JTTRI-AIRO
Japan Transport and Tourism Research Institute
ASEAN-India Regional Office

Aiming for Advanced Logistics in Indonesia

-Improvement of Logistics in ASEAN Island Region- (Part2)

4 September, 2025

Japan Transport and Tourism Research Institute
ASEAN-India Regional Office

Supported by THE NIPPON FOUNDATION

1. Social and Economics Condition and Logistics Challenges in Indonesia

2. Implications for Indonesia's Logistics Challenges Informed by Previous Investigations

3. Proposed Measures for Improving Indonesia's Logistics

4. Way Forward for Enhancing Indonesia's Logistics

1. Social and Economics Condition and Logistics Challenges in Indonesia

Supported by THE NIPPON FOUNDATION

(1) Social and Economics Condition

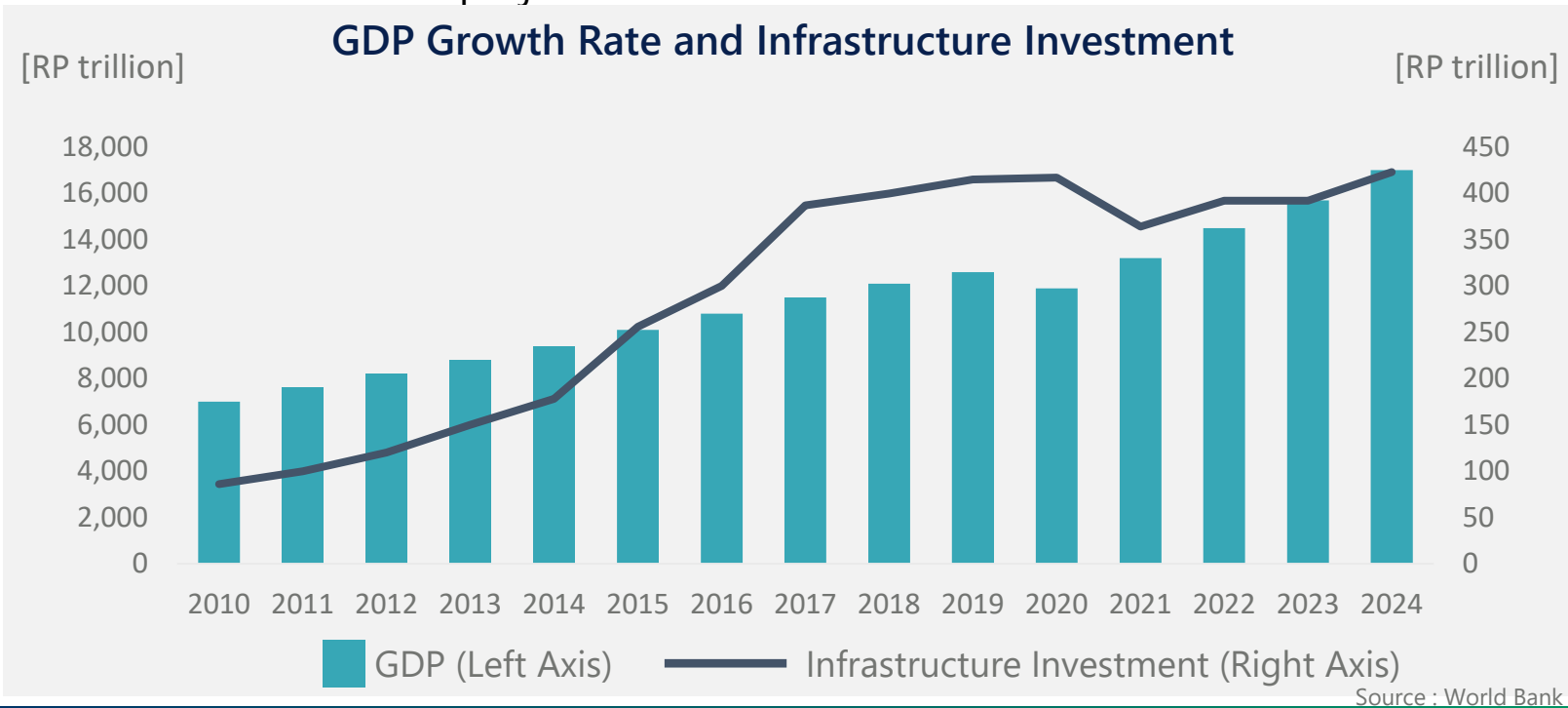
GDP Growth Rate and Infrastructure Investment

- From 2010 to 2024, Indonesia maintained an average annual economic growth of 5%, excluding the COVID-19 pandemic year of 2020.
- In 2024, reflecting government policies to enhance productivity, improve domestic and international connectivity, and support the development of the new capital, IDR 422.7 trillion—equivalent to 12% of total government spending—was allocated to infrastructure development.
- Meanwhile, in 2025, budget revisions amounting to approximately IDR 300 trillion, including for free school meals, are expected to reduce the funds available for infrastructure projects.

5% Annual Average
GDP Growth Rate (Excluding COVID-19 Year))

IDR 422.7 trillion
Infrastructure Investment (2024)

About 12%
Share of Infrastructure Investment in Total Government Spending (2024)



