Aichi 2030 Declaration on Environmentally Sustainable Transport (EST): Country Profile

Sri Lanka

Developed by:

Asian Transport Observatory

Developed with the support of:

ADB ASIAN DEVELOPMENT BANK

AIIB ASIAN INFRASTRUCTURE INVESTMENT BANK

UNCRD

Sri Lanka

Suggested Citation: Asian Transport Outlook (ATO). (2024). Aichi 2030 Declaration on Environmentally Sustainable Transport (EST): Country Profile (Sri Lanka), https://asiantransportoutlook.com/analytical-outputs/countryprofiles/

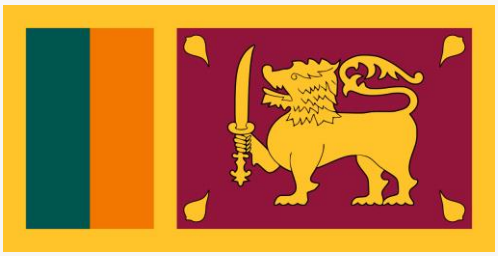
For any questions or information related to this publication, please write to asiantransportoutlook@gmail.com.

Photographs used are copyright free.

Aichi 2030 Declaration on Environmentally Sustainable Transport (EST): Country Profile (Sri Lanka)

2024

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



Sri Lanka, a country in the South Asia region, having Upper middle income status, was recorded to have a national population of about 22 million in the year 2024.

The urban population share in total is about 19%. The age wise distribution of the national population accounts for 29% and 18% of <18 years old (minors) and >60 years old (seniors) population, respectively. The GDP per capita (PPP) for the year 2022 was 14,640 USD.

The motorisation rate of the road transport vehicles for the year 2022, for all vehicles combined, stood at 384 vehicles per thousand population. Similarly, the rate for 2&3 wheelers, LDV, freight vehicles and buses were 222, 41, 18, and 5 respectively.

Introduction to the profiles: The Asian Transport Outlook (ATO) project serves as a comprehensive data repository that organizes transport-relevant data and information from various official and secondary sources. These profiles are meticulously crafted using data from this extensive collection and draw upon a carefully curated selection of key indicators from a pool of over 500 transport-related metrics (visit https://asiantransportoutlook.com/snd for more information).

These profiles also provide comprehensive summaries of national targets that are relevant to the Aichi 2030 Declaration goals as contained in ATO's national policy trackers. The profile is structured by goals, followed by policy insights and enumeration of sample projects by the MDBs corresponding to the 6 Goals.

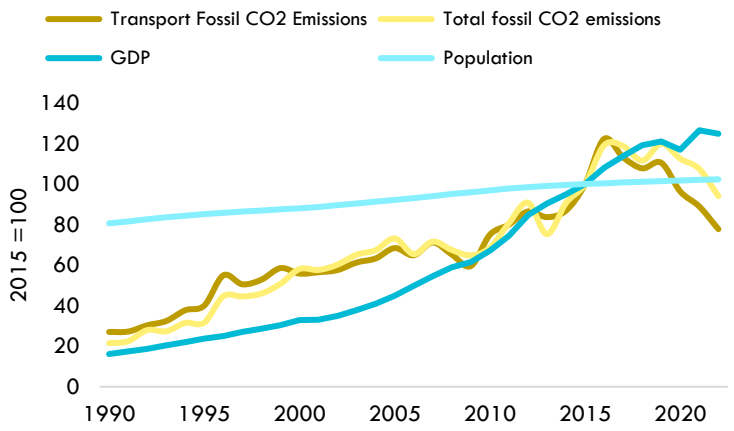
Contents:

Goal 1a – Low-Carbon (climate change mitigation):

By 2030, aim to peak transport CO2 emissions and initiate reductions in transport related CO2 emissions with the intention to move towards decarbonization of the transport sector by 2050, or shortly thereafter (Based on SDG 7.2, 9.1, 13.2, Paris Agreement)

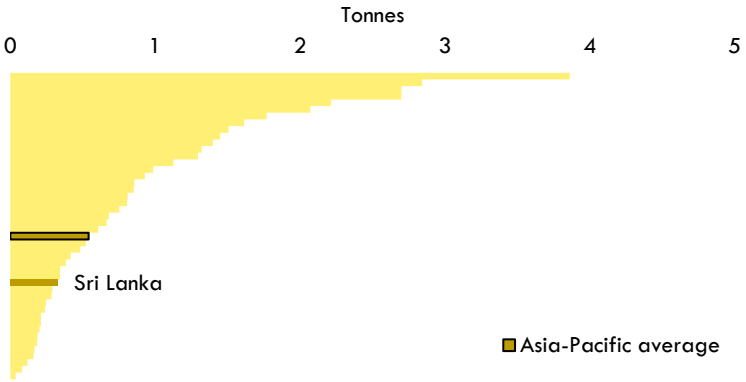
Transport CO2 emissions (fossil)

Growth of transport fossil CO2 emissions, total fossil CO2 emissions, population and GDP (PPP) (1990 - 2022)



(EDGAR, 2023)

Transport fossil CO2 emissions per capita (2022)

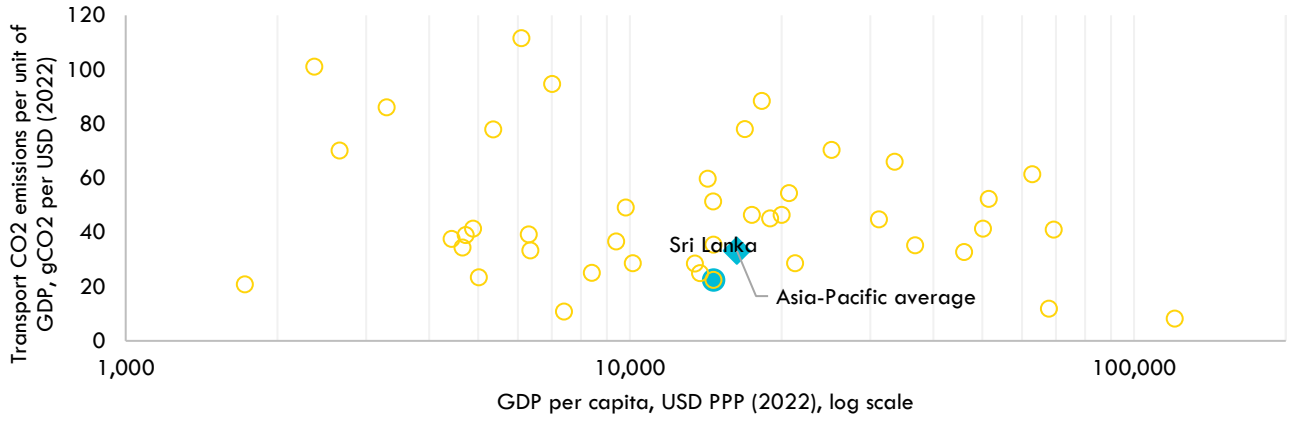


(EDGAR, 2023)

- CO2 emissions: Sri Lanka has shown progress in reducing transport-related CO2 emissions, with an average annual decrease of 4% between 2015 and 2022, outperforming the Asia-Pacific average. Share of transport in total CO2 emissions decreased: 47% to 39% (2015-2022).

