Transport and Climate Profile Timor-Leste

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Developed by:



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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://asiantransportclimateprofiles/

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.

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Transport and Climate Profile: Timor-Leste

2024

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Executive Summary

Timor-Leste, a lower-middle-income country in Southeast Asia, faces significant challenges in balancing transport development with climate change mitigation and adaptation. This narrative explores the current state of transport and climate change in Timor-Leste, highlighting key data trends, policy documents, and potential opportunities for improvement.

CO2 Emissions and Energy Consumption:

In 2023, Timor-Leste's transport sector emitted 342 thousand tonnes of CO2, accounting for a substantial 49% of the country's total emissions. This represents a 6% annual growth between 2019 and 2023, significantly surpassing the Asia-Pacific average of 1% during the same period, primarily driven by a resurgence in travel post-COVID restrictions. The road sector dominated these emissions, contributing 86% in 2022, highlighting a shift from its average 80% share between 2000 and 2015. While this road sector dominance aligns with the broader Asia-Pacific trend of 89% in 2022, other modes played a minor role in Timor-Leste's transport emissions. Notably, Timor-Leste's transport CO2 emissions intensity, at 49.2 gCO2 per USD in 2023, indicates room for improvement compared to the Asia-Pacific average of 32.0 gCO2 per USD and its peers in low and lower-middle-income countries and Southeast Asia, averaging 29.3 and 34.6 gCO2 per USD, respectively.

Adaptation and Resilience:

 Adaptation and resilience are crucial for Timor-Leste, as the country faces an estimated \$3.65 million in potential average annual losses to its transport infrastructure due to various hazards. This translates to 0.06% of the nation's GDP. Most of these losses, 94%, are projected to occur in the road network, while ports and airports account for 3% each. Timor-Leste ranks 117th out of 208 countries in terms of national road vulnerability, underscoring the need for improvements in resilience and redundancy. Furthermore, 1% of Timor-Leste's population resides in lowelevation coastal zones, highlighting their vulnerability to climate change impacts.

Vehicle Fleet and Electric Mobility:

- Vehicle fleet: In 2022, the Asia-Pacific region averaged 577 vehicles per thousand people, with the South East Asia subregion slightly lower at 505. Timor-Leste's fleet composition is not specified, but between 2015 and 2023, the country imported USD 8.1 million worth of buses, a significant increase from the USD 300,000 imported between 2010 and 2015.
- Electric vehicle adoption in Timor-Leste remains low, with no electric buses imported between 2017 and 2023. However, the country imported USD 1.8 million worth of electric vehicles during this period, primarily electric LDVs (35%) and electric 2-wheelers (65%). While the share of electric vehicle imports grew from 0% in 2017 to 0.8% in 2023, it still lags behind the Southeast Asia subregion's 16.1% share.
- Timor-Leste's overall E-mobility Readiness Index score for 2024 is 40/100, indicating significant room for improvement in areas such as access to technology, supporting EV policies, clean energy access, and financial instruments.

Urban Transport and Public Transport Availability:

• Data on urban transport and public transport availability in Timor-Leste is limited.

Investments:

 Timor-Leste has received significant international aid for transport development, primarily focusing on road infrastructure. Public-private partnership investments have also been made, mainly in the waterborne transport sector.

Policy:

- Timor-Leste's transport sector presents a complex landscape of climate policy efforts. While 14 transport-related documents exist, with six directly addressing climate concerns, policy alignment with the Nationally Determined Contributions (NDCs) remains limited. Notably, Timor-Leste's NDC lacks specific emissions targets for the transport sector, and broader economic targets are also absent.
- NDC Gaps and Policy Alignment: Timor-Leste's NDC lacks specific targets for transport sector emissions, making it difficult to track progress and assess the effectiveness of climate action. Additionally, there is a misalignment between policy priorities and the urgency of climate change. Policy gaps are evident, with only 24% of prioritized climate measures originating from the NDC or Long-Term Strategy (LTS). Adaptation and resilience measures constitute 27% of total policies, while mitigation efforts comprise 55%. This imbalance highlights a greater focus on reducing emissions rather than building resilience to climate impacts.
- While the country has policies promoting public transport and biofuels, the focus remains on expanding road infrastructure, potentially exacerbating emissions.

Policy Priorities and Opportunities:

Opportunities exist to bridge these gaps. Key documents like the Transport Sector Master Plan and the National Adaptation Plan offer a foundation for more integrated and comprehensive strategies. Timor-Leste can enhance its climate action efficacy by aligning transport policies with NDC goals. Major opportunities include.