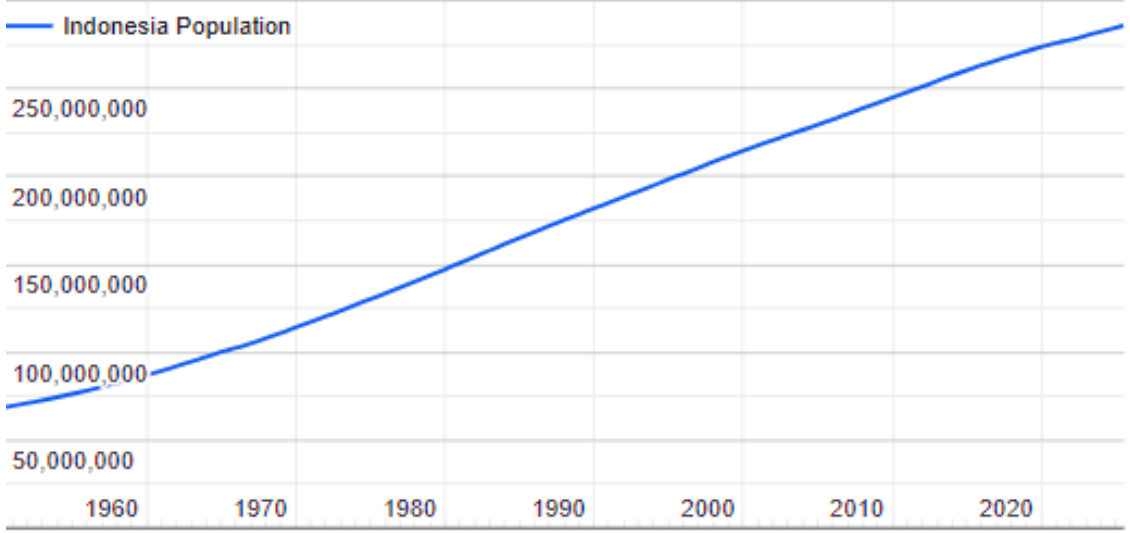
Source : World Bank

(1) Social and Economics Condition

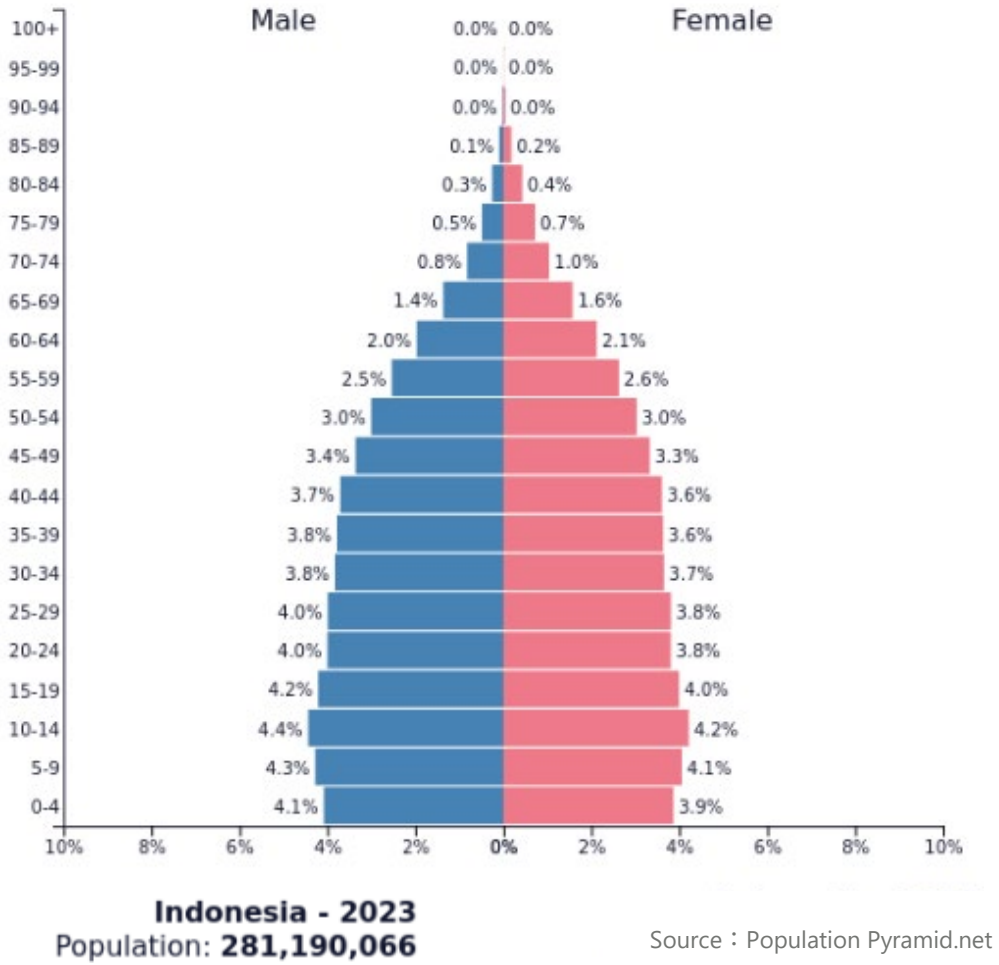
Population Growth

- Indonesia's population is 284 million in 2024, making it the 4th largest in the world, with an annual growth rate of approximately 1.0%.
- The population is projected to reach 290 million by 2030 and 310 million by 2050. Meanwhile, the working-age population accounts for about 70% of the total, indicating a plentiful labor force and high potential for economic

Population in Indonesia



Population by Age Group in Indonesia



Source：Population Pyramid.net

(1) Social and Economics Condition

Current Situation of Economic Disparities

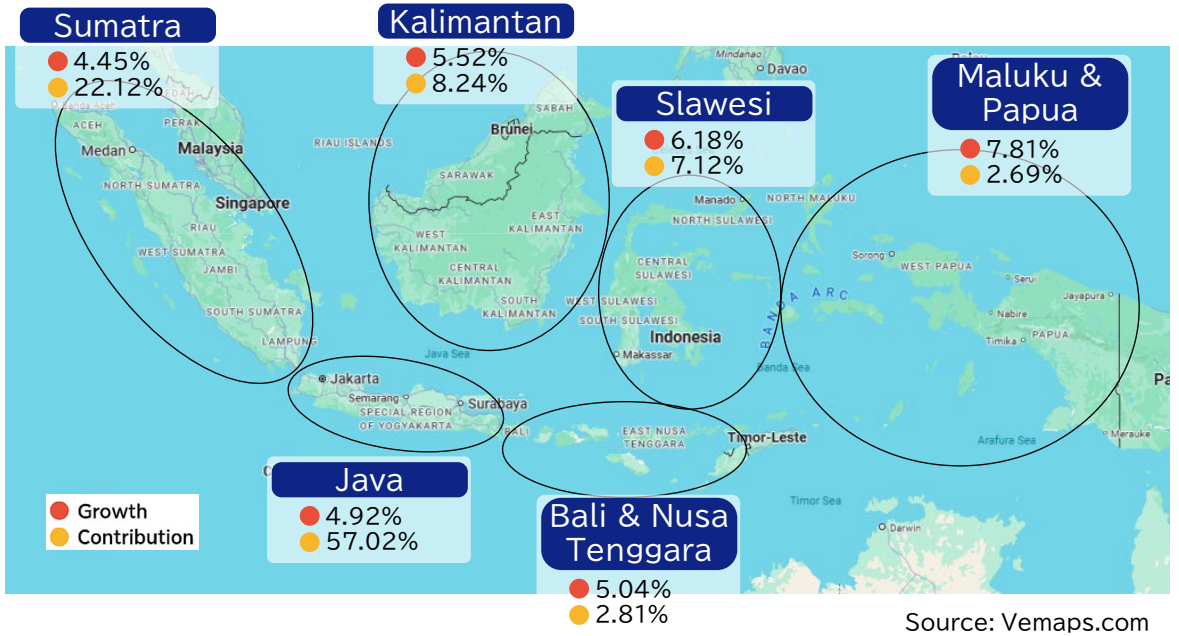
- Java is the economic center of Indonesia. Although it accounts for only 7% of the country's land area, it is home to 56% of the national population and contributes 57% of the country's GDP. Regional disparities in economic growth and the concentration of activities on Java present major challenges.
- To address these issues, promote national integration, and reduce logistics costs, the Indonesian government is currently implementing initiatives such as the Sea Toll policy and the capital relocation program.