- Emissions breakdown: Road transport dominates emissions, accounting for 96% of the total in 2022.

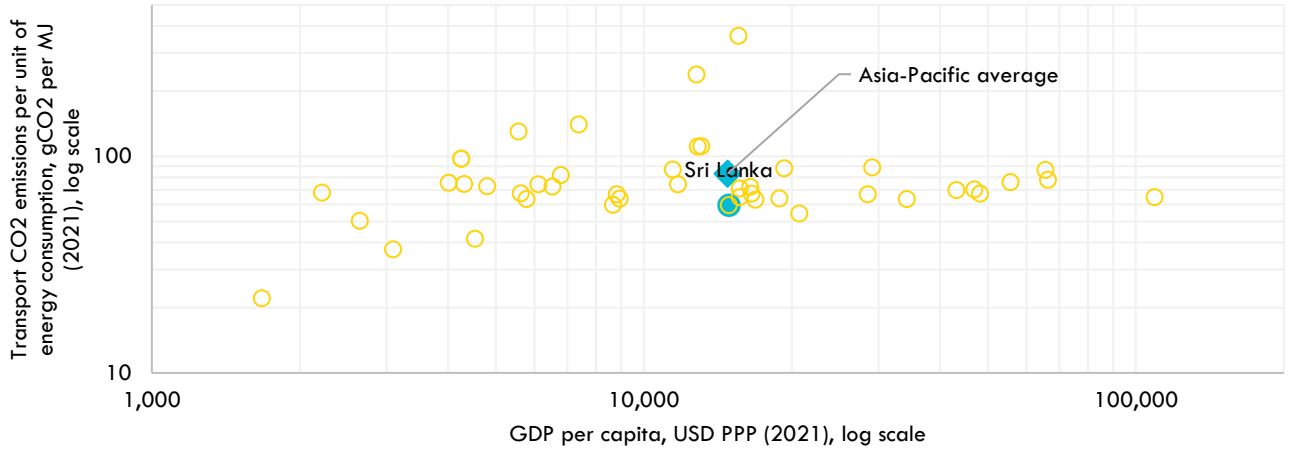
Transport CO2 emissions per unit of GDP (2022)



(EDGAR, 2023)

Transport energy consumption

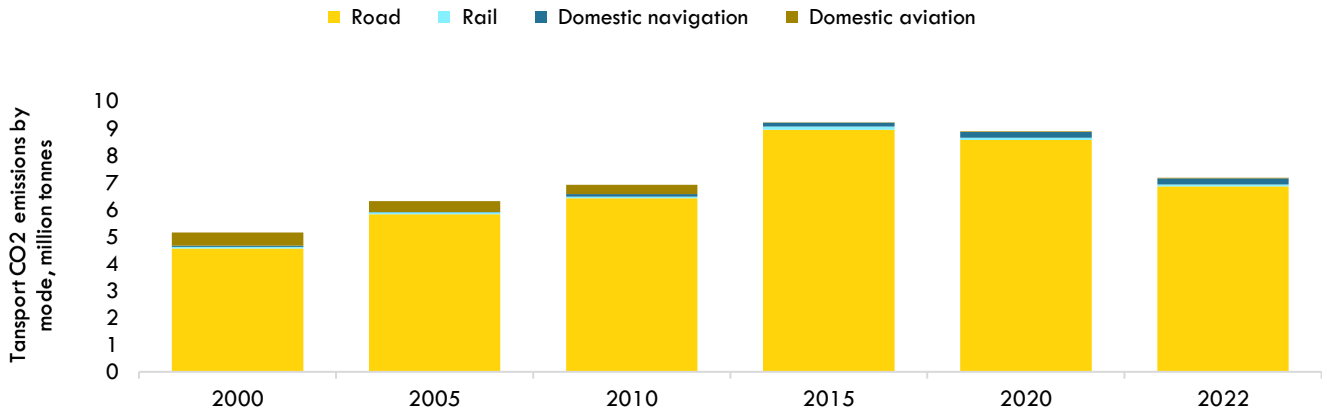
Transport CO2 emissions per unit of energy consumption and GDP per capita (2021)



(EDGAR, 2023)

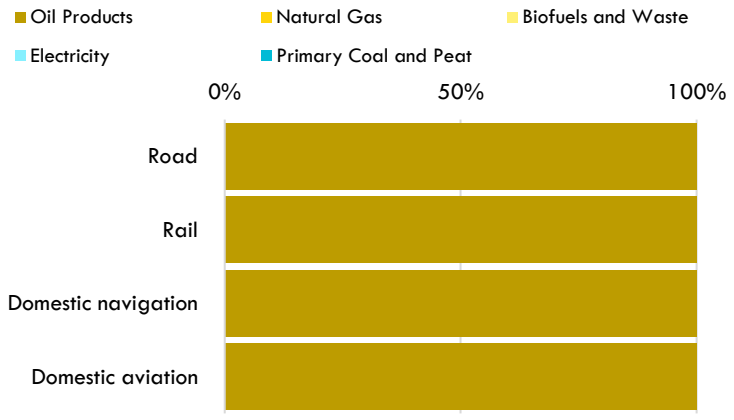
Transport CO2 emissions (fossil) and energy consumption modeshare

Growth of transport CO_2 emissions by mode



(EDGAR, 2023)

Share of transport energy consumption by mode and by source (2021)



(EDGAR, 2023)

Share of transport in renewable energy consumption:

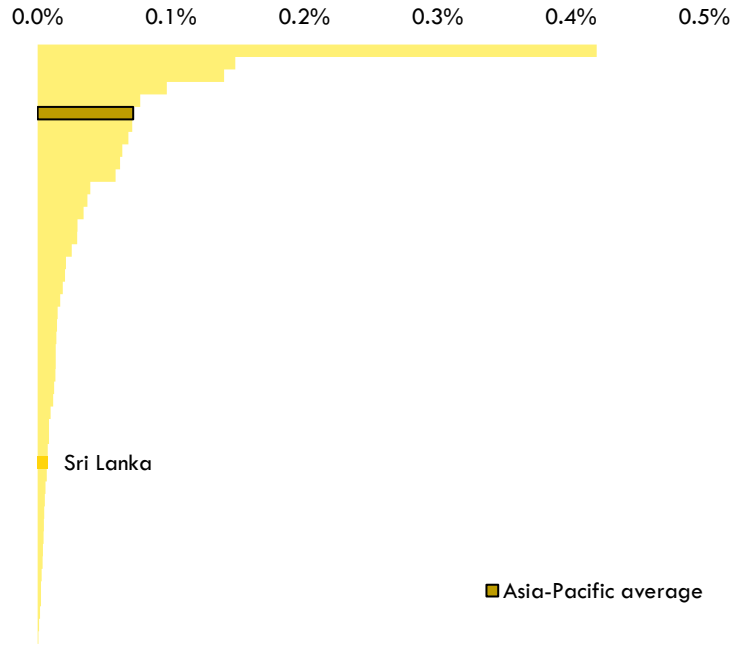
(Data not available)

