INTERMODAL INTEGRATION
IN INDONESIA

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MINISTRY OF TRANSPORTATION
- Archipelago comprising of more than 17,480 islands, with the 5 (five) the largest islands, Sumatra, Java, Kalimantan, Sulawesi and Papua.

- Population is more than 225 million, and the population density is 121 inhabitants per km2. Population is uneven distributed over islands. Java has 58% of the population with only 7% of total area, as shown in the table below.

- Transportation is one of a network chain in the distribution of goods and passengers movement.
To create an effective and efficient national transportation system to support and drive the dynamic of development, human mobility, goods and services and to simulate economic growth in 6 (six) corridors creating national connectivity and to support the improvement of international relations in strengthen the national and state living development in an effort embodiment archipelago insight.

Efforts to improve performance of transport infrastructures done through some approaches, like capacity improving and repairing which previously caused long backlog, and also operation and management approach that guarantee the smoothness of movement accessibility.
1. **Sumatera Economic Corridor** as a “Center for Production and Processing of Natural Resources and as Nation’s Energy Reserves”

2. **Java Economic Corridor** as a “Driver for National Industry and Service Provision”

3. **Kalimantan Economic Corridor** as a “Center for Production and Processing of Natural Resources and Energy Reserves”

4. **Sulawesi Economic Corridor** as a “Center for Production and Processing of National Agricultural, Plantation, Fishery, Oil & Gas, and Mining”

5. **Bali – Nusa Tenggara Economic Corridor** as a “Gateway for Tourism and National Food Support”

6. **Papua – Kepulauan Maluku Economic Corridor** as a “Center for Development of Food, Fisheries, Energy and Mining”
Integrated National Logistics and Supply Chain Capacity Building and Strengthening Logistics Provider and National Logistics Player

Road Map of National Transportation System

Road Map of National Procurement System

Road Map of National Information System

Road Map of National Trading System

Building Institutional Framework

Blueprint of Indonesian Logistics System

Integrated ASEAN Logistics Network

Integrated Global Logistics Network

2009 2010 2011 2013 2020 2025
Vision 2025 :

By year 2025, Indonesia Logistics, that domestically interacted across archipelago and internationally connected to major global economies, effectively and efficiently, would improve national competitiveness to succeed in the global competition era.
Six Prime Mover of National Logistic System (NLC)

- Commodities
- Infrastructure
- Operator/Service Provider
- Human Resources Management
- Information and Communication Technology
- Policy and Regulation

National Competitiveness
Public welfare

Blueprint of National Logistic System
DIRECTION OF NATIONAL LOGISTIC 2025

To have an effective and efficient of national and international logistic system supported with the following condition:

• Integrated transportation system (port, terminal, station, depo, distribution center, warehouse, etc) connected through road, railway, sea, river and lake that facilitate the operational of transportation and logistic.
• ICT network that facilitate trade of domestic good and competitive international trade.
• Enforcement of law ad regulation.
• Strong LSP (Logistic Service Provider).
• Strong institution.
• Professional of human resources.
• Transparant procurement system and considerable trade facilitation.
To realize national and international logistic routes supported by:

- Transportation nodes (i.e. port, terminal, rail station, depots, distribution center, etc.) integrated and connected with road, sea, inland waterways, warehouses, etc, for facilitation of operational transportation and logistic (national and international) and controlled by custom and quarantine.
- Information and communication networking to facilitate domestic cargo trade efficiently and competitive international trade.
- Networking of logistic provider and player.
- Rules and regulation for business certainty
- Strengthening of the institutional capacity
- Professional logistic human resources.
- Procurement system and trade facilitation.
# Production of Freight Transport in each Island Year 2006

