

Transport and Climate Profile Indonesia



Credits: unsplash

Developed by:



Developed with the support of:



Introduction to the profiles: These “Transport and Climate Profiles” are part of the research work entitled “Transport NDC Gap Analysis for Low- and Middle-Income Countries (LMICs) in Asia and the Pacific” which is being implemented and builds on the work of the Asian Transport Outlook (ATO), a project initiated and supported by the Asian Development Bank (ADB). ATO is also being supported by the Asian Infrastructure Investment Bank (AIIB). The research is being co-funded by UKAID through the UK Foreign, Commonwealth and Development Office (FCDO) under the High-Volume Transport (HVT) Applied Research Program managed by DT Global International Development UK LTD (DT Global). The research is being implemented under HVT057 (Transport Decarbonisation Index - <https://transport-links.com/funded-projects/transport-decarbonisation-index-tdi>) whose lead research supplier is the Partnership on Sustainable, Low Carbon Transport. These profiles are designed to complement the main report of the research entitled *Bridging the Gap: A Deep Dive into NDCs and Transport Policy Landscapes in Low- and Middle-Income Asian Economies*. While intended as supplementary materials, they also function as standalone knowledge products. All the related knowledge products will be made available through <https://asiantransportoutlook.com/analytical-outputs/ndc-analysis> and <https://asiantransportoutlook.com/analytical-outputs/transportclimateprofiles/>

The Asian Transport Outlook (ATO) is an initiative that aims at strengthening the knowledge base on transport in the Asia-Pacific region. It supports the planning and delivery of transport-related assistance in Asia, supports wider transport policy making, and helps track global and regional processes related to sustainable development. For example, ATO is the monitoring mechanism for the Aichi 2030 Declaration on Environmentally Sustainable Transport – Making Transport in Asia Sustainable (2021-2030) which was adopted by more than 20 countries in Asia-Pacific through the High Level Environmentally Sustainable Transport Forum (EST) that is organized by the United Nations Centre for Regional Development (UNCRD)-DSDG/UN DESA, along with its partners. For more information, visit asiantransportoutlook.com

This profile is structured into two main sections: Data Insights and Policy Insights. Under “Data Insights”, individual components at the intersection of transport and climate change are detailed. Similarly, the “Policy Insights” section outlines various policy documents, measures, and targets.

Disclaimer: The ATO project collects, collates, organizes, and presents transport-relevant data from publicly available official sources and reputable, peer-reviewed secondary sources. Users should be aware that: the ATO does not generate any primary data; the source data may contain inconsistencies or gaps; despite rigorous quality control measures, the ATO cannot guarantee the absolute accuracy, completeness, or suitability of the data for specific purposes.

Users of the data and derived knowledge products are strongly advised to: independently verify and validate all data before use; exercise professional judgment in data interpretation and application; and acknowledge that any reliance on ATO data is at the user’s own risk. Users should also note that data may be subject to updates or revisions. It is the user’s responsibility to ensure they are working with the most current version of the data available.

The ATO, and all affiliated organizations: make no representations or warranties, express or implied, regarding the data’s accuracy, completeness, or fitness for any particular purpose; and disclaim all liability for any direct, indirect, incidental, consequential, or special damages arising from the use of or reliance upon ATO data or derived products. The views expressed in this knowledge product do not necessarily reflect the official policies of any of the organisations mentioned above.

The designations, presentations, and materials in this publication, including citations, maps, and bibliography, do not express or imply any opinion on the part of the ATO or involved organizations regarding the legal status of any country, territory, city, area, or its authorities, or concerning the delimitation of frontiers or boundaries. By using the data or derived products, users agree to indemnify and hold harmless the ATO, its supporting organizations, and all affiliated organizations from any claims, losses, or damages resulting from such use.

Suggested Citation:

Asian Transport Outlook (ATO). (2024). Transport and Climate Profile: Indonesia, <https://asiantransportoutlook.com/analytical-outputs/countryprofiles/>

For any questions or information related to this publication, please write to asiantransportoutlook@gmail.com.

Photographs used are copyright free.

Transport and Climate Profile: Indonesia

2024

The publication is available at <https://asiantransportoutlook.com/analyticaloutputs/countryprofiles/>

Contents

Data Insights

- I Transport and Climate Change
- II Transport Energy Consumption
- III Adaptation and Resilience
- IV Other Externalities
- V Vehicle Fleet
- VI Urban Transport
- VII Transport Investments

Policy Insights

- VIII Transport and Climate Policy Documents
- IX Representation of Transport in Key Climate Policy Documents
- X Distribution of Transport and Climate Policy Measures in Policy Documents
- XI National Policy Priorities on Transport
- XII Direct GHG Targets
- XIII Indirect Transport Climate Change Targets
- XIV Transport and Climate Policy Measures

Executive Summary

Indonesia, a lower-middle-income Southeast Asian country, faces significant challenges in balancing transport sector growth with climate change mitigation and adaptation goals.

CO2 Emissions:

- Indonesia's transport sector is a major source of greenhouse gas emissions, with CO2 emissions reaching 149,538 thousand tonnes in 2023, accounting for 22% of the country's total emissions. Although emissions growth has moderated since the adoption of the Paris Agreement and SDGs to 2% annually, the sector's historical growth rates and the dominance of road transport, contributing 90% of transport emissions and 19% of economy-wide emissions in 2022, underline the need for decarbonization efforts. While the COVID-19 pandemic led to a temporary reduction in emissions, Indonesia's transport sector CO2 emissions intensity, at 34.5 gCO2 per USD in 2023, remains higher than some of its peers, highlighting the ongoing challenge of balancing economic growth with environmental sustainability.

Energy Consumption:

- Trends: Transport energy consumption has decreased since 2010 (-1% annually), but energy intensity remains high compared to regional peers.
- Fuel Mix: While the share of oil products in road transport has decreased, biofuels and electricity adoption remains low.
- Grid Emissions: Grid emission factor has slightly improved but remains high.

Adaptation and Resilience:

- Potential Losses: Indonesia faces significant potential annual losses due to transport infrastructure hazards.
- Vulnerability: Road network vulnerability is high, and most of the population resides in low-elevation coastal zones.

Vehicle Fleet:

- Growth: Vehicle numbers have grown rapidly, with a high share of two-wheelers.
- Electric Vehicle Imports: While electric vehicle imports have increased, the share remains low compared to the regional average.
- E-mobility Readiness: Indonesia scores well on e-mobility readiness but faces challenges in technology access and financial instruments.

Urban Transport:

- Rapid Transit Expansion: While rapid transit has expanded, it remains limited compared to regional averages.
- Public Transport Access: Public transport access is insufficient for most of the urban population.

Investments:

- ODA and PPP: Indonesia has received significant ODA and PPP investments in transport, mainly focused on rail and ports.

Policy:

- In Indonesia, a total of 29 documents related to transport have been identified, with 8 specifically addressing climate change. Among the remaining documents, 20 contain measures with climate change mitigation or adaptation components. The latest Nationally Determined Contribution (NDC), updated in 2021, sets an economy-wide emissions target, aiming for an unconditional reduction of 29% and a conditional reduction of up to 41% compared to the business-as-usual scenario by 2030. However, the NDC lacks specific targets for net zero emissions, carbon neutrality, or transport-related emissions, although it does include targets for renewable energy. Furthermore, Indonesia's Long-term Strategy for Low Carbon and Climate Resilience 2050, also adopted in 2021, does not specify economy-wide, net-zero, or transport-specific emissions targets either.
- Policy Landscape: A variety of policy documents exist, with a focus on renewable energy, biofuels, and public transport. However, adaptation and resilience measures are limited.

NDC Gaps and Policy Opportunities:

- NDC Gaps: Lack of specific transport sector emission targets and net-zero goals. A significant gap exists between Indonesia's broader transport policy documents and its Nationally Determined Contribution (NDC) and Long-Term Strategy (LTS). While the policy documents outline diverse targets for various aspects of transport, including biofuels, infrastructure improvements, public transport, and renewable energy, only 12% of these measures are reflected in the NDC or LTS. This disconnect highlights a potential misalignment between the country's overarching climate goals and its specific actions in the transport sector. Furthermore, the focus on climate change mitigation (82%) significantly outweighs adaptation and resilience measures (24%), leaving Indonesia vulnerable to the adverse impacts of climate change on its transport infrastructure. This analysis underscores the need for better integration and coordination between transport policies and climate change strategies to ensure a comprehensive and effective response to the challenges posed by climate change in the transport sector.

Policy Opportunities:

- Strengthen adaptation and resilience measures.
- Accelerate the adoption of electric vehicles and biofuels.
- Improve public transport access and expand rapid transit systems.
- Low-carbon Shipping remains a key opportunity.
- Develop specific transport sector emission reduction targets aligned with long-term climate goals.
- Significant variations exist across regions and cities, requiring tailored policy approaches.
- Policy development should consider the distributional impacts on different social groups.

Indonesia's transport sector presents both challenges and opportunities in the context of climate change. Addressing the identified gaps and implementing comprehensive policies will be crucial to achieving a sustainable and resilient transport system.

Data Insights Indonesia



Indonesia

Transport and Climate Profile

Population (2024)
279.8 million

Urban population
59%

Below 18 y.o.
31%

Population density
147 persons per sqkm

Rural population
41%

Above 60 y.o.
12%

Subregion
(1) **South East Asia**

Gross domestic product
(1) (GDP PPP, 2023)
4.33 trillion USD

(1) Domestic consumption per capita, tonnes (2024)
8.2 tonnes

(1,2) *Domestic consumption is the total amount of materials directly used in the economy (used domestic extraction plus imports), minus the materials that are exported.*

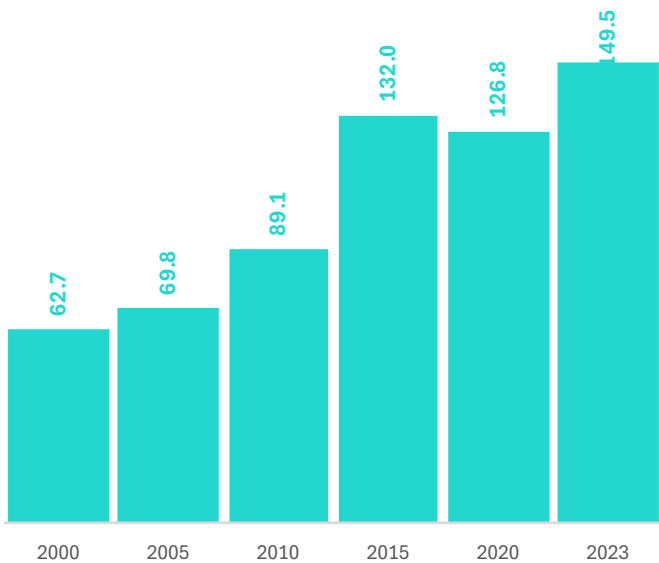
Income class
Low and lower middle income

GDP per capita (PPP, 2023)
15,613 USD (1,2)
(2)

(3)

I. Transport and Climate Change

Transport fossil CO2 emissions, million tonnes



In 2010, transport contributed 20% of total fossil CO2 emissions. By 2023, transport contributed 22%.

Share of transport CO2 emissions by mode (2022)

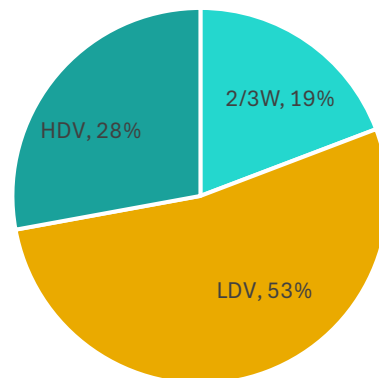
(4) Road	89.7%	Rail	0.0%	(4)
Navigation	5.5%	Aviation	4.8%	(4)

Navigation and aviation only includes domestic transportation

Between 2000-2015, road transport contributed 89% in transport fossil CO2 emissions. Between 2016-2022, road transport contributed 89%.

Road transport CO2 emissions (well-to-wheel), share by mode (2022)

(5)



Transport CO2 emissions intensity (2023)

35 gCO₂ per USD

(2,4)

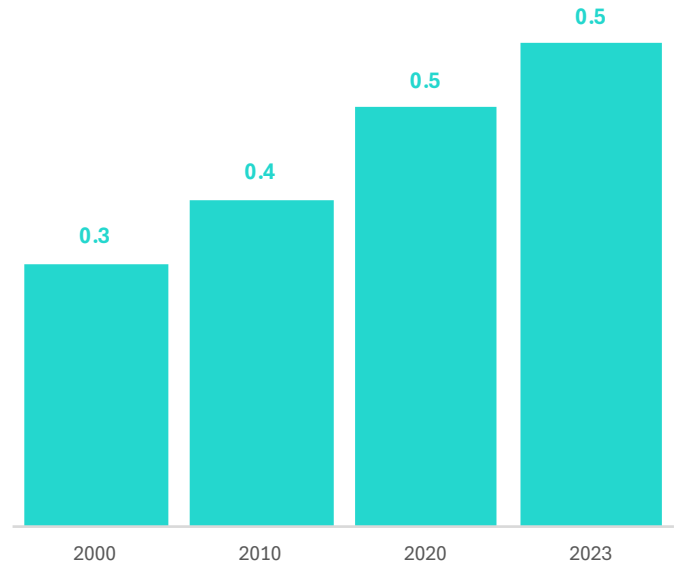
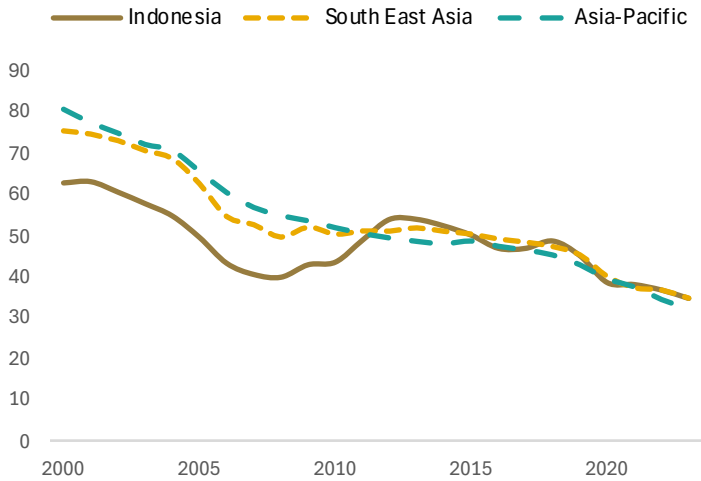
Asia-Pacific average is 32 gCO₂ per USD

Transport fossil CO2 emissions per capita, tonnes

(1,4)

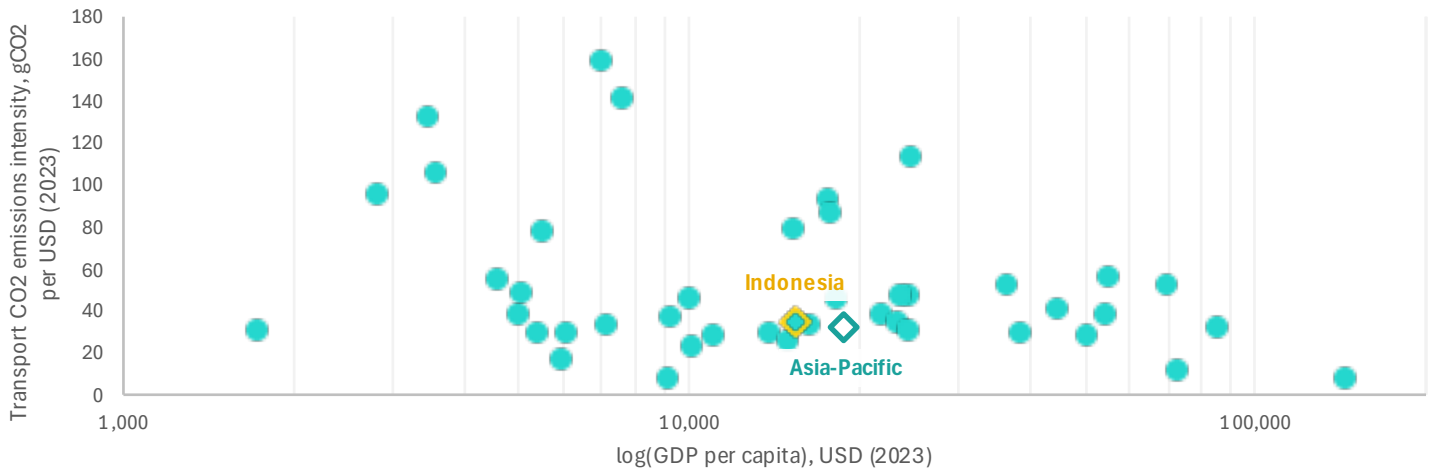
Transport CO2 emissions intensity trend, gCO₂ per USD

(2,4)



