

# Indonesia

Indonesia's transport sector has seen significant growth in demand, with passenger travel increasing by 12% (2015–2023) and freight transport by 38.5% (2015–2022). Transport-related emissions rose by 13.45% between 2015 and 2023, making the sector the fourth-largest emissions contributor to national GHG emissions. Oil products dominate energy use (87%), with biofuels and electricity at 12.9% in 2022. The carbon intensity of Indonesia's electricity remains very high, at 682.4 gCO<sub>2</sub>/kWh in 2023. Beyond climate impacts, transport accounted for 12.4% of national air pollutant emissions in 2019. Transport-induced air pollution, in turn, caused 4.99 premature deaths per 100,000 people in Indonesia in 2019. Road traffic injury is another leading cause of death, claiming 11.3 lives per

100,000 people and accounting for 3.2% of Indonesia's GDP in 2021. In 2020, only 30.7% of the Indonesian population had convenient access to public transport. On the other hand, a moderately high percentage (71.6%) of Indonesia's rural population lived within 2 kilometers of an all-season road in 2019. The country has set strategies for urban mobility, rail expansion, and fuel quality improvements, while the updated NDC recognises transport for mitigation, and includes both transport mitigation and adaptation actions. Despite policies promoting public transport, walking, and cycling, Indonesia faces challenges in shifting towards low-emission transport, given significant fossil fuel subsidies (303.80 USD per capita) and limited electric vehicle uptake.

Income group: Middle-income

Human Development Index (2023): 0.73

Population size (2023): 263.23 million **+7.55%** (2015 - 2023)

Urban population share (2023): 58.55% **+19.13%** (2015 - 2023)

GDP per capita (2023): 4 210.05 USD **+27.33%** (2015 - 2023)

Share of transport and storage jobs in workforce (2023) **4.8%**

Share of women employed in transport and storage (2023) **6.9%**

## Transport Demand Trends

### Passenger transport activity

**24 974**

million passenger-km of rail transport in 2023

**+12%**  
(2015 to 2023)

Modal share for passenger travel

### Freight transport activity

**22 150**

million ton-km of rail transport in 2022

**+38.5%**  
(2015 to 2022)

Modal share for freight transport

### Transport energy consumption (2022)

**2 362 942** TJ

**+26%**  
(2015 to 2022)

#### Oil products

**87.1%**

of total transport energy consumption

### Per capita fossil fuel subsidies (2022)

**303.8** USD per capita

SDG 12

### Fuel quality standards (2022)

**2000-5000** ppm

### Average light duty vehicle fuel consumption (2022)

**9.34** Lge/km

### Road traffic fatalities (2021), WHO estimates

SDG 3.6

**11.3** deaths per 100,000 people

**15.6** Regional  
**15.0** Global

### Road traffic fatality cost as percentage of GDP (2021)

**3.20%**

### Premature deaths linked to transport air pollution (2019)

**5.0** deaths per 100,000 people

**3.2** Regional  
**2.3** Global

### Contribution of transport to air pollution (2019)

**12.4%**

## Transport Emission Trends

### Transport GHG emissions (2023)

**152.1**

million tonnes of CO<sub>2</sub> equivalent

**+13.4%**  
(2015 to 2023)

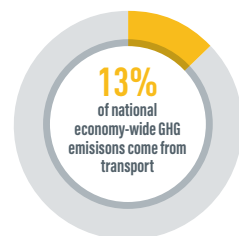
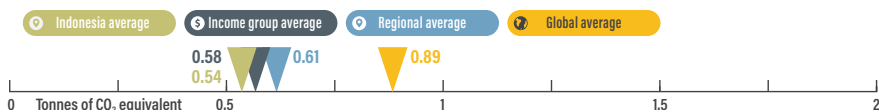
**+1.4%**  
(2022 to 2023)

### Per capita transport GHG emissions (2023)

**0.54**

tonnes of CO<sub>2</sub> equivalent per capita

#### PER CAPITA EMISSION COMPARISON



Transport is the **fourth-largest** GHG-emitting sector in the country in 2023.

## Transport Decarbonisation Pathways

Transport strategy identifies climate change ☒

Long-term strategy submitted to UNFCCC ☒

NDC submitted: 1st and Updated NDC

NDC highlights transport for GHG mitigation ☒

Transport mitigation targets in NDC ☒

Other non-emission related transport targets in NDC ☒

VNR highlights transport ☒ 2021 VNR with transport linkages to SDG 2, SDG 3, SDG 5, SDG 8, SDG 9, SDG 11 and SDG 13

### Transport actions in VNRs

- ▶ Improving transport links
- ▶ Enhancing the maritime sector's infrastructure
- ▶ Expanding access to remote areas
- ▶ Providing alternative multi-modal transport options
- ▶ Developing urban mobility and access to public transport