<table>
<thead>
<tr>
<th>Freight</th>
<th>Sumatera</th>
<th>Jawa</th>
<th>Bali,NTB,NTT</th>
<th>Kalimantan</th>
<th>Sulawesi</th>
<th>Maluku, Papua</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road, ton/year</td>
<td>807.972.356</td>
<td>7.605.578.381</td>
<td>75.773.395</td>
<td>4.146.351</td>
<td>85.691.648</td>
<td>10.565</td>
<td>8.579.172.695</td>
</tr>
<tr>
<td>%</td>
<td>90,73%</td>
<td>95,70%</td>
<td>93,50%</td>
<td>10,98%</td>
<td>39,53%</td>
<td>0,37%</td>
<td>93,49%</td>
</tr>
<tr>
<td>%</td>
<td>0,18%</td>
<td>0,24%</td>
<td>0,02%</td>
<td>0,01%</td>
<td>0,10%</td>
<td>0,00%</td>
<td>0,23%</td>
</tr>
<tr>
<td>Inland Waterway and Ferry, ton/year</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>109.107</td>
<td>-</td>
<td>109.107</td>
</tr>
<tr>
<td>%</td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,29%</td>
<td>0,00%</td>
<td>0,00%</td>
<td>0,00%</td>
</tr>
<tr>
<td>Sea, ton/year</td>
<td>80.776.146</td>
<td>321.860.541</td>
<td>5.146.785</td>
<td>33.444.114</td>
<td>130.091.252</td>
<td>2.859.327</td>
<td>574.178.165</td>
</tr>
<tr>
<td>%</td>
<td>9,07%</td>
<td>4,05%</td>
<td>6,35%</td>
<td>88,53%</td>
<td>60,02%</td>
<td>98,87%</td>
<td>6,26%</td>
</tr>
<tr>
<td>Air, ton/year</td>
<td>160.485</td>
<td>1.029.057</td>
<td>102.259</td>
<td>73.307</td>
<td>745.683</td>
<td>22.209</td>
<td>2.133.000</td>
</tr>
<tr>
<td>%</td>
<td>0,02%</td>
<td>0,01%</td>
<td>0,13%</td>
<td>0,19%</td>
<td>0,34%</td>
<td>0,77%</td>
<td>0,02%</td>
</tr>
</tbody>
</table>

Source: Survey of Origin Destination of National Transportation, MOT
Study on the role of sea transport development to Reduce load of Road and Ferry transportation (2012):

<table>
<thead>
<tr>
<th>Origin</th>
<th>Destination</th>
<th>Road</th>
<th>Sea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Time (days)</td>
<td>Cost (Rp)</td>
</tr>
<tr>
<td>Bandung</td>
<td>Medan</td>
<td>5</td>
<td>5.130.723</td>
</tr>
<tr>
<td>Jakarta</td>
<td>Palembang</td>
<td>1,5</td>
<td>1.734.885</td>
</tr>
<tr>
<td>Jakarta</td>
<td>Medan</td>
<td>4,7</td>
<td>4.373.885</td>
</tr>
<tr>
<td>Lampung</td>
<td>Surabaya</td>
<td>2,3</td>
<td>2.433.135</td>
</tr>
<tr>
<td>Surabaya</td>
<td>Palembang</td>
<td>3,2</td>
<td>3.131.385</td>
</tr>
<tr>
<td>Surabaya</td>
<td>Medan</td>
<td>6,3</td>
<td>5.770.385</td>
</tr>
</tbody>
</table>

Significant differences occurred, where road freight cost lower than sea cost, but road travel time higher than sea travel time.
## Flow of Cargo by Truck (Road Transportation)

<table>
<thead>
<tr>
<th>Origin / Destination</th>
<th>Jakarta</th>
<th>Surabaya</th>
<th>Semarang</th>
<th>Jakarta</th>
<th>Lampung</th>
<th>Palembang</th>
<th>Pekanbaru</th>
<th>Medan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jawa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surabaya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semarang</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jakarta</td>
<td>7,199,636</td>
<td>4,130,329</td>
<td></td>
<td>3,908,847</td>
<td></td>
<td>1,025,230</td>
<td>282,383</td>
<td>630,487</td>
</tr>
<tr>
<td>Lampung</td>
<td>42,524</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palembang</td>
<td>144,160</td>
<td>979,451</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pekanbaru</td>
<td>295,103</td>
<td>19,766</td>
<td>109,538</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medan</td>
<td>1,422,393</td>
<td>2,595</td>
<td>2,579</td>
<td>303,133</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Flow of Cargoes

- **Jawa-Jawa**: 25,842,618, 68%
- **Jawa-Sumatera**: 5,846,947, 15%
- **Sumatera-Jawa**: 1,904,180, 5%
- **Sumatera-Sumatera**: 4,436,999, 12%

### Total

- **38,030,744**, 100%

Source: Directorate of Land Transportation (2007)
Policy of land transportation in the sector of freight transport

1. Utilization of intermodal freight transport;
2. Shifting of domestic freight to containerization;
3. To promote the implementation of on truck on board concept (cargo inspection could be handled in dry port);
4. To push the development of short sea shipping or coastal shipping;
5. Development of high way in northern part of Java (Pantura).
Purpose of *coastal shipping*

- Reducing exhaust gas emissions
- Efficiency of fuel cost
- Pressing road accidents
- Reducing logistic time and cost
- Reducing high axle vehicle load
- Efficiency of road maintenance
- Reducing vehicle maintenance cost
Role of Short Sea Shipping for national economy

- Backbone of national cargo transport (national logistic system)
- To reduce load in land transportation
- To increase efficiency of national transportation system
- Integration of national distribution centers
- As a bridge of production center and consumer center in Indonesian economic corridors
- Short Sea Shipping will support not only cabotage principle but also national economy security.
Establishment and development of International Hub Sea Port in Kuala Tanjung and Bitung, dan Hub Air Port in Jakarta, Kuala Namu, and Makasar.