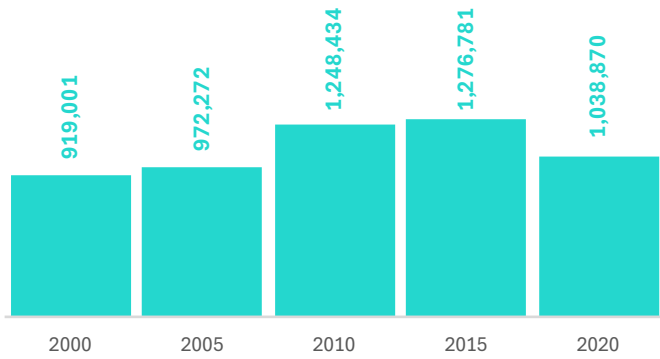
Transport CO2 emissions intensity in Asia-Pacific, gCO₂ per USD

(2,4)



II. Transport Energy Consumption

Transport energy consumption, TJ

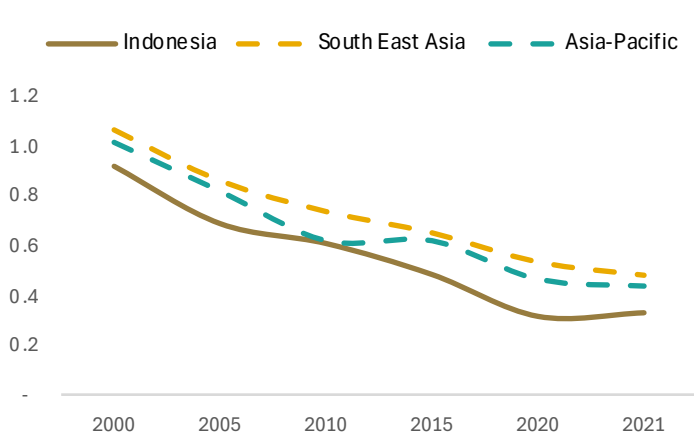


Transport energy intensity (2021)

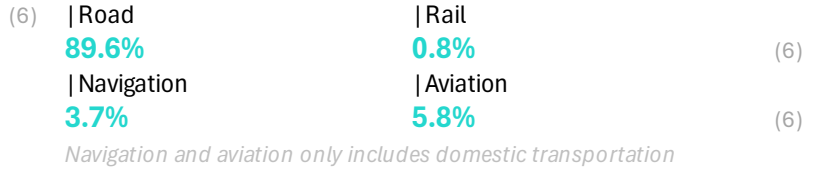
0.3 MJ per USD

Asia-Pacific average is 0.4 MJ per USD

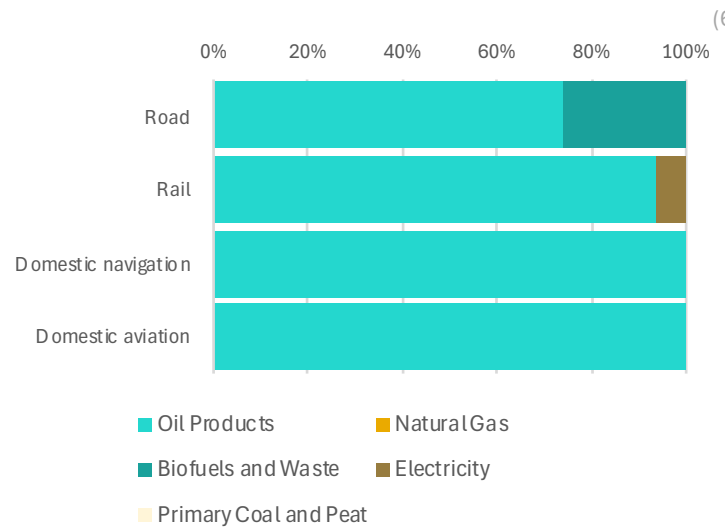
Transport energy intensity trend, MJ per USD



Share of transport energy consumption by mode (2021)



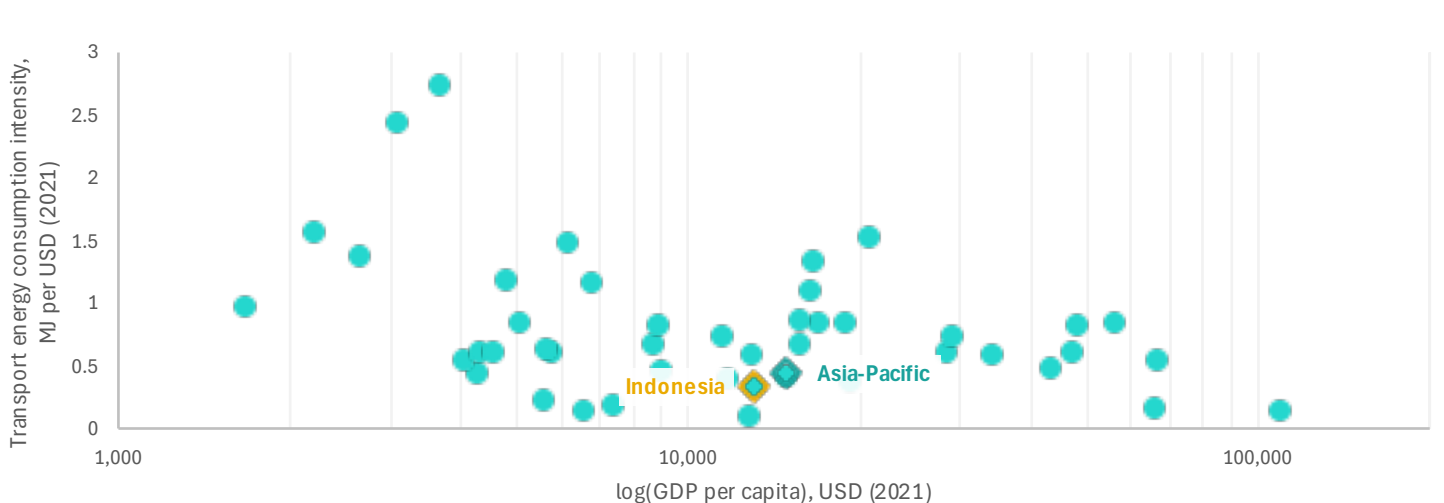
Share of transport energy consumption by source (2021)



Share of transport in renewable energy consumption



Transport energy intensity in Asia-Pacific, MJ per USD

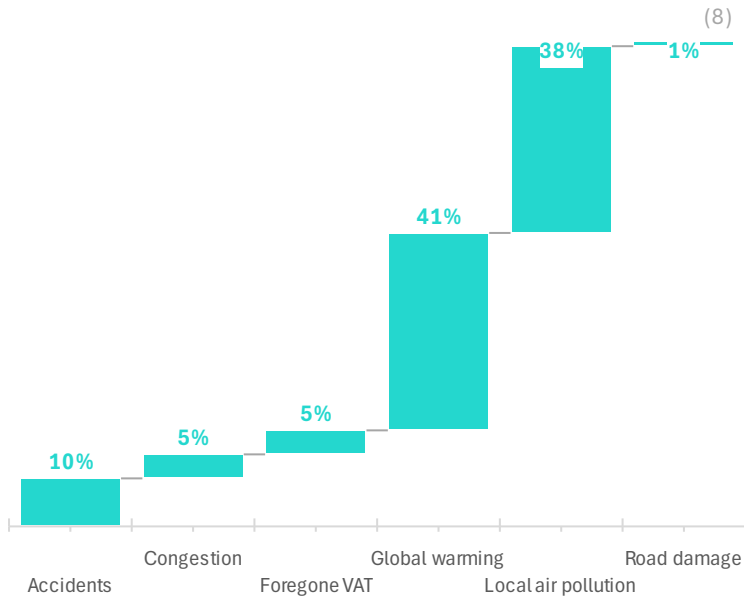


Transport fossil fuel subsidies, cumulative (2010-2022)

201.13 billion USD

32.3% of Asia-Pacific total

Estimated externalities due to fossil fuel subsidies



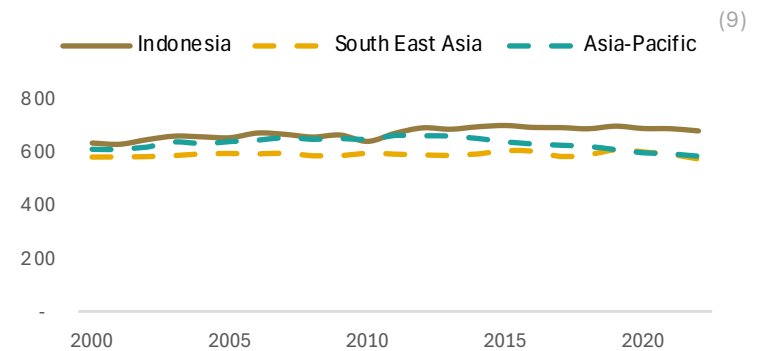
Data includes all sectors and all fuel types

Grid emission factor (2022)

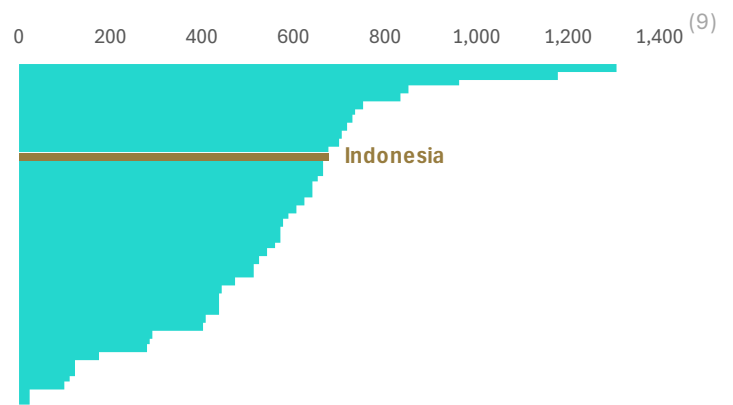
(7) **676 gCO₂ per kWh**

(9)

Grid emission factor trend, gCO₂ per kWh



Grid emission factors in Asia-Pacific, gCO₂ per kWh



III. Adaptation and Resilience

Average annual losses to transport infrastructure due to hazards (2023)

761 million USD

Road	Rail
95%	2%
Ports	Airports
1%	2%

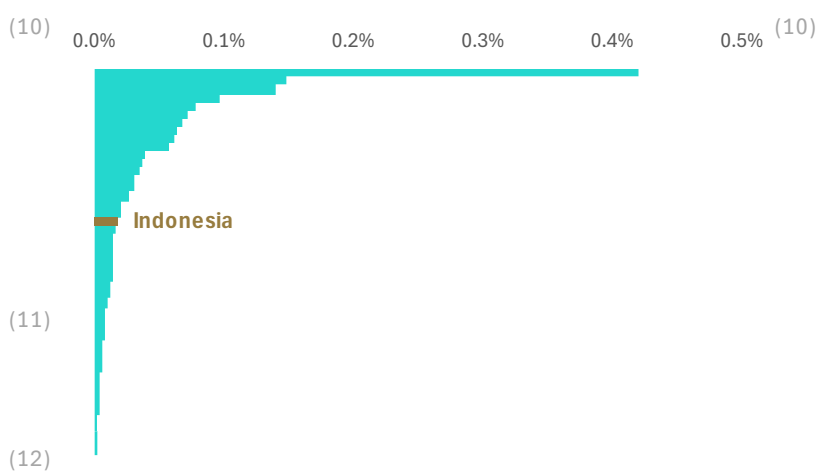
National road vulnerability index ranking (2023)

102nd out of 208 countries

Share of population in low elevated coastal zones (2018)

7%

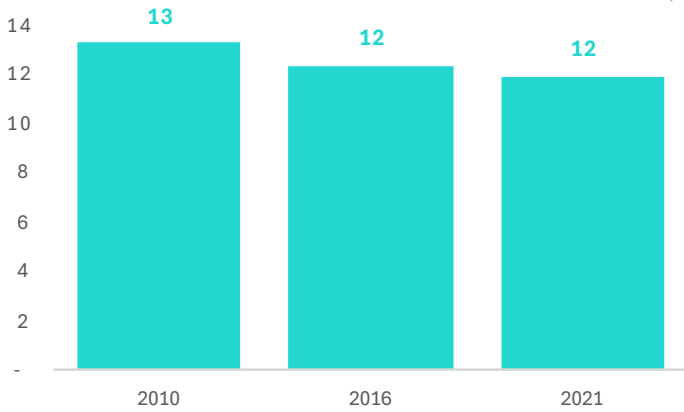
Average annual losses to transport infrastructure due to hazards, as a share of GDP, in Asia-Pacific (2023)



IV. Other Externalities

Road crash fatalities (2021)
31.1 thousand deaths

Road crash fatality rate per 100 thousand population

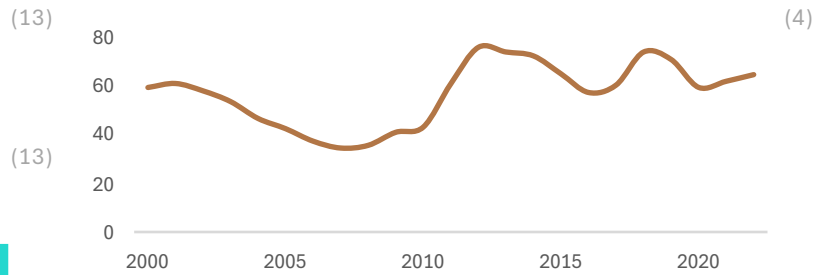


Asia-Pacific average is 16 fatalities per 100 thousand population

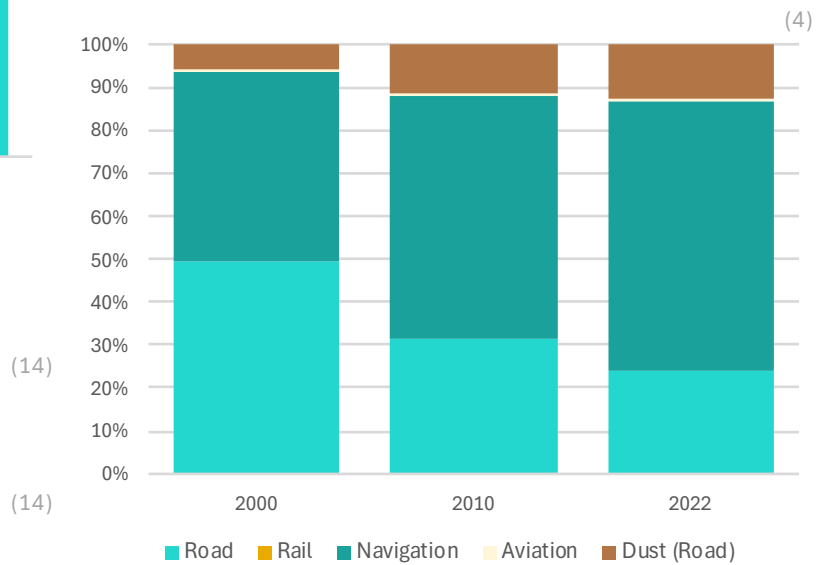
Rural access index (2023)
73%

Rural population without access to all-season roads (2023)
31.5 million

Transport PM 2.5 emissions trend, thousand tonnes



Transport PM 2.5 emissions share by source



V. Vehicle Fleet

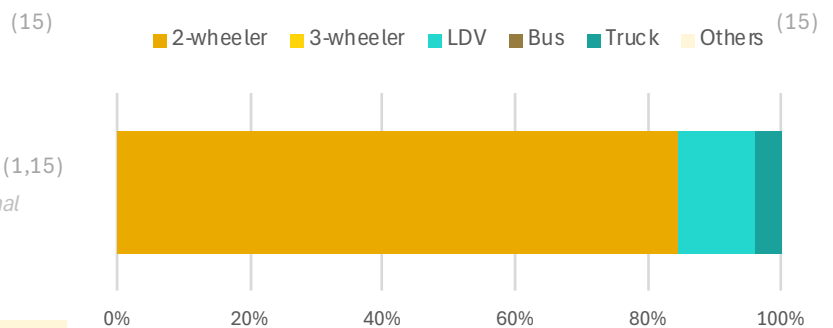
Road vehicles (2023)
157.1 million vehicles

Road vehicle motorization rate (2023)
566 vehicles per thousand population

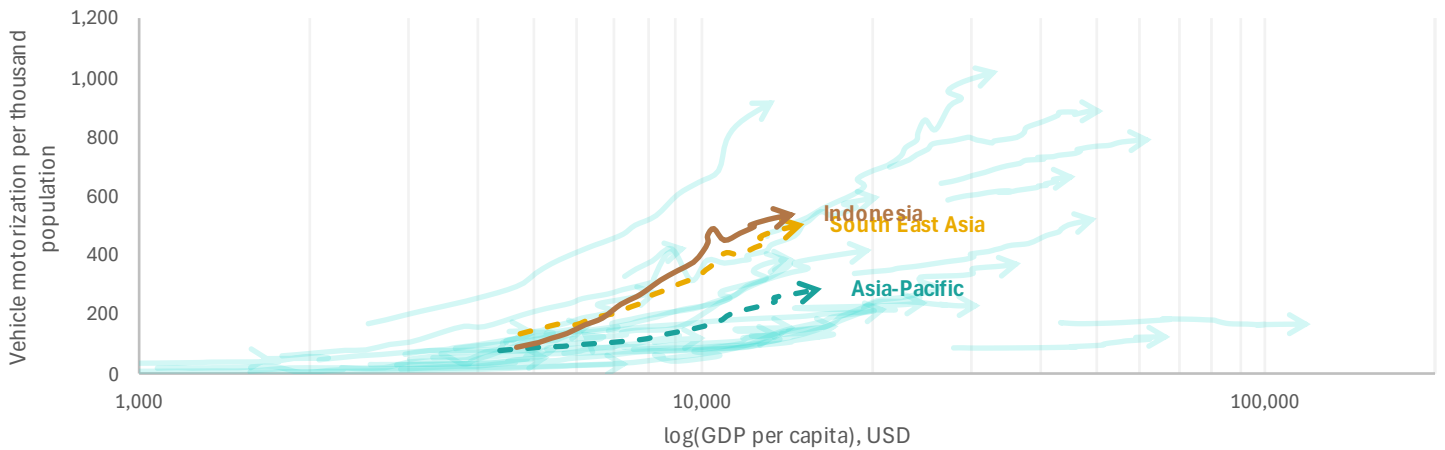
Road vehicles include 2- and 3-wheelers, LDVs, buses and other informal public transport, trucks, and other unclassified types

In 2000, Indonesia had 89 vehicles per thousand population. By 2023, this has increased to 566 compared with Asia-Pacific average of 577 in 2022.