Area and Population by Region (2020)

	Area [1,000km2]		Population [Million]		Population Density [/km2]
Total	1,911	100%	270.2	100.0%	141
Sumatra	481	25.2%	58.6	21.7%	122
Java	129	6.8%	151.6	56.1%	1171
Lesser Sunda	73	3.8%	15.0	5.6%	205
Kalimantan	5544	28.5%	16.5	6.1%	30
Sulawesi	189	9.9%	19.9	7.4%	106
Maluku and Papua	495	25.9%	8.6	3.2%	17

Source：Badan Pusat Statistik (BPS)

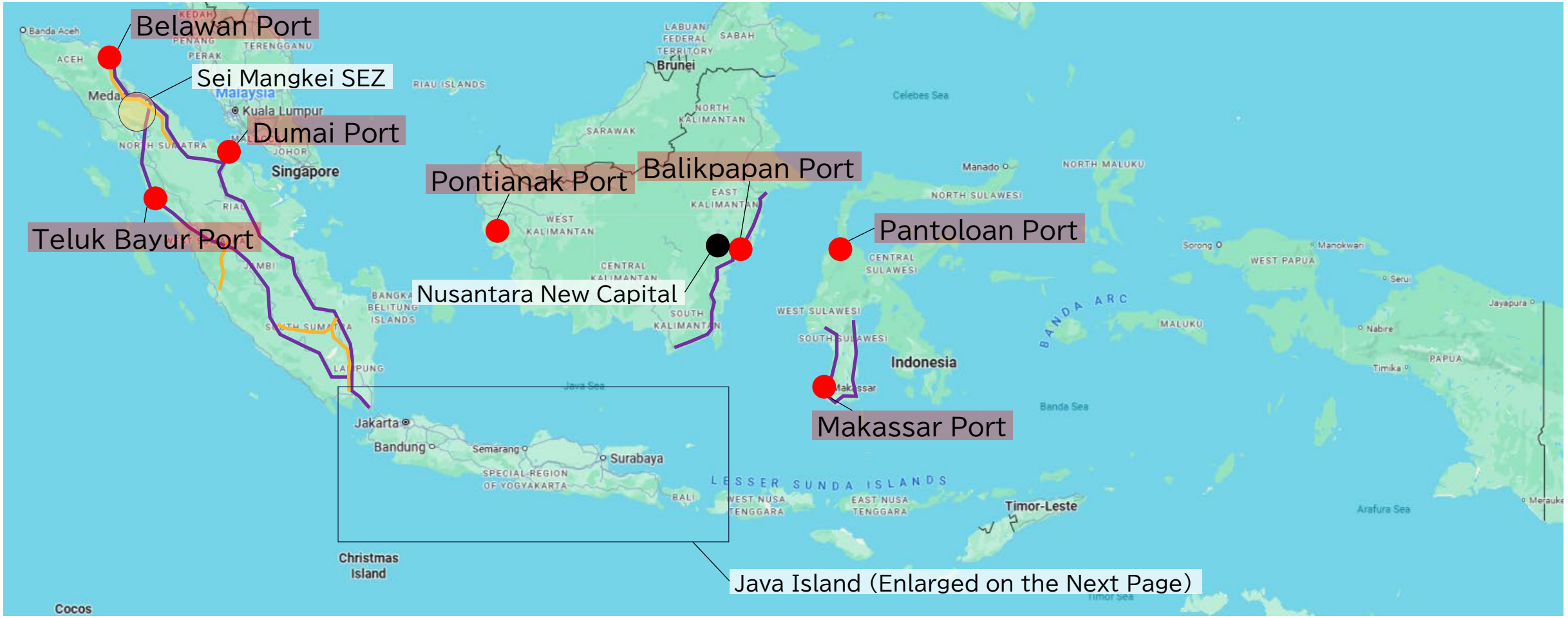
Economic Growth Rate and GDP Share by Region (2024)



Source: Vemaps.com

(1) Social and Economics Condition

Overview of Logistics Infrastructure (Indonesia)



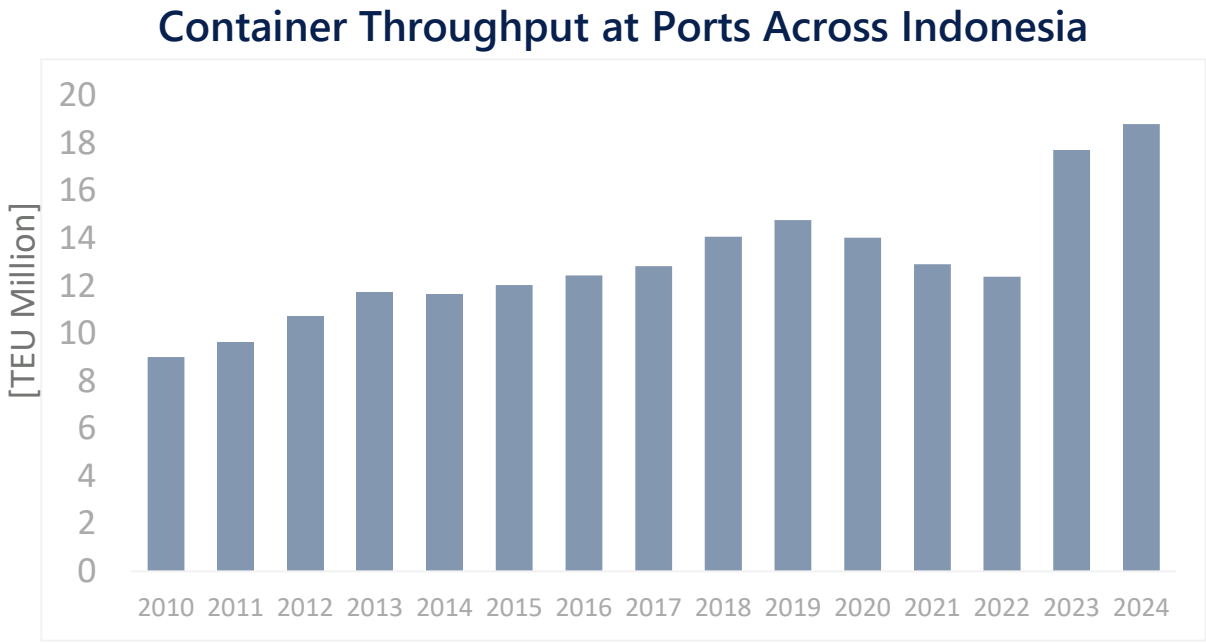
(1) Social and Economics Condition

Overview of Logistics Infrastructure (Java Island)

(1) Social and Economics Condition

Container Throughput at Indonesian Ports

- Container throughput at Indonesian ports has been on an upward trend, and is expected to reach 18.8 million TEU in 2024. With continued GDP growth, an average annual increase of approximately 3% is projected through 2028.
- To accommodate future demand, terminal expansions are planned at ports such as Tanjung Priok, Makassar, Belawan, and Tanjung Perak.



