

Timor-Leste

Transport Climate Profile

Population (2024)
1.4 million

Urban population
33%

Rural population
67%

Below 18 y.o.
43%

Above 60 y.o.
7%

Population density
91 persons per sqkm

Subregion
(1) **South East Asia**

Income class
Low and lower middle income

Gross domestic product
(1) (GDP PPP, 2022)
6.25 billion USD

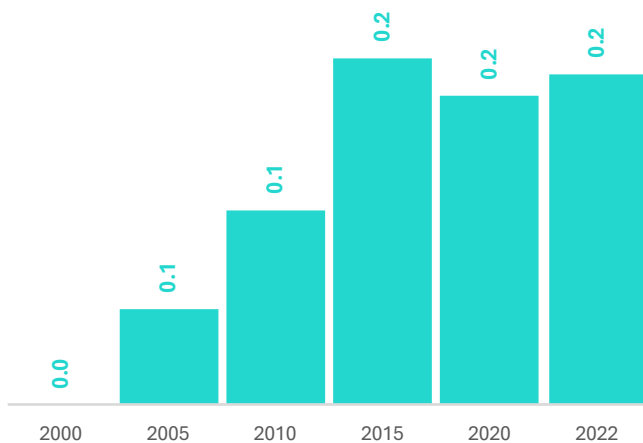
GDP per capita (PPP, 2022)
4,657 USD (1,2)
(2)

(1) Domestic consumption per capita, tonnes (2024)
4.6 tonnes (3)

(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.*

Transport and Climate Change

Transport fossil CO2 emissions, million tonnes



(4)

In 2010, transport contributed 38.4% of total fossil CO2 emissions. By 2022, transport contributed 37.6%.

Share of transport CO2 emissions by mode (2022)

| Road **86.1%** (4)

| Rail **0.0%**

| Navigation **7.9%**

| Aviation **6.0%** (4)

Navigation and aviation only includes domestic transportation

Between 2000-2015, road transport contributed 80.2% in transport fossil CO2 emissions. Between 2016-2022, road transport contributed 84.5%.

Transport CO2 emissions intensity with GDP, 2022
34.4 gCO2 per USD

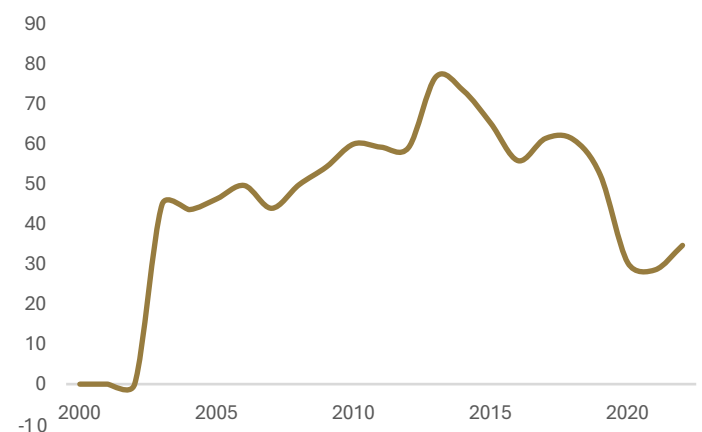
Asia-Pacific average is 33.2 gCO2 per USD

(2,4)

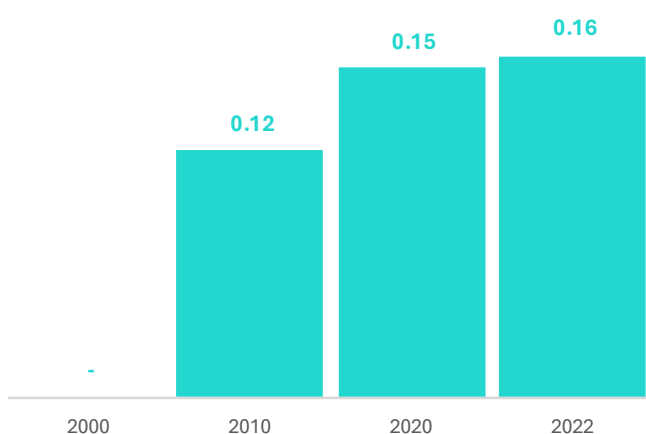
Transport CO2 emissions intensity with GDP trend, gCO2 per USD

(2,4)