Share of vehicles by type



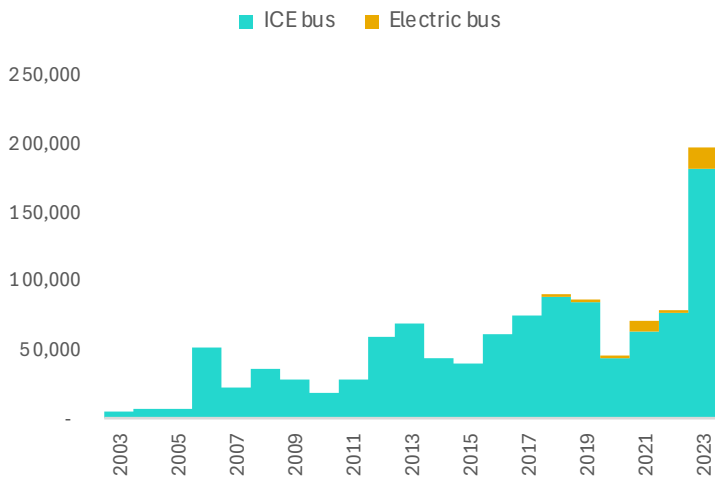
Vehicle motorization per thousand population in Asia-Pacific (2000-2022)



Bus import value (2015-2023)

710.8 million USD

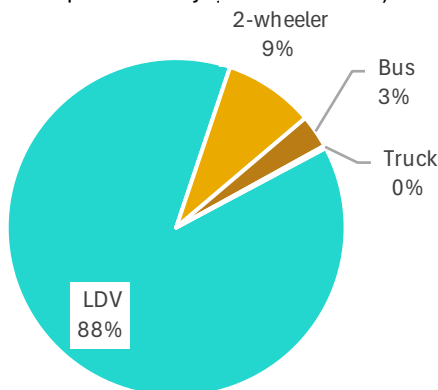
Bus import value, thousand USD



Electric road vehicle import value (2017-2023)

894 million USD

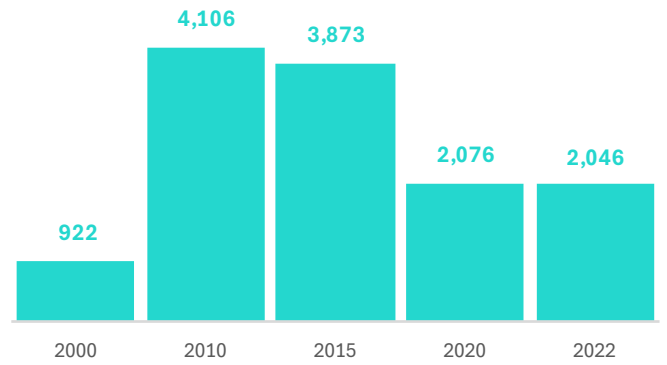
Electric road vehicle import share by type (2017-2023)



Bus vehicle production, units

(16)

(16)



(17)

E-mobility Readiness Index (2024)

| Technology & Market

22/25

| Energy

20/25

| Overall

86/100

| Policy

20/25

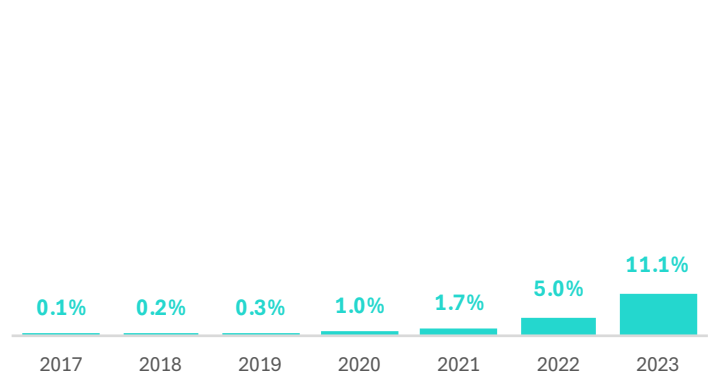
| Financial

24/25

(18)

Electric road vehicle share in total road vehicle import value trend

(16)



VI. Urban Transport

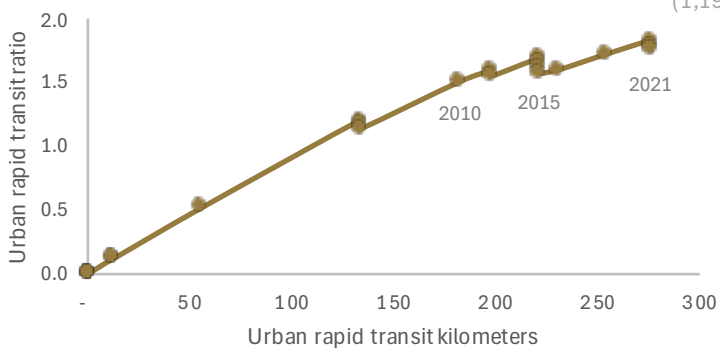
Urban rapid transit length (2021)

| BRT **231 kilometers**
 | LRT **6 kilometers**
 | Metro **39 kilometers**

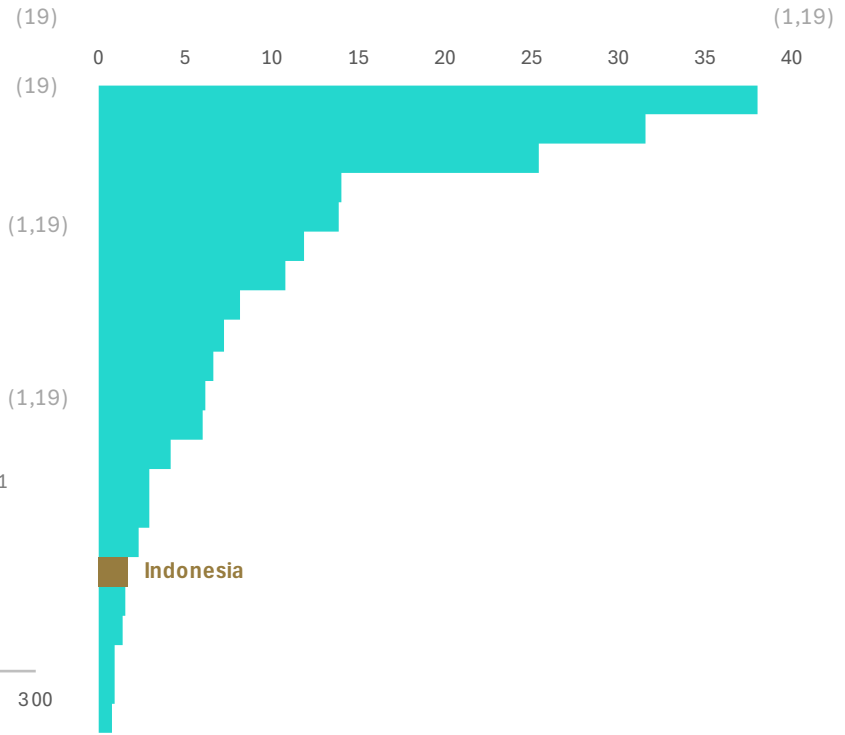
Urban rapid transit ratio (2021)

1.8 kilometers per million urban population

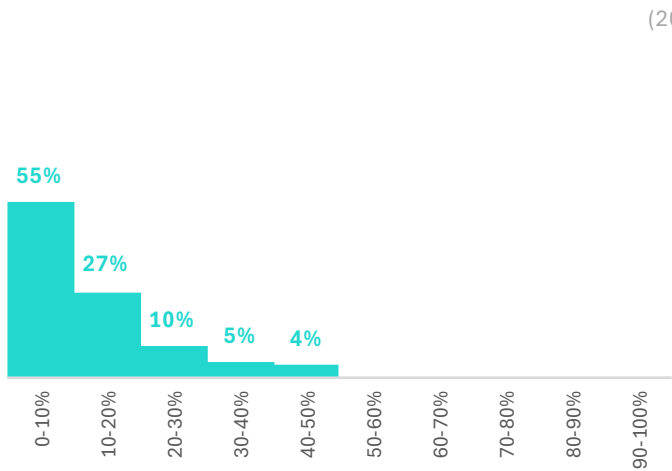
Urban rapid transit ratio, kilometers per million urban population (2000-2021)



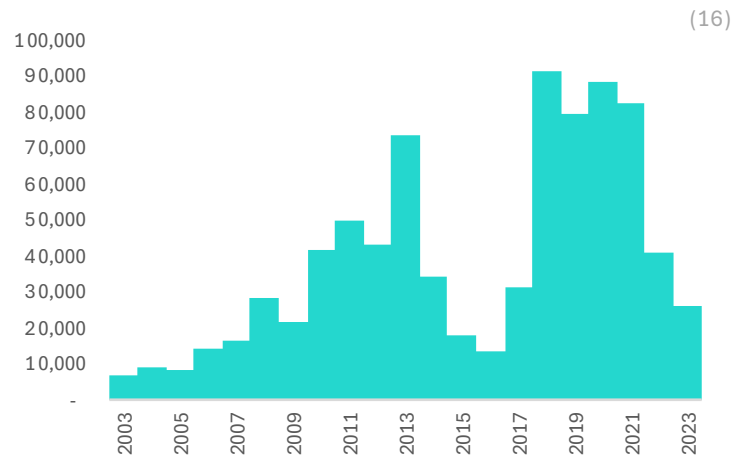
Urban rapid transit ratio in Asia- Pacific, kilometers per million urban population (2021)



Share of cities by level of access to public transport (out of 104 cities)



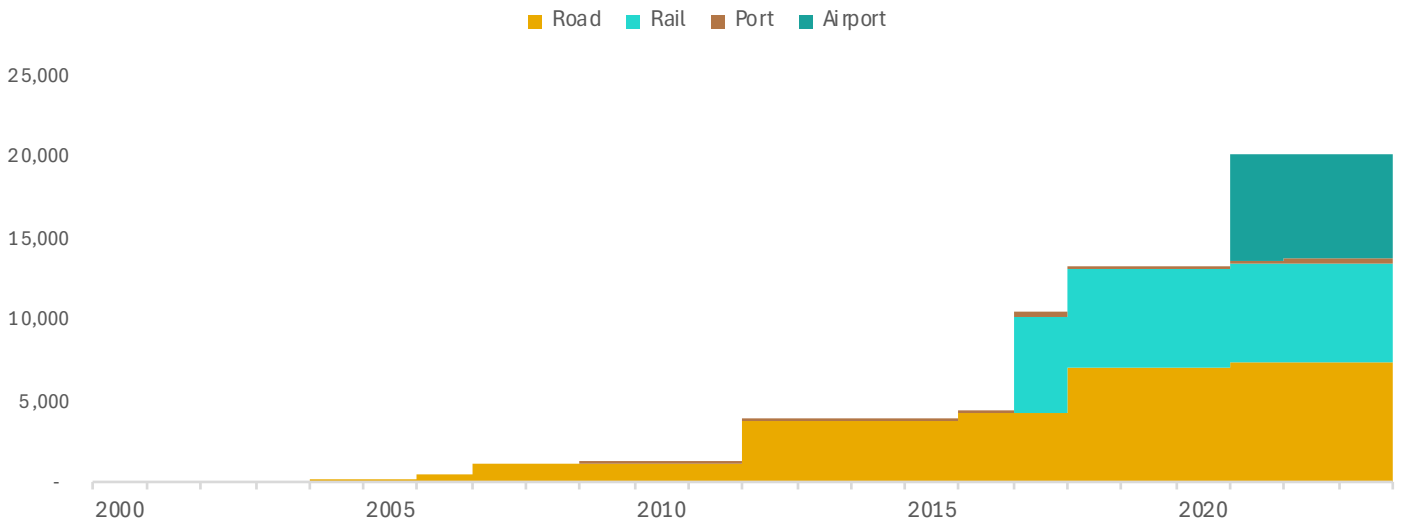
Bicycle import value, thousand USD



VII. Transport Investments

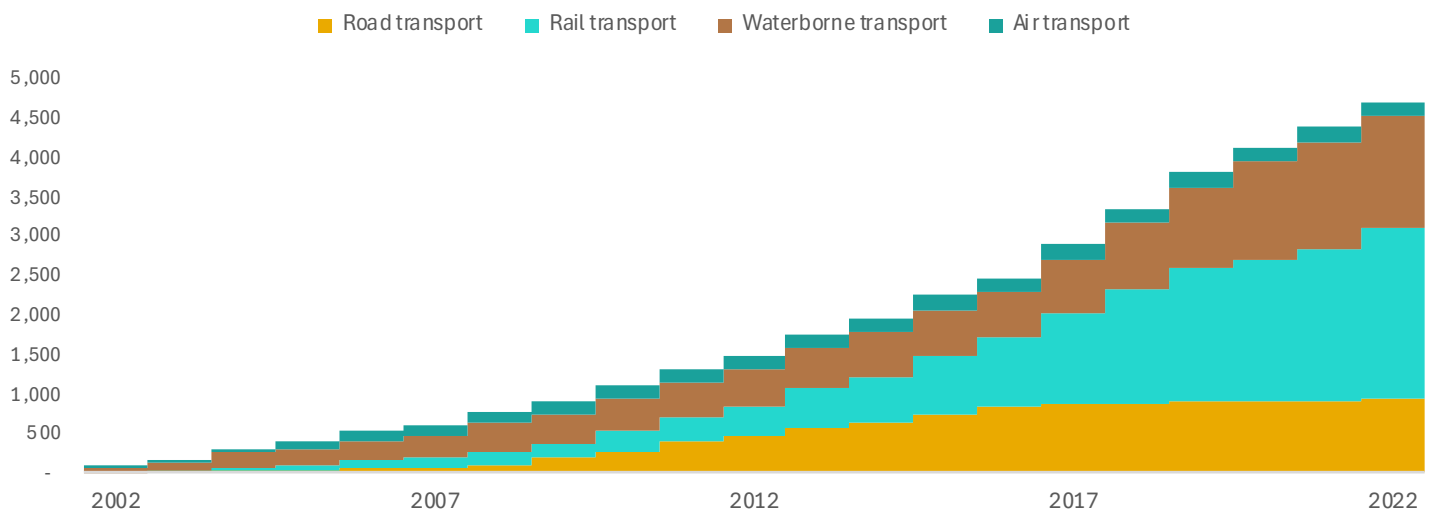
Public-private partnership investments in the transport sector, million USD

(21)

