that is highly mobile by public transportation and micro-mobility (bicycles, electric bikes and electric kickboards, etc.) in order to realize a 10 Minutes City, where major facilities and transportation nodes are accessible in 10 minutes. The goal is to make the city more mobile by public transportation and micro-mobility (bicycles, electric bikes and electric kickboards). According to the Indonesian government (Ministry of Transportation), a phased development plan for bicycle lanes and stations within the Government Core Area (KIPP) is also under consideration. Therefore, the possibility of introducing the system and technology you have described is considered high.

39. We would like to know how Japanese private companies should proceed (in terms of 5W1H) when considering specific investments. (3 cases)

When：The population of the New Capital City Development Area is expected to gradually increase while infrastructure investment and development will take precedence. Therefore, how to capture the needs and the timing of market formation is considered important when considering the timing of investment. We hope that you will consider this matter by closely monitoring the policies of the government of Nigeria and the investment trends of companies from other countries, and by utilizing the latest information available.

Where: Within the New Capital Development Area is a place for upfront investment in infrastructure, etc. Balikpapan City and Samarinda City have already formed a market. However, it should be noted that the investment incentives in IKN do not apply to both cities at this time.

Who：There are some fields in which foreign capital can expand independently and some fields in which foreign capital cannot, so it would be important to proceed with the study while confirming with the Indonesian government.

What: It is important to consider the New Capital City Development area and surrounding areas while identifying businesses and sectors with high potential. As introduced at the seminar (see presentation materials), East Kalimantan Province's current main industries are oil, gas, coal, and oil palm plantations. On the other hand, the eight priority areas of IKN are renewable natural energy, integrated medicine, sustainable agriculture, eco/medical tourism, advanced chemistry, low-carbon energy and resources, smart cities, and 21st century education. It will be important to consider existing and new industrial policies, needs related to infrastructure and urban facilities, and market formation conditions such as population and consumption scale.

Why： For example, we have heard from the Indonesian Chamber of Commerce and Industry (KADIN) that it has high expectations for Japanese technologies and products related to high-quality energy, decarbonization, smart city, and transportation infrastructure for the development of the New Capital City. In addition, the development and relocation of the

capital city is attracting a great deal of attention both domestically and internationally, and may serve as an opportunity for Japanese companies to deploy their technologies and products.
How: We hope that you will keep abreast of the latest information on policies related to the investment environment and local investment trends, as well as the support scheme introduced at the seminar. For specific information on the investment process related to the New Capital City Development, please refer to OIKN's 8 Steps (see presentation material), which was also introduced at the seminar.

40. We would like to know the opportunities for Japanese companies to participate in PPP projects and the specific methods of participation.

Commercialization through PPP schemes is now open to foreign companies, including Japanese companies. Although there are some restrictions on foreign companies investing in Indonesia, such as a lower limit on the total investment amount, the application of government guarantees and simplified and expedited procurement procedures have improved the PPP business risks that have been a concern when investing in Indonesia.
As with investments in IKN in general, the entry method is to submit an LOI to OIKN and then sign an NDA to discuss the specific details of the investment with OIKN. In this case, it would be possible to consider participation in PPP projects led by OIKN or related ministries (Solicited). In addition, the Indonesian government is promoting private sector-led (Unsolicited) PPP projects, and to facilitate this, the Indonesian Chamber of Commerce and Industry (KADIN) serves as an introduction window when looking for local Indonesian companies in areas such as transportation, water resource management, and smart cities. function.

41. After concluding the LOI, the plan is to proceed with a one-on-one procedure between the company and OIKN. Japanese companies are generally reluctant to proceed to the conclusion of a confidentiality agreement or MOU on a one-on-one basis unless they are provided with extensive information on the investment feasibility of their business area. Therefore, we would like to know if there is any room for OIKN to consider schemes other than the one presented.

Currently, the Nusantara Capital Agency has explained that the plan for the investment procedure is according to the eight steps that were reported at the seminar. There is also a mention that the steps will be based on consultations after informing the investors of their requests, so the request for information may take the form of a request for information during the consultations with the Nusantara Capital Agency.

42. Are corruption-related controls and audits in place?

According to press reports, the Minister of BAPPENAS also explained that the Corruption Eradication Commission (KPK) will oversee IKN's planning and development. In addition, a Legal and Compliance Department (Unit) has been established in the Nusantara Capital Agency, and the Head of the Department (Unit), appointed by the President, is responsible for the management of the organization.

43. We would like to ask you about your concerns regarding investments related to the New Capital City.

In addition, government guarantees for PPP projects require confirmation with the Ministry of Finance and the government guarantee implementing agency (PT. PII, a wholly-owned subsidiary of the Ministry of Finance), among others. In order to ensure these procedures, it would be desirable to conduct correspondence with the relevant agencies in a manner that leaves evidence.

44. We would like to see if we can draw on the flexibility of the steps set forth by the Nusantara Capital Agency in obtaining specific information that individual companies would like to know.

See answer to question 41.

45. If there are opportunities for Japanese companies to participate in infrastructure PPP projects, we would like to know about deal formation and risk mitigation methods.

In addition to approaches such as submitting LOI and signing NDA to the Indonesian government (OIKN), we may also work with major Indonesian companies, excluding state-owned companies, through the Indonesian Chamber of Commerce and Industry (KADIN). The Indonesian government, through the Indonesian Chamber of Commerce and Industry (KADIN), is encouraging its member companies to commercialize Unsolicited type PPP projects, especially in the fields related to transportation, water resource treatment and smart cities. In terms of risk mitigation, especially for PPP projects in the New Capital Area where OIKN is the government contracting agency, the risks of PPP projects in Indonesia, which had been a concern for foreign companies, have been improved through the application of government guarantees and simplified and expedited procurement procedures. Therefore, it is important to assess the applicability of these measures at the initial stage, especially in the case of Unsolicited type projects.

(7) About the Seminar

46. Could you please make the recorded video of the seminar available to the public?

Due to circumstances, we will not be releasing the recording of this seminar. We apologize for not being able to respond to your request, and we hope you will understand.

1.5 Summary of Seminar Results and Way Forward

The interests of Japanese companies and participants in relocating to the capital city and implications for future studies obtained through the results of the seminar and pre- and post-questionnaire surveys were summarized as follows.

1.5.1 Summary of Seminar Results

(1) Interest of Japanese Companies and Effects of Seminar

The December 2024 seminar on trends in the relocation of the Indonesian capital attracted 510 participants, about 80% of whom were from private companies and organizations, an increase from the 374 participants in the March 2023 seminar. As the participants increased, the interests of Japanese companies seem to be increased according to the development of IKN.

Regarding business development in the New Capital City or cities surrounding the New Capital City, the percentage of respondents who answered that they were “considering specific projects/ businesses” or “exploring business opportunities and gathering information” increased from about 52% at the previous seminar to about 60% at this seminar. In addition, a comparison of business development intentions before and after the seminar showed that the percentage of respondents who said they “want to consider specific projects/ businesses” or “want to explore opportunities for business expansion” increased by about 9% after the seminar. Thus, it was confirmed that participation in this seminar further increased their intentions for business development.

(2) Widening Area for Business Expansion

In addition to the increase in the percentage of respondents who indicated a positive attitude toward business development, the questionnaire also showed an increase in the percentage of respondents who would like to consider not only the New Capital area but also a “wider area including the New Capital City and the above-mentioned surrounding cities” compared to the previous seminar (43.5% in the previous seminar vs. 52.9% in the current seminar). The survey also indicated that through information gathering and participation in seminars, participants developed growing interest in the development potential and investment opportunities of IKN as well as wider regions including Balikpapan City and Samarinda City.

(3) Interest from Japanese Companies in Various Industries

The seminar attracted participants in private companies from a variety of industries. Many came from construction, consulting service, trade/business, real estate, financial, manufacturing, and logistics/warehousing industries. A cross tabulation of the areas of interest in IKN trends by industry of these participants indicated that “infrastructure development trends”, “support schemes from the Japanese government”, and “Japanese government trends” were of high interest to all industries. On the other hand, the survey also showed that the areas of high interest varied by industry sector. In particular, respondents in the financial, commercial, consulting service, real estate, and logistics/warehousing industries were highly interested in “policy trends in investment regulations and incentives”. Participants from real

estate, industrial parks, and office building-related firms also tended to be highly interested in "local and third-country company trends".

(4) Interest of Japanese Companies in Infrastructure Development

Seminar participants from many industries were highly interested in infrastructure development trends. The questionnaire results indicate that many of the participants would like to confirm the scale and schedule of the capital relocation project by understanding the status of infrastructure development and future plans for IKN and surrounding areas, and to consider the possibility of introducing technologies and services owned by Japanese companies and developing businesses, including PPPs.

As for infrastructure trends and areas of interest, the respondents were interested in a wide range of areas, including urban development, smart cities, roads, transportation, logistics, electric energy, waste management, and disaster prevention, in addition to information on general infrastructure development related to the New Capital City development, such as construction financing and procurement of materials. Interest in infrastructure development connecting the New Capital City Development Area with neighboring cities, logistics trends, etc. was also confirmed. In addition, while the questionnaire from the previous seminar raised some doubts about the progress of the New Capital City Development Project, there were few comments expressing such concerns in this seminar.

(5) Interest of Japanese Companies in Capital Relocation Trends and Investment Opportunities

Many private-sector companies and others are paying close attention to the process and schedule for relocating to the New Capital City, as well as the financing situation and plans related to the New Capital City Development Project, which are important to consider when considering business expansion. There were also questions regarding future population projections for the New Capital City and surrounding areas, as well as plans for industrial parks and commercial facilities. Regarding the progress of the relocation of the capital, the results of the questionnaire indicated that many companies, through their participation in the seminar, felt that the relocation of the capital was progressing steadily and faster than expected.