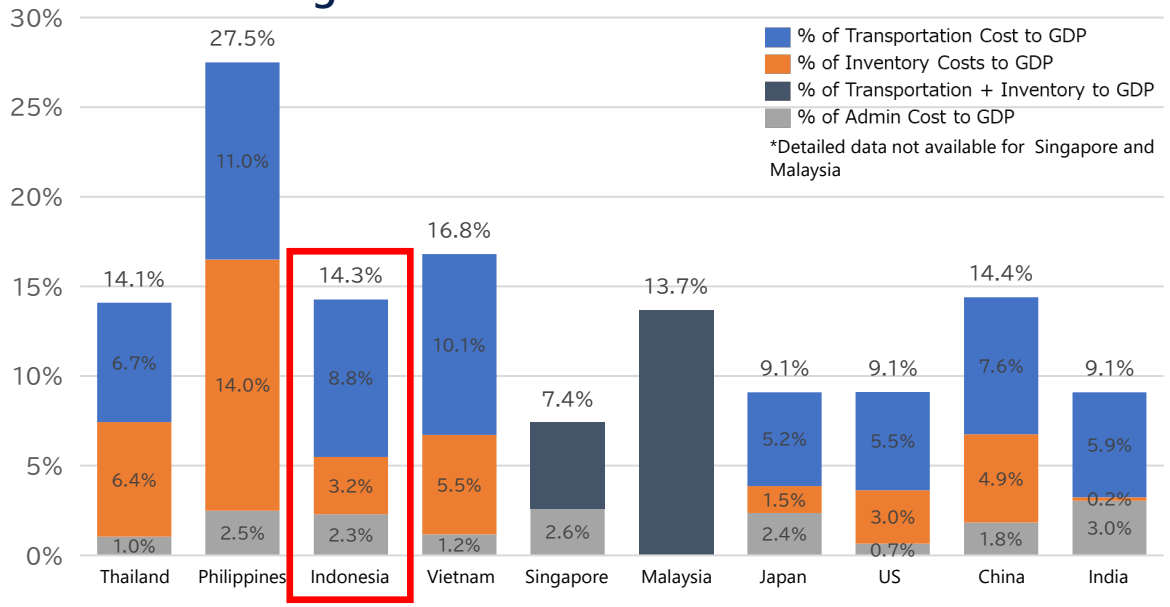
Sources: Statistics Indonesia (BPS), UNCTAD DataHub, World Bank World Development Indicators, CEIC Data, Pelindo, Fitch Ratings

(2) Logistics Cost

Logistics Performance Assessment

- Logistics costs in Indonesia account for approximately 14% of GDP, a high level comparable to other ASEAN countries and higher than in developed economies such as Japan and the United States.
- According to the Logistics Performance Index, Indonesia's ranking declined from 46th in 2018 to 61st in 2023.
- In particular, delays in infrastructure development, slow customs procedures, and low reliability of logistics services have been identified as key areas of concern.

Logistics Costs as a Share of GDP



Sources: World Bank, IMDA, Thai Government, DTI, Bappenas, MOIT, JILS, CSCMP, State Council (China), DPIIT

Logistics Performance by Country

	ASEAN						Japan	US	China	UK	EU		
	Philippines	Indonesia	Vietnam	Thailand	Singapore	Malaysia					Germany	Neitherland	France
LPI Score	3.3	3.0	3.3	3.5	4.3	3.6	3.9	3.8	3.7	3.7	4.1	4.1	3.9
LPI Ranking	43	61	43	34	1	26	13	17	19	19	3	3	13
Custom	2.8	2.8	3.1	3.3	4.2	3.3	3.9	3.7	3.3	3.5	3.9	3.9	3.7
Infrastructure	3.2	2.9	3.2	3.7	4.6	3.6	4.2	3.9	4.0	3.7	4.3	4.2	3.8
International Shipments	3.1	3.0	3.3	3.5	4.0	3.7	3.3	3.4	3.6	3.5	3.7	3.7	3.7
Logistics Competence	3.3	2.9	3.2	3.5	4.4	3.7	4.1	3.9	3.8	3.7	4.2	4.2	3.8
Tracking & Tracing	3.3	3.0	3.4	3.6	4.4	3.7	4.0	4.2	3.8	4.0	4.2	4.2	4.0
Timeliness	3.9	3.3	3.3	3.5	4.3	3.7	4.0	3.8	3.7	3.7	4.1	4.0	4.1

Source: World Bank

(3) Major Issues in Enhancing Logistics Efficiency

- Based on interviews with government officials and logistics operators in Indonesia, the following challenges have been identified as key obstacles to improving logistics efficiency in the country.

Overloading and Oversized Trucks

- Traffic congestion, accident risks, impassable routes or damaged structures, road deterioration, and increased CO_2 emissions are key concerns.
- Since 2021, the Directorate General of Land Transportation has introduced a licensing system for general cargo trucks and installed weigh stations on roads. However, the use of overloaded and oversized trucks continues, driven by the need to reduce transportation costs.

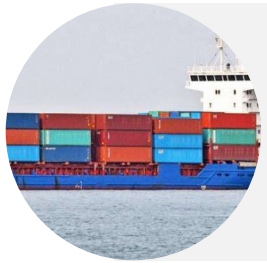
Inconsistency between Port Expansion and Access Roads

- While port handling capacity is being expanded, congestion occurs in areas surrounding ports due to insufficient access road capacity.
- At Patimban Port, a new container terminal is under construction, but the connecting highway is significantly delayed. If the new terminal becomes operational before the highway is completed, further worsening of traffic congestion is expected.

Weaknesses in Railway and Domestic Shipping Infrastructure

- The railway network is limited to Java and Sumatra and has not been expanded nationwide.
- In domestic shipping, few ports are equipped with efficient cargo handling facilities, resulting in slow and inefficient transshipment operations.
- These conditions hinder the promotion of modal shift and impede the diversification of transport modes.

(3) Major Issues in Enhancing Logistics Efficiency



High Fares for Rail and Domestic Maritime Transport

- High rail and domestic shipping costs have hindered modal shifts from trucks and inter-island logistics development.
- Shippers prefer cheaper truck transport; for example, rail between Cilegon and Jakarta costs 1.5 times more.
- Domestic coastal shipping is also costlier than international routes, with Java–Sumatra sea transport roughly twice the Java–Singapore rate.

Long Waiting Times for Trucks and Vessels

- Up to 70% of truck operating time and up to 60% of vessel operating time is spent waiting, leading to reduced efficiency and increased logistics costs.
  - Trucks: Equipment shortages, labor-intensive operations, insufficient workforce, and cargo handling limited to specific hours.
  - Vessels: Congestion due to simultaneous arrivals, equipment and labor shortages, and cargo handling limited to specific hours.