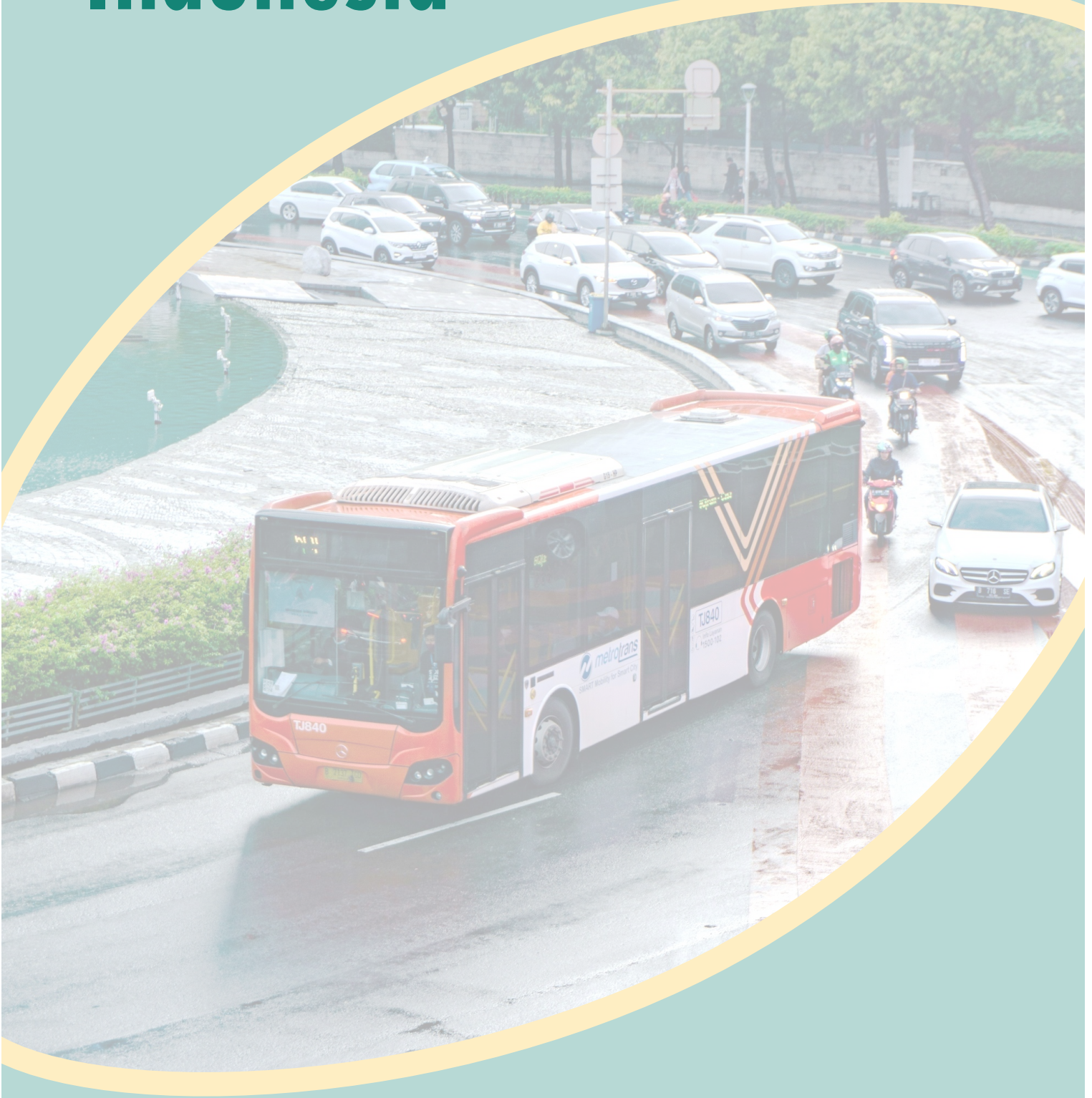


Official development assistance in the transport sector, million USD

(22)



Policy Insights Indonesia



VIII. Transport and Climate Policy Documents

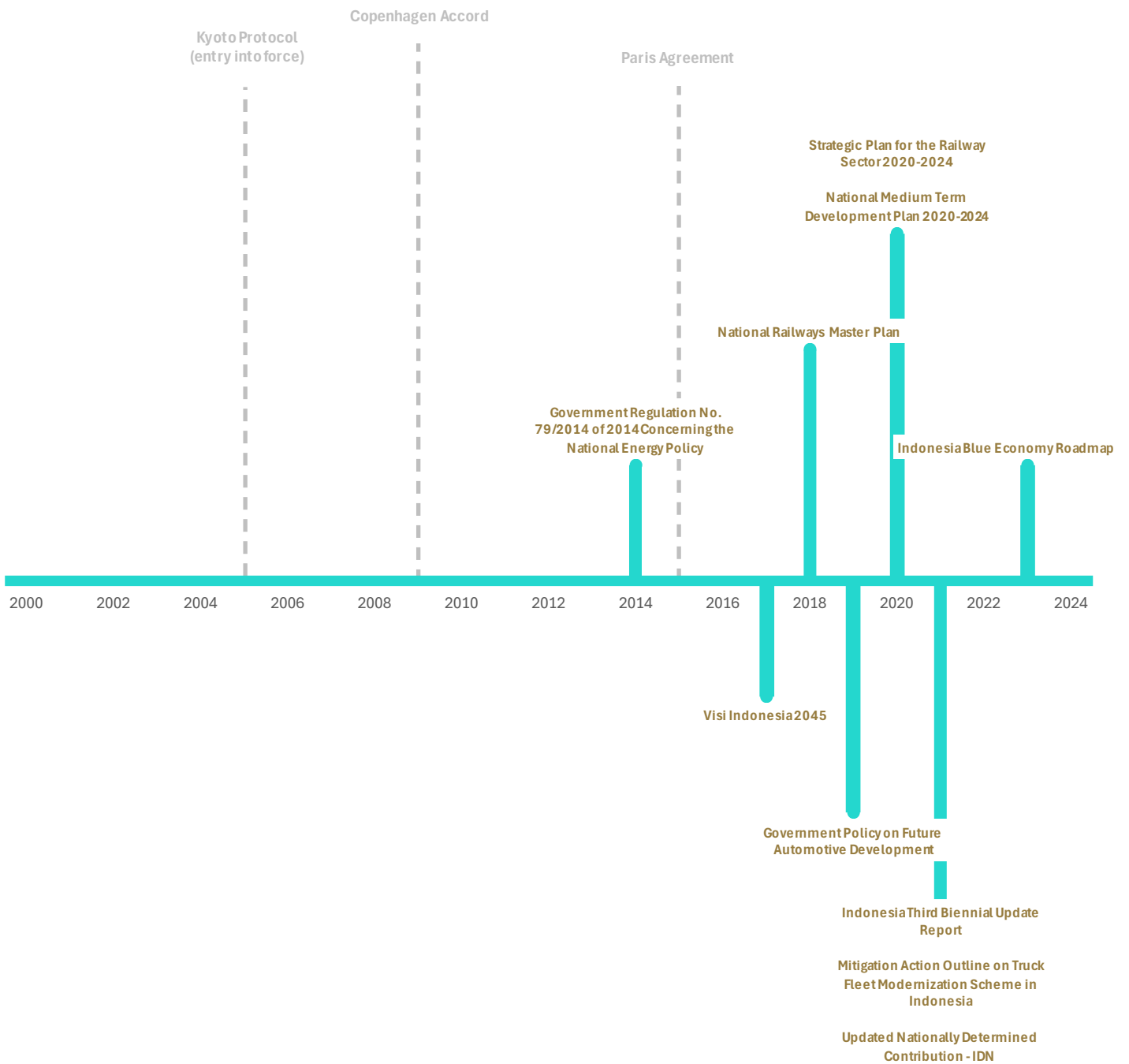
Transport-related policy documents in Indonesia

Selection made based on the number of climate change mitigation and adaptation policy measures

Nationally Determined Contributions of Indonesia

2016: Intended Nationally Determined Contribution - IDN

2021: Updated Nationally Determined Contribution - IDN



IX. Representation of Transport in Key Climate Policy Documents

Nationally Determined Contributions

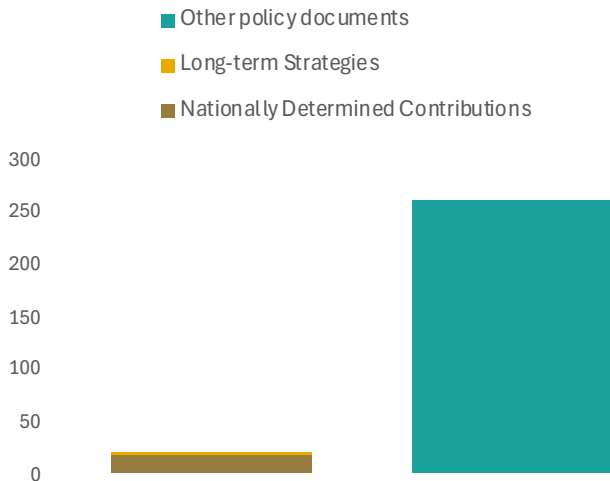
		Road transport	Rail transport	Domestic navigation	Domestic aviation	Urban transport
<i>Updated Nationally Determined Contribution - IDN (adopted in 2021)</i>	Mitigation measures	Yes	Yes	Yes	Yes	
	Mitigation targets					
	Adaptation measures					
	Adaptation targets					

Long-term Strategies

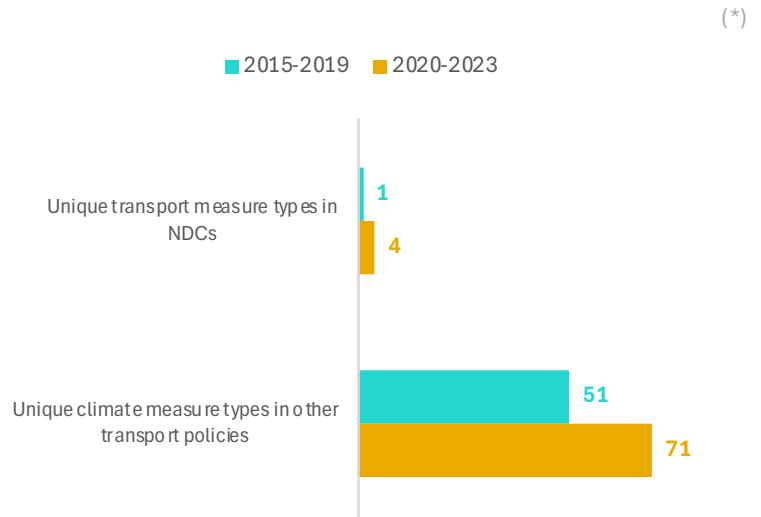
		Road transport	Rail transport	Domestic navigation	Domestic aviation	Urban transport
<i>Indonesia Long-Term Strategy for Low Carbon and Climate Resilience 2050 (adopted in 2021)</i>	Mitigation measures	Yes				
	Mitigation targets					
	Adaptation measures					
	Adaptation targets					

X. Distribution of Transport and Climate Policy Measures in Policy Documents

Number of policy measures by source



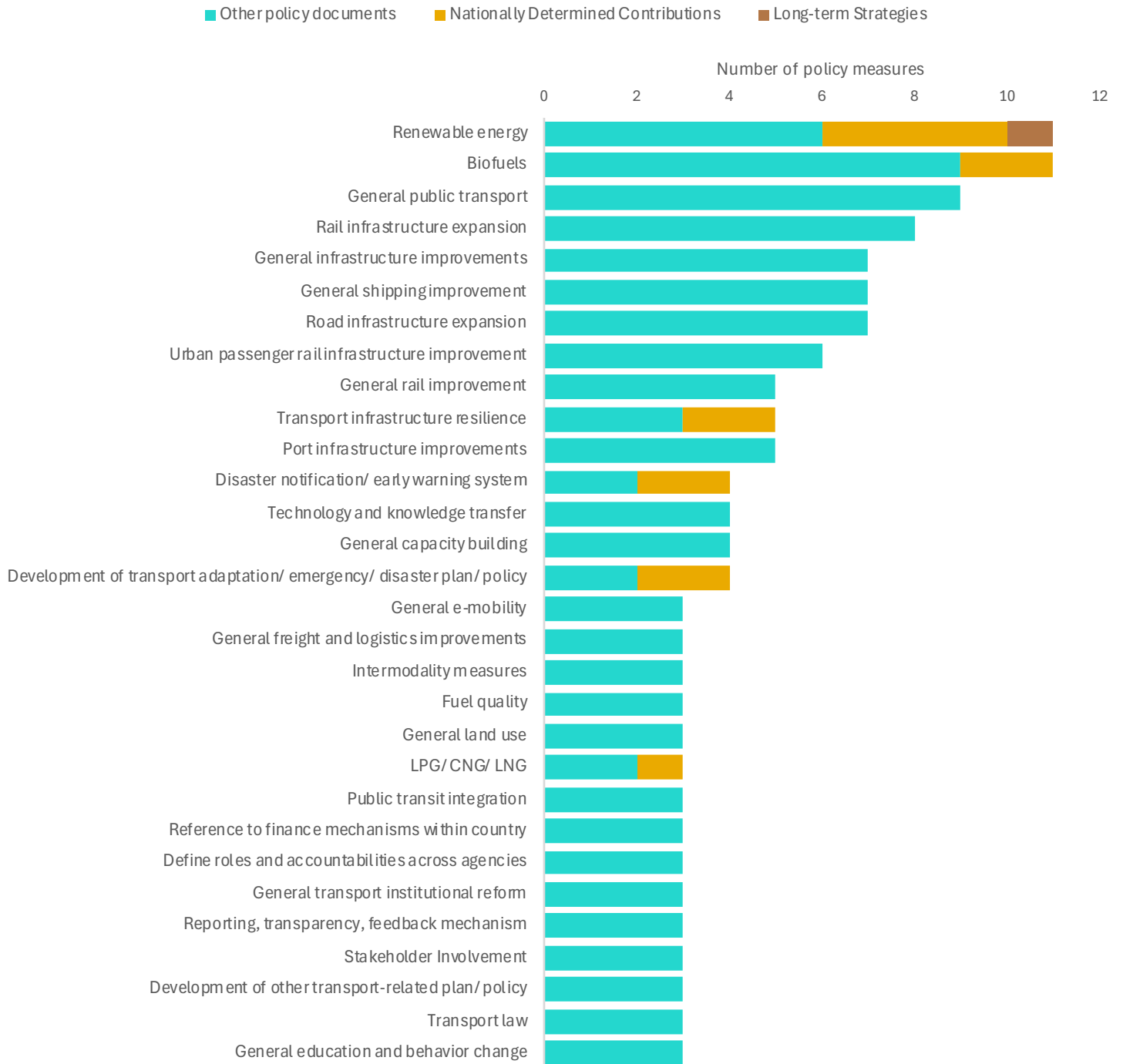
Integration of climate ambition, unique number of policy measures in (*) NDCs and other transport policies



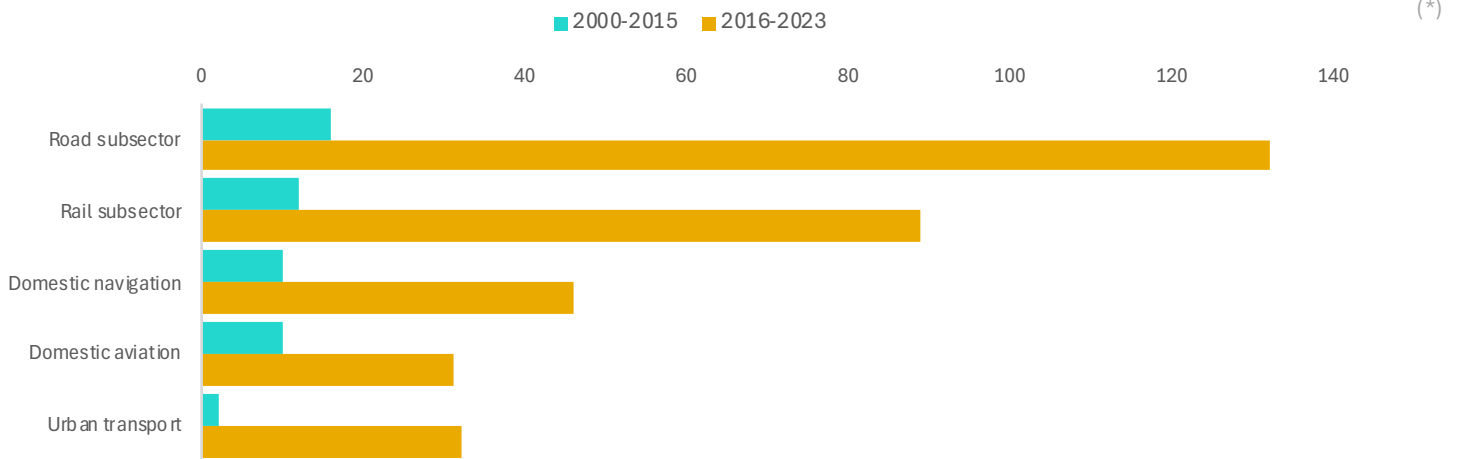
XI. National Policy Priorities on Transport

Priority policy measures on climate change mitigation and adaptation in transport (top 30)

(*)