With regard to investment opportunities, the seminar survey results and collected questions revealed a high level of interest in procedures for considering participation in projects related to the development of IKN; investment opportunities for Japanese companies; business areas and details of potential investment; information on areas of interest and investment status of Japanese companies; investment by countries other than Japan and progress in investment projects; and trends in investment and tax incentives provided by the Indonesian government.

On the other hand, one of the seminar participants commented, "After concluding the LOI, the plan is to proceed with a one-on-one procedure between the company and OIKN. Japanese companies are generally reluctant to proceed to the conclusion of a confidentiality agreement or MOU on a one-on-one basis unless they are provided with extensive information on the investment feasibility of their business area." For Japanese companies interested in participating in the investment process, they are required to directly contact OIKN to conclude an LOI and make adjustments, which is perceived as a rather high hurdle to overcome.

(6) Interests regarding Developments in Japanese Government, Indonesian Government, and Other Countries

Some participants were interested in the Japanese government's support for Japanese companies' investments and projects related to the development of the New Capital City, trends related to support projects by donors from other countries, and the participation and investment trends of foreign companies from other countries. There were also questions about the process of relocating the capital from Jakarta and the positioning of Jakarta after the relocation.

(7) Seminar Content and Methods

Many participants commented that the seminar was a valuable opportunity to learn about the current situation and the latest developments regarding the relocation of the capital city, and that their participation in the seminar was meaningful. Many said that the introduction of the Japanese government's support scheme was also helpful. While some commented that the seminar provided a lot of information in a short period of time, others pointed out that there was not enough time for the presentations and the amount of information presented in such a short seminar.

1.5.2 Way Forward

As indicated in the previous section, throughout the seminar, it became apparent that interest in the capital relocation trends of Japanese companies and others is growing. Approximately 80% of the seminar participants thought that “regular information sharing on business progress” like this seminar was meaningful, and it is considered important to continue to provide regular opportunities for information sharing such as this seminar.

In future surveys, it will be important to collect the latest trends and more detailed information on items of high interest to private companies and information that will be meaningful for investment and business considerations, as identified through this seminar and questionnaire. There are many Japanese companies that have expressed positive intentions for business development and investment in IKN and surrounding areas, including Balikpapan City and Samarinda City. It is vital to obtain information that will be useful not only for future on-site surveys, but also for the Indonesian government, which is expecting investment and business participation by Japanese companies: This can be done by selecting such companies among seminar participants’ companies and conducting supplementary interviews to gather details on specific business considerations and necessary information and support.

While the survey revealed growing interest in investing and expanding into IKN and surrounding areas, it also revealed one of the reasons behind the lack of concrete investment activity – that LOIs must be concluded at the entry stage of investment activity and that direct contact and coordination with OIKN is required. One measure to address this issue would be to establish and strengthen a consultation service and platform function to provide Japanese companies interested in investing and expanding into IKN development with the latest information on IKN development, coordination with OIKN, and LOI submission process.

APPENDIX 2 Additional information collected for JICA New Capital City Seminar 2025

On Thursday 27 February 2025, JICA hosted a seminar in Jakarta, Indonesia, entitled 'Trends in the Development of Indonesia's New Capital City: Local Infrastructure Development and Private Investment from Other Countries' (hereafter, 'JICA New Capital City Seminar 2025').

This APPENDIX 2 is a summary of the information gathered by JICA Study Team for JICA New Capital City Seminar 2025, in preparation for the two presentations on "Overview on the New Capital City" and "Major Private Investment Trends Related to the New Capital City".

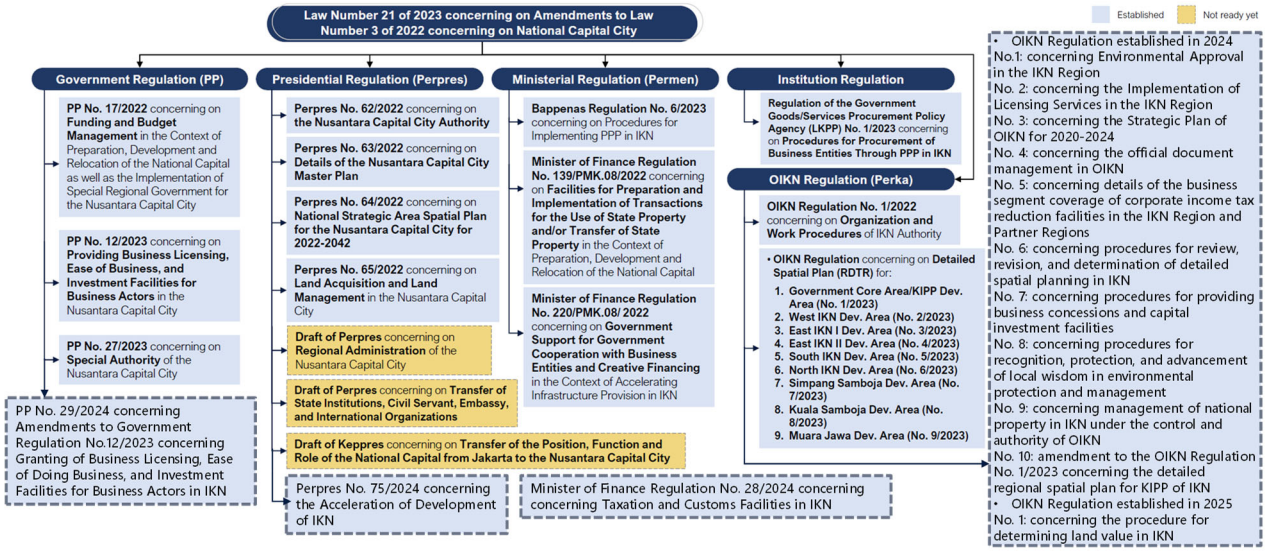
CHAPTER1 Overview on the New Capital City

1.1 Laws and regulations related to the New Capital City

Under Law No. 21/2023 (amended in October 2023), various government regulations, presidential regulations, etc. have been used to define the New Capital City development plan, the organization structure and functions of OIKN, the spatial development plan, etc.

Figure 2-1 in CHAPTER 2 of this Final Report was provided from BAPPENAS in December 2024 as a general overview of laws and regulations related to the development of the New Capital City, but it does not include laws and regulations related to the development of the New Capital City that were additionally enacted from 2024 to January 2025.

In the seminar held on 27 February 2025, the following diagram was used, which added the laws and regulations related to the development of the New Capital City that were enacted from 2024 to January 2025 to Figure 2-1 in CHAPTER 2 of this Final Report.



Source: JICA Study Team added the laws and regulations related to the development of the New Capital City that were additionally enacted from 2024 to January 2025, to the BAPPENAS provided figure

Figure 1-1 List of laws and regulations related to the new capital (the laws and regulations that will come into effect from 2024 to January 2025 are in the dashed box)

The table below also summarises the main content of the laws and regulations related to the development of the New Capital City that became in force from 2024 to January 2025.

Table 1-1 Main contents of the laws and regulations related to the development of the New Capital City to be enforced from 2024 to January 2025