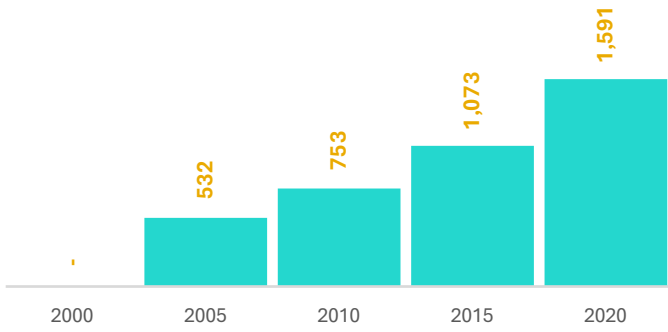
(1,4)



Transport fossil CO2 emissions per capita, tonnes



Transport energy consumption, terajoules

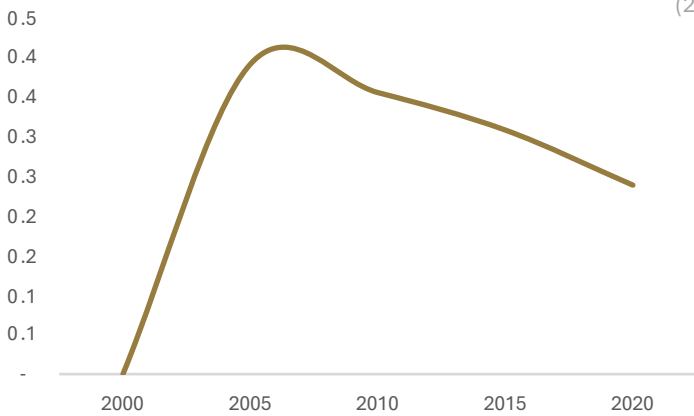


Transport energy intensity with GDP, 2020

0.2 MJ per USD

Asia-Pacific average is 0.5 MJ per USD

Transport energy intensity with GDP trend, MJ per USD



Transport fossil fuel subsidies, cumulative from 2010 to 2022

None

0.0% of Asia-Pacific total

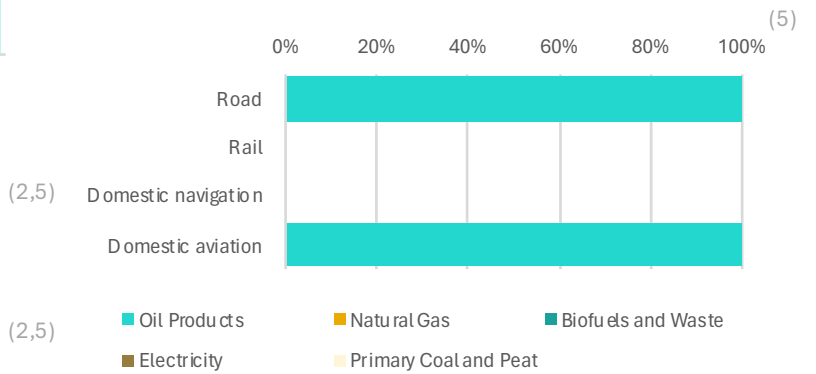
Implicit fossil fuel subsidies due to externalities

Share of transport energy consumption by mode (2020)



Navigation and aviation only includes domestic transportation

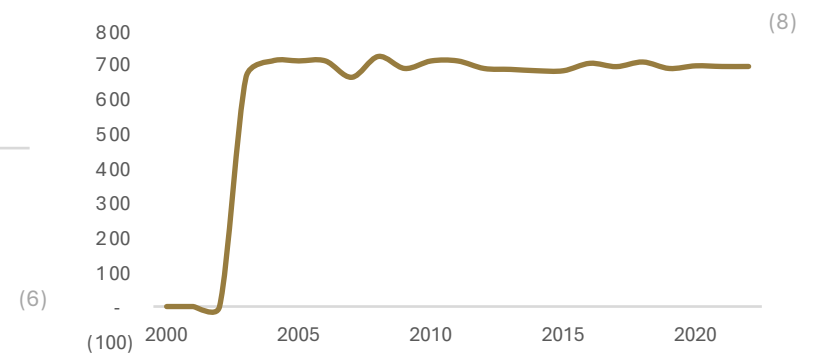
Share of transport energy consumption by source (2020)