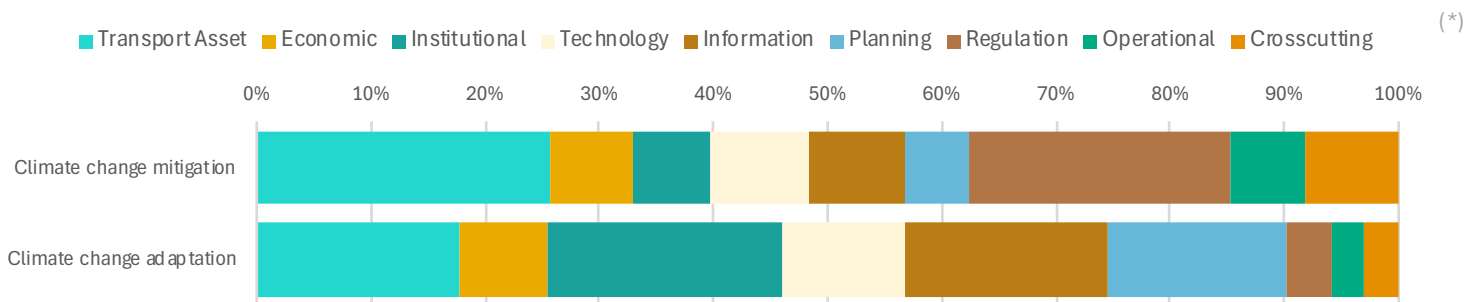
Number of climate change policy measures by subsectors



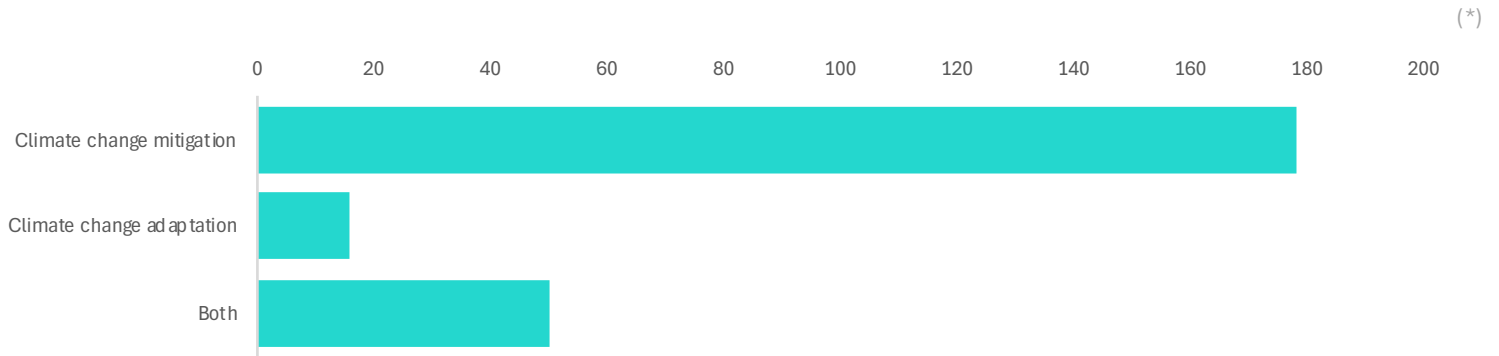
Number of climate change policy measures by passenger vs. freight



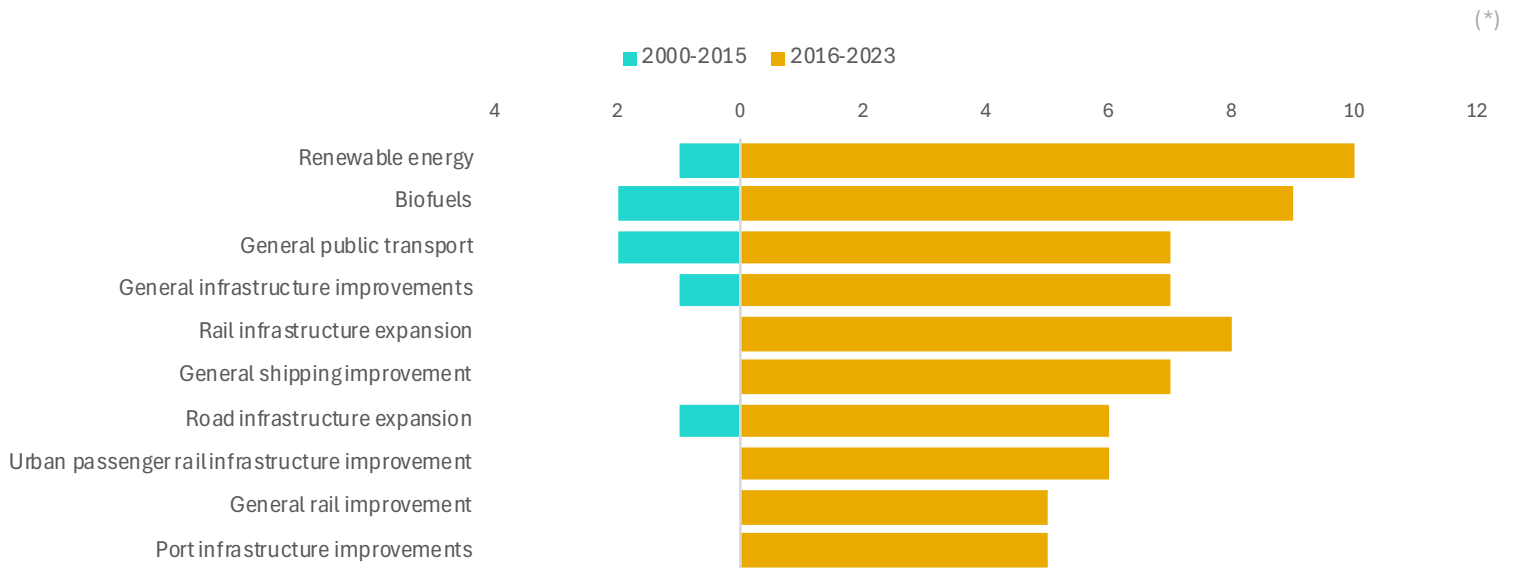
Transport-related climate change policy measures by framework



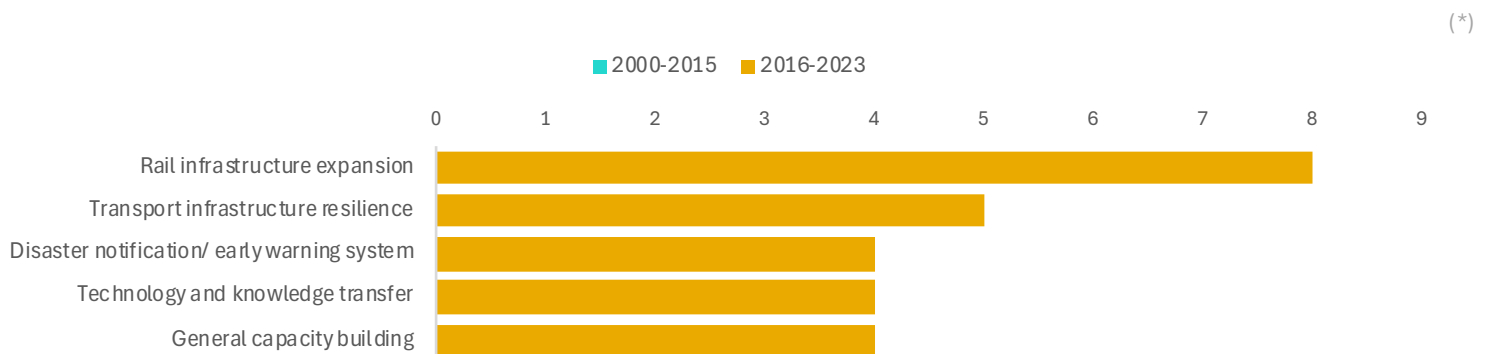
Number of climate change mitigation vs. climate change adaptation policy measures



Climate change mitigation top 10 typology, number of policy measures



Climate change adaptation top 5 typology, number of policy measures



XII. Direct GHG Targets

This table contains transport-relevant (e.g. economy-wide; sector-specific) GHG emissions targets as explicitly mentioned in the policy documents of Indonesia

Document	Year published	Target	Target year
Economy-wide emissions			
Intended Nationally Determined Contribution - IDN	2016	Indonesia has committed to reduce unconditionally 29% of its greenhouse gasses emissions against the business as usual scenario by the year of 2030. The BAU scenario is projected approximately 2,869 GtCO ₂ e in 2030 which is updated from the BAU scenario on the INDC due to current condition on energy policy development in particular in coal fired power plant. Indonesia could increase its contribution up to 41% reduction of emissions by 2030, subject to availability of international support for finance, technology transfer and development and capacity building.	2030
Updated Nationally Determined Contribution - IDN	2021	Based on the country's emissions level assessment in Third National Communication (TNC), Indonesia has set unconditional reduction target of 29% and conditional reduction target up to 41% of the business as usual scenario by 2030.	2030
Indonesia Third Biennial Update Report	2021	Indonesia in its NDC commits to reduce the GHG emissions with unconditional target of 29% and conditional target of up to 41% from the BAU emission by 2030.	2030
Visi Indonesia 2045	2017	Emission reduction will continue by 34 - 41 percent from the base scenario in 2045 through developing NRE, protecting forests and peatlands, increasing land productivity, and integrated waste management.	2045

Net zero, carbon neutrality, and other long-term climate action

Transport GHG emission

XIII. Indirect Transport Climate Change Targets

This table shows non-GHG targets as specified in the policy documents in Indonesia which indirectly benefit climate change mitigation and adaptation in the transport sector

Document	Year published	Target	Target year
Renewable energy			
Intended Nationally Determined Contribution - IDN	2016	new and renewable energy at least 23% in 2025 and at least 31% in 2050	2025
Intended Nationally Determined Contribution - IDN	2016	new and renewable energy at least 23% in 2025 and at least 31% in 2050	2050
Updated Nationally Determined Contribution - IDN	2021	new and renewable energy at least 23% in 2025 and at least 31% in 2050;	2025
Updated Nationally Determined Contribution - IDN	2021	new and renewable energy at least 23% in 2025 and at least 31% in 2050;	2050
Indonesia Blue Economy Roadmap	2023	increase renewable energy share from 5 percent in 2015 to 30 percent in 2045	2045
Indonesia Third Biennial Update Report	2021	New and renewable energy is expected to reach at least 23% in 2025 and 31% in 2050	2050
Biofuels			
Indonesia's Low Carbon Development	2017	Increase the amount of biofuel use in Transport	2050
Indonesia's Low Carbon Development	2017	Biodiesel blend = 30% Ethanol blend = 20% (National General Energy Plan (RUEN))	2050
Supply Utilization and Trading Procedure of Biofuel as Alternate Fuel (Regulation of the Minister of Energy and Mineral Resources No. 32/2008 of 2008)	2008	B20 E15	2025
General aviation improvements			
National Medium Term Development Plan 2020-2024	2020	Number of newly built airports = 21 (Baseline 2019 = 15) Number of air transport routes = 43 (Baseline = 35)	2024
General freight and logistics improvements			
Development of National Logistics System Framework	2013	•Indonesian LPI Score is 3.5	2025
General infrastructure improvements			
National Medium Term Development Plan 2020-2024	2020	Number of cities with multi-level transport systems = 6 (Baseline 2019 = 3)	2024
Strategic Plan for the Railway Sector 2020-2024	2020	Increased public satisfaction index with public services in the transportation sector by 88.5 On Time Performance (OTP) achievement for transportation services is 82.08%	2024
Visi Indonesia 2045	2017	Infrastructure stock increases to 70 percent of GDP by 2045.	2045
General public transport			

XIII. Indirect Transport Climate Change Targets

This table shows non-GHG targets as specified in the policy documents in Indonesia which indirectly benefit climate change mitigation and adaptation in the transport sector

Document	Year published	Target	Target year
National Medium Term Development Plan 2020-2024	2020	Number of metropolitan cities with built and developed urban mass transit systems = 6 (Baseline 2019 = 1)	2024
General rail improvement			
National Railways Master Plan	2018	Creating a railway transportation service that has a passenger market share of 7% - 9% and goods 11% - 13% of all national transportation services. "Increasing railway security and safety with indicators of decreasing the ratio of security and safety disturbances by at least 50% in the period 2010 - 2030" Passenger transportation facilities with a total of 2,839 locomotives, 27,949 intercity trains and 6,229 urban trains Goods transportation facilities with a total of 2,475 locomotives and 48,364 wagons.	2030
Strategic Plan for the Railway Sector 2020-2024	2020	Increased levels of safety and security as measured by a decrease in the fatality ratio of transportation accidents to 0.826	2024
Strategic Plan for the Railway Sector 2020-2024	2020	Creating railway transportation services that have a passenger market share of 7% - 9% and goods of 11% - 13% of all national transportation services." (National Railways 2030)	2030
General shipping improvement			
National Medium Term Development Plan 2020-2024	2020	Connected shipping routes/loops (%) = 27 (Baseline = 2019 = 23) h. Number of main ports that meet standards = 7 (Baseline = 1) Number of subsidized sea toll routes= 25 (Baseline =14)	2024
Visi Indonesia 2045	2017	Maritime economic contribution to GDP will increase from 6.4 percent in 2015 to 12.5 percent in 2045.	2045
Investment required for specific projects			
National Railways Master Plan	2018	"fulfillment of strong railway funding supported by private investment with an investment target estimated to reach USD 65,063.00 million with funding contributions from the Government and investment from Business Entities	2030
Local production, services, contracting etc.			
National Railways Master Plan	2018	"The realization of mastery of railway technology by reducing technological dependence on facilities and infrastructure by a maximum of 25%, local content of at least 85% and supplied by a minimum of 90% of domestic industry	2030
Port infrastructure improvements			
National Medium Term Development Plan 2020-2024	2020	Number of newly built ports for water transport = 36 (Baseline 2019 = 24)	2024
Rail infrastructure expansion			
National Medium Term Development Plan 2020-2024	2020	Length of newly built rail network (cumulative) (in km) = 7451 (Baseline 2019 = 6164)	2024
National Railways Master Plan	2018	1. The national railway network reaches 10,524 km (spread across the islands of Java-Bali, Sumatra, Kalimantan, Sulawesi and Papua) including the city/ urban railway network of 3,755 km.	2030

XIII. Indirect Transport Climate Change Targets

This table shows non-GHG targets as specified in the policy documents in Indonesia which indirectly benefit climate change mitigation and adaptation in the transport sector

Document	Year published	Target	Target year
Strategic Plan for the Railway Sector 2020-2024	2020	Increased national connectivity ratio to 0.69 Interregional Connectivity Ratio 0.36 Length of the built railway network (cumulative) (Km's) = 7451 Construction of access roads and railway lines to port nodes, airports and terminals as well as logistics activity centers;	2024
Reduction of transport/ logistics costs			
Development of National Logistics System Framework	2013	National Logistics Costs of the 2025 GDP declines by 5% from that of 2020	2025
Visi Indonesia 2045	2017	Logistics costs in 2045 will fall to 8 percent of GDP.	2045
Road infrastructure expansion			
National Medium Term Development Plan 2020-2024	2020	Length of newly built and/or operational toll roads (in km) = 2500 (Baseline 2019 = 1461) Length of newly built roads (in km) = 3000 (Baseline 2019 = 3387)	2024
Target - Road crash fatalities			
National Medium Term Development Plan 2020-2024	2020	Reducing road accident fatality ratio per 10,000 vehicles against the 2010 base rate (%) = 65 (Baseline = 53 (2019))	2024
Technology and knowledge transfer			
National Railways Master Plan	2018	"The realization of mastery of railway technology by reducing technological dependence on facilities and infrastructure by a maximum of 25%, local content of at least 85% and supplied by a minimum of 90% of domestic industry	2030
Transport asset condition assessment			
National Medium Term Development Plan 2020-2024	2020	Percentage of roads in good condition at the national/provincial/regency/city level (%) = 97/75/65 (Baseline 2019 = 92/68/57) Railroad conditions according to the Track Quality Index (TQI) categories 1 and 2 (%) = 94 (Baseline 2019 = 81.5)	2024
Travel time improvement			
National Medium Term Development Plan 2020-2024	2020	Travel time on an island's main road network (in hour/100 km) = 1.9 hours/ 100 km (Baseline 2019 = 2.3)	2024
Urban passenger rail infrastructure improvement			
Strategic Plan for the Railway Sector 2020-2024	2020	Number of metropolitan cities with urban mass public transport systems built and developed (cities) = 6 Number of cities where non-level crossings (cities) were built = 6	2024
Vehicle manufacturing			
Government Policy on Future Automotive Development	2019	Motor Vehicle: Total (Unit) Production = 3.000.000 Percentage LCEV(%) = 25 Percentage LCGC(%) = 20 Total (Unit) Sales = 2.500.000 Total (Unit) Export = 1.500.000 Motor Cycle: Total (Unit) Production = 12.500.000 Percentage Electric = 25 Total (Unit) Sales = 8.400.000 Total (Unit) Export = 1.400.000	2030

XIII. Indirect Transport Climate Change Targets

This table shows non-GHG targets as specified in the policy documents in Indonesia which indirectly benefit climate change mitigation and adaptation in the transport sector