Decentralization of Regulatory and Policy Authority

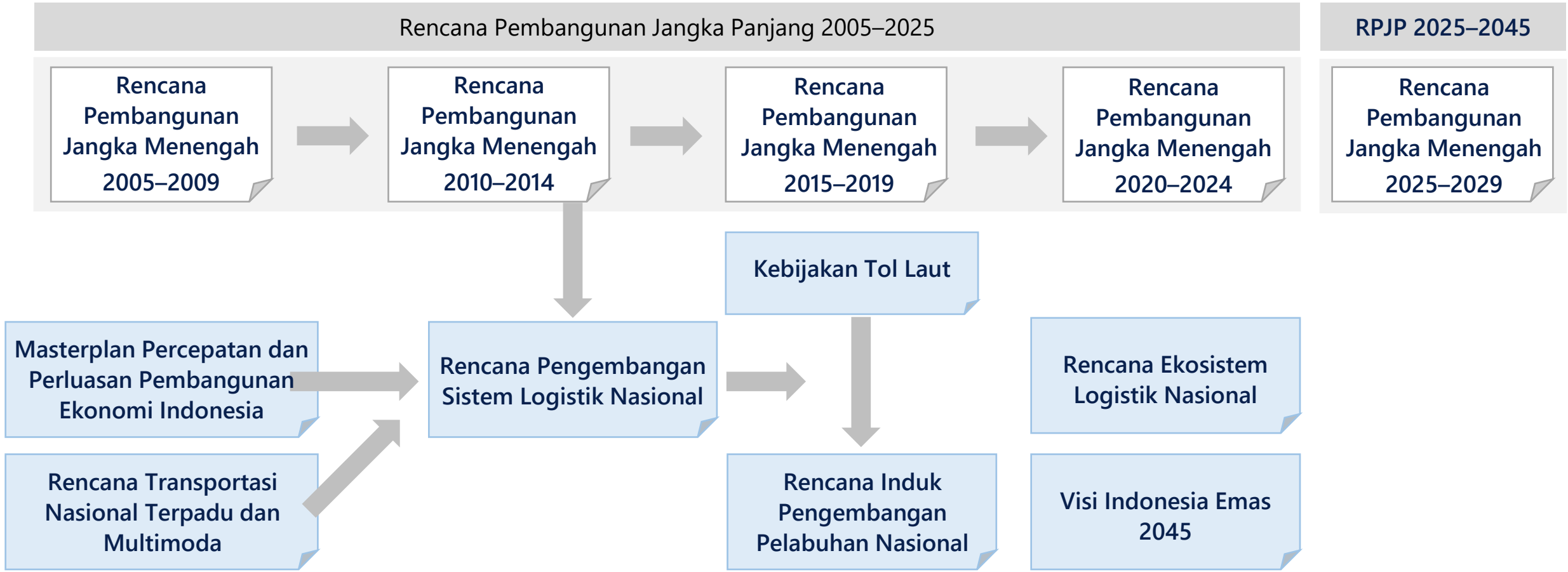
- In the logistics sector, authority is highly fragmented across multiple agencies, requiring significant coordination. (Roads: Ministry of Public Works and Housing; Transport Company Permits: DGLT; Vehicle Permits by Cargo Type: DGLT / Provincial Governments; License Plates: Police)
- Since logistics covers all transport modes, effective policy implementation depends on inter-agency collaboration.

Insufficient Cold Chain Facilities and Workforce

- Although awareness of cold chain logistics has increased and demand is on the rise, several challenges remain, including underdeveloped infrastructure, geographical constraints unique to an archipelagic country, inefficient transport operations, insufficient refrigerated and frozen storage facilities, lack of specialized equipment, and inadequate training of skilled personnel.

(4) Government Initiatives to Improve Logistics Efficiency in Indonesia

- Indonesia's logistics strategy is formulated based on the National Development Plan, alongside various other plans.



(4) Government Initiatives to Improve Logistics Efficiency in Indonesia

- Policies emphasize improving logistics efficiency through enhanced intermodal connectivity, regulatory and institutional reforms, and the development of logistics hubs.

Rencana Transportasi Nasional Terpadu dan Multimoda

- Strengthen connectivity among transport infrastructures via logistics hubs
- Improve access to rural and island areas to reduce disparities
- Enhance integration of international trade and industrial zones with supply chains
- Promote environmentally friendly modes such as rail and inland waterways

Rencana Pengembangan Sistem Logistik Nasional

- Strengthen connectivity among ports, roads, airports, and railways
- Regulatory and institutional reforms (deregulation, simplified customs)
- Development of logistics hubs (decentralized regional network)
- Human resource development (specialized training programs)
- ICT adoption and standardization (unified logistics data and technical standards)

Kebijakan Tol Laut

- Route networks linking major ports and outer islands
- Subsidies for essential goods transport to remote islands
- Improved cargo handling and hinterland links at feeder ports
- Digital tracking and inter-agency data sharing
- Greater private sector role in logistics management

Visi Indonesia Emas 2045

- Reduction of national logistics costs
- Establishment of the National Logistics Ecosystem (NLE) for public–private integration
- Port reform and development of new hubs, with closer links to industrial estates
- Advancement of logistics modernization and regulatory reforms

Draft Presidential Regulation on Strengthening National Logistics (in preparation)

- Promotion of digitalization, legal frameworks, public–private partnerships, and infrastructure development to enhance logistics stability
- Reduction of logistics costs is essential to improving logistics performance

2. Implications for Indonesia's Logistics Challenges Informed by Previous Investigations

(1) Issues and Measures for Improving Logistics in Thailand

In the rapidly growing ASEAN economies, logistics is becoming increasingly important as a backbone of global supply chains. We have conducted research to understand the current situation and challenges in each region and to explore possible measures, as summarized below.

Past Studies on ASEAN Logistics Enhancement

・FY2021–First Half FY2023
→(ASEAN Land Region)
Thailand
Laos
Vietnam
Cambodia
Myanmar
・Second Half FY2023–
→ (ASEAN Maritime Region)
Philippines
Indonesia
Malaysia
Singapore
Brunei

Source: MOFA, Visualizing ASEAN – Basic Economic Statistics

(1) Issues and Measures for Improving Logistics in Thailand

JTTRI-AIRO Opening Commemorative Symposium ASEAN's Logistics amid Turbulent Times

～The Current State and Challenges of Logistics in the ASEAN Region with a Focus on Thailand ～(Part 1)

【Event Overview】

Date/Time : Wed, June 15, 2022 15:30～18:00 (Japan Time)
Venue : Online (Zoom Webinar)

【Program】

Opening Remark : SHUKURI Masafumi, Chairman, Japan Transport and Tourism Research Institute
Greeting from Guest of Honor :
Saksayam CHIDCHOB, Minister of Transport Thailand
NASHIDA Kazuya, Ambassador Extraordinary and Plenipotentiary of Japan to the Kingdom of Thailand
Special Lecture : Chayatan PHROMSORN, Permanent Secretary of Ministry of Transport Thailand
Lecture : SHIBASAKI Ryuichi, Associate Professor, Resilience Engineering Research Center, School of Engineering, the University of Tokyo
TOKONAMI Kiyoshi, Chairman of Transport Division, Japanese Chamber of Commerce, Bangkok
Panel Discussion
Moderator : Chackrit DUANGPHASTRA, Associate Professor of Commerce Department, Chulalongkorn Business School, Chulalongkorn University
Panelist :Punya CHUPANIT, Director General of OTP Ministry of Transport Thailand
Ruth BANOMYONG, Dean of Department of International Business, Logistics and Transport, Thammasat University
Udorn KONGKAKATE, Chairman, Logistics & Supply Chain Sub-Committee, the Federation of Thai Industries
SHIBASAKI Ryuichi, Associate Professor, Resilience Engineering Research Center, School of Engineering, the University of Tokyo
TOKONAMI Kiyoshi, Chairman of Transport Division, Japanese Chamber of Commerce, Bangkok
Closing Remarks : OKUDA Tetsuya, President, ASEAN-India Regional Office, Japan Transport and Tourism Research Institute

(1) Issues and Measures for Improving Logistics in Thailand

JTTRI-AIRO Logistics Symposium - Part 2 Aiming for Advanced Logistics in Thailand