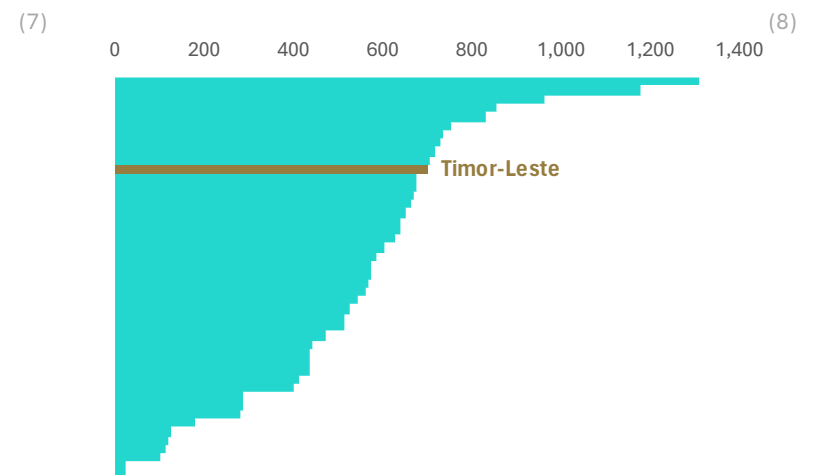
Grid emission factor (2022)

698.1 gCO₂ per kWh

Grid emission factor trend, gCO₂ per kWh



Grid emission factors in Asia-Pacific, gCO₂ per kWh



Vehicle Fleet

Road vehicles (2023)
n.d.

Road vehicle motorization rate (2023)
n.d.

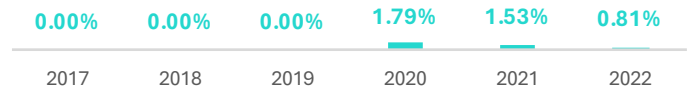
Road vehicles include 2- and 3-wheelers, LDVs, buses and other informal public transport, trucks, and other unclassified types

Electric road vehicle import value (2017-2022)

(9)	Total	Hybrid-electric	(11)
	2.4 million USD	1.6 million USD	

(1,9) Electric road vehicle share in total road vehicle import value trend (11)

Share of vehicles by type



Bus import value (2017-2022)

7.2 million USD (11)

Bus vehicle production, units

(10) Bus import value trend, assuming 2015=100

Adaptation

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

3.65 million USD

Share of average annual losses due to hazards, by mode (2022)

Road	Rail
94%	0%
Ports	Airports
3%	3%

National road vulnerability index ranking (2023)

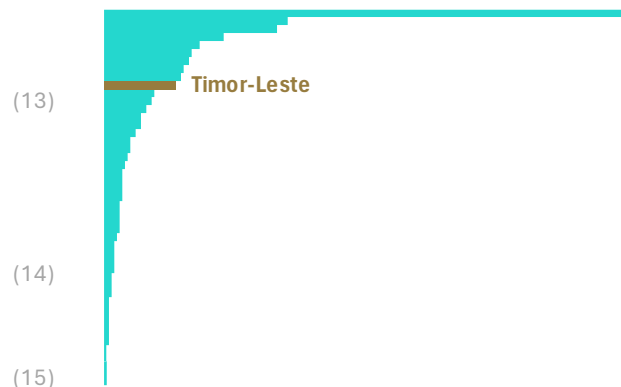
n.d.

Share of population in low elevated coastal zones (2018)

1%

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

(12) 0.00% 0.10% 0.20% 0.30% 0.40% 0.50% (12)



Developed with the support of:



Urban Transport

Urban rapid transit length (2021)

| BRT **None** | LRT **None**

| Metro **None** (16)

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

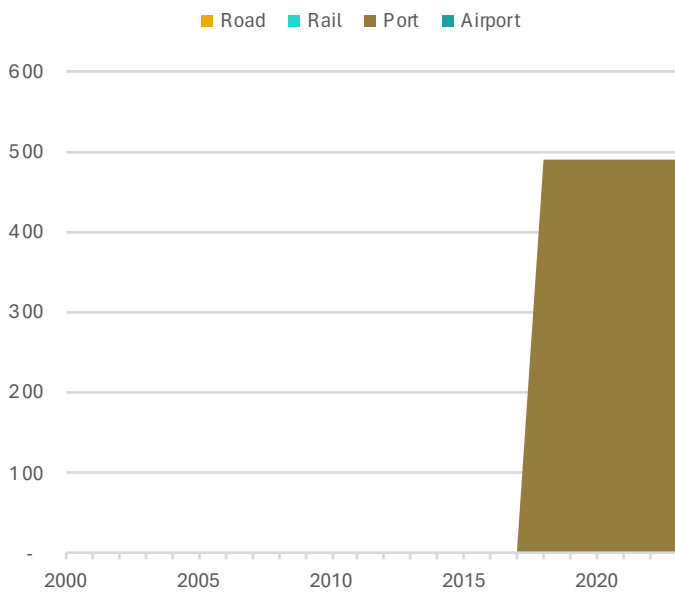
Urban rapid transit ratio (2021) **NA** (1,16)