Goal 1b – Resilience:

By 2030, increase resilience and adaptive capacity of transport system to climate-related hazards and pandemics such as COVID-19. (Based on SDG 13, Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015-2030)

Estimated average annual losses to transport infrastructure due to hazards

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



(CDRI, 2023)

• Infrastructure Vulnerability: Sri Lanka's transport infrastructure is exposed to climate hazards, with roads being the most vulnerable. Average annual losses to transport infrastructure due to hazards: Road: 52%, Railways: 35%, Ports: 8% and Airports: 5%

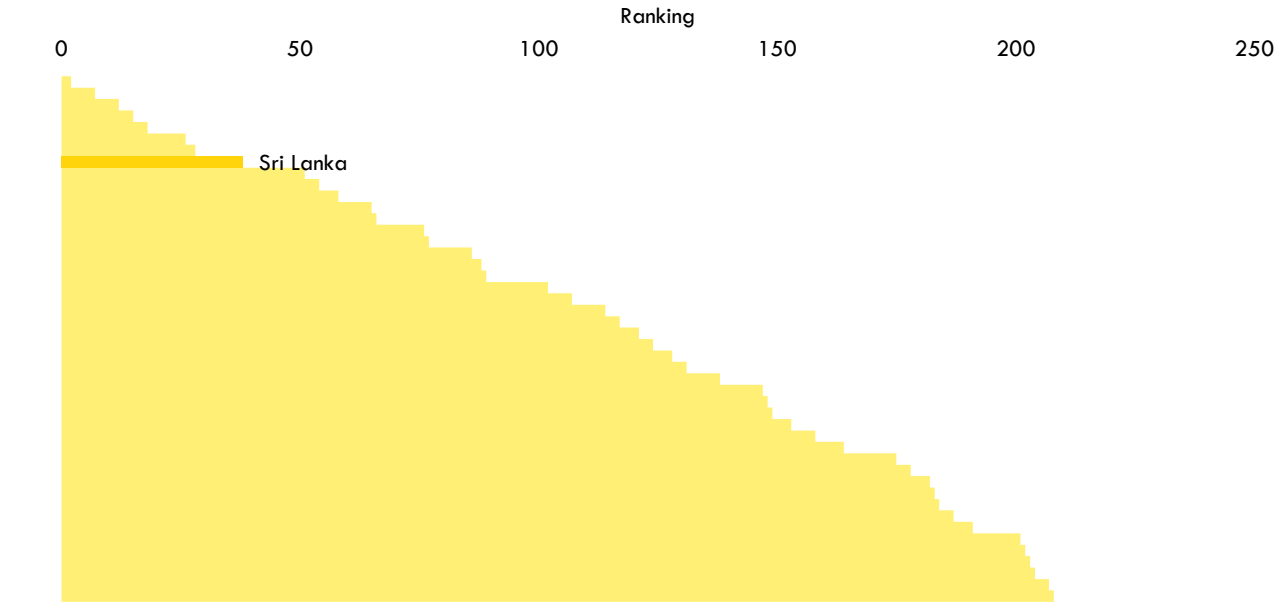
• Coastal Risks: A small but significant portion (3%) of the population lives in low-elevated coastal zones, making them susceptible to sea-level rise and storm surges.

• Network Redundancy: The country's road network has a relatively good ranking in terms of redundancy, indicating its ability to withstand disruptions.

Note: National road vulnerability index ranking (NRVI), highest rank = 1 means fewer disruptions to trips after climate hazards due to sufficient network redundancy.

Climate change vulnerability

National road vulnerability index (NRVI) ranking (2023)



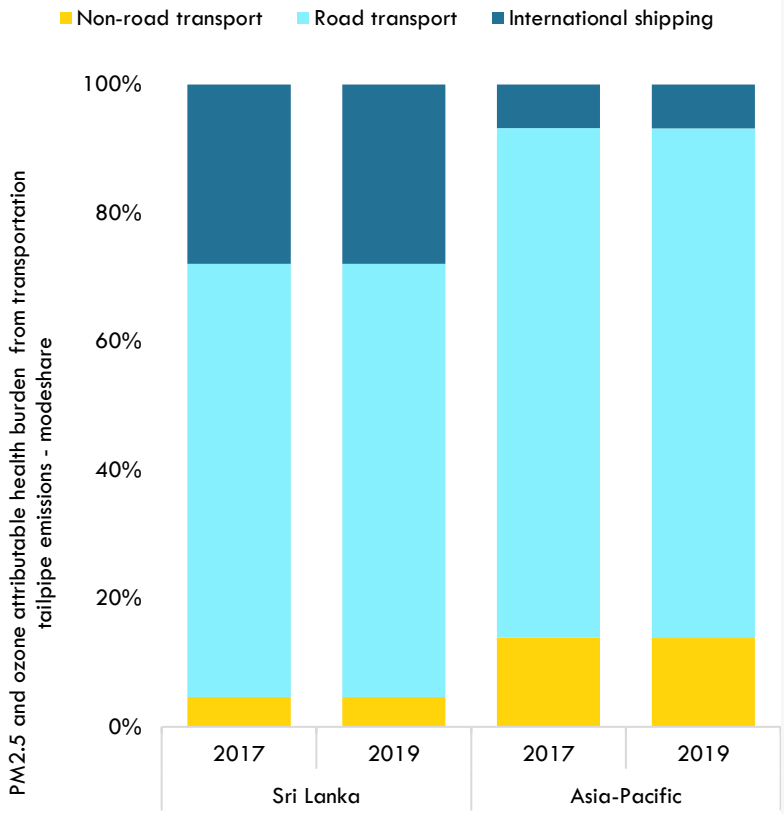
(Koks, et al., 2023)

Goal 1c – Air pollution:

By 2030, reduce air pollution and contamination caused by traffic, including PM2.5, other air pollutants and noise. (Based on SDG 3.9, 11.6).