- Setting ambitious targets: Establish clear and measurable targets for reducing transport emissions in the NDC and other policy documents.
- Aligning policies with climate goals: Ensure that transport policies and investments prioritize climate-resilient infrastructure, low-carbon transport modes, and electric mobility.
- Enhancing public transport: Invest in expanding and improving public transport systems to provide convenient and affordable alternatives to private vehicles.
- Promoting electric mobility: Create incentives for electric vehicle adoption, invest in charging infrastructure, and adopt policies that support the transition to a cleaner vehicle fleet.
- Integrating climate resilience: Incorporate climate risk assessments into transport planning and design processes, ensuring that infrastructure is resilient to extreme weather events and other climate-related hazards.

By taking these steps, Timor-Leste can move towards a more sustainable and climate-resilient transport system that supports its development goals while minimizing its environmental impact.

Data Insights Timor-Leste

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Transport and Climate Profile

Population (2024) Subregion Income class **South East Asia** Low and lower middle income 1.4 million (1)Urban population **Rural population** Gross domestic product GDP per capita (PPP, 2023) 33% **67%** 5,109 USD (GDP PPP, 2023) (1)(1,2)6.95 billion USD (2) Below 18 y.o. Above 60 y.o. 43% Domestic consumption per capita, tonnes (2024) 7% (1)4.6 tonnes (3) Population density Domestic consumption is the total amount of materials directly used 91 persons per sqkm (1,2) in the economy (used domestic extraction plus imports), minus the materials that are exported.

I. Transport and Climate Change

Transport fossil CO2 emissions, million tonnes



In 2010, transport contributed 39% of total fossil CO2 emissions. By 2023, transport contributed 49%.

Share of transport CO2 emissions by mode (2022)

Road	Rail	
86.1 %	0.0%	(4)
Navigation	Aviation	
7.9 %	6.0 %	(4)
Novigation and aviation	a nhu in aludaa da maatia tranana rta	tion

Navigation and aviation only includes domestic transportatior

Between 2000-2015, road transport contributed 80% in transport fossil CO2 emissions. Between 2016-2022, road transport contributed 84%.

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



49 gCO2 per USD

Transport fossil CO2 emissions per capita, tonnes



Asia-Pacific average is 32 gCO2 per USD

Transport CO2 emissions intensity (2023)

Transport CO2 emissions intensity trend, gCO2 per USD



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





II. Transport Energy Consumption



(9)

Transport fossil fuel subsidies, cumulative (2010-2022) None

0.0% of Asia-Pacific total

Estimated externalities due to fossil fuel subsidies

Grid emission factor (2022) (7)

698 gCO2 per kWh

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)

(2020)	
4 million USD	
Road	Rail
94%	0%
Ports	Airports
3%	3%
National road vulnerabilit	y index ranking (2023)
117th out of 208 cou	ntries

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)



IV. Other Externalities

Road crash fatalities (2021) 159 deaths





Asia-Pacific average is 16 fatalities per 100 thousand population

Rural access index (2023) 84%

Rural population without access to all-season roads (2023) **0.2 million**







V. Vehicle Fleet

Road vehicles (2023) **n.d.**

Share of vehicles by type

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

(1,15)

(15)

(14)

(14)

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

Bus import value (2015-2023) 8.1 million USD





Electric road vehicle import value (2017-2023) **1.8 million USD**

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



Bus vehicle production, units



	E-mobility Readiness Index	(2024)	
	Technology & Market	Policy	(18)
n	9/25	0/25	
202	Energy	Financial	
	20/25	11/25	
	Overall		
	40/100		
(16)			

Electric road vehicle share in total road vehicle import value trend

(16)

0.0%	0.0%	0.0%	0.7%	0.5%	0.6%	0.8%	
2017	2018	2019	2020	2021	2022	2023	

(16)

VI. Urban Transport

Urban rapid transit length (2021) BRT <mark>None</mark> Metro <mark>None</mark>	LRT None	(19) (19)	Urban rapid transit ratio in Asia- Pacific, kilometers per million urban population (2021)	(1,19)
Urban rapid transit ratio (2021) NA		(1,19)		

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

Share of cities by level of access to public transport (out of 1 cities) Bicycle import value, thousand USD (20) (16)3,500 **100%** 3,000 2,500 2,000 1,500 1,000 500 0-10% 50-60% 60-70% 90-100% 10-20% 20-30% 30-40% 40-50% 70-80% 80-90% 2005 2009 2013 2015 2017 2019 2003 2007 2011 2021 2023

VII. Transport Investments



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

Official development assistance in the transport sector, million USD



Policy Insights Timor-Leste

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VIII. Transport and Climate Policy Documents

Transport-related policy documents in Timor-Leste

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

Nationally Determined Contributions of Timor-Leste 2016: Intended Nationally Determined Contributions 2022: Timor-Leste Updated NDC 2022-2030