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

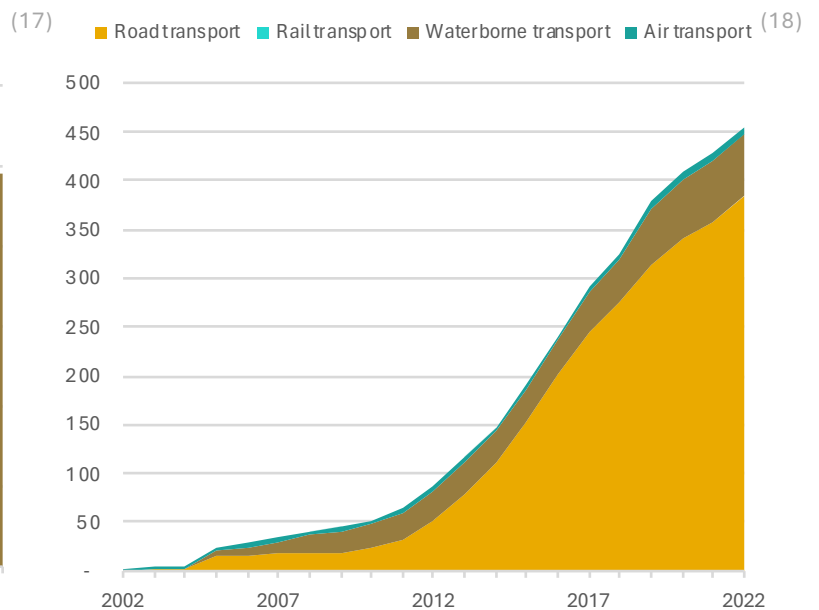
Based on 2015 estimates, only 18% of the population could reach the nearest city in 30 minutes, another 9% could reach in 1 hour, and another 53% could reach only after 3 hours.