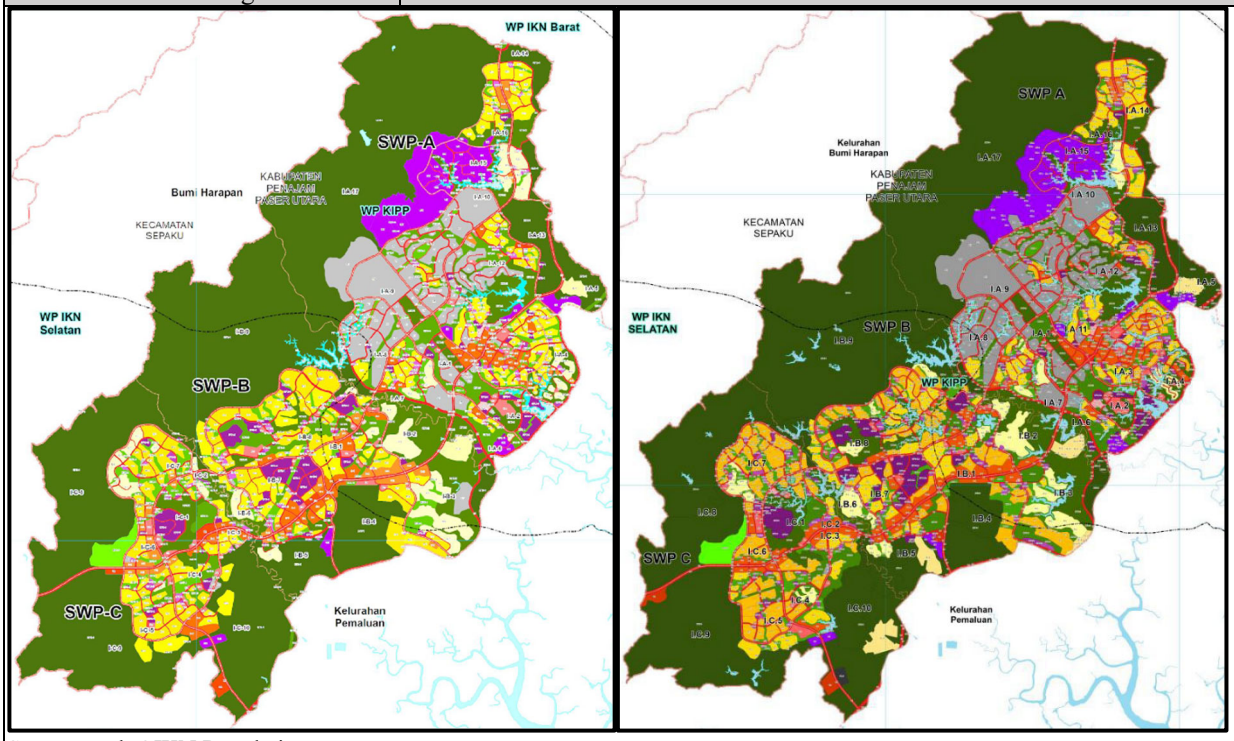
Name of law/regulation	Contents
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 1 Tahun 2024 Tentang Persetujuan Lingkungan di Wilayah Otorita Ibu Kota Nusantara (OIKN Regulation No.1/2024 concerning Environmental Approval in the IKN Region) Effective from 26 February 2024	● This is a regulation on environmental approval by OIKN, and provides a comprehensive regulatory framework for environmental protection and management in business activities in the New Capital Region. ● It stipulates that environmental approval is required for all business activities that have a significant impact, and that environmental approval is granted by OIKN. ● It stipulates that environmental approval is granted in the form of AMDAL, UKL-UPL, and SPPL. ● If a business was operating before these regulations came into force, it is stipulated that a DELH or DPLH must be prepared if there are no environmental documents or if they are not in compliance.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 2 Tahun 2024 Tentang Penyelenggaraan Pelayanan Perizinan Di Ibu Kota Nusantara (OIKN Regulation No.2/2024 concerning the Implementation of Licensing Services in the IKN Region) Effective from 13 March 2024	● This is a regulation concerning the implementation of licensing and permitting operations by OIKN, and stipulate the licensing and permitting procedures for business and non-business activities in the IKN area. “Business activities” are those that contribute to the improvement of the investment ecosystem, and include facilities for investment promotion, etc., while “Non-business activities” include private residences, religious facilities, social welfare facilities, educational facilities, etc. ● This regulation stipulates the procedures for obtaining permission for new construction, renovation, expansion, reduction, and maintenance of buildings, as well as the procedures for obtaining a certificate of building functional suitability. ● This regulation stipulates the monitoring of compliance with permissions and administrative sanctions in the event of violations.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 3 Tahun 2024 Tentang Rencana Strategis Otorita Ibu Kota Nusantara Tahun 2020-2024 (OIKN Regulation No.3/2024 concerning the Strategic Plan of OIKN for 2020-2024) Effective from 3 April 2024	● This is a regulation on the strategic plan for 2020-2024 by OIKN, which stipulates OIKN's vision, mission, strategic goals, policy direction, strategy, institutional framework, performance targets, and funding framework. ● The vision is “to realize Nusantara as a world city for all”, and the mission is “to prepare, build, relocate the capital city and manage special municipalities”. ● The strategic goals are “to promote economic growth, protect the environment, build a digital ecosystem, optimize the investment environment, etc.”. The policy directions and strategies include policies for sustainable urban development, environmental protection, digital infrastructure development, investment promotion, etc., based on the National Long-Term Development Plan. ● As an institutional framework, it stipulates the organizational structure of OIKN, the roles and responsibilities of each department, and the framework for internal audits and compliance. ● In addition, performance targets have been set for economic growth, environmental quality index, digital infrastructure completion, and investment implementation rate, and as a funding framework, the sources of funding for development projects, such as government budgets, private investment, and international aid, have been clearly stated.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 4 Tahun 2024 tentang Tata Naskah Dinas di Lingkungan Otorita Ibu Kota Nasional (OIKN Regulation No.4/2024 concerning the official document management in OIKN) Effective from 22 April 2024	● The rules for the creation and management of official documents in OIKN, including guidelines that set out the types, composition, format, creation, signing, electronic signatures, storage, classification, access, security, and disposal of official documents, as well as the rules and procedures for these.

Name of law/regulation	Contents
Peraturan Menteri Keuangan Nomor 28 Tahun 2024 Tentang Fasilitas Perpajakan Dan Kepabeanan Di Ibu Kota Nusantara (Minister of Finance Regulation No. 28/2024 concerning concerning Taxation and Customs Facilities in IKN) Effective from 16 May 2024	● A regulation on tax incentives in IKN by the Minister of Finance, stipulating the types of tax incentives and procedures for promoting business activities in IKN and partner regions ● It stipulates the following income tax incentives; ➢ Reduction or exemption of income tax for domestic corporations ➢ Reduction or exemption of income tax for financial activities in financial centers ➢ Reduction or exemption of income tax for the establishment or relocation of head offices or regional offices ➢ Reduction or exemption of income tax for training, internships, study, research, development, donations and the construction of public/social facilities ➢ Burden of income tax on the government ➢ Exemption of income tax for certain business activities ➢ Reduction or exemption of income tax for the transfer of land and building rights ● The following preferential measures for VAT and luxury goods tax are stipulated; ➢ Exemption from VAT ➢ Exemption from luxury goods tax ● The following preferential tariff measures are stipulated ➢ Exemption from customs duties on imports by the government for the public good ➢ Exemption from customs duties on imports of capital goods for the construction and development of industry ➢ Exemption from customs duties on imports of goods and materials for the construction and development of industry ● Regulations regarding the application and use of preferential measures ➢ Business entities obtain a business permit from the OSS system ➢ The OSS system checks the conformity of the criteria and notifies the business entity ➢ Business entities upload the necessary documents and applies for preferential treatment ➢ The OSS system checks the accuracy of the data. ➢ The Minister in charge of investment/investment coordination approves the preferential treatment (the Minister makes a decision based on the results of an on-site inspection by the Director General of the General Department of Taxation) ● Obligations and Prohibitions ➢ The business entity must realize the investment plan within two years of the approval decision being issued. ➢ The import of capital goods, use of capital goods for purposes other than their intended use, transfer of capital goods, and transfer of investment outside the Nusantara Capital Region and Partner Regions are prohibited. ➢ If the business entity violates the regulations, fails to fulfil its obligations, or ceases its business activities in the Nusantara Capital Region and Partner Regions, the approval decision for preferential treatment may be revoked.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 5 Tahun 2024 Tentang Rincian Cakupan Bidang Usaha Yang Diberikan Fasilitas Pengurangan Pajak Penghasilan Badan Di Ibu Kota Nusantara Dan Di Daerah Mitra (OIKN Regulation No.5/2024 concerning details of the business segment coverage of corporate	● This is a regulation that specifies the business fields that are eligible for corporate income tax exemptions and reductions under OIKN, and is intended to promote investment in IKN and IKN partner regions. The “IKN partner regions” are to be specified by the Head of OIKN, but as of February 2025, no laws or regulations have been published that specify the names of specific local governments, etc. ● Businesses with an investment scale of 1 billion IDR or more and in any of the following business fields are eligible for corporate income tax exemptions and reductions. ➢ Infrastructure: power generation, road construction, port management,

Name of law/regulation	Contents
income tax reduction facilities in the IKN Region and Partner Regions) Effective from 8 July 2024	airport management, water supply and sewage, medical facilities, educational facilities, telecommunications infrastructure, urban parks, housing, wastewater treatment, underground utility systems, industrial parks, R&D centres, public transport, stadiums, etc. ➢ Facilities for economic revitalization: shopping malls, tourist facilities, hotels, MICE (meetings, incentives, conventions and exhibitions) facilities, electric vehicle charging stations, etc. ➢ Other: urban agriculture, fisheries, value-added industries, hardware and software industries, trade services, construction services, real estate brokerage services, tourism and creative economy services, etc.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 6 Tahun 2024 Tentang Tata Cara Peninjauan Kembali, Revisi, Dan Penetapan Rencana Detail Tata Ruang Di Ibu Kota Nusantara (OIKN Regulation No.6/2024 concerning procedures for review, revision, and determination of detailed spatial planning in IKN) Effective from 8 July 2024	● The rules for the re-evaluation, revision and finalization of the detailed spatial plan (RDTR) and the spatial plan (RTR) by OIKN, and the procedures for planning and managing spatial use in the IKN area. ● The RDTR is re-evaluated every five years (or more frequently under certain conditions), and the reasons for re-evaluation include trends in architectural and environmental design, investment trends, and strategic environmental changes. ● The RDTR is revised based on the results of the re-evaluation (including changes to technical content, updating of environmental impact assessments, and public consultation). ● Proposed revisions to the RDTR are discussed in a forum between the relevant ministries and agencies, and are ultimately finalized by the Head of OIKN. However, in the case of very minor changes, they are implemented by decision of the Head of OIKN, without changing the overall plan for the RDTR.
Peraturan Presiden Nomor 75 Tahun 2024 tentang Percepatan Pembangunan Ibu Kota Nusantara (Presidential Regulation No. 75/2024 concerning the Acceleration of Development of IKN) Effective from 11 July 2024	● This is a presidential regulation to accelerate the construction of IKN, and its purpose is to provide and manage basic services, social facilities, and commercial facilities to build an urban ecosystem in IKN. ● It is stated that the provision and management of basic services and social facilities (housing, health, education, social culture, energy and electricity, telecommunications and DX, transportation, water supply, sanitation and waste management, emergency facilities, public cemeteries, green spaces, sports facilities, religious facilities, office facilities, and public safety and order, etc.) and commercial facilities (hotels, shopping centers, retail stores, restaurants, recreation and entertainment facilities, etc.) will be provided and managed. ● Provision of incentives and business permits for businesses that provide and manage basic services, social facilities and commercial facilities (details are stipulated in the regulations, etc.). ● Land Valuation and Management: stipulations concerning land valuation and management in the Nusantara Capital. Land valuation is based on valuations by public assessors, and standards for land use and management are provided. ● Handling of social issues: stipulations regarding the handling of social issues related to land in the IKN area. Issues related to land use and management are handled by the integration team, and appropriate compensation is provided. ● Management of infrastructure and buildings: stipulations regarding the management of infrastructure and buildings. Infrastructure and building management is carried out by OIKN or relevant ministries.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 7 Tahun 2024 Tentang Tata Cara Pemberian kemudahan Berusaha Dan Fasilitas Penanaman Modal Di Ibu Kota Nusantara (OIKN Regulation No.7/2024	● This is a regulation for promoting business activities and investment in the IKN area, and they stipulate procedures for facilitating business activities and promoting investment in the IKN area. ● This covers business permits, investment promotion measures (tax incentives, provision of land, infrastructure development, ensuring investment security and convenience, etc.), land rights (procedures for acquiring land use rights, building use rights, and land management rights),