Development of Port of Kalibaru as an expansion of Tanjung Priok port

Operation of Short Sea Shipping in the northern coast of Java and road in eastern part of Sumatera

Increasing the Role of Freight train in Java and Sumatra.

Development of automation systems and national logistic information which electronically integrated.

Increasing load capacity of pioneer and national fleets for passenger and freight transportation in eastern part of Indonesia.

Increasing the availability, quality and capacity of inter-island sea transport through the empowerment of the national and a traditional shipping.

Development of logistic centers to serve consolidated LCL container for exporters of small and micro business.
### PROJECTION AND DISTRIBUTION OF CONTAINER THROUGHPUT IN INDONESIA by 2030

<table>
<thead>
<tr>
<th>DISTRIBUTION AREA</th>
<th>CONTAINER (Million TEUs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Sumatera</td>
<td>5.6</td>
</tr>
<tr>
<td>West Kalimantan</td>
<td>0.7</td>
</tr>
<tr>
<td>South Sumatera</td>
<td>3.0</td>
</tr>
<tr>
<td>Java</td>
<td>22.7</td>
</tr>
<tr>
<td>Bali and Eastwards</td>
<td>2.2</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>2.3</td>
</tr>
<tr>
<td>West Sulawesi</td>
<td>1.9</td>
</tr>
<tr>
<td>East Region</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42.0</strong></td>
</tr>
<tr>
<td><strong>Total 2010</strong></td>
<td><strong>8.0</strong></td>
</tr>
</tbody>
</table>

Indonesian container throughput increasing from 8 million TEUs in 2010 become more than 40 million TEUs in 2030

Source: Directorate of Port and Dredging
SEA CONTAINER ROUTE NETWORKS IN INDONESIA

ROUTE NETWORK:
- TG. PRIOK – PONTIANAK, PP
- TG. PRIOK – BELAWAN, PP
- TG. PRIOK – (TG. PERAK) – BELAWAN, PP
- TG. PRIOK – BELAWAN – BUATAN – TG. PRIOK
- TG. PRIOK – PANJANG, PP
- TG. PRIOK – TELUK BAYUR, PP
- TG. PRIOK – Pekanbaru, PP
- TG. PRIOK – Banjarmasin, PP
- TG. PRIOK – Balikpapan, PP
- TG. PRIOK – Samarinda, PP
- TG. PRIOK – TG. PERAK – BITUNG, PP
- TG. PRIOK – TG. PERAK – PANJANG, PP
- TG. PRIOK – TG. PERAK (Makassar) - BITUNG, PP
- TG. PERAK – TG. PERAK – SORONG, PP
- TG. PERAK – TG. PERAK – MANOKWARI, PP
- TG. PRIOK – TG. PERAK – MERAuke, PP
- TG. PRIOK – TG. PERAK – AMAMAPARE, PP
- TG. PERAK – TG. PERAK – SORONG, PP
- TG. PERAK – TG. PERAK – MANOKWARI, PP
- TG. PERAK – TG. PERAK – MERAuke, PP
- TG. PERAK – TG. PERAK – AMAMAPARE, PP
- TG. PERAK – TG. PERAK – MAKASSAR – KENDARI, PP
- TG. PERAK – TG. PERAK – MAKASSAR – KENDARI, PP
- TG. PERAK – PONTIANAK, PP
- TG. PERAK – (TG. MAKASSAR) – SAMARINDA, PP
- TG. PERAK – JAYAPURA, PP
- TG. PERAK – SAMPIt, PP
- TG. PERAK – BENOa, PP
- TG. PERAK – (MAKASSAR) – AMBON – (Kwandang), PP
- TG. PERAK – SAMARINDA – BONtANG, PP
- TG. PERAK – (MAKASSAR) – TERNATE – (AMBON), PP
ROUTES OF PASSENGERSHIP AND FERRY