Transport Investment

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

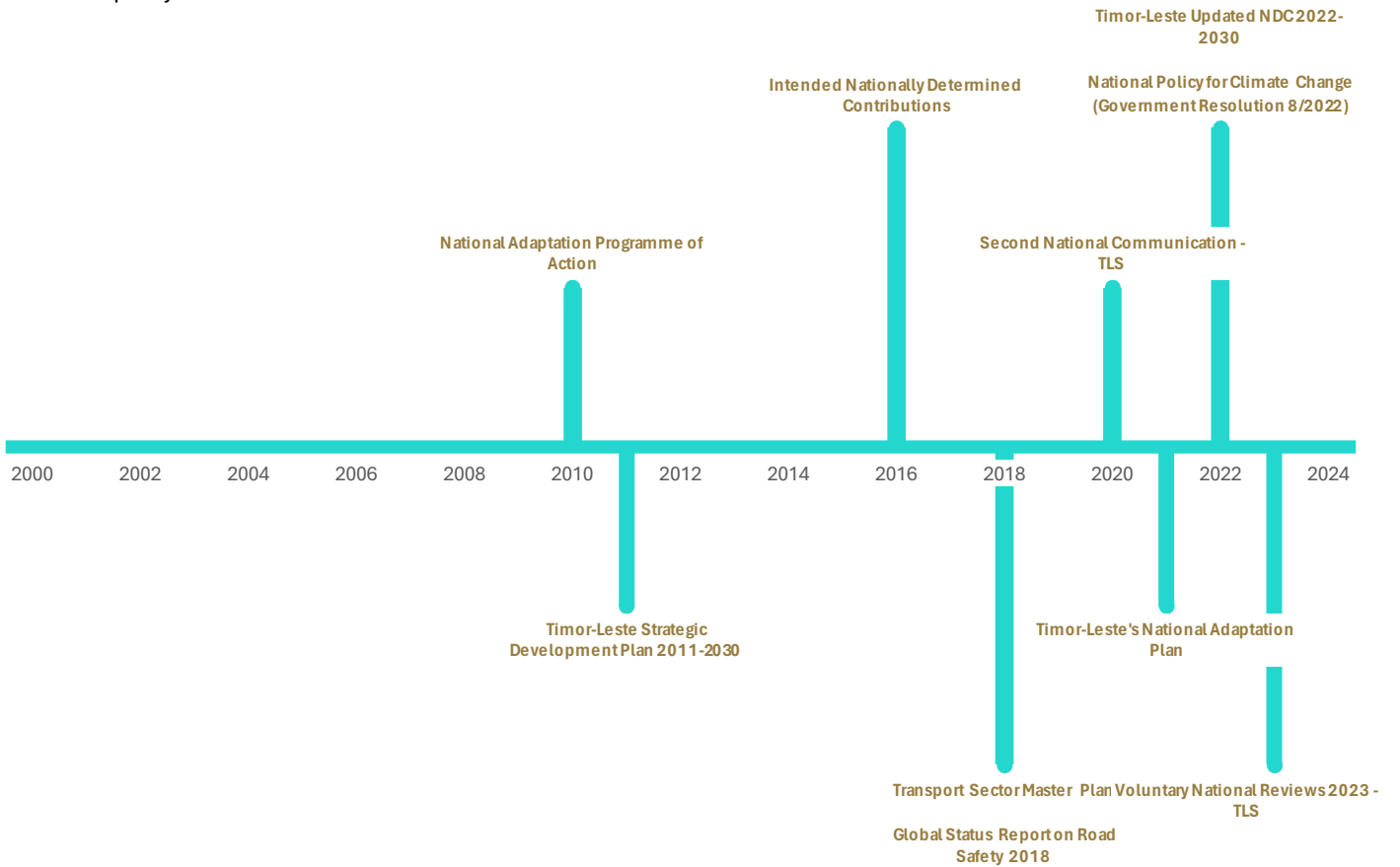


Official development assistance in the transport sector, million USD



Transport Climate Policy Documents

Transport-related policy documents in Timor-Leste



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

Nationally Determined Contributions

		Road transport	Rail transport	Domestic navigation	Domestic aviation	Urban transport
Timor-Leste Updated NDC 2022-2030 (adopted in 2022)	Mitigation measures	Yes		Yes	Yes	
	Mitigation targets					
	Adaptation measures	Yes		Yes	Yes	
	Adaptation targets					

Long-term Strategies

		Road transport	Rail transport	Domestic navigation	Domestic aviation	Urban transport
None	Mitigation measures					
	Mitigation targets					
	Adaptation measures					
	Adaptation targets					

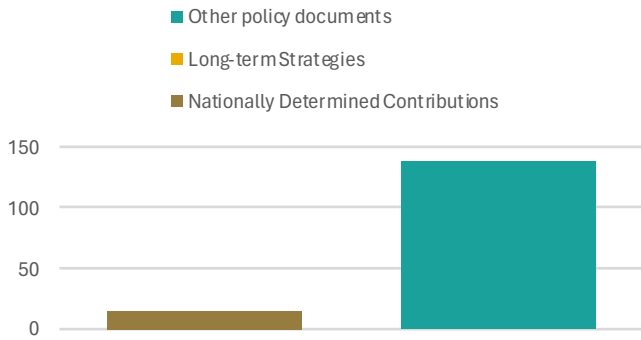


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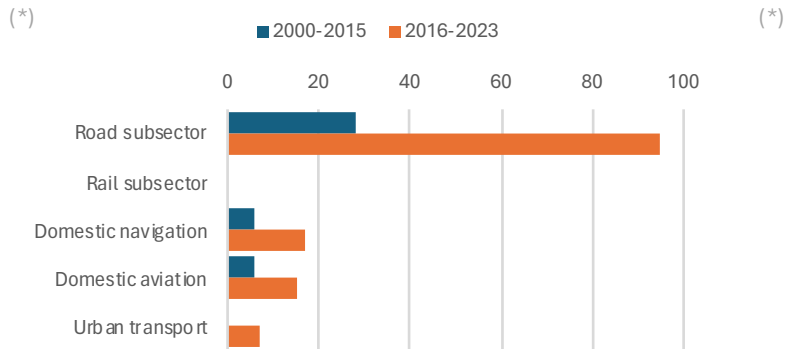