Transport air pollution health impact

Transport air pollution health impact (PM 2.5)



(McDuffie et al., 2021)

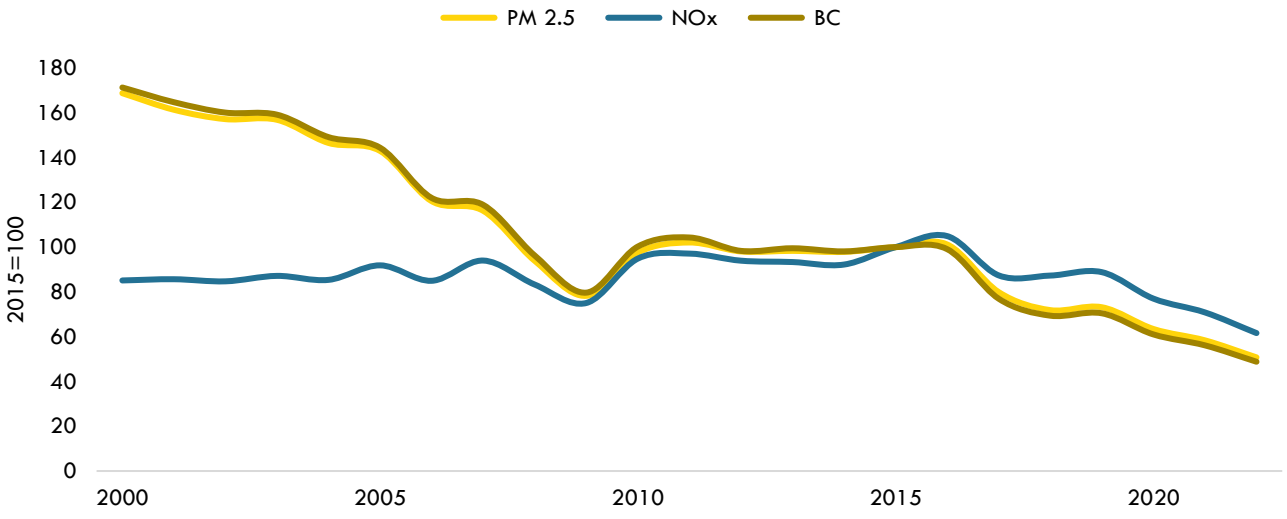
- Air pollutant reductions: Sri Lanka has made significant strides in reducing air pollutant emissions from transport, surpassing the Asia-Pacific average in several categories.

- Health impacts: Despite progress, transport-related air pollution still contributes to a considerable number of deaths annually.

- In Sri Lanka, the total attributable deaths due to the PM2.5 and ozone air pollution from the transport sector changed from 597 to 628 between 2017 to 2019.
- The numbers for Asia-Pacific were about 236 thousand and 253 thousand, respectively, for the same time period.

Transport air pollutant emissions

Growth of road transport air pollutant emissions



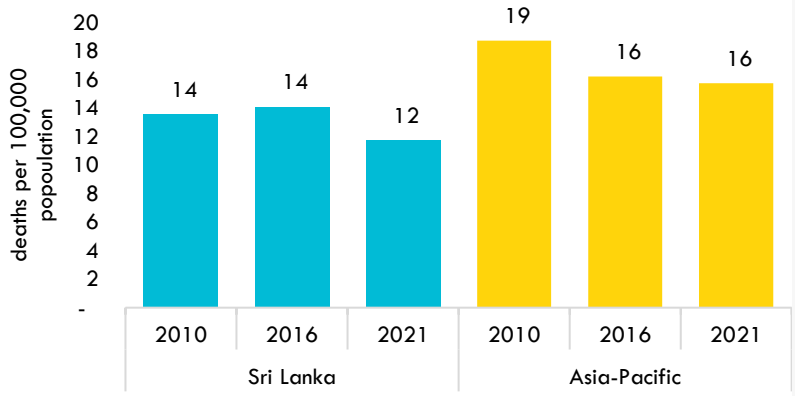
(EDGAR, 2023)

Goal 2 – Road safety:

By 2030, halve the number of deaths and injuries from road traffic accidents in Asia compared to 2020, with specific attention to vulnerable road users. (Based on SDG 3.6 and second UN Decade of Action on Road Safety 2021 – 2030, Stockholm Declaration on Road Safety)

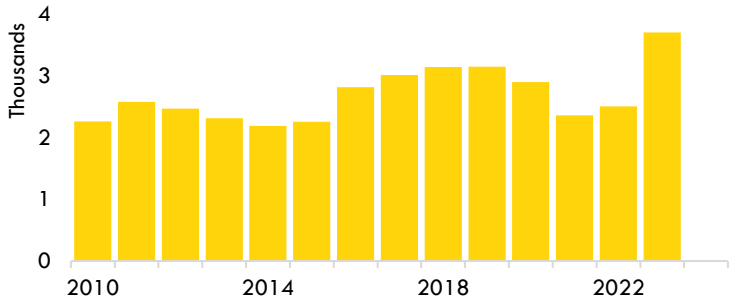
Road traffic crash fatalities

Road traffic crash fatality rate



(WHO, 2023)

Road traffic crash fatalities (absolute values)

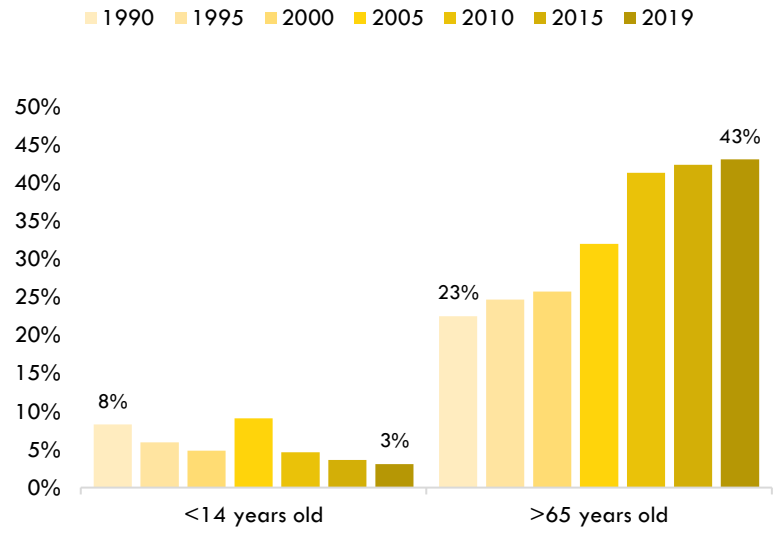


(Country official statistics)

- Fatalities: Road traffic fatalities remain a concern, with an estimated 3,000 deaths in 2021.
- Vulnerable Groups: Minors, seniors, and pedestrians are disproportionately affected by road crashes compared to the Asia-Pacific average.
- Infrastructure Safety: The country needs to improve the safety of its road infrastructure, particularly for pedestrians and cyclists.