Name of law/regulation	Contents
concerning procedures for providing business concessions and capital investment facilities) Effective from 26 July 2024	permission for employing foreign workers in specific positions and the procedures for doing so, and the development of housing and residential areas, etc.
Peraturan Pemerintah Nomor 29 Tahun 2024 tentang Perubahan Atas Peraturan Pemerintah Nomor 12 Tahun 2023 tentang Pemberian Perizinan Berusaha, Kemudahan Berusaha, Dan Fasilitas Penanaman Modal Bagi Pelaku Usaha Di Ibu Kota Nusantara (Governmental Regulation No. 29/2024 concerning Amendments to Governmental Regulation No.12/2023 concerning Granting of Business Licensing, Ease of Doing Business, and Investment Facilities for Business Actors in IKN) Effective from 12 August 2024	● This PP No. 29/2024 is a revised version of PP No. 12/2023, and updates these regulations and introduces more detailed provisions. The main changes are as follows; ➢ Tax incentives: PDRI (Pajak Dalam Rangka Impor): Import tax incentives, including exemption from import VAT and import income tax. BPHTB (Bea Perolehan Hak Atas Tanah dan Bangunan): Tax exemption on the acquisition of land and buildings. Land and Building Tax (Pajak Bumi dan Bangunan): Reduction in land and building taxes for a certain period of time. ➢ Investment promotion measures: Provision of land: Provision of land and securing of locations for businesses Infrastructure: Infrastructure for business activities is provided, ensuring safety and convenience for investors Labor: Provision of skilled labor and labor force ➢ Employment of foreign workers: Extension of work permits: Work permits for foreign workers are extended for 10 years, with the possibility of further extensions Exemption from work permits: Work permits are exempted for foreign workers engaged in specific projects ➢ Housing development: support for housing construction programs, tax relief for simple housing, provision of infrastructure, facilitation of land acquisition, improved access, exemption from BPHTB, reduction in land and building taxes, awards in the housing sector, etc.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 8 Tahun 2024 Tentang Tata Cara Pengakuan, Pelindungan, Dan Pemajuan Kearifan Lokal Dalam Pelindungan Dan Pengelolaan Lingkungan Hidup (OIKN Regulation No.8/2024 concerning procedures for recognition, protection, and advancement of local wisdom in environmental protection and management Effective from 26 August 2024	● A regulation for the identification, protection and promotion of “local wisdom” in the protection and management of the environment by OIKN, and stipulate procedures for protecting local wisdom and promoting sustainable environmental management. ● This regulation stipulates that OIKN will identify local wisdom, and that policies for the protection and management of local wisdom will be formulated and implemented, and that local wisdom will be guaranteed and used as part of cultural promotion. ● The protection and management of the IKN area will be sustainable and will make use of local knowledge. Traditional knowledge is considered to be part of local knowledge and includes knowledge, skills and practices relevant to sustainable environmental management. Genetic resources, which are genetic materials obtained from plants, animals and microorganisms, also play an important role in sustainable environmental management. ● Other provisions include access to local knowledge (procedures for use), monitoring and evaluation, funding, rights and obligations of local knowledge custodians and users, and violations and penalties.
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 9 Tahun 2024 Tentang Pengelolaan Barang Milik Negara Di Ibu Kota Nusantara Yang Berada Dalam Penguasaan Dan Kewenangan Otorita Ibu Kota Nusantara (OIKN Regulation No. 9/2024 concerning management of national	● A regulation for the management of state-owned property (BMN) by OIKN, including guidelines for the management and operation of BMN under OIKN management. ● This regulation stipulates the necessary procedures at each stage, from BMN procurement planning, budgeting, procurement, use, maintenance, evaluation, transfer, disposal, record management, and supervision and management.

Name of law/regulation	Contents
property in IKN under the control and authority of OIKN Effective from 26 September 2024	
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 10 Tahun 2024 Tentang Perubahan Atas Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 1 Tahun 2023 Tentang Rencana Detail Tata Ruang Wilayah Perencanaan Kawasan Inti Pusat Pemerintahan Ibu Kota Nusantara (OIKN Regulation No.10/2024 amendment to the OIKN Regulation No. 1/2023 concerning the detailed regional spatial plan for KIPP of IKN) Effective from 7 October 2024	● This is a revision of OIKN Regulation No. 1/2023, which stipulates the details of the land use plan in Presidential Regulation No. 63/2022 (Perpres No. 63/2022, Details of the Nusantara Capital City Master Plan), and stipulates the spatial plan for the KIPP area in detail. The main changes are as follows. ➢ Zones and Areas: Subzones have been added, including specific block allocations such as Cemetery Zone (RTH-7) and Greenbelt Zone (RTH-8). ➢ Water Zone, Residential Zone (High Density, Medium Density, Low Density), Public Service Facilities Zone, Mixed Use Zone, Commercial and Service Zone, Office Zone, Transportation Zone, Defence and Safety Zone, and other specific zones are detailed. ➢ Article 27: The water zone is expanded to 152.67 hectares. ➢ Article 29: The residential zone is expanded to 839.86 hectares, with the addition of detailed sub-zones. ➢ Article 30: The public service facility zone is expanded to 231.99 hectares, with the addition of detailed sub-zones. ➢ Article 31: Mixed Zone expanded to 174.29 hectares, with detailed sub-zones added. ➢ Article 32: Commercial and Service Zone expanded to 70.02 hectares, with detailed sub-zones added. ➢ Article 33: Office Zone expanded to 401.25 hectares. ➢ Article 34: Transport Zone expanded to 17.99 hectares. ➢ Article 35: The defence and security zone is expanded to 211.33 hectares. ➢ Article 36: The other allocated zone is expanded to 76.38 hectares, with the addition of detailed sub-zones. ➢ Article 37: The road zone is expanded to 556.27 hectares. ➢ Article 42: Basic rules on land use and activities are added. ➢ Article 43: Classification of land use activities and conditions added. ➢ Article 44: Regulations on intensity of spatial use added. ➢ Article 45: Building regulations added. ➢ Article 47: Special provisions for disaster-prone areas, TOD areas, evacuation sites, underground spaces, and forest protection areas added. ➢ Article 48: Implementation regulations on the application of the RDTR added. ➢ Article 49: Provisions relating to the transfer of development rights (TPZ) have been added. ➢ Article 51A: Provisions relating to public interest activities not included in the spatial plan have been added. ➢ Maps and Annexes: Maps and annexes relating to planning areas, structural planning, intensity of spatial use, building regulations and special provisions have been updated. ➢ Implementation and Enforcement: Detailed implementation plans for roads, public transport, energy networks and other utilities have been added, and the phases, funding sources and responsible agencies have been clarified. ● The land use planning maps before and after the revision are shown below;

Name of law/regulation	Contents
	 Source: each OIKN Regulation **Figure 1-2 Land use planning map for the KIPP area (left: OIKN Regulation No. 1/2023, right: OIKN Regulation No. 10/2024)**
Peraturan Kepala Otorita Ibu Kota Nusantara Nomor 1 Tahun 2025 Tentang Tata Cara Penetapan Nilai Tanah Di Ibu Kota Nusantara (OIKN Regulation No.1/2025 concerning the procedure for determining land value in IKN) Effective from 17 February 2025	● This is a regulation for the procedure for land evaluation by OIKN, and include guidelines for the evaluation and management of land (land prices) in the IKN area. ● The procedure for land evaluation consists of planning, preparation, implementation, processing of evaluation results, and finalization of the evaluation. ➢ Planning: background to the evaluation, land to be evaluated, purpose of the evaluation, budget planning, selection of evaluators, etc. ➢ Preparation: Technical preparation, determination of the area to be evaluated, selection of samples, quality control, etc. ➢ Implementation: Procedures for implementation of evaluation by public and government evaluators, evaluation criteria, reporting of evaluation results, etc. ➢ Processing: Data processing of evaluation results, creation of land evaluation maps, creation of evaluation result reports, etc. ➢ Finalization: Procedures for finalization of evaluation results by the Head of OIKN, methods of using evaluation results, procedures for adjusting evaluation results, etc.