Transport Climate Policy Overview

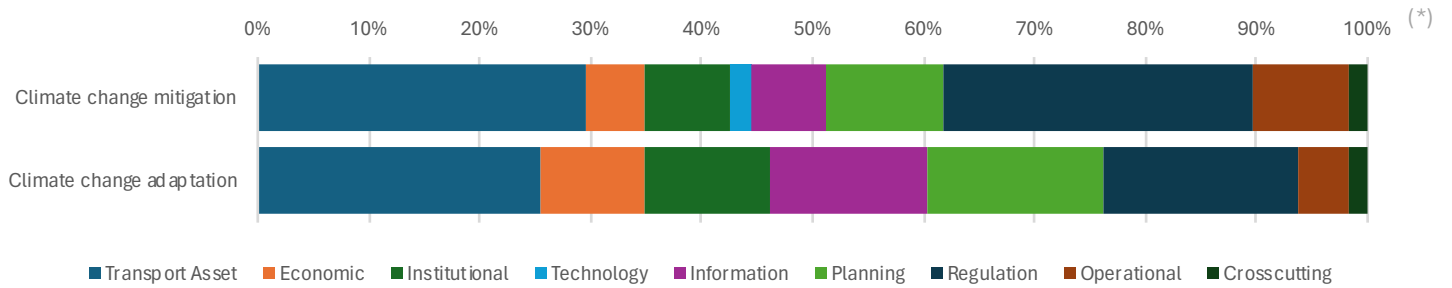
Number of measures by source



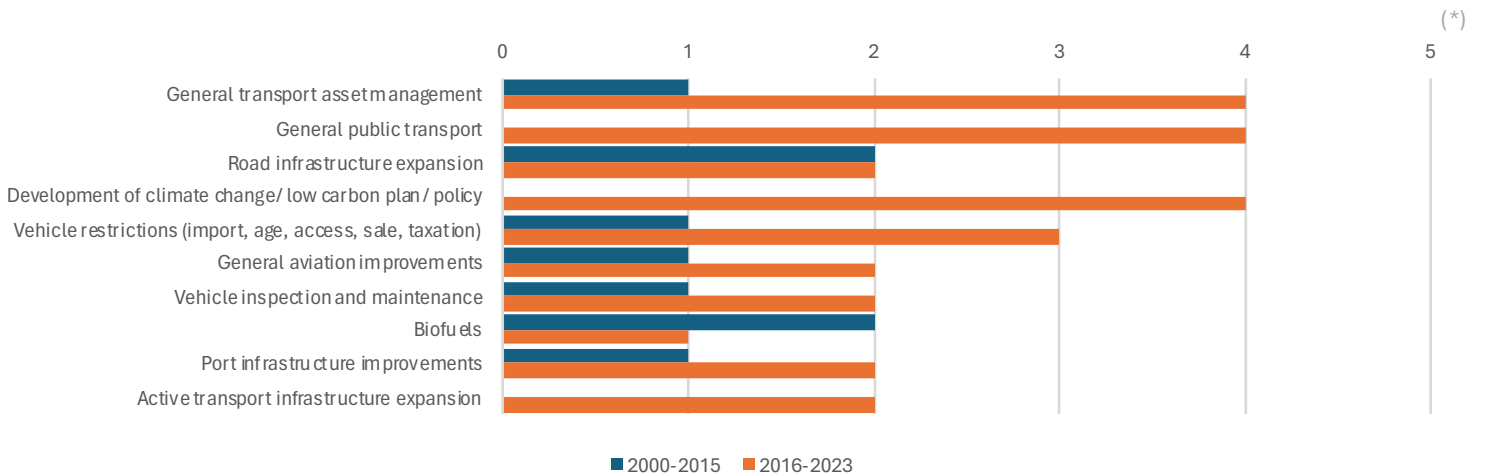
Number of climate change measures by subsectors



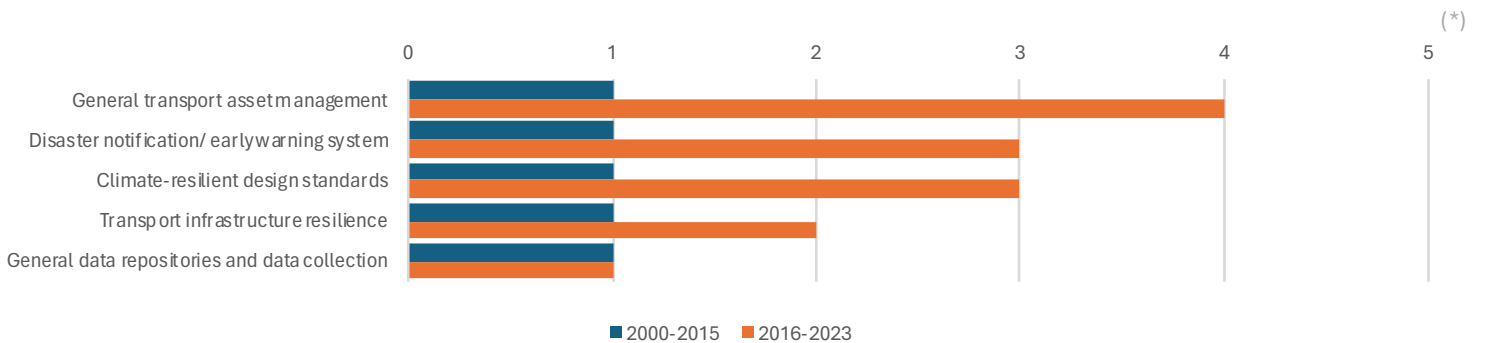
Transport-related climate change by framework