IX. Representation of Transport in Key Climate Policy Documents

Nationally Determined Contributions						
		Road	Rail	Domestic	Domestic	Urban
		transport	transport	navigation	aviation	transport
Timor-Leste Updated NDC 2022-2030 (adopted in 2022)	Mitigation measures Mitigation targets	Yes		Yes	Yes	
	Adaptation measures Adaptation targets	Yes		Yes	Yes	
Long-term Strategies						
		Road	Rail	Domestic	Domestic	Urban
		transport	transport	navigation	aviation	transport
Nono	Mitigation measures					
None	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 Timor-Leste

	Year		Target
Document	published	Target	year
Economy-wide emissions			
Net zero, carbon neutrality, and other long-ter climate action	m		
Transport GHG emission			

XIII. Indirect Transport Climate Change Targets

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

	Year		Target
Document	published	Target	ye ar
General transport asset management			
Transport Sector Master Plan	2018	Upgrade to climate-resilient roads: Core Rural Roads in Coffee producing areas (D) Non-Core Rural Roads Low traffic (E1 Roads)	2025
Transport Sector Master Plan	2018	Upgrade to climate-resilient roads: Other non coffee linked rural roads (D)	2030
Transport Sector Master Plan	2018	Non-Core Rural Roads low Traffic (E2 Roads)	2022
Road infrastructure expansion			
Timor-Leste Strategic Development Plan 2011-2030	2011	Construct new bridges to provide all-weather access on major routes within five years and the remainder of national and district roads by 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	2030
Technical standards for road infrastructure			
Timor-Leste Strategic Development Plan 2011-2030	2011	Establish national ring road standards and establish a ring road to these standards by 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.	2030

XIV. Transport and Climate Policy Measures

	Year		ad	_	me stic /igation	me stic ation	oan nsport
Document	published	Measure	Roi	Rai	Do Nav	Do Avi	Urt Tra
Biofuels							
Timor-Leste Updated NDC 2022-2030	2022	Research will be undertaken to improve the understanding of the economics and potential of biofuel production and the use of sustainable biomass as feedstock for bioenergy production in Timor-Leste.					
Regulation No. 1/2015 of 2015 - First Amendment to Regulation No. 1 of 2014 on Fuel, Biofuel and Lubricant Quality Standards and Specifications	2015	The specification for the blending of Biofuel with Gasoline and Diesel Fuel used for the propulsion of vehicles, used in the domestic market, with a percentage by volume of Biofuel greater than 5%, are set forth in Annexes III and V, except for the values established as maximum contents of such Biofuel. The blending of Biofuel is limited up to a maximum threshold of 20% by volume	х				
Regulation No. 1/2015 of 2015 - First Amendment to Regulation No. 1 of 2014 on Fuel, Biofuel and Lubricant Quality Standards and Specifications	2015	(a) to regulate the quality of the Fuel, Biofuel and Lubricants distributed in the domestic market in order to reduce pollutant emissions arising from their use; (b) to encourage the adoption of environmentally friendly engine technologies capable of ensuring minimum carbon emissions and the implementation of emission control technologies; (c) to ensure that all the relevant and appropriate information about Fuel, Biofuel and Lubricants is provided to retailers and consumers when the products are provided, marketed and used.	x				
Climate-resilient design standards							
Intended Nationally Determined Contributions	2016	Review existing laws, regulations and standards to enhance CC-resilience of critical infrastructure.	х		x	х	
National Adaptation Programme of Action	2010	Review existing laws, regulations and standards and enhance CC-resilient infrastructure Pass new legislation to strengthen and guarantee national development for regulations quality of materials and building codes and practices.	x		x	x	
Second National Communication - TLS	2020	Review and revise legislation, regulations and standards to enhance climate change resilient infrastructure	х				1
Timor-Leste's National Adaptation Plan	2021	Improve regulatory framework for climate-smart and climate-proof infrastructure	х		Х	х	
Development of climate change/ low carbon plan/ policy							
Timor-Leste Updated NDC 2022-2030	2022	Timor-Leste's National Climate Change Policy was endorsed and published in the official gazette as Government Resolution no. 8/2022, of 1 March.					

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XIV. Transport and Climate Policy Measures