1.2 Organization Structure of OIKN

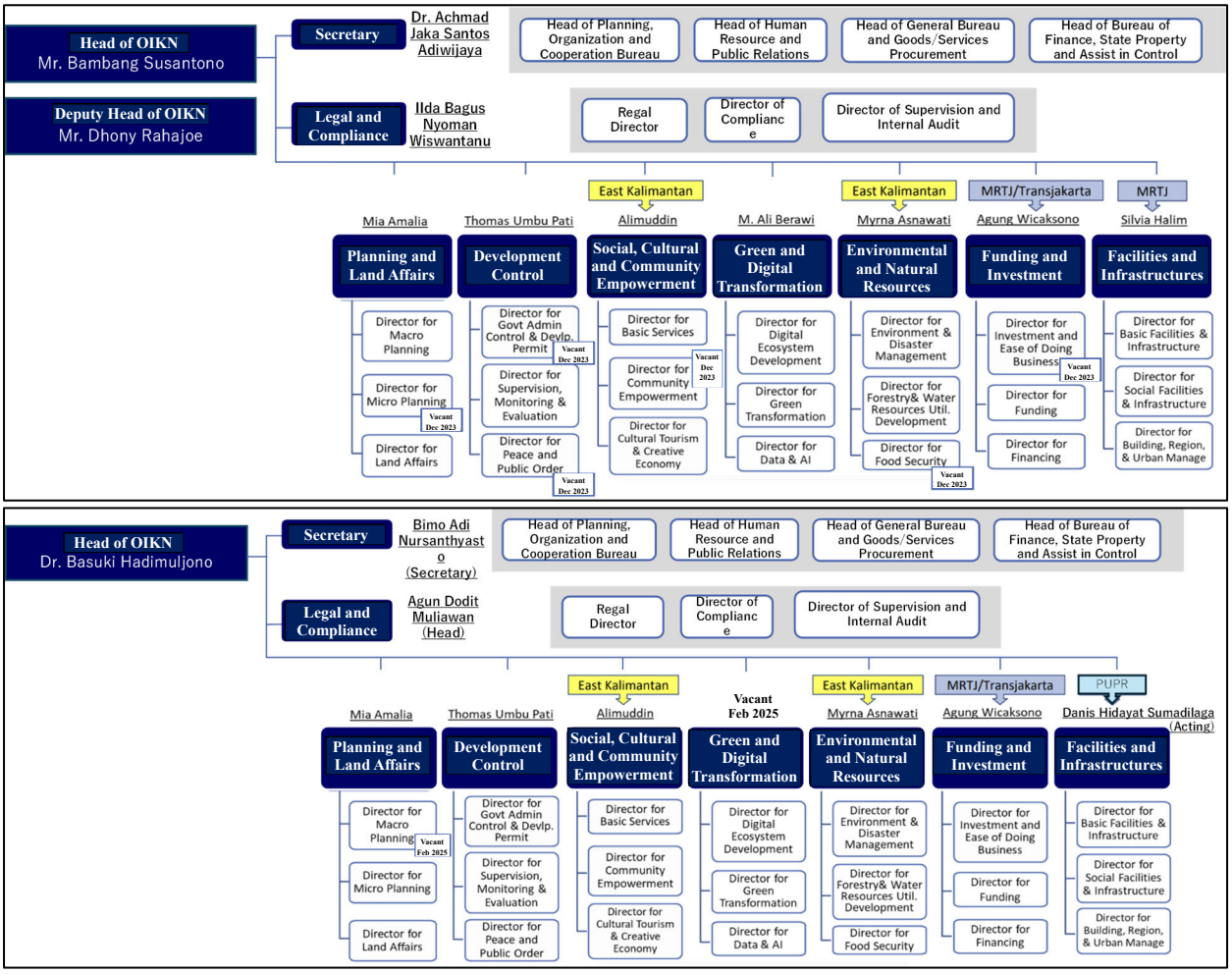
The following figures 1-3 show the structure of OIKN as of December 2023, when the JICA-sponsored “Seminar on the Trend of Capital Relocation in Indonesia: The Latest Situation on the Ground and the Trend of East Kalimantan Regional Development” was held, and as of 27 February 2025. As of December 2023, there were many vacant Director positions in OIKN.

After that, while the OIKN structure was being enhanced, in June 2024, Head Bambang and Deputy Head Dhony resigned and the Minister of Public Works and Public Housing (PUPR), Basuki also served as the Head of OIKN. The Deputy Head position remained vacant until

February 2025.

After the inauguration of President Prabowo administration in October 2024, the Secretary-General Dr. Achmad Jaka Santos Adiwijaya and the Deputy for Facilities and Infrastructure Silvia Halim resigned[1]. The new Secretary General is Bimo Adi Nursanthyasto, who was previously the Secretary to the Inspector General at the Ministry of Public Works and Public Housing (at the time), and the new Deputy for Facilities and Infrastructure is Danis Hidayat Sumadilaga, who is also the Head of the New Capital Infrastructure Development Task Force at the Ministry of Public Works.

In addition, on 11 February 2025, Ali Berawi, the Deputy for Green Digital Transformation, announced his resignation[2], and as of 27 February 2025, his successor has not been announced.



Source: JICA Study Team based on information from the OIKN website[3]

Figure 1-3 Organization Structure of OIKN (Top: as of December 2023, Bottom: as of 27 February 2025)

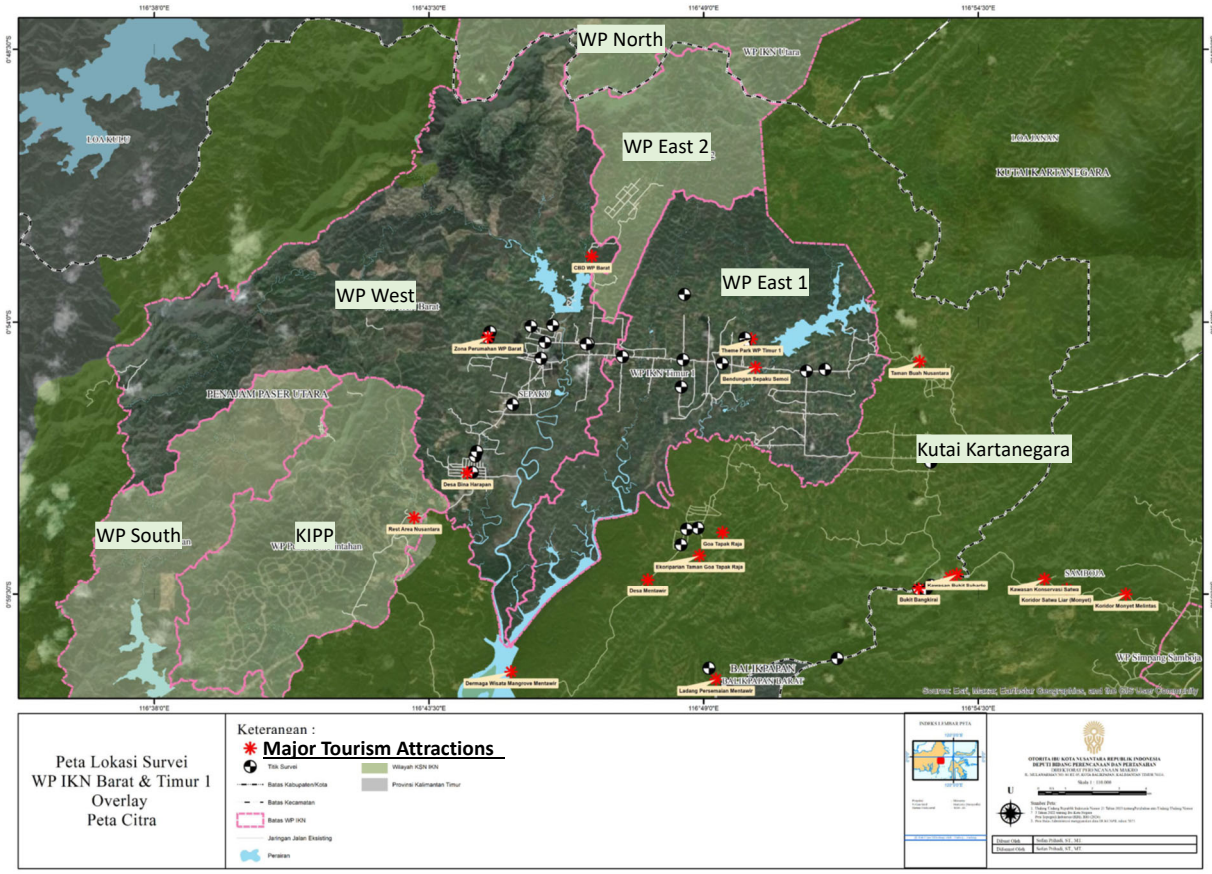
1.3 Trends in tourism development at IKN

In November 2024, OIKN drafted the "Action Plan for Tourism Area Development in IKN

[1] IKNPOS Article dated 24 October 2024 https://iknpos.id/2024/10/bimo-adi-nursanthyasto-sekretaris-otorita-ikn-yang-baru-siapa-dia/
[2] VOI Article dated 11 February 2025 https://voi.id/ja/keizai/459092
[3] OIKN website https://www.ikn.go.id/struktur-organisasi

WP East 1 and IKN WP West (Rencana Tindak Pengembangan Kawasan Pariwisata Di Kawasan WP IKN Timur 1 & WP IKN Barat)"4 and is currently considering how to turn IKN into a tourism super hub in the second phase of the IKN development.

The following figure shows the relative positions of IKN WP East 1 and IKN WP West. Mangrove conservation areas have been set up in the south of IKN WP East 1 and IKN WP West, but the expansion of palm oil production and housing development are threatening these areas. Mangroves not only provide a habitat for indigenous flora and fauna, but also play a role in supporting the welfare of local fishermen. On the other hand, there are no natural forests in the north of the area, so it is said that no indigenous flora or fauna can be seen there. In addition, the population is concentrated along the provincial road in the area, and it is thought that the IKN development will attract visitors for commercial reasons in particular.



Source: Action Plan for Tourism Area Development in IKN WP East 1 and IKN WP West (Rencana Tindak Pengembangan Kawasan Pariwisata Di Kawasan WP IKN Timur 1 & WP IKN Barat)

Figure 1-4 Geographical relationship between KN WP East 1 and IKN WP West

1.3.1 Major tourism attraction

The following tourist resources exist in IKN WP East 1 and IKN WP West.

- Ecotourism that targets endangered, endemic and protected species of flora and fauna.
- Experiencing Balik-culture through crafts, traditional dance and homestays in the tourist villages

[4] This document is not made public as of 28 February 2025. It was provided to JICA Study Team by OIKN for inclusion in this Final Report.

- Sepaku Tourist Village (Desa Wisata Sepaku)
- Bina Harapan Tourist Village (Desa Wisata Bina Harapan)
- Bukit Raya Tourism Village (Desa Wisata Bukit Raya)
- Tengin Baru Village (Desa Tengin Baru)
- Agromulyo Village (Desa Agromulyo)

1.3.2 Issues for the development of the tourism industry

The following points have been identified as issues for the development of the tourism industry in IKN WP East 1 and IKN WP West.