Document	Year published	Target	Target year
Government Policy on Future Automotive Development	2019	Motor Vehicle: Total (Unit) Production = 4.000.000 Percentage LCEV(%) = 30 Percentage LCGC(%) = 20 Total (Unit) Sales = 2.100.000 Total (Unit) Export = 900.000 Motor Cycle: Total (Unit) Production = 15.000.000 Percentage Electric = 30 Total (Unit) Sales = 9.000.000 Total (Unit) Export = 1.750.000	2035

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Biofuels							
Intended Nationally Determined Contribution - IDN	2016	Implementation of biofuel in transportation sector (Mandatory B30) by 2030 Scenario 1: 90% Scenario 2: 100%	x				
Updated Nationally Determined Contribution - IDN	2021	Indonesia has stipulated a national mandatory biodiesel policy of B20 and enhance it to B30 in 2020 Implementation of biofuel in transportation sector by 2030 Scenario 1: 90% Scenario 2: 100%	x				
Government Policy on Future Automotive Development	2019	Development of Biofuel vehicle (Biosolar + Bioethanol) and Gas (BBG)					
Government Policy on Future Automotive Development	2019	Development of Biofuel vehicle (Biosolar + Bioethanol) and Gas (BBG)	x				
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	utilization of Renewable Energy Sources of bio-fuel type shall be directed to substitute fuel oil especially for transportation and industry;	x	x	x	x	
Indonesia Third Biennial Update Report	2021	MEMR Ministerial Regulation No.41/ 2018 on Supply and Utilisation of Biodiesel and Palm Oil Plantation Fund. Regulate the supply and utilisation of biodiesel under the framework of Palm Oil Plantation Fund. Ministerial Regulation No. 12/2015 on Biofuel Blending. Regulate the utilisation and administration of biofuels. Mandatory of Biodiesel Utilization in power plants, industries, and transportation sectors					
Indonesia Third Biennial Update Report	2021	utilisation of biofuel					
Roadmap of SDGs Indonesia: A Highlight	2019	Conversion from fossil fuels to biofuels use in the transportation and manufacturing sectors, and power plants;	x	x	x	x	
Development of transport adaptation/ emergency/ disaster plan/ policy							
Intended Nationally Determined Contribution - IDN	2016	The GOI has made significant efforts towards developing and implementing a National Action Plan on Climate Change Adaptation (RAN-API) which provides a framework for adaptation initiatives that has been mainstreamed into the National Development Plan.					
Updated Nationally Determined Contribution - IDN	2021	The GOI has made significant efforts towards developing and implementing a National Action Plan on Climate Change Adaptation which provides a framework for adaptation initiatives that has been mainstreamed into the National Development Plan.					

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia's Adaptation Communication	2022	The Government of Indonesia through the Ministry of National Development Planning/MNDP (Badan Perencanaan dan Pembangunan Nasional/Bappenas) has published the Indonesia Climate Change Sectoral Roadmap, ICCSR (2010) and the National Action Plan for Climate Change Adaptation, RAN API (2014). The Ministry of Environment and Forestry/MoEF (Kementerian Lingkungan Hidup dan Kehutanan/KLHK) has also submitted the Second National Communication (SNC 2011) and the Third National Communication (TNC 2018), and published the Climate Change Vulnerability, Risk, Impact, and Adaptation Progress Report (2017) which summarizes various adaptation initiatives across ministries and agencies.					
National Medium Term Development Plan 2020-2024	2020	Integrated programs in disaster risk management, especially concerning the risk of flooding in urban areas, with a combination of structural and non-structural approaches including green infrastructure; (b) Establishing a master plan for regional resilience to disasters, (c) Preparing disaster risk maps based on regional characteristics; (d) Developing a land subsidence monitoring system;	x	x	x	x	x
Disaster notification/ early warning system							
Intended Nationally Determined Contribution - IDN	2016	Enhancement of adaptive capacity by developing early warning systems, broad-based public awareness campaigns, and public health programmes;					
Updated Nationally Determined Contribution - IDN	2021	Development of Early Warning System (EWS).					
Indonesia's Adaptation Communication	2022	Early warning system					
National Medium Term Development Plan 2020-2024	2020	Providing early warning systems for floods and landslides.					
Fossil fuel subsidy elimination							
Updated Nationally Determined Contribution - IDN	2021	It has succeeded in removing fossil fuel subsidies to create fiscal space for education, health, social assistance and infrastructure, including renewable energy projects and public transports.	x	x	x	x	
General adaptation measures							
Intended Nationally Determined Contribution - IDN	2016	The medium-term goal of Indonesia's climate change adaptation strategy is to reduce risks on all development sectors (agriculture, water, energy security, forestry, maritime and fisheries, health, public service, infrastructure, and urban system) by 2030 through local capacity strengthening, improved knowledge management, convergent policy on climate change adaptation and disaster risks reduction, and application of adaptive technology.					
LPG/ CNG/ LNG							
Updated Nationally Determined Contribution - IDN	2021	Compressed Natural Gas consumption (CNG fuelling station). by 2030 Scenario 1: 100% Scenario 2: 100%	x				

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	utilization of natural gas Energy Sources for industry, electric power, household, and transportation, shall be prioritized for the use of those with highest added value;	X	X	X	X	
Indonesia Third Biennial Update Report	2021	Natural gas utilisation for city public transportation fuels	X				X
Renewable energy							
Indonesia Long-Term Strategy for Low Carbon and Climate Resilience 2050	2021	enhancement of renewable energy in power, transport use of decarbonized electricity in transport	X				
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	utilization of Renewable Energy Sources of solar Energy type shall be directed to electric power, and non electric power for industry, household, and transportation;	X	X	X	X	
Indonesia Blue Economy Roadmap	2023	Expansion of the application and expansion of the renewable energy transition in coastal and marine activities (fishery, tourism, transportation, trade).			X		
Indonesia's Adaptation Communication	2022	Use of renewable resources, efficient use of clean water, green transportation	X	X	X	X	
Roadmap of SDGs Indonesia: A Highlight	2019	Renewable energy mix in 2030 with business-as-usual scenario =12.1% Renewable energy mix in 2030 with intervention scenario = 26.1%					
Transport infrastructure resilience							
Intended Nationally Determined Contribution - IDN	2016	Improvement of human settlements, provision of basic services, and climate resilient infrastructure development.					
Updated Nationally Determined Contribution - IDN	2021	Integrating adaptation in infrastructure development and maintenance.					
Indonesia Blue Economy Roadmap	2023	Improvement of climate-resilient infrastructure for food storage and processing, including cold chain infrastructure to reduce post-harvest losses.	X	X	X	X	
National Medium Term Development Plan 2020-2024	2020	Developing and improving the quality of disaster-resilient infrastructure in disaster-prone priority areas;	X	X			
Strategic Plan for the Railway Sector 2020-2024	2020	Strategic direction and policy to realize infrastructure disaster resilience by improving disaster resilient infrastructure in priority disaster-prone areas		X			
Vehicle efficiency standards							
Updated Nationally Determined Contribution - IDN	2021	Energy efficiency measures to be carried out by all energy consuming sectors (industry, commercial, transport, residential) through improvement of device efficiency and energy system efficiency.	X	X	X	X	
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	target-setting on fuel consumption in the transportation sector shall be measurable and gradually conducted so as to increase efficiency	X	X	X	X	
Accreditation of driver training agencies							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Require certified drivers to take driving class periodically and review drivers' qualification through periodical drive license renewal.	x				
Accreditation of vehicle inspection centers							
National Railways Master Plan	2018	Accreditation program for railway facilities and infrastructure maintenance facilities.		x			
Air traffic management							
Indonesia Third Biennial Update Report	2021	Performance Based Navigation (PBN)				x	
Indonesia Third Biennial Update Report	2021	flight operation efficiency improvement performance-based navigation (PBN)				x	
Aircraft fleet renovation							
Indonesia Third Biennial Update Report	2021	renewal of airplanes				x	
Ban of ICE sales							
Government Policy on Future Automotive Development	2019	Set a clear phase out plan for ICE cars while building infrastructure and incentivizing EV adoption	x				
Presidential Regulation No. 55 of 2019 on Acceleration of Battery Electric Vehicles Program for Road Transportation	2019	Control of the use of motorized vehicles fueled by fossil fuels is gradually carried out based on the industrial development road map	x				
BRT							
Indonesia Third Biennial Update Report	2021	Indonesian Bus Rapid Transit Corridor Development Project (INDOBUS) Encourage technical efficiency development of transit system – Bus Rapid Transit (BRT)/semi BRT	x				x
Convention on Road Traffic 1968							
59 UN Transport Agreements/ and Conventions Serviced by ECE	2021	Signature by country	x				
Customs Convention on Containers 1972							
59 UN Transport Agreements/ and Conventions Serviced by ECE	2021	Ratification, accession, or definite signature by country					
Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention) 1975							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
59 UN Transport Agreements/ and Conventions Serviced by ECE	2021	Ratification, accession, or definite signature by country					
Data modelling improvements							
Indonesia Third Biennial Update Report	2021	Implementation of traffic impact management on national main roads (ANDALLALIN)	x				
Define roles and accountabilities across agencies							
National Railways Master Plan	2018	Increasing the Government's role as a railway regulator through accreditation HR formation and education programs - railways, testing institutions and maintenance facilities for railway facilities and infrastructure, the establishment of institutions that regulate the pattern of relations between facility operators and railway infrastructure operators (Track Access Charges), the formation of institutions that organize infrastructure maintenance (Infrastructure Maintenance and Operation) and institutions that organize public obligations (Public Services Obligation).		x			
Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Pricing to Achieve the Nationally Determined Contribution Target and Control over Greenhouse Gas Emissions in the National Development	2021	The preparation of Sector GHG Emissions Baseline is conducted by the related ministers according to their authority with the following provisions: Sub-Sectors of power generation, transportation, building, and industry, is coordinated by the minister administering government affairs in the field of energy and mineral resources;	x	x	x	x	
Strategic Plan for the Railway Sector 2020-2024	2020	Division of roles in transportation financing between the central government, regional governments and private		x			
Design standards for sidewalks and bicycle paths							
Global Status Report on Road Safety 2018	2018	Yes	x				

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
National Vision of Non-Motorized Transport Infrastructure	2020	Provide obstacle-free moving space with a minimum width of 1.5 meters (a minimum of 1.8 meters is recommended to accommodate passing wheelchair users). Ensure it is uninterrupted by driveway lane, road furniture, or other objects. Provide ramps for any height difference on the pedestrian path. Crossing standards: Clearly mark with a minimum mark width of 2.5 meters. Make the crossing distance as short as possible. Provide ramps to accommodate access for people with disabilities. Place at every foot of the intersection or at midblocks with a maximum of 80 to 100 meters distance from other crossing points. Provide refuge island that can accommodate people with disabilities on roads that have more than two lanes. Pedestrian friendly intersections: Provide a waiting space for pedestrians to wait before crossing. Make crossing distance as short as possible. Minimize corner radii to add space for pedestrians and to reduce vehicle speed when turning. Provide pedestrian refuge islands for wide crossing (more than two lanes). Bollards: Should be functional enough to restrict motor vehicle from entering sidewalk without hindering access for pedestrians and people with wheelchairs Shaded walking space: Provide sufficient protection from direct sun light and rain, with a preferable minimum width of 2.4 meters Take into account the effective height of pedestrian space (minimum 2.4 meters) Take into account the effective width of pedestrian space (minimum 1.5 meters) Surface material: Use material that is durable and easy to maintain. Use nonslippery material, with a coefficient of friction > 0.55. Use materials that minimize sunlight reflection or light reflection when the surface is wet. Use a color and texture that contrasts with the adjacent carriageway cycling infra: Has net width of 1.75 to 2 meters for one-way or minimum of 2.5 meters for two-way lane. In limited space, bicycle lane can be made 1.5 meters wide, but this reduces the possibility for cyclists to overtake or cycle side-by-side. Provide ramps when there is an elevation change. Whenever possible and appropriate, physical protection should be provided to separate cycling lane from motorized traffic. Cycling intersection/ crossings: Provide waiting space for cyclists before crossing. Mark with continuous 1.8-meter-wide markings for one-way or three meters for two-way lane. Provide protected islands at intersection corners. Place traffic lights for cyclists and pedestrians Provide signages that shows priority for cyclists and pedestrians CONSISTENT DESIGN FOR EASY COMPREHENSION Place markings with bicycle symbols on bicycle lane every 100 meters or at least on every bicycle lane opening (e.g., after intersections or driveways). If cycling lanes within a city or an area are colored, that color should be consistent. Provide signage and wayfinding signs or maps for cyclists Cycle parking: Should be placed as close as possible to building access door/bus stop/destination area. Place appropriately, so they don't disrupt the movement of pedestrians and cyclists. Place in highly visible areas, equipped with sufficient lighting to provide safety. Mark clearly Provide shade over bicycle parking area if possible Use materials that are durable and easy to maintain, such as asphalt or concrete. Materials must not be slippery, with a coefficient of friction > 0.55. Ensure that any manhole covers are level to the surface of the cycling lane. Ensure that any manhole steel gratings are perpendicular to the direction of the cycling lane.	x				

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Development of climate change/ low carbon plan/ policy							
Indonesia's Adaptation Communication	2022	With the ratification of the Paris Agreement in 2016 as the main legal framework for climate policy in Indonesia, Indonesia has submitted the 1st NDC in 2016, the Updated NDC in 2021, and the Enhanced NDC in 2022.					
Development of national development plan/ policy							
Indonesia's Adaptation Communication	2022	Indonesia has adopted the 2030 Agenda for Sustainable Development through Presidential Regulation No. 59/2017.					
Technology Needs Assessment for Climate Change Mitigations 2012	2012	On February 5, 2007, the Indonesian Government issued a Law No. 17 of 2007 on National Long-Term Development Plan (RPJPN) Year 2005-2025. Some national documents related to climate change have been prepared by Indonesia. Some of those are the First National Communication under the United Nations Framework Convention on Climate Change (2000), Identification of Less Greenhouse Gases Emissions Technologies in Indonesia (2001), National Action Plan on Climate Change 2007 (RAN-PI, 2007), National Development Planning: Indonesia Responses to Climate Change (2007 revised in 2008), Second National Communication under UNFCCC (2008), and Indonesia's GHG Abatement Cost Curve (2010).					
Development of other transport-related plan/ policy							
Indonesia Third Biennial Update Report	2021	Sustainable Urban Transport Programme Indonesia (SUTRI NAMA)	X	X	X	X	X
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	The roadmap aims to set targets and timeline of truck fleet modernization program, including the targeted trucks to be scrapped, the estimated percentage of targeted trucks that the program aims to scrap, and the key agencies that are responsible for policy design and implementation. The roadmap should layout the supporting policies to maximize the effect of truck modernization and identify the responsible agencies to lead each of the actions, such as financial support, standard setting, in-use vehicle management, improvement of truck driver license requirement, infrastructure construction, logistic integration and optimization. Set a pragmatic policy roadmap with a clear timeline for tightening fuel efficiency and emissions standards for trucks or heavy-duty vehicles in general and fuels in Indonesia	X				
Strategic Plan for the Railway Sector 2020-2024	2020	Preparation of integrated and sustainable urban mobility policy guidelines		X			X
Disaster monitoring and risk assessment for transport infrastructure							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia Blue Economy Roadmap	2023	Implementation of port audit and "port risk assessment" and related facilities according to internationally recognized safety standards and rules.			x		
Ecodriving							
Indonesia Third Biennial Update Report	2021	Implementation of smart driving	x				
Emissions trading and carbon pricing							
Indonesia Blue Economy Roadmap	2023	Promotion of carbon removal and offset for achieving net-zero company pledges, followed by renewable energy use and energy efficiency improvements.			x		
Energy efficient vehicle purchase incentives							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Provide incentives for clean truck purchase and operation	x				
EV charging infrastructure							
Presidential Regulation No. 55 of 2019 on Acceleration of Battery Electric Vehicles Program for Road Transportation	2019	Provision of electricity charging infrastructure for Battery -Based KBL as intended in Article 22 paragraph (1) can be carried out by State Owned Enterprises in the energy sector and/or other business entities.) To accelerate the Battery- Based KBL program for road transportation , SPKLU is provided at the location: a. Public Fuel Filling Station (SPBU); b. Gas Fuel Filling Station (SpBG) ; c. Central Government and Regional Government offices ; d. mall; and e. public parking on the side of the main road .	x				
EV manufacturing							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Presidential Regulation No. 55 of 2019 on Acceleration of Battery Electric Vehicles Program for Road Transportation	2019	In order to accelerate the development of the domestic Battery -Based KBL industry as intended in paragraph (2), motor vehicle component industrial companies and/or domestic Battery -Based KBL component industry companies are required to support and collaborate with the domestic Battery - Based KBL industry The Battery -Based KBL industry and the Battery-Based KBL component industry are required to prioritize the use of TKDN with the following criteria : a. for two -wheeled battery- based KBLs and/or three levels of use of domestic components as follows: 1) 2019 to 2023, minimum TKDN of 40% (forty percent) ; 2) from 2024 to 2025, minimum TKDN of 600/o (sixty per hundred); and 3) in 2026 and beyond, a minimum TKDN of 80% (eighty percent) , b. for battery -based KBLs with four or more wheels, the level of use of domestic components is as follows: 1) 2019 to 2021, minimum TKDN of 35% (thirty - five per hundred); 2) from 2022 to 2023, the minimum TKDN is 40% (forty per hundred) ; 3) 2024 to 2029, minimum TKDN of 600/o (sixty per hundred); and 4) In 2030 and beyond, the minimum TKDN is 80% (eighty percent) . Every battery-based KBL operated on the road must meet technical and roadworthy requirements . Every battery-based KBL imported , manufactured and/ or assembled domestically which will be operated on the road must have its type registered and comply with REPUBLIC OF INDONESIA TECHNICAL PROVISIONS FOR MOTOR VEHICLES	x				
Fiscal incentives for EVs and components							
Government Policy on Future Automotive Development	2019	Set a clear phase out plan for fuelbased MC while building required infrastructure and incentivizing electric MC adoption	x				
Presidential Regulation No. 55 of 2019 on Acceleration of Battery Electric Vehicles Program for Road Transportation	2019	Incentivising mechanisms in sales, public transport agencies, research, parking rates etc.	x				
Freight rail infrastructure improvement							
Strategic Plan for the Railway Sector 2020-2024	2020	Development of freight trains		x			
Fuel quality							
Indonesia Third Biennial Update Report	2021	Fuel switching of fossil fuel in transport (RON 88 ke RON 90, 92, 98+)	x				
Indonesia Third Biennial Update Report	2021	fuel switch to less carbon emission fuel in residential and transport sector The mitigations activities in this sector are in the form of enhancement of transport efficiency and the increased use of zero and/or low emitting alternative fuels.	x	x	x	x	
International Energy Charter	2015	encouraging the clean and efficient use of fossil fuels	x				