PT. PRIMA VISTA:
1. KM. MABUHA Y NUSANTARA: TG. PRIOK-PONTIANAK PP
2. KM. MADANI NUSANTARA: SURABAYA-BALIKPAPAN-PARE-PARE-BALIKPAPAN-BATULICIN-MAKA SAR PP
3. KM. MARINA NUSANTARA: SURABAYA-BANJARMASIN-PP
4. KM. TITIAN NUSANTARA: SURABAYA-BALIKPAPAN PP
5. KM. SENOPATI NUSANTARA: PKL BALEM-TG. PRIOK PP
6. KM. MANDIRI NUSANTARA: SURABAYA-BALIKPAPAN PP
7. KM. MARISA NUSANTARA: TG. PRIOK-PONTIANAK PP
8. KM. FARINA NUSANTARA: TG. EMAS KUMAI PP
9. KM. SAFIRA NUSANTARA: TG. PERAK-BALIKPAPAN PP
10. KM. MENTARI NUSANTARA: TRAYEK DALAM RENCANA (TG. PERAK-ENDE-KUPANG PP)

PT. ASDP:
1. KC. BARITO: SURABAYA-BENOBA-MAU MER-SEMARANG KUPANG PP
2. KC. AMBULI: SURABAYA-BANJARMASIN-BATULICIN-BALIKPAPAN PP
3. KC. SERAYU: GRESIK-BAWEAN-SURABAYA PP
4. KC. MAHAKAM: JAKARTA-BANGKA-JAKARTA-BELITUNG-JAKARTA-PONTIANAK-JAKARTA-SEMARANG-KENDAWANGAN-PONTIANAK-SEMARANG-JAKARTA
5. KC. CISADANE: JAKARTA-BANGKA-JAKARTA-BELITUNG-JAKARTA-PONTIANAK-JAKARTA-SEMARANG-KENDAWANGAN-PONTIANAK-SEMARANG-JAKARTA

PT. DHARMA LAUTAN UTAMA:
1. KM. MUTIARA: SURABAYA-KUMAI-SURABAYA-RAHA-BAU-MAKASSAR-BAU-RAHA-SURABAYA
2. KM. KUMALA: SURABAYA-BANJARMASIN PP
3. KM. KIRANA II: SURABAYA-BANJARMASIN PP
4. KM. DHARMA KENCANA II: SURABAYA-KUMAI-SURABAYA-SAMPITT-SPEMANG-SAMPITT-SPEMANG-SEMARANG-KUMAI-SURABAYA
5. KM. KIRANA: SURABAYA-BALIKPAPAN-BATULICIN-SURABAYA-MAKASSAR-SURABAYA
6. KM. DHARMA KENCANA: SURABAYA-MAKASSAR-BAU-BAU-BAU-BAU-MAKASSAR-SURABAYA
7. KM. MUSTIKA KENCANA: SURABAYA-MAKASSAR-BAU-BAU-SAMPITT
NETWORK OF FERRY ROUTES


POLICY DIRECTIONS FOR INTENSIFIED INTERMODAL AND MARITIME TRANSPORT

1. Promoting efficient door-to-door cargo transport and cross-border transport facilitation, through the simplification/ harmonization of trade and transport documentation and procedures, establishing uniform and transparent transit and cargo clearance system. Developing an efficient and global/regional-minded freight forwarder industry, third party logistics services and haulage industry and utilizing ICT applications.

2. Improving land transport network infrastructure for better connections and linkages with the national, regional and international maritime (seaports and inland waterways) including land transport trade corridors.

3. Developing responsive regional maritime transport policies to address the growing containerization in the region, improvement of the efficiency and productivity in domestic ports, rationalization of shipping services and the opportunities for increased multimodal transport service.
POLICY DIRECTIONS FOR INTENSIFIED INTERMODAL AND MARITIME TRANSPORT

4. Enhancing transport security and safety in the regional supply chain networks, through capacity building initiatives, technical networking, and regular exchange of relevant technologies, best practices and information.

5. Pursuing environmentally sustainable regional transport strategies, including accession to the relevant international conventions and protocols, promotion of environmental-friendly transport technology and transportation modes.

6. Creating enabling policy towards conducive environment for the increased private sector involvement and public-private partnerships in the provision and operation of transport infrastructure and transport and logistics facilities and services.
1. Movement of people and goods especially in the northern coast of Java is still very dependent on road transport.

2. Road transport will not be able to bear load of goods and passengers movement that will increase in the future, along with the increasing number of population and the acceleration of economic growth with the implementation of MP3EI.

3. Rail and sea transportation could be optimized to reduce load of road transport and get efficient fuel consumption.

4. Concept of integrated intermodal transport still to be developed in order to reduce load of road transport and overcome the problems of over weight in road transport.