【Event Overview】

Date/Time : Thu, June 15, 2023 13:00~18:00 (Local Time)
15:00~18:00 (Japan Time)
Venue : Bangkok, Thailand Okura Prestige Bangkok
Onsite + Online, JP-TH Simultaneous Interpretation

【Program】

Opening Remark : SHUKURI Masafumi, Chairman, Japan Transport and Tourism Research Institute
Greeting from Guest of Honor : Punya CHUPANIT, Director General of OTP Ministry of Transport Thailand
OBA Yuichi, Charge d'Affaires ad interim, Embassy of Japan in Thailand
Research Report : SAWADA Takaaki, Senior Research Fellow/ Executive Director, JTTRI-AIRO
SAKAI Keichi, Research Fellow, JTTRI-AIRO
Keynote Lecture : Siradol SIRIDHARA, Assitant Professor, CLARE Mahidol University
Somsiri SIEWWUTTANAGUL, Lecture, CLARE Mahidol University
MORI Takayuki, Professor Emeritus, University of Marketing and Distribution Sciences]
Panel Discussion
Moderator : Chackrit DUANGPRASTRA, Associate Professor, Department of Commerce, Chulalongkorn Business School, Chulalongkorn University
Panelists : Punya CHUPANIT, Director General of OTP, Ministry of Transport
Bhanumas SRISUKH, Advisor to Logistics and Supply Chain Committee, Board of Trade of Thailand
SHIBASAKI Ryuichi, Associate Professor, Resilience Engineering Research Center, University of Tokyo
WAKE Soichiro, Executive Officer, Japan Railway Freight Company
TOKONAMI Kiyoshi, Chairman of Transport Division, Japanese Chamber of Commerce, Bangkok
Closing Remarks: OKUDA Tetsuya, President, JTTRI-AIRO

(1) Issues and Measures for Improving Logistics in Thailand

Efficiency of Inland Transportation and Optimization of Connectivity among Transportation Modes

- Continuous infrastructure development, such as double-track railways, proper maintenance, installation and renewal of equipment in freight stations and ports.
- Reconfiguring freight forwarder system in collecting and distributing hub-to-hub cargo transport, especially by rail.
- Expanding the area and adding to the functions of the ICDs in Bangkok and EEC and development of ICDs in other regions.

Utilization of Information Technology in the Logistics Field

- Creating and expanding the information platform connecting multi-stakeholders at the logistics hubs.
- Utilizing accumulated Big-Data as statistical data in the logistics field.

Enhancement and Strengthening of Cooperation among Logistics Stakeholders

- Promoting mixed loading, consolidation, joint delivery and enlightening the cargo owners about their efficiency.
- Cooperation in human resources development among companies and logistics organizations, supported by the government.

The measures common to inland and island areas can also be applied to logistics issues in the Philippines and other ASEAN island regions.

(1) Issues and Measures for Improving Logistics in Thailand

(a) Efficiency of Inland Transportation and Optimization of Connectivity among Transportation Modes

Current Situation in Indonesia

- PT. KAI provides scheduled freight train services
- KAI's logistics subsidiary acts as the interface with shippers, handling pickup and delivery by truck
- Rail lines on Java have significant potential for freight transport

Proposed Measures for Improvement

Promotion of Rail Freight Transport

By using rail for bulk transport instead of trucks, traffic congestion can be eased, logistics timeliness improved, and cargo types diversified.

Restructuring the Freight Pickup System

To expand rail freight usage, the cargo collection system will be restructured from a "block train" approach to an "individual cargo pickup" approach, expected to broaden collection channels and reduce freight rates.

Utilization and Development of ICDs in Suburban Areas

Strengthening ICDs can be achieved by adding distribution processing functions and expanding collection areas. Establishing ICDs at logistics and regional hubs enhances intermodal connectivity and improves transport efficiency.

(2) Issues and Measures for Improving Logistics in Thailand

(b) Utilization of Information Technology in the Logistics Field

Current Situation in Indonesia

- ICT usage is currently limited to customs and port operations
- The "Golden Indonesia 2045" vision identifies rising infrastructure maintenance costs as a challenge
- Statistical data are not yet fully available

Proposed Measures for Improvement

Development of Government-Led IT Platforms

- Introducing an integrated platform to improve coordination between maritime and inland transport

Infrastructure Monitoring Using ICT

- ICT utilization is expected to improve efficiency and reduce costs

Data Analysis Using Statistical Data

- Statistical data enable optimization and support evidence-based policymaking

(2) Issues and Measures for Improving Logistics in Thailand

(c) Enhancement and Strengthening of Cooperation among Logistics Stakeholders

Current Situation in Indonesia

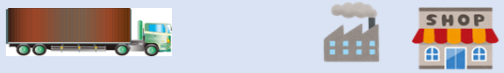
- Existing cooperation varies by transport mode

Rail containers: PT. KAI and its logistics subsidiary PT. KAI Logistik coordinate cargo pickup and delivery
Bulk transport: PT. KAI contracts directly with large shippers for specific cargo, providing rail services
Ports: Little coordination exists between port operators and drayage companies (short-haul trucking)

Proposed Measures for Improvement

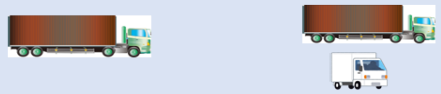
Strengthening collaboration for cargo consolidation and joint delivery

① Land Cargo Transporter + Cargo Owner/ Shipper



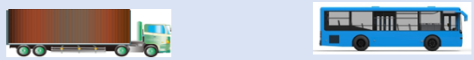
Mixed Loading/ Consolidation
Increase: Loading Capacity
Reduce: Trucks and Their Trips, Cost
→ Reduce Costs

② Land Cargo Transporter + Land Cargo Transporter



Joint Transportation/ Joint Delivery
Increase: Loading Capacity
Reduce: Trucks and Their Trips
→ Reduce Costs
(complying with Antitrust Laws)

③ Land Cargo Transporter + Other Transport company (Bus/ Taxi)



Small-lot Cargo Carried by Public Transport
Public Transport Vehicles Carry Small-Lot Cargo
→ Reduce Costs,
Maintain Logistics Network in Rural Areas

Cooperation in human resource development among logistics stakeholders

(3) Issues and Measures for Improving Logistics in Philippines

JTTRI-AIRO Logistics Symposium Aiming for Advanced Logistics in the Philippines

【Event Overview】

Date/Time : Wed, February 19, 2025 8:30~12:00 (Local Time)
9:30~13:00 (Japan Time)
Venue : Manila, Philippines Dusit Thani Manila Hotel
Onsite + Online, JP-EN Simultaneous Interpretation