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Reduce fuel consumption and emissions from in-use fleet	x				
Fuel tax							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Reform taxation of fuel to subsidize fuels that support operation of cleaner trucks, such as ultra-low sulfur fuels and natural gas.	x				
General alternative fuels							
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	utilization of liquid Energy Sources other than liquefied petroleum gas shall be directed to transportation sector;	x	x	x	x	
General aviation improvements							
Indonesia Third Biennial Update Report	2021	Modernisation of air navigation Revegetation of airports Utilisation of Solar Power Plant Utilisation of Solar Cell for Airport Lighting Utilisation of Light Emitting Diode (LED) for Runway Lights and Airport Navigation Signboard				x	
General capacity building							
Indonesia Blue Economy Roadmap	2023	creating competitive quality maritime human resources Improvement in skills related to marine-based research and development, manufacturing and logistics.			x		
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Conduct a survey on capacities of in-use vehicle testing institutions and identify the need for improvement. Improve the capacity of the service sector to provide adequate maintenance and repairs for vehicles that fail KEUR tests should be another focus of capacity building	x				
National Railways Master Plan	2018	Strengthening Institutions and the quality of human resources in order to improve railway safety and security Improving the human resources capabilities of railway regulators through education and training programs including developing training patterns and curricula. Encourage the realization of HR for railway operators through the preparation of regulations regarding competency standards and qualifications for HR operators, competency certification and development of HR operators.		x			
Strategic Plan for the Railway Sector 2020-2024	2020	utilizing appropriate and targeted technology supported by professional human resources who are anticipatory of potential disasters;		x			
General e-mobility							
Government Policy on Future Automotive Development	2019	Establish R&D centers for EV components, esp. battery, and perform rapid prototyping	x				

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	acceleration of utilizing electric power for the propulsion of motor vehicles;	x				
Roadmap of SDGs Indonesia: A Highlight	2019	Encouraging the use of electricity to meet the final energy needs of the transportation, household and industrial sectors Development of electric/hybrid vehicles;	x				
General economic instruments							
Indonesia Blue Economy Roadmap	2023	Development of incentive schemes to support the growth of high-tech-based blue economy sectors and new sectors such as shipbuilding, renewable energy, bioeconomy, and biotechnology.			x		
General education and behavior change							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Provide clear cost and benefit analysis to inform operators and business owners and prove financial feasibility of truck modernization, taking consider of all fiscal and non-fiscal incentives for truck renewal. Anti-idling devices as well as related campaigns by local authorities can help in promoting behavior change. Provide education to truck operators, especially small truck operators, on the management of truck fleet operation and the cost and benefit of renewing old and inefficient trucks.	x				
National Medium Term Development Plan 2020-2024	2020	Developing and educating human resources on transportation safety and SAR.	x	x	x	x	
Strategic Plan for the Railway Sector 2020-2024	2020	Increasing public accessibility awareness of transportation services		x			
General freight and logistics improvements							
Indonesia Blue Economy Roadmap	2023	Strengthening of advanced logistics technologies and systems to optimize supply chain management and reduce transportation costs.	x	x	x	x	
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Incentivize unification of small trucking operators Develop a green freight program with key sector associations that provides certification for operators who implement green practices such as efficient and cleaner vehicle technologies. Provide guidance and incentives for shippers, carriers, and/or third-party logistics providers to participate to save costs and reform their operation and fleet management to increase demand for certified green truck operators.	x				
General infrastructure improvements							
Indonesia Third Biennial Update Report	2021	Utilisation of Solar Cell for Public Street Lights (Penerangan Jalan Umum/PJU)					

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia's Adaptation Communication	2022	Use of renewable resources, efficient use of clean water, green transportation Settlement areas, Public facilities and infrastructure, Areas for orderly traffic facilities and transportation services, healthy mining areas, healthy forest areas, healthy industrial and office areas, Healthy tourism area, Food and nutrition security, Independent community life, Healthy social life, Smart City	x	x	x	x	x
International Energy Charter	2015	promoting the realisation of infrastructure projects important for providing global and regional energy security modernisation, renewal and rationalisation by industry of services and installations for the production, conversion, transport, distribution and use of energy promoting the developemnt and interconnection of energy transport infrastructure and the regional integration of energy markets facilitating access to transport infrastructure, for the international trnaist purposes in line with the objectives of this Charter coordination and where appropriate, harmonisation of safety principles and guidelines for energy products and their transport as well as for energy installations, at high level					
National Medium Term Development Plan 2020-2024	2020	Constructing grade-separated road and rail crossings in urban areas	x	x			x
Voluntary National Review 2021 - IDN	2021	(3) development of non-level crossings between roads and railways in urban areas Increasing regional connectivity through road, rail, sea, air and land connectivity	x	x	x	x	x
General innovations and digitalization							
Indonesia Blue Economy Roadmap	2023	maritime technological innovation Expansion of digital technologies adoption and data-sharing platforms to improve efficiency and transparency in maritime trade and logistics.			x		
Indonesia's Adaptation Communication	2022	Maritime Integrated Data System (MIDAS)			x		
General land use							
Roadmap of SDGs Indonesia: A Highlight	2019	Improved integration of housing development of middle and lower income community through the transportation system.	x	x	x	x	
Strategic Plan for the Railway Sector 2020-2024	2020	Implementing a Transport Demand Management (TDM) strategy along with strengthening integration between land use and transit planning		x			
Voluntary National Review 2021 - IDN	2021	Urban development policies, including: (1) planning for metropolitan areas outside Java; (2) development of metropolitan areas outside Java; (3) improving the quality of the Java metropolitan area; (4) development of big, medium and small cities; (5) construction of new cities; (6) development of the State Capital.					x
General parking measures							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
National Railways Master Plan	2018	Development of train stations including park and ride facilities at national, provincial and district/city strategic activity centers		x			x
General public transport							
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	to accelerate the application and/or transfer to efficient mass transportation system, both urban and intercity transportation;	x	x	x	x	x
Indonesia Third Biennial Update Report	2021	Modernisation of public transports	x				
Indonesia Third Biennial Update Report	2021	development of mass road transport	x				
Long-Term National Development Plan of 2005-2025	2007	provide alternatives for users of transportation services while still maintaining the role of government as the regulator of public services that are affordable to the general public providing mass public transportation services in urban areas that are supported by feeder services that are safe, comfortable, orderly, affordable, and environment friendly, and that are in line with policies on spatial planning	x	x			x
National Medium Term Development Plan 2020-2024	2020	Developing mass public transport systems in 6 metropolitan areas (Major Projects);	x	x			x
National Railways Master Plan	2018	Public transport subsidies in the form of pioneer train services and Public Service Obligations (PSO)		x			x
Roadmap of SDGs Indonesia: A Highlight	2019	Providing public open space and mass transportation networks to promote physical activity	x	x	x	x	
Voluntary National Review 2021 - IDN	2021	Urban transportation priority projects include: (1) development of mass public transport systems including in 6 (six) metropolitan areas (Major Projects); (5) provision of PSO and subsidies for urban mass public transport.	x	x	x	x	x
General rail improvement							
National Railways Master Plan	2018	Improving service quality, security and railway safety Increasing the public's affordability (accessibility) to train services through a public service obligation mechanism Improving the reliability/worthiness of railway facilities and infrastructure through testing and certification programs for facilities, infrastructure including other supporting facilities, Encourage an increase in the role of the domestic railway industry, including its supporting industries, to increase the competitiveness and independence of the railway industry Reducing the number of land transportation accidents		x			
Strategic Plan for the Railway Sector 2020-2024	2020	improving transportation safety and security		x			
General shipping improvement							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia Blue Economy Roadmap	2023	short sea-shipping modern port management improve the provision, quality and integration of maritime infrastructures; develop Indonesia as a global hub through strengthening shipping liners as well as ports and logistics management improve interisland trade and supply chain; promote the greening of transportation, shipping, ports and logistics services expand maritime finance improve monitoring and law enforcement at sea expanding maritime research and development Development of regulation related to mooring buoy points to support tourism and marine transportation to reduce environmental damage Promotion of the importance of greening of transportation, shipping, ports, and logistics services to reduce carbon emissions Improvement of basic infrastructure and connectivity in coastal areas and small islands. Development of efficient and sustainable maritime transport systems to facilitate the movement of goods and services. Development of maritime services, such as ship repair and maintenance, maritime insurance, and maritime law services.			x		
Indonesia Third Biennial Update Report	2021	Implementation of LDF (Long Distance Ferry) Application of solar cell Shipment Navigation System for efficient harbour management through Sailing Navigation Support Facility (SBNP)			x		
Indonesia Third Biennial Update Report	2021	development of long-distance ferry in 2019			x		
National Medium Term Development Plan 2020-2024	2020	Developing shipping information technology.			x		
Visi Indonesia 2045	2017	development of efficient and effective sea connectivity, the main port system of sea highways and 7 international hubs, short sea-shipping, and (d) modern port management			x		
General transport asset management							
National Medium Term Development Plan 2020-2024	2020	Preserving national roads (including improving/widening roads); and vi) Developing and maintaining regional roads. Maintaining and operating rail infrastructure and facilities (IMO),	x	x			
National Railways Master Plan	2018	rail infrastructure improvement & rehabilitation		x			
General transport demand management							
Strategic Plan for the Railway Sector 2020-2024	2020	Implementing a Transport Demand Management (TDM) strategy along with strengthening integration between land use and transit planning		x			
General transport finance							
National Railways Master Plan	2018	Preparation of regulations to increase investment railway operations		x			
Strategic Plan for the Railway Sector 2020-2024	2020	Strengthening stakeholder synergy for sharing urban transportation funding;		x			x
General transport institutional reform							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Establish a National Steering Committee that comprise representatives from the MoT (Directorate General of Land Transportation), MoEF (Directorate General of Climate Change Control), and BAPPENAS (Deputy of Facility and infrastructure). The Steering Committee will give guidance to the project at political and strategic level. It will coordinate the collaboration across agencies. Establish a Technical Steering Committee that comprise representatives from implementation directorate of MOT, MoEF, MEMR and BAPPENAS, and representatives of MOF, MOI, Traffic Corps, BPJT, and local governments in order to coordinate activities of different parties and give technical guidance. The Directorate of Road Transport and the Directorate of Road Transportation Facility of MOT will advise on onroad trucks and regulate new trucks respectively. The Directorate of Climate Change Management of MoEF will advise environmental related standards making and MRV. The Directorate of MEMR will advise on fuel quality improvement and fuel pricing. The Directorate of Transportation of BAPPENAS will advise on development planning and coordination. The MOF and MOI will advise on fiscal support and industry development respectively, while Traffic Corps and BPJT will advise on the onroad implementation and toll road development. The Technical Steering Committee will work closely with the Technical Support Unit to address concerns from the Technical Support Unit while get technical suggestions based on the assessment of the Technical Support Unit. Establish a Technical Support Unit that comprise government staff and experts in the field to support the decision-making within the National Steering Committee and the Technical Steering Committee. The Technical Support Unit will mainly include staff from MOT Directorate of Road Transport and the Directorate of Road Transportation Facility and the Transportation Research and Development Agency. MOT will identify the experts, stakeholders, academics in other ministries, institutions, organizations, private sector, and universities to support investigation and information integration on various action measures. The technical research will provide input to the decision-making process.	x				
National Railways Master Plan	2018	Establishment of an Infrastructure Organizing Agency and Railway Facilities.		x			
Strategic Plan for the Railway Sector 2020-2024	2020	e. Development of a central government support mechanism for the provision of transit-based urban mass public transportation (PPP scheme) through: 1) Accelerating the development of urban mass public transportation;		x			x
High-speed rail (HSR)							
National Medium Term Development Plan 2020-2024	2020	High-Speed Rail (Jakarta-Semarang & Jakarta-Bandung) (Major Project);		x			

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Voluntary National Review 2021 - IDN	2021	The government has also provided several infrastructure projects to several StateOwned Enterprises (BUMN) (including the Trans Sumatra-PT Hutama Karya Toll Road, Refinery Development Master Plan (RDMP) -PT Pertamina, Tuban Refinery-PT Pertamina, Jakarta-Bandung High-Speed. Train-PT Wijaya Karya and PT KAI, etc.)		x			
Hydrogen							
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	utilization of New Energy Sources in the liquid form that is liquified coal and hydrogen shall be for transportation;	x	x	x	x	
Intelligent transport systems (ITS)							
Indonesia Third Biennial Update Report	2021	Application of traffic management technology in national main roads (Area Traffic Control System/ ATCS)	x				
Roadmap of SDGs Indonesia: A Highlight	2019	Developing an Intelligent Transport System/ITS,	x	x	x	x	
Intermodality measures							
Long-Term National Development Plan of 2005-2025	2007	promoting an intermode and inter-mode transportation services network;	x	x			
National Medium Term Development Plan 2020-2024	2020	Developing inter-modal facilities that are integrated with centers of economic activities, housing, and public facilities via transportation nodes,	x	x			
Strategic Plan for the Railway Sector 2020-2024	2020	increasing intermodal integration and public accessibility		x			
Investment required for specific projects							
Voluntary National Review 2021 - IDN	2021	In the 2015- 2019 National Medium-Term Development Plan (RPJMN), the government priorities were improving transport links, enhancing the maritime sector's infrastructure, expanding access to remote areas, providing alternative multi-modal transport options, and assisting urban mobility. The government has increased the allocation of infrastructure spending by USD 10 billion each year to achieve these priority targets.	x	x	x	x	x
Investment volume for transport							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Complete promised \$70 billion investment in 5,400 km toll road construction by 2024	x				
Involvement of subnational government for transport activities							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Guide local government to build facilities and mechanism to monitor and enforce regulations on truck fleet, for example, installing cameras to capture, read, and analysis vehicle plate and related registration and KEUR testing information and training officers to monitor the data, identify noncompliant vehicles, and impose penalty.	x				