Climate change mitigation top 10 typology, number of measures



Climate change adaptation top 5 typology, number of measures



Climate Change Mitigation Policy Measures - Road Transport

Policy document	Year	Measures
Second National Communication - TLS	2020	Active transport infrastructure expansion, Vehicle scrappage scheme, LPG/ CNG/ LNG, General public transport, Target - Transport energy consumption, Vehicle efficiency standards, Vehicle restrictions (import, age, access, sale, taxation)
Transport Sector Master Plan	2018	Active transport infrastructure expansion, General data repositories and data collection, General infrastructure improvements, Vehicle inspection and maintenance, Express lanes/ public transport priority, General public transport, Development of transport asset management plan/policy, Performance-based transport maintenance contracts, General transport asset management, Traffic management, General parking measures, Investment required for specific projects, Investment volume for transport, Reference to finance mechanisms within country, General capacity building, Road infrastructure expansion, Define roles and accountabilities across agencies, General transport institutional reform, Transport law, General education and behavior change, General vehicle improvements
Regulation No. 1/2015 of 2015 - First Amendment to Regulation No. 1 of 2014 on Fuel, Biofuel and Lubricant Quality Standards and Specifications	2015	Biofuels
Global Status Report on Road Safety 2018	2018	Design standards for sidewalks and bicycle paths, National speed law, Speed limits on urban roads <= 30 kph, Speed limit on rural roads <= 70 kph, Speed limit on motorways <= 90 kph
Timor-Leste Strategic Development Plan 2011-2030	2011	Prevention of construction of roads, Technical standards for road infrastructure, Development of transport asset management plan/policy, General transport asset management, Logistics hub, Road infrastructure expansion, General transport institutional reform
Timor-Leste Updated NDC 2022-2030	2022	Development of transport plan/ policy, Vehicle restrictions (import, age, access, sale, taxation)
Voluntary National Reviews 2023 - TLS	2023	General freight and logistics improvements, General transport finance
Intended Nationally Determined Contributions	2016	General public transport, Vehicle restrictions (import, age, access, sale, taxation)
National Policy for Climate Change (Government Resolution 8/2022)	2022	General public transport, Vehicle efficiency standards
The Highway Code	2003	Vehicle inspection and maintenance, National speed law, Passenger and freight load limits
Timor-Leste's National Adaptation Plan	2021	Transport asset management funding strategy, Road infrastructure expansion
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Vehicle inspection and maintenance, Vehicle import inspections
Decree-Law No. 30/2011 of 2011 on Conditions and Procedures to be Observed in Relation to the Import of Motor Vehicles	2011	Vehicle restrictions (import, age, access, sale, taxation)

Climate Change Mitigation Targets - Road Transport

Policy document	Target year	Targets
Transport Sector Master Plan	2025	Upgrade to climate-resilient roads: Core Rural Roads in Coffee producing areas (D) Non-Core Rural Roads Low traffic (E1 Roads)
Transport Sector Master Plan	2030	Upgrade to climate-resilient roads: Other non coffee linked rural roads (D)
Transport Sector Master Plan	2022	Non-Core Rural Roads low Traffic (E2 Roads)
		Construct new bridges to provide all-weather access on major routes within five years and the remainder of national and district roads by 2030
Timor-Leste Strategic Development Plan 2011-2030	2030	Establish national ring road standards and establish a ring road to these standards by 2030. The National Ring Road will have been completed to provide a high standard highway right around the country capable of taking a full length container at an average speed of 60 km per hour New bridges will have been constructed to provide all-weather access on all national and district road routes
		Establish national ring road standards and establish a ring road to these standards by 2030.
Timor-Leste Strategic Development Plan 2011-2030	2030	The Dili to Baucau road link will be fully upgraded to international standards, including widening where technically feasible. The Manatuto-Natarbora road link will be fully upgraded to international standards, including widening where technically feasible.

Climate Change Mitigation Policy Measures - Domestic Navigation

Policy document	Year	Measures
Timor-Leste Updated NDC 2022-2030	2022	Development of transport plan/ policy
Voluntary National Reviews 2023 - TLS	2023	General freight and logistics improvements, General transport finance, Employment in transport, communication, and storage
Transport Sector Master Plan	2018	General international conventions, General shipping improvement, Investment volume for transport, General capacity building, Port infrastructure improvements, General transport institutional reform
Timor-Leste Strategic Development Plan 2011-2030	2011	Logistics hub, Port infrastructure improvements, Vehicle manufacturing
Timor-Leste's National Adaptation Plan	2021	Port infrastructure improvements
Second National Communication - TLS	2020	Target - Transport energy consumption