【Program】

Opening Remark : SHUKURI Masafumi, Chairman, Japan Transport and Tourism Research Institute
Greeting from Guest of Honor : Hon. Jaime J. Bautista, Secretary, Department of Transportation
H.E. Endo Kazuya, Ambassador Extraordinary and Plenipotentiary of Japan to the Philippines
Keynote Lecture : Elmar Francisco U. Sarmiento, Undersecretary for Maritime, Department of Transportation
Terada Yoshimichi, Vice Minister, Ministry of land, Infrastructure, Transport and Tourism
JTTRI-AIRO Presentation : Tomita Akihiro, Senior Research Fellow/Executive Director of JTTRI-AIRO
Takashima Minoru, Research Fellow of JTRI-AIRO
Panel Discussion
Moderator : Shibasaki Ryuichi, Associate Professor, the University of Tokyo
Panelists : Mary Jean Pacheco, Undersecreatry for Supply Chain and Logistics Group, Department of Trade and Industry
Marc Anthony D. Dizon, AVP Operations, Fast Cold Chain Solutions, Inc./Technical Consultant, Cold Chain Association of the Philippines , Inc.
Nakayama Shigeyoshi, President, NX Logistics Philippines, Inc./GM of Sales Development Division, Nippon Express Philippines Corp.
Alan Kiel Irlanda, Vice President & General Manager, K Line Logistics Philippines, Inc.
Closing Remarks: Timothy John R. Batan, Undersecretary for Planning and Project Development, Department of Transportation

(3) Issues and Measures for Improving Logistics in Philippines

- At the Logistics Symposium held in Manila, Philippines, in 2024, experts from industry, government, and academia discussed improvements for maritime ASEAN logistics. Based on the panel discussions, the proposed measures are as follows:

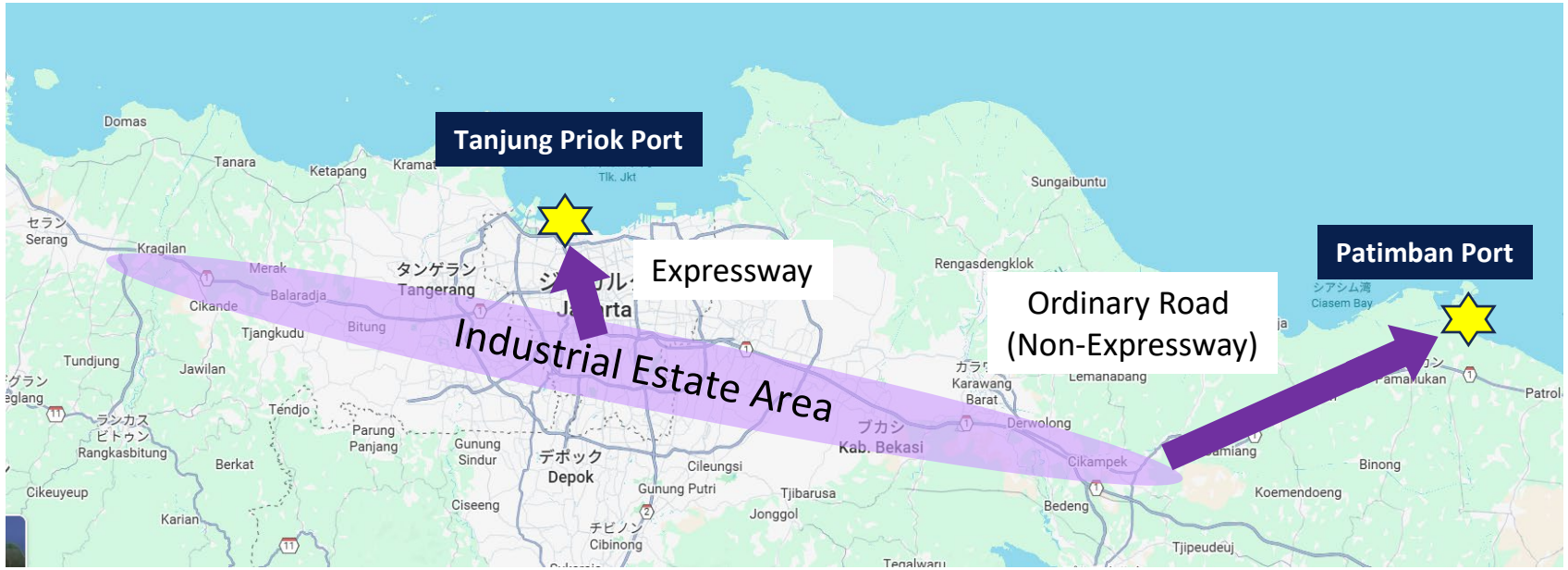
  - **Strengthen coordination between Manila Port, other ports, and terminals within Manila Port**
  - Promote cold chain to improve food logistics
  - Introduce digital transformation and new technologies
  - Develop human resources to enhance logistics sector capabilities
  - Address natural disasters and improve resilience
  - Reduce road congestion

(4) Issues and Measures for Improving Logistics in Philippines

Alleviating Jakarta Congestion through Utilization of Patimban Port

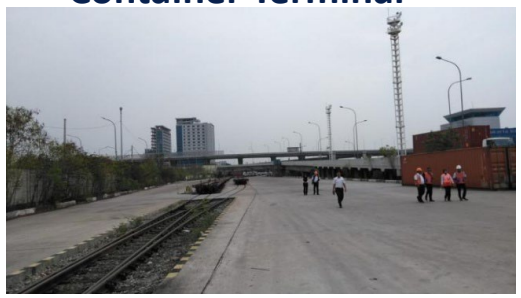
- Jakarta's industrial zone stretches east–west from East Serang to East Bekasi, with Tanjung Priok and Patimban ports serving as main export hubs
- Patimban Port's container terminal helps relieve congestion at Tanjung Priok, but limited highway access may discourage shippers
- To enhance connectivity, highway and rail access to Patimban Port should be prioritized
- Thailand's multi-modal logistics network connecting Laem Chabang Port, Bangkok Port, and Lat Krabang ICD can serve as a model for Indonesia

Spatial Relationship of Industrial Estates, Ports, and Access Routes



Sungai Lagoa Sta.

Jakarta International Container Terminal



(5) Promotion of Cold Chain Logistics

Seminar for Promotion of Cold Chain Logistics Standards in Malaysia

【Event Overview】

Date/Time : Mon, Feb 7, 2022 15:00～18:00 (Japan Time)
Venue : Online (Zoom Webinar)

【Program】

Opening Remark : SHUKURI Masafumi, Chairman, Japan Transport and Tourism Research Institute
TERADA Yoshimichi, Deputy Minister for Public Transport and Logistics Policy, Ministry of Land, Infrastructure, Transport and Tourism
Keynote Speech : Mori Takayuki, Professor, Emeritus, University of Marketing and Distribution Sciences
Lecture : Freddie Lim CEO/Nee Phing Tan CBDO, TASCO Yusen Gold Cold Sdn Bhd
Iwahara KoichiCEO, NL Cold Chain Network (M) Sdn. Bhd.
Ohtsubo Hirotoshi, Counsellor for International Logistics, Ministry of Land, Infrastructure, Transport and Tourism, Japan
Hirata Junichi, General manager, Innovation and Sustainability Center, Transportation and Logistics Department, Class NK
Azwana Binti Mohamad, Principal Assistant Secretary, Strategic Planning and International Division, MOT, Malaysia
Panel Discussion
Moderator : Mori Takayuki, Professor, Emeritus, University of Marketing and Distribution Sciences
Panelist : Freddie LimCEO, TASCO Yusen Gold Cold Sdn Bhd (TYGC)
Iwahara Koichi, CEO, NL Cold Chain Network (M) Sdn. Bhd. (NLCCN)
Ohtsubo Hirotoshi, Counsellor for International Logistics, Ministry of Land, Infrastructure, Transport and Tourism, Japan
Hirata Junichi, General manager, Innovation and Sustainability Center, Transportation and Logistics Department, Class NK
Azwana Binti Mohamad, Principal Assistant Secretary, Strategic Planning and International Division, MOT, Malaysia
Sawada Takaaki, Executive Director and Senior Research Fellow, Japan Transport and Tourism Research Institute, ASEAN-India Regional Office (JTTRI-AIRO)
Closing Remarks : Anis Mardiana Binti Abdullah, Deputy Under Secretary, Strategic Planning and International Division, MOT, Malaysia