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
National Railways Master Plan	2018	Increasing the role of Regional Government in developing railway operations. Encourage the realization of multi-operator railway operations by giving authority to the Regional Government in developing and granting permits for railway operations.		x			
Jet fuel policies							
Indonesia Third Biennial Update Report	2021	Implementation of new and renewable energy technologies				x	
Local authorities have the power to modify national speed limits							
Global Status Report on Road Safety 2018	2018	Yes	x				
Logistics hub							
National Medium Term Development Plan 2020-2024	2020	Constructing international passenger and freight terminals,	x	x	x	x	
Visi Indonesia 2045	2017	the main port system of sea highways and 7 international hubs,					
Low-emission vehicle zones							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Encourage local government to set low emission zones that restrict or forbid the old and dirty trucks from driving through the local jurisdiction. Provide guidance to set the criteria of old and dirty trucks based on local context and policy targets and the implementation of such projects based on global best practices.	x				
National speed law							
Global Status Report on Road Safety 2018	2018	Yes	x				
Port electrification							
Indonesia Third Biennial Update Report	2021	Shore Connection			x		
Port infrastructure improvements							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia Blue Economy Roadmap	2023	the development of 48 port cities the central port system of sea highways and seven international hubs Development of sustainable amenities, accessibility, and transportation in coastal and marine-based tourism destinations, including marinas, ports, jetties, docking facilities, and coastal resorts, to enhance accessibility and connectivity to popular tourist destinations and to foster sustainable tourism based on coastal and marine potentials. Development of new port facilities in strategic locations to cater to emerging trade routes and market demands. Development and modernization of marine infrastructure and logistics facilities to accommodate increased trade volumes and larger vessels to improve cargo handling and transportation efficiency. Development and upgrade of port infrastructure such as container terminals, dry ports, intermodal facilities, and hinterland connections to improve connectivity and efficient ride and supply chain interisland. Strengthening of the provision, quality, and integration of port and maritime infrastructures.			X		
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Reduce truck dwelling time at the port for loading and unloading. Prevalent approaches include increasing port capacity through port construction at new berths, improving loading and unloading process, and improving navigability and handling equipment quality of the ports to reduce loading and unloading time at the port.	X		X		
National Medium Term Development Plan 2020-2024	2020	Developing major ports, for example: Integrated Main Port Networks (Major Project), ii) Developing and expanding ports that support sea tolls, iii) Developing and expanding ports that priority areas, for example: cruise ports, Constructing 26 ferries, iii) Constructing 36 new ferry ports,			X		
Visi Indonesia 2045	2017	the development of 48 port cities,			X		X
Programs to reduce emissions in logistics							
Indonesia Blue Economy Roadmap	2023	Expansion of green transportation, shipping, ports, and logistics services to reduce carbon emissions.	X	X	X	X	
Long-Term National Development Plan of 2005-2025	2007	increasing the share of cargo transportation by railway, inter-island cargo transportation, through the Ro-Ro system as well as through conventional sea transportation					
Public transit integration							
National Railways Master Plan	2018	Integrating train services with other modes by building access to airports, ports and industrial areas		X			
Strategic Plan for the Railway Sector 2020-2024	2020	increasing intermodal integration and public accessibility		X			
Voluntary National Review 2021 - IDN	2021	(2) development of modal transfer facilities that are integrated with centers of economic activity, settlements and public facilities at transportation nodes	X	X	X	X	
Rail infrastructure expansion							
Indonesia Third Biennial Update Report	2021	Construction of doubleline railway crossings in the Northern Java Railways lines to Soekarno-Hatta Airport Railways line to Kuala Namu Airport		X			

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia Third Biennial Update Report	2021	construction and utilisation of railways		x			
National Medium Term Development Plan 2020-2024	2020	Makassar-Parepare Rail (Major Project); constructing new rail lines (including double-track and reactivating existing lines) and improving rail lines in Java and Sumatra; Developing airport and seaport rail links;		x			
Visi Indonesia 2045	2017	trains in Sulawesi, Kalimantan and Papua;		x			
Voluntary National Review 2021 - IDN	2021	The government has also provided several infrastructure projects to several StateOwned Enterprises (BUMN) (including the Trans Sumatra-PT Hutama Karya Toll Road, Refinery Development Master Plan (RDMP) -PT Pertamina, Tuban Refinery-PT Pertamina, Jakarta-Bandung High-Speed. Train-PT Wijaya Karya and PT KAI, etc.)		x			
Reference to finance mechanisms within country							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	➤ Provide fiscal support to incentivize early scrappage	x				
National Medium Term Development Plan 2020-2024	2020	Implementing sea toll subsidies and pioneering sea transport services, Providing PSOs and subsidies for urban mass public transport	x	x	x		x
National Railways Master Plan	2018) Establishment of institutions supporting alternative financing schemes Development of alternative financing/investment patterns.		x			
Reporting, transparency, feedback mechanism							
Indonesia's Adaptation Communication	2022	The Ministry of Environment and Forestry/MoEF (Kementerian Lingkungan Hidup dan Kehutanan/KLHK) has also submitted the Second National Communication (SNC 2011) and the Third National Communication (TNC 2018), and published the Climate Change Vulnerability, Risk, Impact, and Adaptation Progress Report (2017) which summarizes various adaptation initiatives across ministries and agencies.					
Ministry of National Development Planning Strategic Plan	2020	% availability of information on the results of monitoring.evaluation of development plans for the Transportation = 96 -100 (By 2024)	x	x	x	x	
National Railways Master Plan	2018	Coordination with related parties in realizing safety improvement programs and railway security including the implementation of monitoring and evaluation.		x			
Road charging and tolls							
Government Regulation No. 79/2014 of 2014 Concerning the National Energy Policy	2014	to accelerate the implementation of electronic road pricing so as to reduce the traffic congestion triggered by private vehicle;	x				
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Reform toll road charge design to require lower charge for cleaner and efficient trucks and higher charge to older and dirtier trucks.	x				
Road infrastructure expansion							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Long-Term National Development Plan of 2005-2025	2007	increasing the development of freeways at strategic corridors	x				
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Complete promised \$70 billion investment in 5,400 km toll road construction by 2024	x				
National Medium Term Development Plan 2020-2024	2020	Strategic road development, for example: Trans-Papua Merauke-Sorong (Major Project) and Trans-Roads on 18 Disadvantaged, Frontier, and Outermost Islands (Major Projects); ii) Toll road construction, for example: Trans-Sumatra Toll Road Aceh - Lampung (Major Project); Developing access roads to transportation nodes (seaports, airports, and bus terminals); Preserving national roads (including improving/widening roads); and vi) Developing and maintaining regional roads. Developing urban ring roads	x				x
Visi Indonesia 2045	2017	Land connectivity is realized by the completion of the main roads throughout the island; Java and Sumatra toll roads; border road;	x				
Voluntary National Review 2021 - IDN	2021	(4) construction of urban ring roads	x				x
Voluntary National Review 2021 - IDN	2021	The government has also provided several infrastructure projects to several StateOwned Enterprises (BUMN) (including the Trans Sumatra-PT Hutama Karya Toll Road, Refinery Development Master Plan (RDMP) -PT Pertamina, Tuban Refinery-PT Pertamina, Jakarta-Bandung High-Speed. Train-PT Wijaya Karya and PT KAI, etc.)	x				
Road safety training for professional drivers							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Design driving training courses to teach truck drivers to drive efficiently and safely in collaboration with training service providers and integrate this as a mandatory element into the truck driver certification training system.	x				
Road-side vehicle technical checks							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	KEUR test should be ideally combined with complementary measures, such as spot-checking, remote sensing, and public spotter program	x				
Ship efficiency improvements							
Indonesia Blue Economy Roadmap	2023	promote the greening of transportation, shipping, ports and logistics services Improvement in the capacity of fishing vessel crews to maintain vessel efficiency and reduce greenhouse gas emission Expansion of sustainable marine transportation practices, such as using fuel-efficient vessels and adopting clean propulsion technologies, to reduce carbon emissions and improve economic efficiency. Investments in new ships that reduce greenhouse gas emissions.			x		
Indonesia Third Biennial Update Report	2021	Modernisation of ships and ship technology for pioneer ship *			x		
Speed limit on motorways <= 90 kph							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Global Status Report on Road Safety 2018	2018	100 km/h	x				
Speed limit on rural roads <= 70 kph							
Global Status Report on Road Safety 2018	2018	80 km/h	x				
Speed limits on urban roads <= 30 kph							
Global Status Report on Road Safety 2018	2018	50 km/h	x				x
Stakeholder Involvement							
Long-Term National Development Plan of 2005-2025	2007	encouraging all stakeholders to participate in the provision of transportation services	x	x	x	x	
National Railways Master Plan	2018	Coordination with related parties in realizing safety improvement programs and railway security including the implementation of monitoring and evaluation.) Encourage stakeholder participation to create new innovations in railway facilities and infrastructure technology.		x			
Strategic Plan for the Railway Sector 2020-2024	2020	Encourage the role of the private sector in services and delivery of services for the construction of airport, port and terminal access railway lines Strengthening stakeholder synergy for sharing urban transportation funding;		x			x
Technical standards for general transport infrastructure							
Government Policy on Future Automotive Development	2019	Acceleration standard harmonization in regional (eq. ASEAN MRA 2020)	x				
National Vision of Non-Motorized Transport Infrastructure	2020	Bus stops: Must be universally accessible from sidewalks or other pedestrian paths. Provide ramp if there is any height difference. Bus stops placement: • On 4-meter-wide (or more) sidewalks: Place on the curb edge, still providing a clear pedestrian zone with a minimum width of 2 meters. • On less than 4-meter-wide sidewalks: Place adjacent to building/property line. Provide bicycle parking facility to accommodate intermodality whenever possible	x				
Technical standards for rail infrastructure							
National Railways Master Plan	2018	railways through the preparation of regulations (norms, standards, procedures and criteria) to increase railway safety and security Selection of standard technology according to needs and determination of technical standards that are in line with railway technology development plans		x			
Technologies on transport asset management							
National Railways Master Plan	2018	development of modern maintenance systems and technology		x			

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Technology and knowledge transfer							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Establish training program to educate truck operators and drivers to use digital logistic platform.	x				
National Railways Master Plan	2018	development of safety and security systems and technology as well as the use of information technology in railway operations . Improve technological mastery of railway facilities and infrastructure through research collaboration with universities and research institutions. Transfer technology in high-tech products through production cooperation and training from producing country		x			
Strategic Plan for the Railway Sector 2020-2024	2020	utilizing appropriate and targeted technology supported by professional human resources who are anticipatory of potential disasters;		x			
Traffic management							
Indonesia Third Biennial Update Report	2021	Application of traffic management technology in national main roads (Area Traffic Control System/ ATCS)	x				
Indonesia Third Biennial Update Report	2021	utilisation of effective traffic control	x				
Transit-oriented development (TOD)							
National Railways Master Plan	2018	Integration of inter- and intermodal services based on Transit Oriented Development (TOD)		x			
Strategic Plan for the Railway Sector 2020-2024	2020	TOD		x			
Transport law							
Long-Term National Development Plan of 2005-2025	2007	ensuring consistency of laws and regulations that are related to the implementation of transportation	x	x	x	x	
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Encourage other non-fiscal incentives to cleaner and efficient trucks, for example: reduce KEUR test frequency, simplify loan application requirement and process from banks, encourage local government to provide local permit and license benefit.	x				
Strategic Plan for the Railway Sector 2020-2024	2020	Continuing consolidation through restructuring, reform and strengthening in the areas of regulations, institutions, apparatus resources and consistent law enforcement;		x			
Travel time improvement							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Reduce stops and stopping time at toll and inspection stations.	x				
Urban passenger rail infrastructure improvement							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Indonesia Third Biennial Update Report	2021	Construction of urban railway system in Greater Jakarta (Jakarta, Bogor, Depok, Tangerang, Bekasi) Utilization of LRT system in Palembang City		x			x
National Railways Master Plan	2018) Increasing the role of urban trains and intercity trains.		x			x
Roadmap of SDGs Indonesia: A Highlight	2019	Development of Mass Rapid Transit/MRT, Light Rail Transit/LRT, and tram;		x			x
Strategic Plan for the Railway Sector 2020-2024	2020	Strengthening urban infrastructure with a strategy to develop urban mass public transportation systems in 6 metropolitan cities.		x			x
Visi Indonesia 2045	2017	rail-based urban transportation and fast trains to anticipate mega urbanization and urbanization in Java		x			x
Vehicle air pollution emission standards							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Reduce fuel consumption and emissions from in-use fleet 2) Accelerate the transition to cleaner and efficient trucks ➤ Introduce fuel efficiency standards to accelerate the uptake of advanced technologies ➤ Accelerate adoption of Euro VI fuel and engine standards	x				
Vehicle import inspections							
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Yes	x				
Vehicle inspection and maintenance							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Strengthen KEUR testing standards and upgrade in-use vehicle emission testing facilities to accommodate the increasing share of trucks with advanced technologies. Strengthen certification and inspection of KEUR testing institutes, require testing institutes to submit testing data to regulatory agency, and establish online monitoring system for constant testing data reporting. c. Enhance the monitoring and enforcement of KEUR testing to ensure capture of noncompliant inuse trucks and enforce repairment Establish high emitter screening program with a combination of regular KEUR testing and selective road test. Require trucks that are older than 20 to conduct more frequent KEUR tests. Any vehicle that fail three consecutive KEUR tests after repairs have been performed should be scrapped, and the vehicle owners should be compensated. b. Provide a 5-year waiver on KEUR test for trucks that meet the world-class Euro VI emission standards, therefore reduce the test and cost burden for cleaner trucks.	x				
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Periodic inspection is in effect	x				
Vehicle labelling							

XIV. Transport and Climate Policy Measures

This table lists the policy measures that relate to climate change mitigation and adaptation in the transport sector that had been identified in the transport policy documents of Indonesia

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Establish vehicle labeling system to link to the vehicle registration information and distinguish cleaner and newer vehicles from dirtier and older ones. The label will link to the vehicle information, including certified emission level, efficiency, and/or age. Color coded labels will be considered to provide a simple signal to vehicle owners, inspectors, and traffic officials how high a vehicle's emissions are, and whether the vehicle is eligible for scrappage subsidies and/or liable for any local charge. The labels can also be used to enforce driving restrictions at the city or regional levels, and to check compliance with the KEUR requirements.	x				
Vehicle manufacturing							
Government Policy on Future Automotive Development	2019	Improve productivity in ICE vehicles by adopting technology Establish R&D centers for EV components, esp. battery, and perform rapid prototyping Build domestic production capabilities for electric MC along value chain Enhance raw material production capabilities, i.e. steel and chemical Strengthen local components manufacturing capabilities by accelerating component production FDI and technology transfer	x				
Vehicle restrictions (import, age, access, sale, taxation)							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	Ban the import of second-hand trucks, trailers, and other key truck parts older than five years	x				
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Import is regulated with vehicle age restriction	x				
Vehicle scrappage scheme							
Mitigation Action Outline on Truck Fleet Modernization Scheme in Indonesia	2021	(1) Scrappage of high-emitting trucks ➤ Set a scrappage schedule and corresponding management mechanism ➤ Provide fiscal support to incentivize early scrappage ➤ Establish scrappage implementation mechanism	x				
Vehicle taxes							
Government Policy on Future Automotive Development	2019	Import duty incentives (CKD dan IKD) (Permenperin 34/2017 Jo 5/2018) Harmonization of luxury tax Implementation Euro 4 emission standard (Permen LHK P.20/2017)	x				

References:

- 1) UN Population Database (2022), <https://population.un.org/wpp/>
- 2) World Bank (2022), <https://data.worldbank.org/>
- 3) Global Materials Flow Database (UNEP, 2023), <https://www.resourcepanel.org/global-material-flows-database>
- 4) Emissions Database for Global Atmospheric Research (EC, 2023), <https://edgar.jrc.ec.europa.eu/>
- 5) International Council on Clean Transportation (2023)
- 6) UN Energy Statistics (2021)
- 7) Fossil Fuels Consumption Subsidies 2022 (IEA, 2022), <https://www.iea.org/reports/fossil-fuels-consumption-subsidies-2022>
- 8) Climate Change Dashboard (IMF, 2024), <https://climatedata.imf.org/pages/access-data>
- 9) Ember (2023), <https://ember-climate.org/data-catalogue/yearly-electricity-data/>
- 10) Coalition for Disaster Resilient Infrastructure (CDRI, 2023), <https://giri.unepgrid.ch/facts-figures/building-infrastructures>
- 11) Koks, et al. (2023), <https://iopscience.iop.org/article/10.1088/2634-4505/acd1aa>
- 12) Environmental Vulnerability Indicators (UN, 2018), <https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html>
- 13)) Global Status Report on Road Safety 2023 (WHO, 2023), <https://www.who.int/teams/social-determinants-of-health/safety-and-mobility/globalstatus-report-on-road-safety-2023>
- 14) Socioeconomic Data and Applications Center (CIESIN, 2023), <https://sedac.ciesin.columbia.edu/data/set/sdgi-9-1-1-rai-2023>
- 15) Country Official Statistics
- 16) Trademap (ITC, 2024), <https://www.trademap.org/>
- 17) International Organization of Motor Vehicle Manufacturers (OICA, 2023), <https://www.oica.net/production-statistics/>
- 18) ATO analysis of UNEP Index using latest data
- 19) Rapid Transit Database (ITDP, 2022), <https://www.itdp.org/rapid-transit-database/>
- 20) Socioeconomic Data and Applications Center (CIESIN, 2023), <https://sedac.ciesin.columbia.edu/data/set/sdgi-11-2-1-urban-access-publictransport-2023>
- 21) PPI Database (World Bank, 2023), <https://ppi.worldbank.org/en/ppi>
- 22) Organisation for Economic Co-operation and Development (OECD) (2022), <https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#>
- (*) National transport policies



<https://asiantransportoutlook.com/>