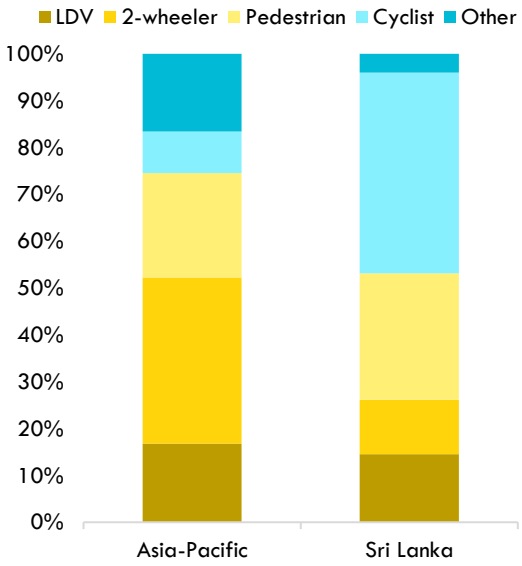
Share of vulnerable groups

Share of road crash fatalities by age



(GBD, 2021)

Share of road crash fatalities by mode



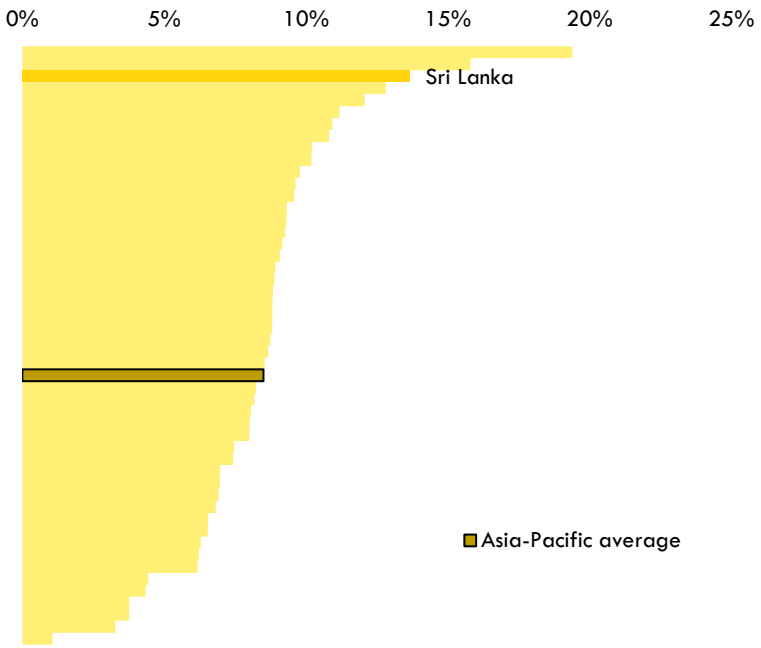
(WHO, 2023)

Goal 3 - Economic sustainability:

By 2030, realize sustainable economic and employment growth by leveraging science, technology and innovation and green investments in quality passenger and freight transport infrastructure and services in a manner that fully incorporates environmental and social impacts throughout the lifecycle of the transport infrastructure and services, (Based on SDG 8.4, SDG 9.1, 12.1 and 12.c)

Transport sector and GDP

Transport as a share of GDP

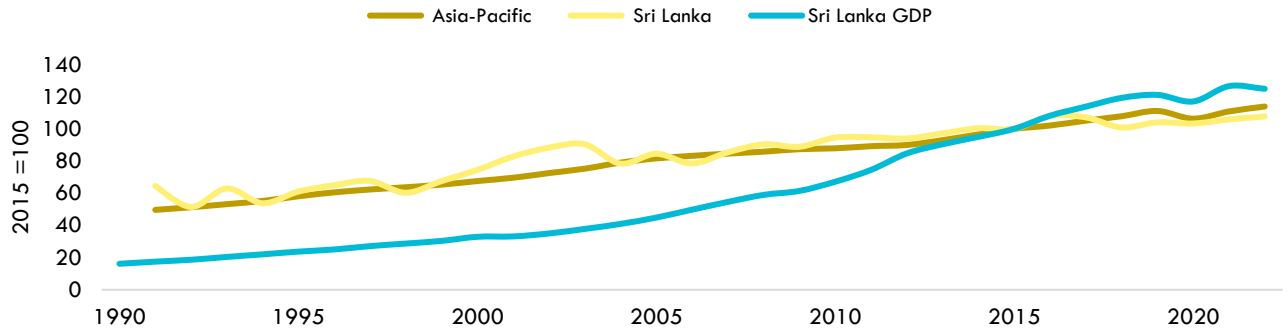


(UN, 2023)

- Sector contribution: The transport sector contributes significantly to Sri Lanka's GDP and employment.
- ODA: Transport Official Development Assistance and PPP investments have declined in recent years, potentially impacting infrastructure development.
- Logistics performance: The country has improved its logistics performance, indicating greater efficiency in trade and transport operations.

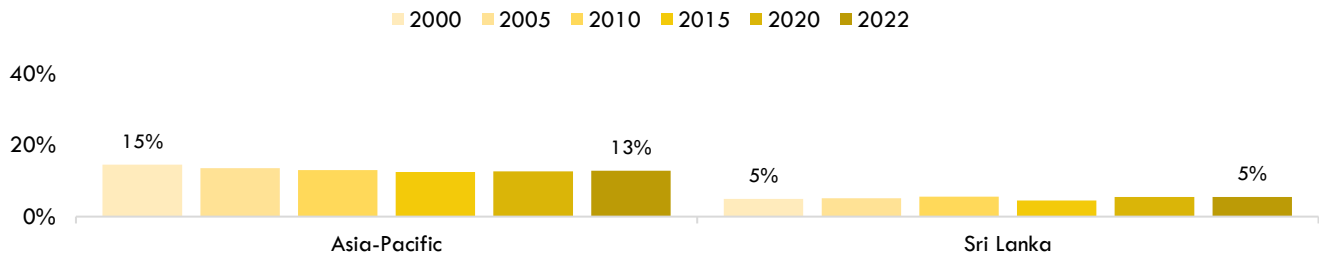
Transport employment

Growth of transport sector employment



(ILO, 2024)

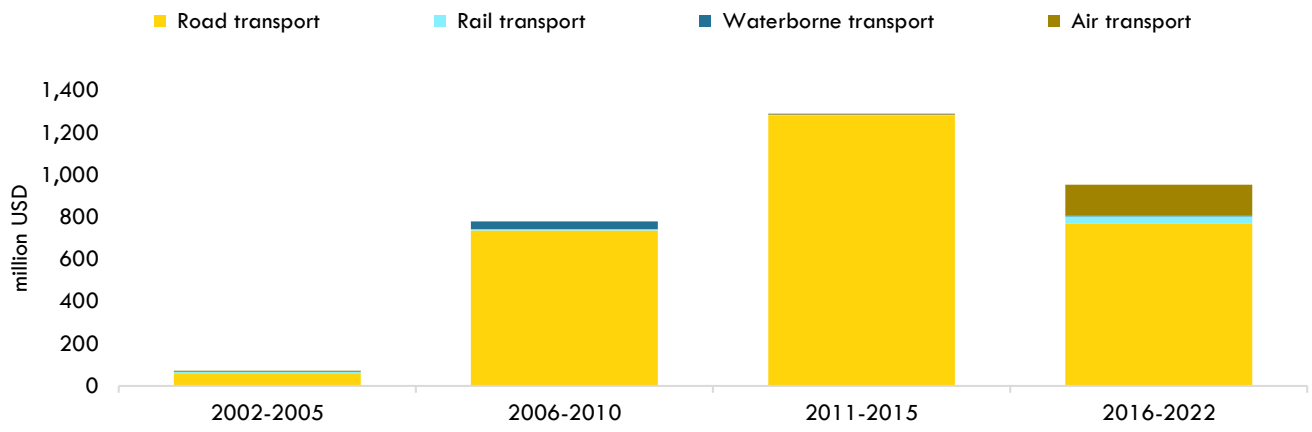
Female share in the transport employment