	Year		oad	ail	o me s avigat	o me s viatio	rban ranspo
Document	published	Measure	Ř	Ĕ	ΩZ	ΔÁ	<u> </u>
Timor-Leste Updated NDC 2022-2030	2022	The introduction of a new initiative to formulate a low carbon development strategy to guide national mitigation and adaptation commitments, activities and approaches. Develop a national climate change law that will create a legal framework for Timor-Leste's climate change response and pass this law in 2023/2024. Endorse Timor- Leste's National Climate Change Policy as endorsed in 2021 as a framework for guiding the national approach to climate change. This policy will trigger the development of a National Climate Change Strategy and Action Plan which will serve as the central planning document to guide the implementation of the National Climate Change Policy and the achievement of this NDC					
National Policy for Climate Change (Government Resolution 8/2022)	2022	The National Directorate for Climate Change will be responsible for developing a detailed National Climate Change Strategy and Action Plan (NCCAP) to implement the measures that are listed in this climate change policy at the national, municipal and local levels.					
Voluntary National Reviews 2023 - TLS	2023	In line with the Timor-Leste's Nationally Determined Contribution (2022-2030), promote a low-carbon development strategy.					
Development of transport adaptation/ emergency/ disaster plan/ policy							
Timor-Leste Updated NDC 2022-2030	2022	To support efforts to systematically reduce the impacts of climate change, The Government of Timor-Leste launched the National Adaptation Plan process in 2019.					
National Policy for Climate Change (Government Resolution 8/2022)	2022	Timor-Leste has developed a NAP that was submitted in September 2011.					
Development of transport plan/ policy							
Timor-Leste Updated NDC 2022-2030	2022	A transport master plan will be developed to build sector resilience and reduce emissions derived from the transport sector. This plan will create policy entry points for promoting and supporting climate-friendly public transport options and non-motorised transport solutions where possible.	x		х	x	
Disaster monitoring and risk assessment for transport infrastructure							
Timor-Leste Updated NDC 2022-2030	2022	A national infrastructure assessment and audit will be conducted to improve investment planning and improve capital cost projections. This assessment will be used to develop new basic infrastructure requirements designed to minimise exposure and vulnerability to current and projected climate change risks. This commitment is conditional on external financing and technical assistance.					
Timor-Leste's National Adaptation Plan	2021	Identification of Infrastructure Vulnerabilities	Х		Х	Х	

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XIV. Transport and Climate Policy Measures

	Year		ad	=	me s vigat	mes	ban insp(
Document	published	Measure	Ro	Rai	Do Na	Avi Avi	Url Tra
Disaster notification/ early warning system							
Intended Nationally Determined Contributions	2016	Establish early warning systems in areas identified as vulnerable to disasters such as floods and storms					
Timor-Leste Updated NDC 2022-2030	2022	Through the Green Climate Fund, Timor-Leste is working with United Nations Development Programme (UNDP) to address the urgent need for integrated climate information services, covering oceans, and proactive disaster risk management approaches founded on impact-based forecasting and end-to-end MHEWS.					
National Adaptation Programme of Action	2010	Establish early warning systems in areas identified as vulnerable to disasters such as floods and storms.					
Timor-Leste's National Adaptation Plan	2021	Enhancing Early Warning Systems to build greater resilience to hydro and meteorological hazards in SIDS					
General land use							
Timor-Leste Updated NDC 2022-2030	2022	Land-use planning and environmental licensing regimes					
General public transport							
Intended Nationally Determined Contributions	2016	Promote use of public transport by enabling convenient (routes to all areas) and reliable access to bus or micro- bus, constructing appropriate facilities such as proper bus stops, terminals, and establish necessary regulations to control the transportation system	x				
National Policy for Climate Change (Government Resolution 8/2022)	2022	The policy to mitigate GHG emissions in transport within Timor-Leste is centered around two themes: reducing GHG emissions from the vehicle fleet (personal and public) and promoting the use of public transport in urban areas and between communities.	x				х
Second National Communication - TLS	2020	improvement of efficiency in transportation for reducing mobile GHG emissions through the increasing use of public transport and more efficient vehicle Promote use of public transport by enabling convenient (routes to all areas) and reliable access to bus or micro-bus, constructing appropriate facilities such as proper bus stops, terminals, and establish necessary regulation to control the transportation system.	x				
Transport Sector Master Plan	2018	New Dili Central Bus Terminal improved Dili-other city linkage through hybrid scheduled and demand services provision of en route covered bus stops at key intersections with safety laybys Marked and fixed with shelters at 7 to 10 km intervals Use of a fixed taxi rate protocol and safety features within taxis Improved Dili-municipal center linkage through hybrid scheduled and demand services	x				x
Reporting, transparency, feedback mechanism							
Timor-Leste Updated NDC 2022-2030	2022	Timor-Leste submitted its Second National Communication to the UNFCCC in November 2020. Timor-Leste began its Technology Needs Assessment process in 2020.					