(6)コールドチェーンの普及啓発のインドネシアへの応用

Current Situation in Indonesia

- Although awareness of cold chain logistics has increased and demand is on the rise, several challenges remain, including underdeveloped infrastructure, geographical constraints unique to an archipelagic country, inefficient transport operations, insufficient refrigerated and frozen storage facilities, lack of specialized equipment, and inadequate training of skilled personnel.

Main Discussions at the Seminar

- 90% of food loss occurs at the distribution stage, and it is necessary to develop a cold chain at the transportation and storage stages.
- The significance of the cold chain is threefold: maintaining quality, bridging the distance between production and consumption, and stabilizing prices and supply.
- While demand for cold chains is expanding in ASEAN, quality varies. To improve the cold chain, it is necessary to create a system from both hardware and software aspects, such as inspection of transportation systems, support for infrastructure development, and enlightenment of related parties. In addition, the challenges of maintaining the cold chain are temperature quality and delivery efficiency, and it is necessary to build a stable system for this purpose. Cooperation at the government level will also continue.
- By creating and certifying cold chain standards, it is possible to improve the level of the food supply chain and to judge the service level of logistics operators.

Using JTTRI research and discussions to promote cold chain logistics in Indonesia

3. Proposed Measures for Improving Indonesia's Logistics

(1) Proposed Measures for Each Challenge

Three proposed measures for the challenges outlined in Chapter 1

Challenges

Overloading and Oversized Trucks

Inconsistency between Port Expansion and Access Roads

Weaknesses in Railway and Domestic Shipping Infrastructure

High Fares for Rail and Domestic Maritime Transport

Long Waiting Times for Trucks and Vessels

Decentralization of Regulatory and Policy Authority

Insufficient Cold Chain Facilities and Workforce

Proposed Measures

Improvement of Port Access

- Proposal for an Integrated Port Logistics Framework

Modal Shift from Trucks to Rail and Domestic Shipping

- Modal Shift Subsidies
- Government Projects for Rail Infrastructure Development and Expansion
- Development of Port Transshipment Facilities (New and Expanded)
- Encouraging Private Sector Participation in Rail Transport
- Subsidies for Investment in Port Transshipment Equipment

Human Resource Development for Logistics Improvement

- Multimodal WG
- Cold Chain WG
- HR Development WG

(2) ①Improvement of Port Access

Mismatch between Port Expansion and Access Development

If access infrastructure does not match the expanded cargo handling capacity of a port, the following issues may arise:

- **Increased Congestion**：Negatively affecting surrounding traffic
- **Reduced Competitiveness**：Longer access times and higher costs compared to other ports
- **Underutilized Facilities**：Poor access discourages port usage

These issues negatively impact all stakeholders, including port operators, shippers, logistics providers, and local residents.

Main Reasons Why Port Access Expansion Is Not Fully Coordinated with Port Development

Port Planning Stage	Port Construction Stage	Port Operation Stage
• Coordination with port access authorities ensures aligned planning	• Agencies implement design and construction separately without coordination	• Delayed or missing port access expansion causes problems

Source : Government Agencies

(2) ① Improvement of Port Access

Proposal for an Integrated Port Logistics Framework

Government Agencies Responsible for Infrastructure Development	Port, Access Roads, and Access Railways
Government Agencies Responsible for Permits and Oversight	Port Operations, Road Transport, Trucks, Rail Transport, Coastal Shipping
Logistics Operators	Port Operators, Railway Companies, Shipping Lines, Forwarders, etc.
Experts	Universities, Research Institutes, Think Tanks, etc.

Stage	Roles and Functions	
Planning	Coordination	• Align the scale and schedule of port and access infrastructure plans.
	Regulation & Permits	• Prepare necessary permits and policies in a timely manner.
	Feedback	• Collect input from the logistics industry.
Construction	Progress Monitoring	• Track the progress of infrastructure development by each government agency.
	Schedule Adjustment	• Address deviations in completion timing.
	Progress Sharing	• Share delay information with regulatory authorities and logistics operators.
Operation	Feedback	• Gather logistics operators' opinions on infrastructure and regulatory issues.
	Problem reporting	• Raise issues with relevant ministries to drive improvements or solutions.

(3) ②Modal Shift from Trucks to Rail and Domestic Shipping

- Promoting modal shift from trucks to rail and coastal shipping requires cost and convenience improvements and network expansion.
- Policies include regulatory and infrastructure measures, divided into short-term and medium/long-term actions. Proposed policies are shown below.

Policy Guidelines for Modal Shift from Trucks to Rail and Domestic Shipping

Infrastructure Development

- Promote government projects for rail infrastructure development and expansion (including laying tracks on islands without rail service)
- Development of port transshipment facilities (new construction and expansion)

Regulatory Measures

- Subsidies for rail and shipping use to promote modal shift from trucks
- Encourage private sector participation in rail transport (construction/operation of freight terminals, ownership of dedicated freight cars, etc.)
- Provide subsidies for private investment in port transshipment facilities
- Establish standards and certification systems for CO_2 emissions reduction

(4) ③Human Resource Development for Logistics Improvement

Challenges in Human Resource Development for Logistics Improvement

Challenges Recognized by DGIMT

- DGIMT in Indonesia recognizes a shortage of skilled personnel needed to promote intermodal transport.
- They expect knowledge transfer and training support through strategic partnerships

Issues to Be Addressed Within the Framework

- Multimodal
- Cold Chain
- HR Development

Proposal: Establishing a Collaboration Framework

- Set up committees with government, academia, and logistics operators
- Promote logistics HR development
- Foster public-private-academia collaboration for economic and social growth

4. Way Forward for Enhancing Indonesia's Logistics

Proposals for Establishing a Fast, High-Quality, and Reliable Logistics System in Indonesia

1. Implications for Indonesia's Logistics Challenges Informed by Previous Investigations

（1）Measures for Improving Logistics in Thailand

（2）Measures for Improving Logistics in Philppines

（3）Promotion of Cold Chain Logistics

2. Improvement of Port Access

3. Modal Shift from Trucks to Rail and Domestic Shipping

4. Human Resource Development for Logistics Improvement

While these proposals address many issues, other logistics-related challenges remain, such as expanding air cargo transport, simplifying customs procedures, and easing cross-industry regulations. Both countries will continue to engage in ongoing discussions to address these challenges and further improve Indonesia's logistics.