### Transport actions in NDC

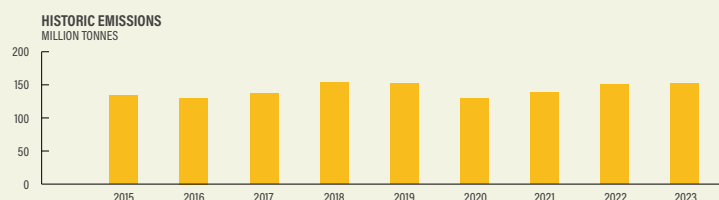
#### Mitigation

- ▶ Biofuels
- ▶ Fuel quality improvements
- ▶ LPG/CNG/LNG

#### Adaptation

- ▶ Adaptation and resilience of transport systems
- ▶ Education and Training
- ▶ Transport Planning

### Transport GHG emissions from 2015 to 2023



## Policy Areas: Indicators and Targets

### Integrated Transport Planning

National urban mobility framework (2024)	✓
Sustainable urban mobility plans (2024)	✓
Number of sustainable urban mobility plans (2024)	1 city
Low emission zones (2024)	2 cities

### Adaptation and Resilience

ND-GAIN Index (2022)	48.55
Vulnerability score for infrastructure (2022)	0.20

### Walking

Walkability Score (2024)	0.40
National walking strategies (2024)	✓ Walking and cycling combined

#### Target

- Create a safe, comfortable, inclusive, and comprehensive walking and cycling space which supports public transport usage.

### Cycling

Cycling infrastructure in capital (2022)	365 km of bicycle lanes
Percent near protected bikeways (2024)	0%
Bike sharing systems (2024)	5
National cycling strategies (2024)	✓ Walking and cycling combined

#### Target

- Create a safe, comfortable, inclusive, and comprehensive walking and cycling space which supports public transport usage.

### Public Transport

Bus rapid transit (2024)	251 km of total length in 1 city
Bus rapid transit daily passenger volume (2024)	46 467 passengers per day
Urban rail (LRT, metro, tram) (2024)	55 km in 2 cities
Proportion of population that has convenient access to public transport (2020)	30.70% <span>SDG 11.2</span>

### Intercity Rail

Rail network (2019)	5 483 km
Rail travel activity (2019)	29 066 million passenger-km
Rail freight activity (2019)	15 573 million ton-km
High-speed rail	—
High-speed rail travel activity	—
National plans for passenger and freight rail expansion (2024)	✓

#### Target

- 10,524 km national railways in 2030 including 3,755 km urban railways  
Railway share to increase to 7-9% for passenger and 11-13% for freight transport

### Road Transport

Total road vehicles in use per 1,000 people (2020)	771
Road vehicle fleet growth (from 2015 to 2020)	26.84%
Rural Access Index (2019)	<span>SDG 9.1</span> 71.6 RAI PST
Diesel prices (2022)	0.46 USD per litre
Gasoline prices (2022)	0.62 USD per litre

### Aviation

Air passengers carried (2021)	33.5 million people
Air freight activity (2021)	772.9 million ton-km
Carbon-accredited airports (2023)	—
of which carbon neutral:	—

### Shipping

Logistics Performance Index (2023)	3
Liner shipping connectivity index (Q4 2024)	32.7
Container port traffic (2020)	14 025 449.0 TEU

### Transport Energy Sources

Biofuel blend overall mandate (2023)	—
Biofuel blend biodiesel mandate (2023)	35.0%
Biofuel blend ethanol mandate (2023)	5.0%
Carbon intensity of electricity (2023)	682.43 gCO <sub>2</sub> /kWh
Renewable energy (biofuels and electricity) share in transport (2022)	12.9% of total transport energy consumption <span>SDG 7.2.1</span>
Biofuels (2022)	12.8% of total transport energy consumption
Electricity (2022)	0.1% of total transport energy consumption
Targeted renewable power share	—

### Vehicle Technologies

Emission standards for LDVs (2024)	Euro 4 and above
CO <sub>2</sub> emissions performance for passenger cars (2024)	—
Targeted CO <sub>2</sub> emissions performance (2024)	No target set
Regulatory environment ranking on used vehicles (2024)	Banned
Electric vehicles stock for passenger cars (2024)	78 000 vehicles
Share of electric vehicles in car sales (2024)	7.3 %
ICE phase-out targets	✗
Electric vehicles stock for vans (2024)	—
Electric vehicles stock for trucks (2024)	1 vehicle

just one truck?

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#### List of acronyms

GDP	Gross-domestic product
HDV	Heavy-duty vehicle
ICE	Internal combustion engine
kWh	Kilowatt-hour
LDV	Light-duty vehicle
LRT	Light-rail transit
NDC	Nationally determined contribution
PST	Primary, secondary or tertiary roads

TEU	Twenty-foot Equivalent Unit
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VNR	Voluntary national review of the Sustainable Development Goals
WLTP	Worldwide harmonised light vehicles test procedure