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Domestic Aviation	Urban Transport
Vehicle restrictions (import, age, access, sale, taxation)							
Intended Nationally Determined Contributions	2016	Continue to promote and implement the current Decree Law (No.30/2011) on used vehicles which are imported into Timor-Leste to be less than 5 years of factory production.	x				
Timor-Leste Updated NDC 2022-2030	2022	Decree-Law (No. 30/2011) prohibits the import of light passenger and mixed vehicles that are more than 5 years old (from the date of their original manufacture to the date of import) with exceptions in place for particular circumstances and vehicles. Timor-Leste will continue to use these standards to control vehicle imports and revise them as required to suit national policies and priorities.	x				
Decree-Law No. 30/2011 of 2011 on Conditions and Procedures to be Observed in Relation to the Import of Motor Vehicles	2011	Without prejudice to the exceptions drawn up in the following article, it shall be forbidden to import mixed and light passenger vehicles of over five years old, as of date of manufacture.	x				
Second National Communication - TLS	2020	Continue to promote and implement the current Decree Law (No. 30/2011) on used vehicles which are imported into Timor Leste to be less than 5 years of factory production.	x				
Active transport infrastructure expansion							
Second National Communication - TLS	2020	providing pedestrian and bicycle lanes to encourage people for walking or using bicycle	х				
Transport Sector Master Plan	2018	Traffic Demand – Improved provisions for pedestrians and non-motorized transport	х				
Air traffic management							
Transport Sector Master Plan	2018	Automatic Dependent Surveillance Broadcasting				х	
Define roles and accountabilities across agencies							
Transport Sector Master Plan	2018	Institutionalize road safety roles and functions	х				
Design standards for sidewalks and bicycle paths							
Global Status Report on Road Safety 2018	2018	Yes	х				
Development of aviation plan/policy							
Timor-Leste Strategic Development Plan 2011-2030	2011	We will develop a District Aviation Plan to provide a district aviation capacity and identify current and proposed light aviation airstrips and the capital needs for upgrading and rehabilitating these airstrips.				x	
Development of transport asset management plan/policy							

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Timor-Leste Strategic Development Plan 2011-2030	2011	Deliver a comprehensive roads maintenance program	x				
Transport Sector Master Plan	2018	Establish a national road maintenance plan in cooperation with donors to define maintenance requirements for all roads in all parts of Timor Leste	x				
Employment in transport, communication, and storage							
Voluntary National Reviews 2023 - TLS	2023	Address the jobs-skills mismatch in key sectors – agriculture, tourism, blue economy and entrepreneurship. The country needs experts in various fields, including marine science, fisheries management, aquaculture, tourism, and maritime transport, to drive sustainable growth in the sector.			x		
Express lanes/ public transport priority							
Transport Sector Master Plan	2018	Dedicated bus lanes as needed and as appropriate	х				
General aviation improvements							
Timor-Leste Strategic Development Plan 2011-2030	2011	To meet the future demand for air tra#c, we will expand the Presidente Nicolau Lobato International Airport in Dili and build and rehabilitate regional airstrips to establish a district aviation capacity. New terminal facilities will be constructed to support modern airport operations and cater to the development of the tourism industry. To support tourism growth, the airport will be promoted to international operators and regional airlines. The plan will include the rehabilitation or building of airstrips for at least Suai, Oe-Cusse Ambeno, Lospalos, Maliana, Viqueque, Atauro and Same. Baucau airport will be developed as an alternative airport to Dili and will be also used as aeromilitary base. This will include construction of a control tower and terminal.				x	
Timor-Leste's National Adaptation Plan	2021	To meet the future demand for air traffic and boost key industry sectors, we will expand out international airport and build a network of district airports				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 Timor-Leste

Year Document publish	d Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Transport Sector Master Plan 2018	Develop the air and air services system including expanding international linkages and establishment of a domestic service as demand warrants. Increase productivity by corporatizing services that are more commercial and providing incentive contracts to managers of airports; AACTL will introduce modern satellite-based navigation and flight information systems for civil aviation use, significantly improving the safety of Timor-Leste's air space and airports. 1. installing lights and other aids that will allow routine 24-hour operation as part of improving PNLIA 2. negotiating access to aviation meteorological information services, most likely with Indonesia or Australia 3. extending PBN to other parts of Timor-Leste when justified by increased flights 4. working with ANATL to develop sufficient capacity to meet air traffic control needs, particularly as PNLIA becomes 24-hour capable and Oecusse and Suai develop as regional airports in the future Presidente Nicolau Lobato International Airport Stage 1 terminal facilities complete, designed for eventual 0.5 million pa passenger capacity Stage 2 terminal facilities complete and terminal and related facilities in operation Stage 1 infrastructure works – runway extension, safety areas & lighting Stage 2 infrastructure works – runway widening and extension to 2,500m as needed and approved Baucau Airport - Runway etabilitation and facilities improvements Atauro District Airport - Runway, facilities improvements Stage 2 runway & facilities improvements Maliana, Viqueque District Airports - Runway, facilities & fencing improvements - Runway, facilities & fencing improvements - Runway, facilities & fencing improvements				x	