- Although there are already tourist-related facilities in IKN WP East 1 and IKN WP West, further development is needed to create a world-class market and brand.
- Although the access roads are well maintained, there is insufficient access to the areas where future development is expected in IKN WP East 1 and IKN WP West.

1.3.3 SWOT Analysis of the Tourism Industry in East Kalimantan Province

In the "Action Plan for Tourism Area Development in IKN WP East 1 and IKN WP West", in addition to IKN WP East 1 and IKN WP West, the SWOT (strengths, weaknesses, opportunities, threats) of the tourism industry in IKN and the surrounding East Kalimantan Province are organized as follows.

Table 1-2 SWOT (strengths, weaknesses, opportunities and threats) of the tourism industry in IKN and the surrounding area of East Kalimantan Province

Strengths	**Opportunities**
● The rich natural environment of World Heritage sites ● Diversity of nature, traditional culture and modern tourist facilities ● Improved accessibility and connectivity to tourism resources ● Active cooperation between tourism industry stakeholders ● Recovery of the domestic tourism market after COVID-19	● The potential for the tourism sector to make a greater contribution to the economy of East Kalimantan Province ● Empowering local communities through tourism ● IKN's ecotourism development and introduction of sustainable technologies ● Restoration of ecosystems through forest recovery, etc. ● Attracting domestic and foreign investors
Weaknesses	**Threats**
● Mono-species plantations (reducing the appeal of ecotourism) ● The ecotourism areas are not maintained to international standards, and the effect of nature conservation is low. ● Lack of skilled personnel such as guides and a lack of inter-agency cooperation ● Lack of brand integration between the three cities (IKN, Balikpapan and Samarinda)	● Environmental sustainability is threatened by insufficient planning and management of tourism development. ● Influence on the politics and policies of the new government ● Intensified competition between popular domestic tourist destinations ● Delays in tourism development due to a shortage of skilled labour ● Disasters

Source: JICA Study Teams based on the Action Plan for Tourism Area Development in IKN WP East 1 and IKN WP West" (Rencana Tindak Pengembangan Kawasan Pariwisata Di Kawasan WP IKN Timur 1 & WP IKN Barat)

1.3.4 Building a tourism industry ecosystem and promoting investment in the IKN area

(1) Building a tourism industry ecosystem in the IKN area

Based on the results of the SWOT analysis and future analysis based on multiple scenarios described above, the "Action Plan for Tourism Area Development in IKN WP East 1 and IKN WP West" identifies the following six points as necessary elements for building a tourism industry ecosystem in the IKN area and surrounding areas, and proposes future action policies.

a) Improving competitiveness and efficiency

To improve competitiveness and efficiency, strengthen cooperation between tourism industry stakeholders such as hotels, transport and tour service providers.

b) Strengthening cooperation between tourism businesses

Improve communication and cooperation between tourism businesses such as hotels and restaurants to create integrated tour packages.

c) Safety and environmental considerations

Implement environmentally friendly initiatives such as waste management, nature conservation, and plastic reduction to improve the sustainability of natural resources.

d) Improving the skills of tourism workers

Provide specialized training and certification programs to improve the skills and services of tourism workers.

e) Strengthening the role of government in infrastructure development and tourism promotion

The government will provide physical and non-physical infrastructure and promote the tourism industry through tourism resource development strategies.

f) Expanding local contributions

To improve the local economy, we will promote the development of small and medium-sized enterprises and microenterprises based on tourism, involving local communities.

(2) Promoting investment in the tourism industry in the IKN area

In addition to the above, the following seven points have been identified as necessary elements for promoting investment in the tourism industry in the IKN area and surrounding areas, and a policy for future initiatives has been proposed.

a) Recognition of the uniqueness and identity of tourist destinations

In order to generate sustainable socio-economic benefits, a tourism identity should be created by emphasizing uniqueness, natural beauty, culture and local traditions.

b) Promotion through social media

Attractive content, photos, videos and inspiring stories should be disseminated through social media to attract travelers. In addition, the scope of the tourism promotion effect can be expanded through collaboration with influencers, etc.

c) Selecting the appropriate target market

Market analysis is necessary to set the appropriate target. In addition, in the promotion, it is necessary to match the needs and preferences of the target (e.g. foreign tourists) by emphasising cultural uniqueness.

d) Target price

In order to set a price that is suitable for the target market, detailed market research is necessary. An appropriate price will increase the willingness of tourists to buy, as well as the appeal of the destination as a tourist spot, and will be the key to attracting tourists on an ongoing basis.

e) Unique Selling Proposition (USP)

In order to attract more tourists, promote the development of a unique tourist spot that is differentiated from competitors (other regions). This uniqueness will be the source of the main competitiveness of the tourist spot.

f) Vigorous Promotion

To attract tourists, intensive promotion will be carried out through special events such as cultural and sporting festivals. High-quality customer service will increase tourist satisfaction.

g) Implementation of good planning

Marketing and planning for tourism-related investment will be carried out in detail. Investment in new accommodation, the development of public transport, and the introduction of sustainable environmental programs will improve the quality and competitiveness of the tourist destination.

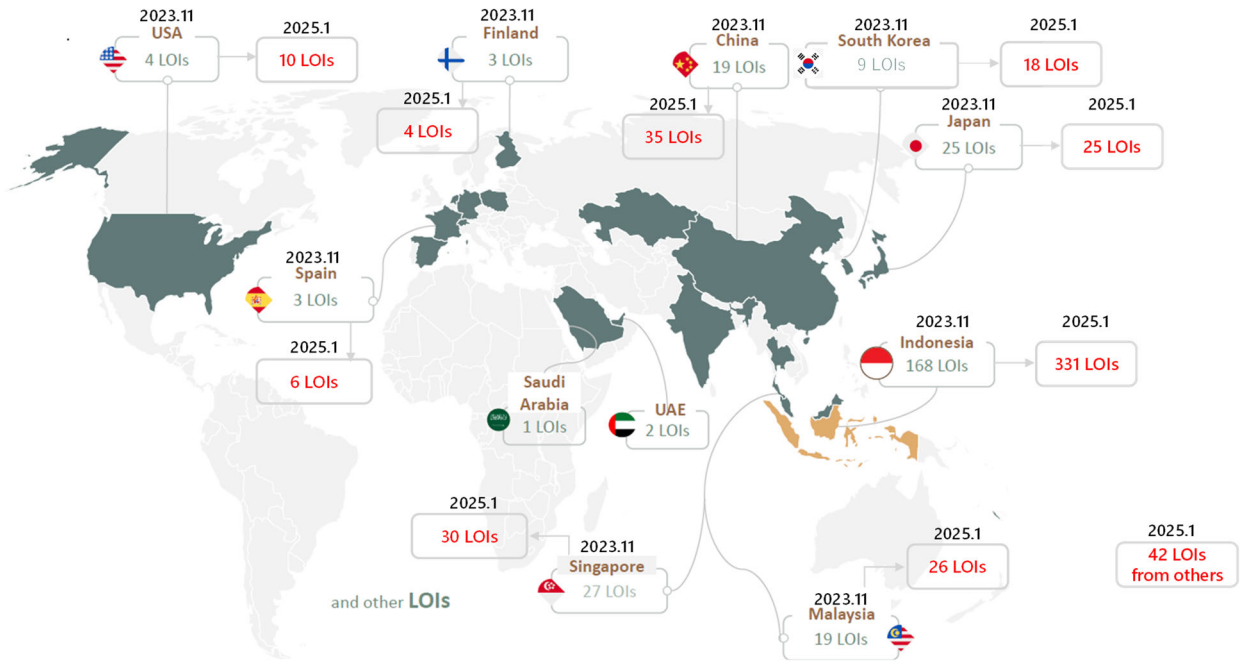
CHAPTER2 Trends in Major Private Sector Investment Related to the New Capital City

2.1 Track record of private investment and PPPs related to the development of the new capital (as of January 2025)

2.1.1 Interest in private investment and PPPs related to the development of the new capital (LOI by country)

The number of companies and organisations that have submitted letters of interest (LOIs), the first step towards implementing private investment and PPP projects related to the development of the new capital city, has increased from around 300 in November 2023 to 533 in January 2025.

The country with the most LOIs submitted is Indonesia, which has almost doubled since November 2023. This is followed by China, Singapore and Malaysia, with Japan in fourth place with 25 LOIs, just behind Malaysia. However, the number of LOIs submitted by Japanese companies has remained at 25 since 2023, with no additional submissions, and this figure remains unchanged at 25 as of January 2025.



Source: JICA Study Team based on information provided by OIKN

Figure 2-1 Status of LOI submissions by country (comparison between November 2023 and January 2025)

2.1.2 Trends in private investment

Private investment in the first phase of IKN development (up to the end of 2024) was 58.4 trillion IDR (approximately 35.9 billion USD)[5], which was well below the target of 100 trillion IDR. 56.9 trillion IDR (approximately 3.5 billion USD) of that private investment was from

[5] Article distributed by TEMPO.CO (dated 13 February 2025) https://en.tempo.co/read/1974768/minister-claims-rp6-49-trillion-investment-ready-to-enter-ikn-in-phase-9-groundbreaking

Indonesian private companies and state-owned companies, and foreign investment was totally only 1.5 trillion IDR from few companies such as Russia's Magnum (a joint venture with an Indonesian private company), China's Delonix (direct investment in an Indonesian private company), and Australia's AIS (a joint venture with an Indonesian private company)[6].

The following eight groundbreaking events (GB) have taken place in the IKN area between September 2023 and the end of 2024, and a total of 16 construction projects are either underway or complete (the overall progress rate as of January 2025 is 92%).