Estimated using (ILO, 2024)

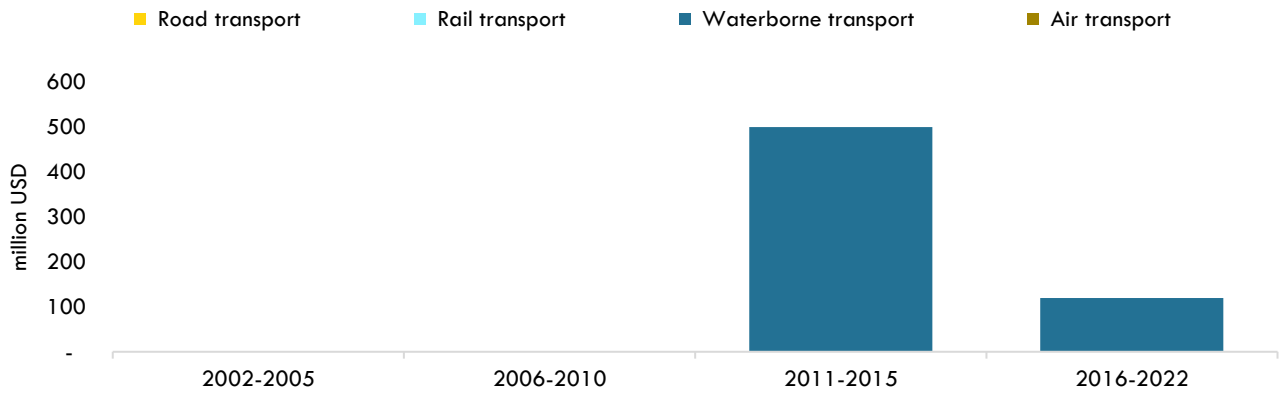
Transport investments

Official development assistance for Transport



(OECD, 2022)

Public Private Partnership in Transport



(WB, 2023)

Freight sector

Domestic Logistics Performance Index, Rank change (2016 - 2023)

(Data not available)

Goal 4 - Rural access:

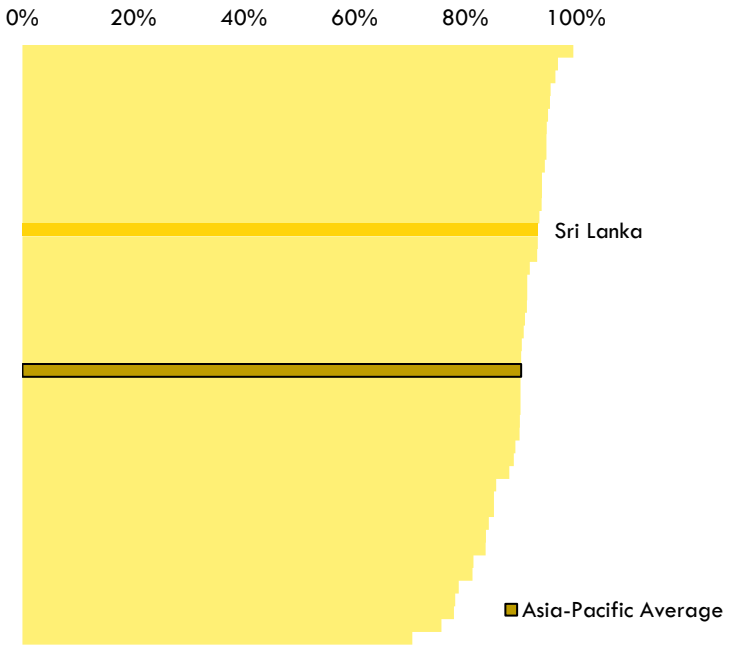
By 2030, realize accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the farming community, and other rural population including physically disabled and vulnerable groups (Based on SDG 2 and SDG 9.1)

Rural access

Rural access index

(CIESIN-rural, 2023)

Share of Secondary and Tertiary roads in Total road network



(ATO and Country estimates)

• Rural connectivity: Sri Lanka has achieved near-universal access to all-weather roads for its rural population, exceeding both regional and global averages.

Goal 5 - Urban access:

By 2030, ensure access to accessible, inclusive, safe, efficient, affordable, and sustainable transport facilities, systems and services for urban dwellers, including physically disabled and vulnerable groups through the development of urban transport infrastructure and services (Based on SDG 11.2 and 11.7)

Urban rapid transit infrastructure

Rapid transit infrastructure to resident ratio (RTR)

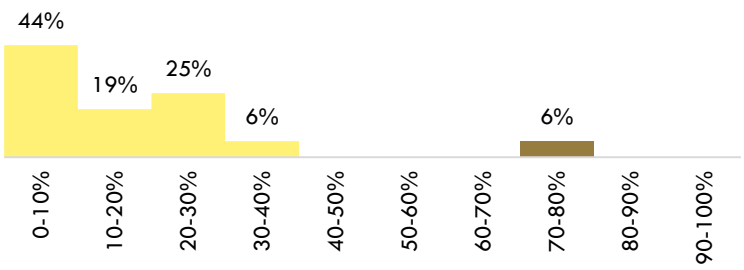
(Data not available)

Urban rapid transit infrastructure length

(Data not available)

Urban access

Share of cities by level of urban access (out of 16 cities)



(CIESIN-urban, 2023)

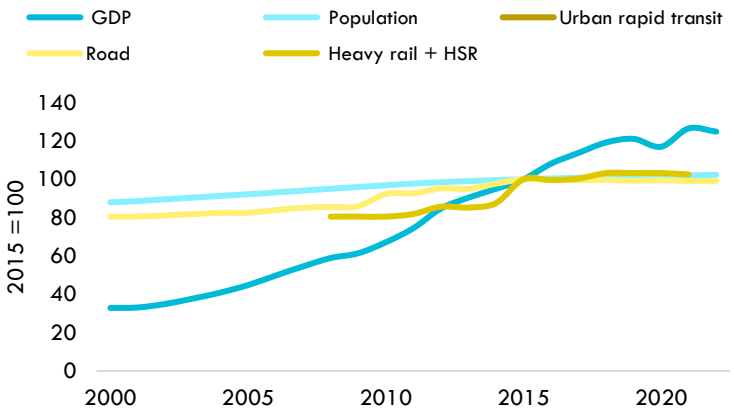
• Public transport accessibility: Data is limited, but based on a sample of cities, urban access to public transport needs improvement.