General capacity building

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Transport Sector Master Plan	2018	All agencies require improved capacity in asset management, maintenance programming, project preparation, safeguards, project implementation, regulatory functions, monitoring, financial management, planning, and policy development; Improved capacity across the transport sector through sustained commitment to staff training, institutional reform and upgrading, international support and addition of new trained staff where demand warrants Upgrading of training in asset management, maintenance programming, project preparation, safeguards, project implementation, regulatory functions, monitoring, financial management, planning, and policy development; Skills development and hiring of new staff as needed for the fields of management, planning and budgeting, engineering and technical skills, maintenance and Develop capacity to implement road safety policies, standards, procedures and guidelines In the national context DNTM will become a more effective sea transport regulator by developing its management and operational capacity and adopting a risk-based approach and cost recovery business model. APORTIL will continue to manage and operate the nation's ports and become more effective by developing its management and operational capacity and adopting a business model that balances commercial viability, safety, security, customer service and asset management.	x		x	x	
General data repositories and data collection							
Timor-Leste Strategic Development Plan 2011-2030	2011	A National Climate Change Centre will be established by 2015 to conduct research and observation on climate change issues, to ensure data on climate change impacts is being collected and to encourage technology innovation to address climate change adaptation and mitigation.					
Transport Sector Master Plan	2018	Establish a centralized computer based register of driver licenses Establish a centralized computer based register of vehicles and owners	х				
General education and behavior change							
Transport Sector Master Plan	2018	Improve road safety awareness and education Demonstrate the benefits of improved policies, standards, procedures and guidelines	х				
General freight and logistics improvements							
Voluntary National Reviews 2023 - TLS	2023	Improving basic infrastructure in key value chains including cold chains to bridge the gap between urban and rural communities.	x		x	x	x
General infrastructure improvements							
Transport Sector Master Plan	2018	improved highway safety features including markings, signage, geometric design, maintenance and enforcement	х				
General international conventions							

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Sector Master Plan	2018	A national law for Air Transport to bring into effect the ICAO conventions to which TL will accede and including local legal requirements for airports, air operations and aircraft A national law for Marine Transport to bring into effect the IMO conventions to which TL will accede and including local legal requirements for ports			х	x	
General parking measures							
Transport Sector Master Plan	2018	Off street parking garages Enforced parking control I	х				
General shipping improvement							
Transport Sector Master Plan	2018	Develop the marine transport system including effective international links as well as linkage among the ports of Timor Leste corporatizing the Port Administration of Timor-Leste with autonomy of decision making and an independent board of directors with performance based compensation for senior staff based on service efficiency targets and profitability of the corporation. Provide for hypothecated revenue;			x		
General transport asset management							
Timor-Leste Strategic Development Plan 2011-2030	2011	Timor-Leste will undertake substantial and long-term investment in roads to maintain our current road network, including a major program of road rehabilitation, repair and improvement. Rehabilitate all existing roads Dili – Liquiça – Bobonaro Road Project This road project will involve the full rehabilitation and installation of an overlay of 230 km of roads from Dili to the Indonesian border at Mota'Ain, as well as Tibar to Maliana via Gleno and additional roads in the Cova Lima district. The project will also rehabilitate key roads in the western region, providing improved access to services such as education and health. Dili – Aileu – Maubisse – Aituto – Ainaro – Cassa This road project will provide another key north south corridor, opening up access to central Timor-Leste and promoting tourism by providing an improved link to the Maubisse tourist zone. The repair of these roads is also essential to providing access to government services and improving access to education and health. The Suai to Beaço south coast route will be developed to support the growth of the petroleum industry and to open up this coastline to allow economic development and the delivery of social services.	x				
Transport Sector Master Plan	2018	Timor-Leste will undertake substantial and long-term investment in roads to maintain our current road network, including a major program of road rehabilitation, repair and improvement. Rehabilitation: Dili-Liquiça-Bobonaro Road All coffee area target rural roads Other core rural roads All national and regional roads Ainaro-Cassa Rehabilitation Project Suai-Cassa-Hatu Udo-BetanoNatarbora-Viqueque-Beaço Rehabilitation Project Gleno to Bobanaro Road Ainaro-Cassa - Same Main bridges repaired and protected All district roads Other National Roads	x				
General transport finance							

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Voluntary National Reviews 2023 - TLS	2023	The Public-Private Partnerships framework should be used in vital, job-rich sectors like green and blue economies, connectivity and infrastructure.	x		х	х	
General transport institutional reform							
Timor-Leste Strategic Development Plan 2011-2030	2011	As part of the modernisation of the airport, the management of the airport will be transferred to an airport authority which will focus on commercial aspects of the airport to maintain operational capacity and investment financing over the longer term. A well trained and professional Traffic and Road Safety Unit will ensure that our roads are safe and that road laws are obeyed	x				
Transport Sector Master Plan	2018	Develop the marine transport system including effective international links as well as linkage among the ports of Timor Leste corporatizing the Port Administration of Timor-Leste with autonomy of decision making and an independent board of directors with performance based compensation for senior staff based on service efficiency targets and profitability of the corporation. Provide for hypothecated revenue; Within the transport sector, one of the most important institutional development objectives is the conversion of the current DNTT – the Directorate of Land Transport from MDRI into an autonomous and self financing Land Transport Authority (LTA). To ensure that the transport sector makes the expected contributions to national integration and development envisaged in the SDP, MDRI will establish a National Transport Project Planning Unit (TPPU) to guide, direct and support the implementation of the Plan.	x		x		
General vehicle improvements							
Transport Sector Master Plan	2018	Establish comprehensive vehicle standards	х				
Investment required for specific projects							
Transport Sector Master Plan	2018	The estimate of expenditure on rural roads following the Rural Roads Master Plan is \$US 175 million over the next 5 years.	x				
Investment volume for transport							
Transport Sector Master Plan	2018	Table 12	х		х	х	
Logistics hub							
Timor-Leste Strategic Development Plan 2011-2030	2011	A logistics base for the petroleum sector will be established in Suai.	x		x	х	
LPG/ CNG/ LNG							