Table 2-1 Breakdown of total investment amount and investors/project details for each groundbreaking event (GB)

Groundbreaking event (GB) Total investment amount	Investors	Project Details
GB 1 September 2023 22.9 trillion IDR	Nusantara Consortium[7]	Mixed-use complex
	VASANTA	Hotel
	Abdi Waluyo's Hospital	Hospital
	PSSI &FIFA	Training center
GB 2 November 2023 15.6 trillion IDR	NIS	International school
	Astra International/YPA-MDR	Primary school
	Pakuwon	Mixed-use complex
	MOT	VVIP airport
	PLN	50MW solar power plant
	Bank Indonesia	Central bank office
	Hermina	Hospital
	Mayapada Hospital	Hospital
	BPJS	Office
GB 3 December 2023 4.8 trillion IDR	Danone	Forest regeneration project
	PUPR/KLHK	Forest regeneration project
	Kemnkes	Hospital
	Pakubuwono	Mixed-use complex
	WBL/BSB	Mixed-use complex
	BSH	Mixed-use complex
	Bluebird	Green transport
	State Police	Office
	State Military	Office
GB 4 January 2024 4.3 trillion IDR	LPS	Head office office
	WBL	Warehouse complex
	Sun Hub	Warehouse
	RRI	Studio
	Katadata Green	Green school
	Pos Indonesia	Logistics hub
	Jambuluwuk	Hotel
	PUPR/OIKN	Office
	PUPR	State-run mosque
GB 5 February 2024 2.1 trillion IDR	Bank Mandiri/BRI/BNI/	KIPP 1B banking services center
	Bankaltimtara	Office
	OJK	Mini Studio
	TVRI	Smart Office

[6] PwC Indonesia "Capital investment: Foreign investment in IKN Nusantara reaches Rp1.5 trillion", dated 23 December 2024 https://www.pwc.com/id/en/media-centre/infrastructure-news/december-2024/foreign-investment-in-ikn-nusantara.html

[7] Nusantara Consortium: Agung Sedayu Group, Salim Group, Sinarmas, Pulau Intan, Djarum, Wings Group, Adaro, Barito Pacific, Mulia Group, Kawan Lama, Alfamart (Source: OIKN article (dated 4th June 2024) https://www.ikn.go.id/astra-biz-center-ikn-dan-nusantara-botanical-garden-pusat-layanan-terintegrasi-dan-destinasi-pariwisata-baru-di-ikn)

Groundbreaking event (GB) Total investment amount	Investors	Project Details
	Telkom	Office
	BPJS	KIPP 1B Banking Service Centre
GB 6 June 2024 1.8 trillion IDR	Educational Organizations[8]	University/Research Facility
	Astra Biz Center	EV Showroom
	Arena	F&B
	Nusantara Consortium※	Botanical Garden
	PLN	Telecommunications Network
	BTN	Bank Office
GB 7 August 2024 5.4 trillion IDR	BCA	Bank Office
	RGE	Mixed-Use Complex
	Intiland	Hotel
	Swiss-bel Hotel	Hotel & MICE
GB 8 September 2024 1.6 trillion IDR	AIS	International School
	Consortium Nusantara	Shopping Mall
	Delonix	Mixed-Use Complex
	Prima Hotel	Hotel
	Plataran	Restaurant
	Magnum	Mixed-Use Complex

Source: JICA Study Team based on materials provided by OIKN

When the above-mentioned private investment projects that have already started are counted by sector, it can be seen that projects in sectors with social infrastructure functions such as retail, logistics, hotels, housing, offices and banks are leading the way.

Table 2-2 Breakdown of private investment projects already under construction by sector

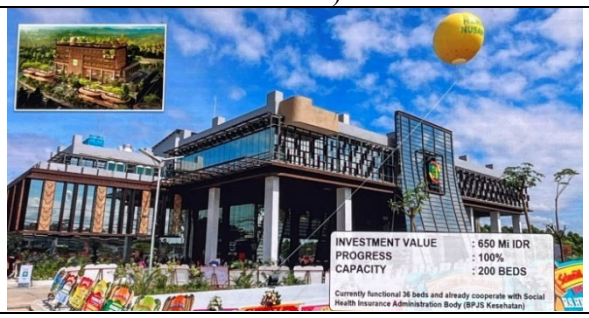
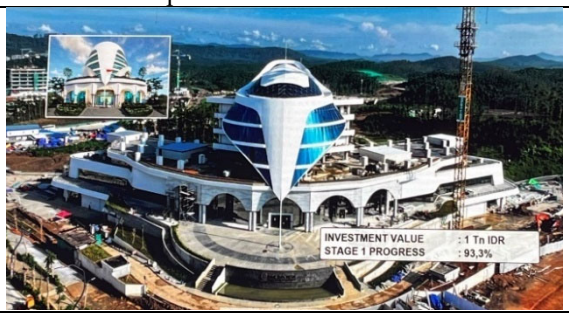
Hospitality 9 Projects	Housing 8 Projects	Retail and Logistics 13 Projects	Office 8 Projects	Bank 8 Projects
Education 7 Projects	Health and Wellness 3 Projects	Energy and Transportation 2 Projects	Green 2 Projects	Media and Technology 5 Projects

Source: JICA Study Team based on materials provided by OIKN

The following table shows the progress of major private investment projects that have already started.

[8] Bina Bangsa School, Gunadarma University, Al Azhar Summarecon Nusantara, Lim Kok Wing University of Creative Technology, Research Center established by Standford University, Pertamina University, and Bakrie University (Source: Kompas article (dated 16 May 2024) https://ikn.kompas.com/read/2024/05/16/111549187/groundbreaking-ke-6-ikn-libatkan-sejumlah-nama-besar-sektor-pendidikan-dan?page=all)

Table 2-3 Examples of private investment projects that have already started

Football Association of Indonesia (PSSI) Training Center	Swissôtel Nusantara
	
Progress: 100% Investment: 87 billion IDR	Progress: 100% Investment: 1.2 trillion IDR (191 rooms)
50MW Solar Power Plant	Hermina Hospital (Maternal and Child Health & Cancer)
	
Progress: 98.7% Investment amount: 879.3 billion IDR (50MW) *JV between a Singaporean company and PLN 51%: PT PLN Nusantara Renewables 49%: PT Sembcorp Renewables Indonesia	Progress: 100% Investment amount: 650 billion IDR (200 beds)
Mayapada Hospital (Renal and Metabolic)	IKN hospital (Stroke and Heart)
	
Progress: 96% Investment: 500 billion IDR (200 beds)	Progress: 99% Investment: 512 billion IDR (250 beds)
Kampung Kecil Restaurant	Office Complex of Central Bank of Indonesia
	
Progress: 100% Investment: -	Progress: 93.3% Investment: 1 trillion IDR

Source: JICA Study Team based on materials provided by OIKN

2.1.3 PPP Projects (Solicited, Unsolicited)

Of the PPP projects related to the development of the New Capital City, details of only one solicited PPP project, the IKN Access Toll Road, which is currently under construction, have been published in the PPP Book 2024.

Meanwhile, there are eight unsolicited PPP projects currently underway as of January 2025, all of which are housing development projects. Three of the eight projects are being undertaken by foreign companies, two of which are Malaysian companies and one of which is a Chinese company.

The following table shows an overview of the PPP projects related to the development of the New Capital City that have been announced. In addition, although there have been reports in the press about negotiations with private companies for several other PPP projects, most of the details of these projects have not been made public.

Table 2-4 List of PPP Projects Related to the Development of the New Capital City

No	PPP Project Name	Summary (PPP Book 2024)	Applied Scheme (PPP Book 2024)
1.	IKN Access Toll Road (Type of PPP: Solicited)	IKN Access Toll Road (total length 70.29 km, project period 50 years)	GCA: Minister of Public Works and Housing Implementing Agency: Indonesia Toll Road Authority (BPJT) Return of Investment: User Charge CAPEX: USD 1,301.67 Million, OPEX: Under Calculation, Financial Feasibility: Under Calculation
2.	10 Towers of Public Official Apartments in Nusantara Capital City (IKN) (Type of PPP: Unsolicited)	Apartments for government employees located in KIPP 1B (10.21 ha, 10 buildings, 600 units)	GCA: OIKN, Initiator: Maxim Global Berhad CAPEX: USD 295.51 Million, OPEX: USD 141.30 Million Financial Feasibility: FIRR: 12.34%, EIRR: 15.93%, NPV: USD 19.15 Million (Est. Period: 12 yrs)
3.	20 Towers of Public Officials Housing in WP 1B Nusantara Capital City (IKN) (Type of PPP: Unsolicited)	Apartments for government employees located in KIPP 1B (21.3 ha, 20 buildings, 1,078 units)	GCA: OIKN, Initiator: IJM – CHEC Consortium CAPEX: USD 934.17 Million, OPEX: Under Calculation Financial Feasibility FIRR: 13.78%, EIRR: Under Calculation, NPV: USD 26.88 Million (Est. Period: 12 yrs 9 mths)
4.	8 Government Towers in the Western Government Housing Area for Civil Servants (ASN) (Type of PPP: Unsolicited)	Apartments for government employees located in KIPP 1A (6.83 ha, 8 buildings, 266 units)	GCA: OIKN, Initiator: PT Nindya Karya (Persero) (assisted by PT SMI through PDF from MOF) CAPEX: USD 143.17 Million, OPEX: USD 90.45 Million Financial Feasibility FIRR: 13.17%, EIRR: 16.62%, NPV: USD 15.59 Million (Est. Period: 11 yrs 3 mths)
5.	ASN Residence in West Residence Nusantara Capital City (IKN) (Type of PPP: Unsolicited)	Apartments for government employees located in KIPP 1A (7.87 ha, 8 buildings, 208 units)	GCA: OIKN, Initiator: Triniti Land – Truba Group Consortium (assisted by PT SMI through PDF from MOF) CAPEX: USD 169.05 Million, OPEX: USD 91.45 Million Financial Feasibility FIRR: 16.05%, EIRR: 13.56%, NPV: USD 34.51 Million (Est. Period: 15 yrs)
6.	Construction of 10 Towers of Flats and 20 Landed Houses for State Civil Apparatus in New Capital City (Type of PPP: Unsolicited)	Apartments for government employees located in KIPP 1B (10 buildings, 780 units) and detached houses for government employees	GCA: OIKN, Initiator: PT Ciputra Nusantara CAPEX: USD 334.6 Million, OPEX: USD 82.4 Million Financial Feasibility FIRR: Under Calculation, EIRR: 17% NPV: USD 4.5 Million (Est. Period: 13 yrs)