Goal 6 - National access and connectivity:

By 2030, facilitate inclusive multi-modal national (including rural-urban) and regional (cross-border) connectivity through the provision of sustainable multi-modal freight and passenger transport infrastructure and services (Based on SDG 9.1)

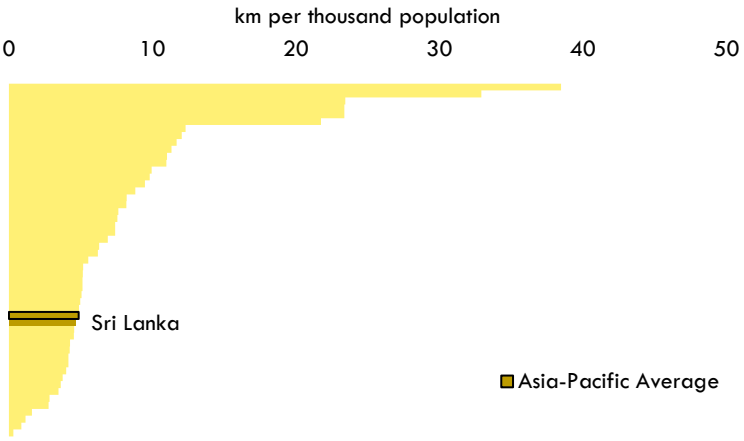
Transport infrastructure

Growth of transport infrastructure



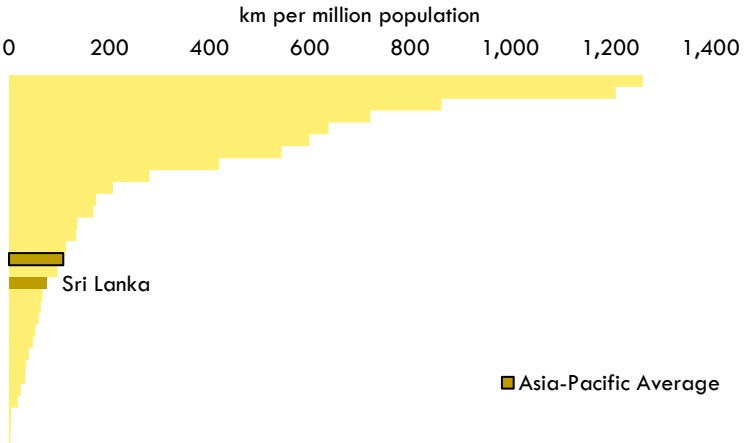
(IRF, 2024) (UIC, 2024) (ITDP, 2022) (ATO and Country estimates)

Road transport infrastructure availability (2022)



(IRF, 2024) (ATO and Country estimates)

Rail transport infrastructure (including HSR) availability (2021)



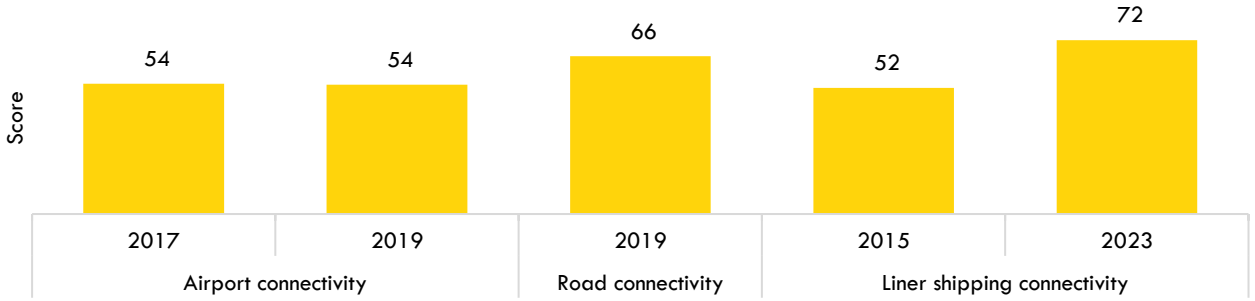
(UIC, 2024)

• Infrastructure: The country's transport infrastructure has seen some expansion, but more investment is needed to keep up with growing demand. Road length per thousand population and heavy rail length per million population are below Asia-Pacific averages

• Connectivity: Sri Lanka has made progress in improving its shipping connectivity and internet access.

Transport connectivity

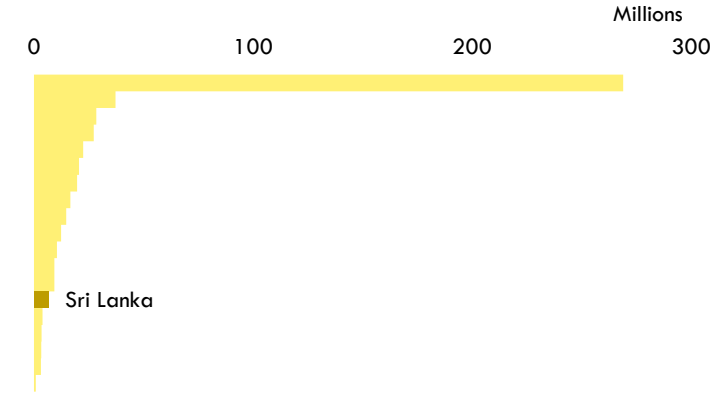
Transport connectivity



(WEF, 2018) (UNCTAD, 2024)

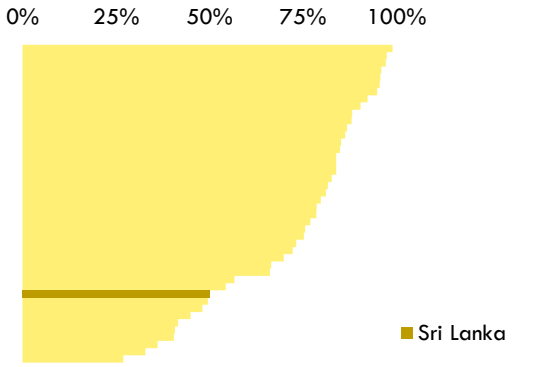
ICT

Container port traffic (TEU)



(UNCTAD, 2024)

Percentage of individuals using the internet (2022)



(ITU, 2023)

Transport Policy insights:

The insights are based on the transport policy trackers developed by the ATO. Trackers include analysis of policy measures and targets from all the transport relevant policy documents for a country published after the adoption of the Aichi 2030 Declaration, i.e. 2021.

• Policy adoption: Sri Lanka has adopted several transport-related policies since 2015, with a focus on low-carbon transport and air pollution.