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XIV. Transport and Climate Policy Measures

	Year		ad	ij	o me s avigat	omes iatio	ban anspo
Document	published	Measure	Rc	Ra	Δž	<u>A</u> D	5 Ĕ
Second National Communication - TLS	2020	replacement of oil fuels with gas fuels (LPG, CNG or LGV) through developing infrastructure for gas utilization in transport (conversion kits, gas station, gas supply infrastructures, etc.).	х				
National speed law							
Global Status Report on Road Safety 2018	2018	Yes	х				
The Highway Code	2003	– A driver must adjust the speed in such a way that, taking into account the features and the condition of the road and the vehicle, the load being carried, weather or environmental conditions, traffic intensity or any other relevant circumstances, he or she may safely make manoeuvres the need of which can be anticipated and, especially, bring his or her vehicle to a standstill within the free and visible space ahead of him or her.	x				
Passenger and freight load limits							
The Highway Code	2003	 Carrying a number of people in excess of the vehicle seating capacity or that may undermine their safety or a safe driving is prohibited. 	x				
Performance-based transport maintenance contracts							
Transport Sector Master Plan	2018	Establish Performance Based Program to Implement Plan	х				
Port infrastructure improvements							
Timor-Leste Strategic Development Plan 2011-2030	2011	The construction of a port at Tibar is a national priority for the development of our nation. This port will be developed as a multi-purpose port with a capacity of one million tonnes per year and cater for commercial cargo and passenger needs. The centrepiece of this development will be the construction of a new port at Suai. Timor-Leste will embark on a regional ports construction program over the next ten years. Port facilities will be built, repaired or substantially expanded at: Com, where the wharf will be upgraded to build a port and a fisheries industry facility Atauro, where a port will be built to support cargo, passengers, fisheries and tourism Kairabela in Vemasse sub-district, where a small port will be constructed to provide close sea access for Baucau district Oe-Cusse Ambeno, where the passenger dock will be rehabilitated as a first phase commencing in 2011, followed by the construction of a tide-independent facility and dry cargo berth and rehabilitation of the existing general cargo berth Manatuto, where a jetty will be built with refrigeration facilities to allow the export of fishery and agriculture products. In addition, further navy facilities will be built at the Hera seaport, while port facilities will be planned for the eastern part of the south coast around Beaço.			x		
Timor-Leste's National Adaptation Plan	2021	New seaports are a national priority to support our growing economy and meet future industry and freight demands			x		

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Do me stic Aviation	Urban Transport
Transport Sector Master Plan	2018	It is proposed to develop a dedicated ferry terminal with facilities for passengers and goods and two ferry berths at the western end of the port area. APORTIL will continue to undertake maintenance, rehabilitation and improvements within the Dili Port, largely based on the 2014 surveys and recommendations (JICA, 2014). These include repairs to the main wharf and container storage and pavement areas, as well as some rationalization and improvement of the container and warehouse storage to improve the efficiency of port operations. Improvements in security fencing and lighting have also been identified. Tibar Port - primary cargo facilities relocated to Tibar Port Suai Port - port facilities for Supply Base in operation Oecusse Port - the passenger dock will be rehabilitated as a first phase commencing in 2011, followed by the construction of a tide-independent facility and dry cargo berth and rehabilitation of the existing general cargo berth Atauro Port - a port will be built to support cargo, passengers, fisheries and tourism Com Port - the wharf will be upgraded to build a port and a fisheries industry facility Kairabera Port - a small port will be constructed to provide close sea access for Baucau district Manatuto - a jetty will be built with refrigeration facilities to allow the export of fishery and agriculture products East South Coast Port - port facilities will be planned for the eastern part of the south coast around Beaço.			x		
Prevention of construction of roads							
Timor-Leste Strategic Development Plan 2011-2030	2011	New roads will only be built if they serve important economic or social objectives.	x				
Reference to finance mechanisms within country							
Transport Sector Master Plan	2018	The new Road Maintenance Fund will provide funds for the maintenance and rehabilitation of national, district, urban and rural roads.	х				x
Road infrastructure expansion							
Timor-Leste Strategic Development Plan 2011-2030	2011	New roads will only be built if they serve important economic or social objectives. Build the road infrastructure required to support the development of the south coast. The Tasi Mane project will have been completed, establishing a dynamic and integrated petroleum industry connected by a highway on the south coast of Timor-Leste.	х				
Timor-Leste's National Adaptation Plan	2021	An extensive network of quality and well-maintained roads will connect our communities, promote rural development, industry and tourism and provide access to markets.	x				
Transport Sector Master Plan	2018	Northern Corridor Manatutu to Notabora and Baucau to Viqueque Eastern Link from Laga to Viqueque District road from Maliana to Suai	х				