No	PPP Project Name	Summary (PPP Book 2024)	Applied Scheme (PPP Book 2024)
		located in KIPP 1C (20 units)	
7.	National Defense Personnel Housing Towers in WP 1A (Type of PPP: Unsolicited)	Apartments for defense personnel located in KIPP 1A (59.7 ha, 60 buildings, 2,160 units)	GCA: OIKN, Initiator: Consortioum CITIC – Risjadson – CCFG CAPEX: USD 1,067.25 Million (incl. VAT), OPEX: USD 928.81 Million (incl. VAT) Financial Feasibility FIRR: 9.8%, EIRR: 10.99% NPV: USD 48.67 Million (Est. Period: 15 yrs)
8.	109 State Civil Apparatus Landed Houses in WP 1B KIPP IKN (Type of PPP: Unsolicited)	Detached houses for government employees located in KIPP 1B (9.2 ha, 109 units)	GCA: OIKN, Initiator: PT Intiland Development Tbk (assisted by PT SMI through PDF from MOF) CAPEX: USD 141.07 Million (incl. VAT), OPEX: USD 24.56 Million (incl. VAT) Financial Feasibility FIRR: 11.96%, EIRR: 20.75% NPV: Under Calculation (Est. Period: 9.5 yrs)
9	Construction of apartments for government employees by PT Summarecon Agung Tbk (not listed in PPP Book, so the information on the right is taken from a newspaper report[9]) (Type of PPP: Unsolicited)	Apartments for government employees located in KIPP 1A (6 buildings, 252 units)	GCA: OIKN, Initiator: PT Summarecon Agung Tbk Return of Investment: Not disclosed Investment Amount: IDR 1.67 trillion Financial Feasibility: Not disclosed

Source: Based on the content of PPP Book 2024 and newspaper reports, compiled by JICA Study Team

[9] EKONOMI article (dated November 1, 2023)
https://ekonomi.bisnis.com/read/20231101/47/1710223/proyek-rusun-asn-summarecon-smra-di-ikn-belum-dimulai-ini-kata-pupr

2.2 Outlook for private investment and PPPs related to the development of the new capital city after 2025

The following table shows the five investment projects (excluding public investment) in IKN that are expected to begin construction by 2025, with a total value of 6.49 trillion IDR (approximately 400 million USD) for private companies and state-owned companies (BUMN).

Table 2-5 Expected Investment in IKN in 2025 (excluding public investment)

Investors	Outline	Investment
PT Citadel Group Indonesia (CITADEL Group in Malaysia)	Develop a high-end residential area consisting of townhouses and multipurpose areas on 2.17 ha of land in KIPP 1A	3.97 trillion IDR
PT Puri Persada Lampung	Build an office building on 3 ha of land in KIPP 1A	1.4 trillion IDR
PT Makmur Berkah Hotel	Build an international standard hotel (Marriott) on 2.04 ha of land in KIPP 1A	0.95 trillion IDR
Surabaya University	Establish a PhD (PDSU) campus on 1.19 ha of land in KIPP 1B	0.15 trillion IDR
PT Vitka Delifood	On the 0.35 ha of land in KIPP 1A, the company will build its own restaurant facilities, such as Rumah Makan Padang Sederhana and Momoo Juice, as well as tenants for the food and beverage industry.	0.02 trillion IDR

Source: Created by the research team based on newspaper report[10]

In addition, the following details have been announced by Mr. Basuki, the Head of OIKN[11], but the details have not yet been made public;

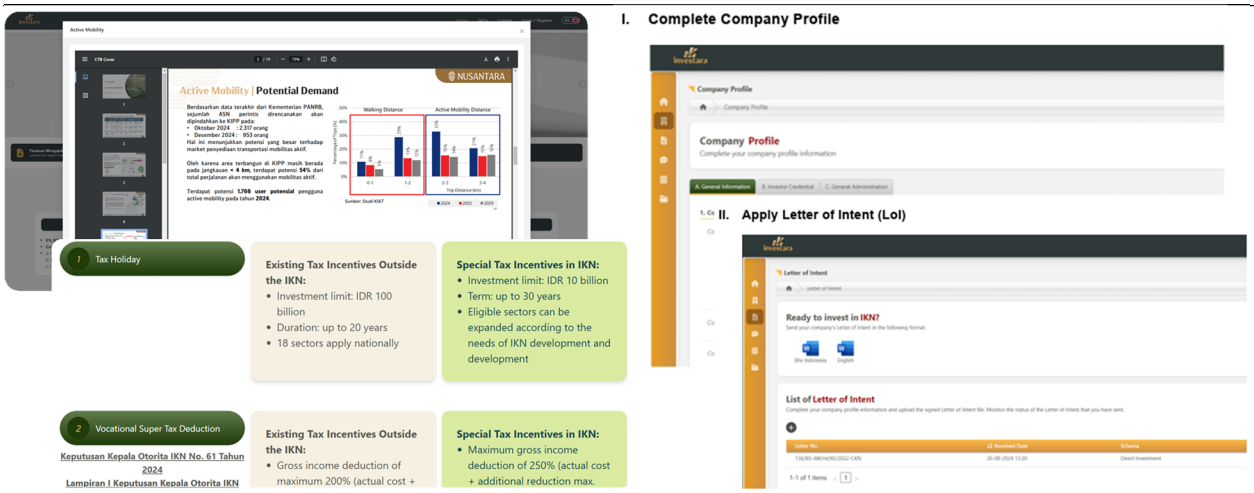
- A feasibility study has been completed with a private company for PPP projects worth 60.93 trillion IDR (approximately 3.77 billion USD), including 97 apartment buildings, 129 detached houses, and solar power plants.
- KIPP is currently considering six PPP projects for 138.6 km of roads and Multy-utility tunnels.

2.3 Implementation of investment procedure support by “investara”

OIKN has launched a website called “investara” to provide support for private companies that are interested in participating in private investment and PPP projects[12].

On this website, you can find information on private investment and PPP in IKN, including related laws and regulations, tax incentives, and other investment incentives. By opening a personal account, you can also proceed with the investment procedures online, starting with the submission of a LOI.

[10] IDN FINANCIALS article (dated February 13, 2025) https://www.idnfinancials.com/jp/news/52447/citadel-enters-ikn-invest
[11] Article distributed by ANTARA (dated January 25, 2025) https://en.antaranews.com/news/342782/oikn-to-boost-new-capital-dev-as-rp488-trillion-budget-approved
[12] Investara website https://investara.ikn.go.id/home



Source: investara website

Figure 2-2 “investara” image figure

2.4 Incentives for private investment related to IKN development

Various investment incentives (tax breaks, land use periods, government support, etc.) are provided for private investment related to the development of the New Capital City.

The following table summarizes the main contents stipulated in OIKN Regulation No. 7/2024, Presidential Regulation No. 75/2024, and Governmental Regulation No. 29/2024 as incentives for private investment related to the development of the New Capital City.

Table 2-6 Tax incentives for private investment related to IKN development

Tax incentives at IKN	Details, conditions, etc.
Income tax exemption	Minimum investment amount: 10 billion IDR Term: Up to 30 years The target fields will be expanded in line with the progress of IKN development.
Income tax deduction for vocational training	Tax deduction of up to 250% of the cost of internships, training, etc.
Income tax deduction for research and development	Tax deduction of up to 350% of the cost incurred
Income tax deduction for donations	Up to 200% (no limit on donations)
Exemption for MSMEs	Sales of less than 50 billion IDR are tax-exempt
Exemption for personal income tax (PPh21)	Income tax for all employees living in IKN is paid by the Indonesian government (no income limit)
Corporate tax incentives for the financial sector	Up to 25 years, 100% for banks and insurance, 85% for other financial sectors
Income tax incentives for the transfer of head office and branch offices	100% corporate tax exemption for 10 years, 50% corporate tax exemption for the next 10 years, etc.
Exemption from consumption tax and luxury tax	Consumption tax and luxury tax exemption for the provision of real estate, electric vehicles, real estate rental services, construction services, and waste disposal services
Import duties	Investment promotion projects added to the list of import tariff exemptions, extension of import tariff exemption period (up to 6 years)
Income tax incentives for the transfer of land and building rights	100% income tax deduction for the first land and building rights holder

Source: OIKN Regulation No.7/2024, Presidential Regulation No. 75/2024, Governmental Regulation No. 29/2024

Table 2-7 Investment incentives other than tax incentives for private investment related to IKN development

Other investment incentives at IKN	Details, conditions, etc.
Preferential treatment for the acquisition and use of land and buildings	Exemption from land and building acquisition tax Grant of a 95-year business right (HGU) and extension of up to 95 years Grant of an 80-year building right (HGB) and extension of up to 80 years Grant of an 80-year usage right (HPL) and extension of up to 80 years
Preferential treatment for the employment of foreign workers	Exemption from paying compensation when employing foreign workers
Support for the provision of housing	Support for providing housing for business owners, investors and employees
Appropriate evaluation and management of land by OIKN	OIKN will properly assess and manage the land, and business owners will be able to use the land on fair terms.
Payment of ADP (OIKN-managed assets and land)	You can choose to pay in full or in installments.
Infrastructure supply and management by OIKN	OIKN will develop and manage infrastructure and facilities, and you will be able to use them.

Source: OIKN Regulation No.7/2024, Presidential Regulation No. 75/2024, Governmental Regulation No. 29/2024