Climate Change Mitigation Policy Measures - Domestic Aviation

Policy document	Year	Measures
Transport Sector Master Plan	2018	Air traffic management, General aviation improvements, General international conventions, Investment volume for transport, General capacity building
Timor-Leste Strategic Development Plan 2011-2030	2011	Development of aviation plan/policy, General aviation improvements, Logistics hub
Timor-Leste Updated NDC 2022-2030	2022	Development of transport plan/ policy
Timor-Leste's National Adaptation Plan	2021	General aviation improvements
Voluntary National Reviews 2023 - TLS	2023	General freight and logistics improvements, General transport finance
Second National Communication - TLS	2020	Target - Transport energy consumption

Climate Change Mitigation Policy Measures - Urban Transport

Policy document	Year	Measures
Voluntary National Reviews 2023 - TLS	2023	General freight and logistics improvements
National Policy for Climate Change (Government Resolution 8/2022)	2022	General public transport
Transport Sector Master Plan	2018	General public transport, Reference to finance mechanisms within country
Global Status Report on Road Safety 2018	2018	Speed limits on urban roads ≤ 30 kph

Climate Change Adaptation Policy Measures

Policy document	Year	Measures
Intended Nationally Determined Contributions	2016	Disaster notification/ early warning system, Climate-resilient design standards (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation)
National Adaptation Programme of Action	2010	Disaster notification/ early warning system, Climate-resilient design standards, Transport infrastructure resilience (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation)
Second National Communication - TLS	2020	Climate-resilient design standards, Transport infrastructure resilience (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation)
Timor-Leste's National Adaptation Plan	2021	Disaster notification/ early warning system, Climate-resilient design standards, Transport asset management funding strategy, Transport infrastructure resilience, Disaster monitoring and risk assessment for transport infrastructure (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation)
Transport Sector Master Plan	2018	General data repositories and data collection, General international conventions, Development of transport asset management plan/policy, Performance-based transport maintenance contracts, General transport asset management, Investment required for specific projects, Investment volume for transport, Reference to finance mechanisms within country, General capacity building, Define roles and accountabilities across agencies, General transport institutional reform, Stakeholder Involvement, Transport law, General vehicle improvements (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation, Urban transport)
National Policy for Climate Change (Government Resolution 8/2022)	2022	Development of transport adaptation/ emergency/ disaster plan/ policy (Sub-sectors: NA)
Timor-Leste Updated NDC 2022-2030	2022	Disaster notification/ early warning system, Reporting, transparency, feedback mechanism, Development of transport adaptation/ emergency/ disaster plan/ policy, Development of transport plan/ policy, Disaster monitoring and risk assessment for transport infrastructure (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation)
Timor-Leste Strategic Development Plan 2011-2030	2011	General data repositories and data collection, Development of transport asset management plan/policy, General transport asset management, General transport institutional reform (Sub-sectors: Road transport)
Voluntary National Reviews 2023 - TLS	2023	General transport finance, Employment in transport, communication, and storage (Sub-sectors: Road transport, Domestic Navigation, Domestic Aviation)

Climate Change Adaptation Targets

Policy document	Target year	Targets
Transport Sector Master Plan	2025	Upgrade to climate-resilient roads: Core Rural Roads in Coffee producing areas (D) Non-Core Rural Roads Low traffic (E1 Roads)
Transport Sector Master Plan	2030	Upgrade to climate-resilient roads: Other non coffee linked rural roads (D)
Transport Sector Master Plan	2022	Non-Core Rural Roads low Traffic (E2 Roads)

Notes



(*) Policy measures and targets were extracted from policy documents as listed in the ATO National Transport Policies Database

<https://bit.ly/ATOpolicyrepository>

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/>
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- (6) Fossil Fuels Consumption Subsidies 2022 (IEA, 2022), <https://www.iea.org/reports/fossil-fuels-consumption-subsidies-2022>
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- (8) Ember (2023), <https://ember-climate.org/data-catalogue/yearly-electricity-data/>
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- (13) Coalition for Disaster Resilient Infrastructure (CDRI, 2023), <https://giri.unepgrid.ch/facts-figures/building-infrastructures>
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- (15) Environmental Vulnerability Indicators (UN, 2018), <https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html>
- (16) Rapid Transit Database (ITDP, 2022), <https://www.itdp.org/rapid-transit-database/>
- (17) PPI Database (World Bank, 2023), <https://ppi.worldbank.org/en/ppi>
- (18) Organisation for Economic Co-operation and Development (OECD) (2022), <https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#>

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