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Document	Year	Мерсиге	load	lail)om Vavig	Voiat	Jrba Tans
Speed limit on motorways <= 90 kph	pubusiieu	nedoure					
Global Status Report on Road Safety 2018	2018	120 km/h	х				
Speed limit on rural roads <= 70 kph							
Global Status Report on Road Safety 2018	2018	90 km/h	х				
Speed limits on urban roads <= 30 kph							
Global Status Report on Road Safety 2018	2018	50 km/h	х				х
Stakeholder Involvement							
Transport Sector Master Plan	2018	undertaking appropriate consultation with stakeholders is carried out prior to finalizing regulations. broad and effective cooperation between stakeholders with a responsibility or interest in improving road safety outcomes under the leadership of DNSR broad and effective integration and cooperation between stakeholders with a responsibility for urban management and development, so that traffic, transport and development needs are kept in balance and urban congestion is effectively planned and managed					
Target - Transport energy consumption							
Second National Communication - TLS	2020	Improvement of energy efficiency in supply side (fossil fuel combustions), transportation, and demand side (household and commercial buildings)	x		x	х	
Technical standards for general transport infrastructure							
Transport Sector Master Plan	2018	standards for infrastructure, services and facilities that are focused on the needs of users, including accessibility, affordability and safety					
Traffic management							
Transport Sector Master Plan	2018	Traffic Capacity – improved traffic management planning and controls	х				
Transport asset management funding strategy							
Timor-Leste's National Adaptation Plan	2021	In order to achieve the target of the National Strategic Development Plan (2011-2030) on infrastructure, the Ministry of Public Work, primarily through the National Directorate for Roads, Bridges and Flood Control has formulated its five year investment plan for upgrading, rehabilitation and maintenance of national, urban and municipal roads and bridges.	x				
Transport infrastructure resilience							

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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 Timor-Leste

Desument	Year	Макента	oad	ail	o me s avigat	omes viatio	rban ranspo
Document	pubusnea	Measure	~	8			<u> </u>
National Adaptation Programme of Action	2010	Improve physical infrastructure/civil engineering and natural vegetation methods to prevent landslides in hill sites, roads and river banks.	х		х	х	
Second National Communication - TLS	2020	Climate resilient infrastructure, bioengineering	х		х	х	
Timor-Leste's National Adaptation Plan	2021	Climate-proofed infrastructure development Improve physical infrastructure and natural vegetation methods to prevent landslides in hill sites, roads and river banks that are made vulnerable by climate change	х		x	x	
Transport law							
Transport Sector Master Plan	2018	review and revise current Decree Law, and introduce complementary legislation, in the areas of: a. right-of-way control and management b. road traffic regulation and management c. public transport regulation and management d. urban planning and development . Improve road safety legislation Enforce regulations for taxi and public transport vehicles - vehicle condition and driver training	х				
Vehicle efficiency standards							
National Policy for Climate Change (Government Resolution 8/2022)	2022	The policy to mitigate GHG emissions in Timor-Leste's energy sector is centered around two themes: the development and use of renewable energy technologies, and the development of energy efficiency measures for building and industrial use and vehicles. The policy to reduce emissions from the vehicle fleet comprises efforts to establish vehicle emissions regulations and to promote and implement legislation	x				
Second National Communication - TLS	2020	improvement of efficiency in transportation for reducing mobile GHG emissions through the increasing use of public transport and more efficient vehicle	х				
Vehicle import inspections							
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Yes	х				
Vehicle inspection and maintenance							
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Periodic inspection is in effect	х				
The Highway Code	2003	1 – Motor vehicles and the trailers thereof are subject to inspection, for the purposes of; b) Being granted a registration number; c) Changing manufacturing or functional features; d) Verifying their features and roadworthiness on a regular basis.	х				
Transport Sector Master Plan	2018	establishing regimen for inspection, licensing, monitoring operation and enforcement of regulations covering vehicles, vessels and aircraft, and education, testing, licensing, and enforcement of their operations; Establish requirements for vehicle fitness	х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Domestic Aviation	Urban Transport
Vehicle manufacturing							
Timor-Leste Strategic Development Plan 2011-2030	2011	Shipbuilding and repair facilities			x		
Vehicle scrappage scheme							
Second National Communication - TLS	2020	replacing of old cars with the new one for taxis through incentives	х				

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