Initiatives Toward Green Transport in Indonesia
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COMPETITIVE – INNOVATIVE - DYNAMIC
Agenda

- Facts related to Green Transport
- View in Freight Transport
- Key Points for Sustainable Green Road Freight Transport
- Green Logistics initiative showcase
Facts related to Green Transport in Indonesia
About Indonesia

- Large trading partner in the ASEAN and the world.
- High volume of imported and exported goods (*logistics services >90% by trucks*).
- Various challenges (*incl. poor energy & environmental performance, safety risk, and high cost*).

**Freight transport significant contribution to greenhouse gas (GHG) and criteria pollutant emissions**

- Oversizing and overloading
- Road congestion
- High cost

Source: GIZ, *Truck Fleet Modernization in Indonesia*. 2021
About Indonesia

• 94% fuel energy use in the transportation sector
• net oil importer since 2004
• Est. be a net gas importer in 2028 and net coal importer in 2032.
• 23% consumption by transportation sector (*dominated private vehicles*).
• Committed net zero emissions by 2060

About Indonesia

GHG emissions by sector from 2010 to 2017

Modal mix in Energy Consumption

Source: MoEF (2017)
Logistics carbon emission contributes 27% >90% of the impact on the environment by business-to-consumer (B2C)
National Regulation for Road Transport

1. Indonesian National electricity plan President Regulation No. 22 of 2017 on National Energy General
2. President Regulation No. 55 of 2019 on the Acceleration of the BEV Program for Road Transportation
3. Government Regulation No. 74 of 2021 ("GR 73/2019")
5. Ministry of Transportation Regulation No. 65 of 2020
6. Ministry of Transportation Regulation No. 15 of 2022

None facilitating commercial vehicle for Road Freight Transport
View in Freight Transport
• Ave. truck age was 10-11 years,
• >50% trucks at Tanjung Priok >15 yrs.
• Larger firms operate younger vehicles
• National and local legislation limiting age in place, but enforcement is not.
• Green road freight program rely on the economic situation of operators.
• Fierce Competition on both the financial and operational level

<table>
<thead>
<tr>
<th>Age of truck</th>
<th>Share in Tanjung Priok activity (2014)</th>
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<tbody>
<tr>
<td>&lt;5 years</td>
<td>30%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>8%</td>
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<tr>
<td>10-15 years</td>
<td>11%</td>
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<tr>
<td>15-20 years</td>
<td>26%</td>
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<tr>
<td>&gt; 20 years</td>
<td>25%</td>
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• In Sumatera (2007-2014) 30-98% of trucks overloaded
• Pavement service life reduced of 10 yrs (designed) to 3.64 yrs
Land transport heavily on road freight (>90%)

Road network is underdeveloped

Traffic accidents, over dimension and overload

More stringent EURO IV standards but the availability of the low sulphur fuel is insufficient

Biofuel is blended in diesel mandatory min 20% (B20) since 2015
Road Freight transport

Heavy trucks consumed 40% of total energy at transport sector

Trucks emitting 50 million tons of CO2 per year

Trucks demand grown 60%, triple by 2060
Key Points for Sustainable Clean Road Freight Transport
Barriers for Cleaner Truck Fleet

Absence of strategic policy guidelines
Expensive and inefficient business practices
Weak compliance and enforcement program
Absence of cross sector coordination

- Upfront cost
- Operational Cost
- Maintenance Cost
- Low truck productivity
- ODOL issue
- Lack of professional drivers

Source: GIZ, Truck Fleet Modernization in Indonesia. 2021
Sustainable Plan for Cleaner Road Transport

• Emission Baseline Inventory
• Route Optimization
• Offsetting Emission
• Financial Aid for cleaner fleet
• Electrification

Electrification challenges:
• Higher Capex for EV
• Performance Concerns (Distance, Durability)
• Charging Infrastructure
• Waste Management
LSP initiative in transition to clean and energy

• Mostly MNC
  • Global initiative
  • Allocated budget
  • Branding

• Limited Initiative
  ✓ Less consumption in electricity (ie. solar panel, LED, sensor)
  ✓ Recycle Rain water
  ✓ Last Mile Delivery (motorbike) conversion into EV
  ✓ Optimization (Routing, Consolidation, Crossdocking, Sharing capacity, etc)
Green Logistics initiative

A Showcase
Showcase 1

Bicycle & Cargobike
1000W Hub Drive
Pace up to 50km speed
Carry up to 150Kg
Cross Java island
30,000KM saving 850Kg2 of CO2
Blitz partners with NinjaXpress to provide a transition into sustainable deliveries by using Blitz's electric motorbikes for their last-mile couriers.
SiCepat Delivers

>1.2m shipments per day

Up to 5,000 courier drivers with electric motorcycles.

DHL began electrifying its fleet in 2021 with the introduction of six electric motorbikes.

In 2022, DHL added 2 units of EV, which can travel up to 150 km and carry up to 4.8 cubic meters of load.

Building 40k sqm facility featuring green solutions to reduce carbon emissions.

- Solar panels to cover power consumption at the warehouse and office during the day
- LED lamps with motion sensors
- Rainwater harvesting
- Electric vehicles for shipping