• Aichi alignment: More recent policies show greater alignment with the Aichi 2030 Declaration, indicating a growing commitment to sustainable transport. A review of policy documents published since 2015 shows a clear prioritization of climate change mitigation (Goal 1a), with 85% of documents offering extensive coverage. Air pollution (Goal 1c) also received substantial attention (54% coverage), followed by road safety (Goal 2) at 15%. However, there's a stark absence of policy focus on economic sustainability (Goal 3), rural access (Goal 4), and urban access (Goal 5), all with 0% coverage. Policies related to resilience (Goal 1b) and national access and connectivity (Goal 6) were moderately addressed, with 8% and 23% coverage respectively. This analysis underscores a significant policy gap in crucial areas such as economic sustainability and access, both in rural and urban contexts.

Transport relevant policy documents

Red - Poor coverage; Orange - Moderate coverage; Green - Extensive coverage

Doc. No.	Document Name	Year	Goal 1a	Goal 1b	Goal 1c	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6
1	First Nationally Determined Contributions	2016								
2	National Adaptation Plan for Climate change Impacts in Sri Lanka	2016								
3	National Civil Aviation Policy for Sri Lanka	2016								
4	Clean Air 2025 - Action plan for Air Quality Management	2016								
5	National transport Policy of Sri Lanka	2017								
6	Public Investment Program 2021	2017								
7	The National Export Strategy (NES) of Sri Lanka	2018								
8	Sustainable Sri Lanka 2030 Vision and Strategic Path	2019								
9	National Physical Planning Policy & The Plan — 2017-2050	2019								
10	Updated Nationally Determined Contributions	2021								
11	National Road Master Plan 2021-30	2021								
12	Climate Prosperity Plan	2022								
13	SRI LANKA NATIONAL HYDROGEN ROADMAP	2023								

(ATO National policy tracker)

Poor coverage
Moderate coverage
Extensive coverage

Transport relevant national targets

Doc. No.	Target	Year	Goal 1a	Goal 1b	Goal 1c	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6
1	**First Nationally Determined Contributions**									
	NDCs for Mitigation intends to reduce the GHG emissions against BAU scenario by 20% in the energy sector (4% unconditionally and 16% conditionally) and by 10% in other sectors (transport, industry, forests and waste) by 3% unconditionally and 7% conditionally by 2030.	2030	x		x					
	Reduce unproductive vehicles by 25% in 2025 unconditionally. This could be increased by 50% with conditions.	2025	x		x	x				
9	**National Physical Planning Policy & The Plan — 2017-2050**									
	this electrified railway is proposed to be extended up to Kurunegala before 2030	2030	x		x					x
8	**Sustainable Sri Lanka 2030 Vision and Strategic Path**									
	An allocation of 5 per cent of all transport sector capital investment should be allocated for transport safety improvements from 2020	>2020				x	x			x
	By 2025, each city with over a 100,000 day time population will have a transport and traffic plan that will ensure adequate walkability, cycling and access by public transport modes including a multi-modal transport terminal, while controlling traffic volumes and on-street and even off-street parking to levels that are sustainable for the physical and cultural character of the city.	2025	x		x	x			x	x
	By 2025, each city with over a 100,000 day time population will have a transport and traffic plan that will ensure adequate walkability, cycling and access by public transport modes including a multi-modal transport terminal, while controlling traffic volumes and on-street and even off-street parking to levels that are sustainable for the physical and cultural character of the city.	2025	x	x	x	x			x	x
	By 2025, each city with over a 100,000 day time population will have a transport and traffic plan that will ensure adequate walkability, cycling and access by public transport modes including a multi-modal transport terminal, while controlling traffic volumes and on-street and even off-street parking to levels that are sustainable for the physical and cultural character of the city.	2025	x	x	x	x			x	x
	prioritizing steps to improve road safety and achieve the vision zero goal by 2030	2030				x				
	achieving at least 50 per cent use of renewable energy for transport by 2030	2030	x		x					
10	**Updated Nationally Determined Contributions**									
	To achieve 70% renewable energy in electricity generation by 2030	2030	x		x					
	reduce greenhouse emissions by 14.5% for the period of 2021-2030 from Power (electricity generation), Transport, Industry, Waste, Forestry, and Agriculture	2030	x		x					
	Sri Lanka expects to achieve its Carbon Neutrality by 2050	2050	x							
12	**Climate Prosperity Plan**									

	Economy-wide: 75% of new jobs supported by re skilling and training for industries of the future	2030	x	x	x	x				x
	Share of non-motorized transportation increases to 20% of all road trips.	2030	x		x	x			x	
	Share of non-motorized transportation increases to 30% of all road trips.	2035	x		x	x			x	
	50% of new road vehicles are electric or hybrid 50% of public transportation, including suburban railway, is electrified including through retrofitting.	2030	x		x					x
	90-100% of new road vehicles are electric or hybrid 100% of public transportation, including suburban railway, is electrified including through retrofitting.	2035	x		x					x
	50% of public transportation, including suburban railway, is electrified including through retrofitting.	2030	x		x					x
	100% of public transportation, including suburban railway, is electrified including through retrofitting.	2035	x		x					x
	Sri Lanka renewable energy production exceeds 100% of domestic power needs by 2040	2040	x		x					
	5km of bike lanes integrated into relevant roads in 10 key urban locations	2025	x		x	x			x	
	50% of relevant roads include bike lane	2030	x		x	x			x	
	90-100% of relevant roads include bike lane.	2035	x		x	x			x	
	Clean technologies are leveraged to digitize or provide new digital support to 90-100% of the economy across all sectors.	2035	x	x	x	x				x
	Economy-wide: 75% of new jobs supported by re skilling and training for industries of the future Clean technologies are leveraged to digitize or provide new digital support to 75% of the economy across all sectors	2030	x	x	x	x				x
	Economy-wide: Promoting energy efficient equipment, technology and systems improvement to increase overall energy efficiency by 40%.	2030	x							

(ATO National policy tracker)

Transport relevant sample projects:

A sample list of projects by the MDB highlights their focus with respect to the Aichi 2030 Declaration Goals.

Transport relevant projects

Year	Project name	Amount (million USD)	Goal 1a	Goal 1b	Goal 1c	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6
2021	Second Integrated Road Investment Program-Tranche 3	200		x			x			
2023	Second Integrated Road Investment Program-Tranche 4	60		x			x			
2021	Inclusive Connectivity and Development Project	500								

(MDB Projects database)

References:

Asian Transport Outlook (ATO) + Country. (2024). ATO estimates based on Country Official Statistics	(ATO and Country estimates)
Asian Transport Outlook (ATO) + UNEP. (2024). ATO analysis of UNEP Index using latest data	(ATO analysis of UNEP data)
Coalition for Disaster Resilient Infrastructure (CDRI). (2023). Building & infrastructur. https://giri.unepgrid.ch/facts-figures/building-infrastructures	(CDRI, 2023)
Socioeconomic Data and Applications Center (SEDAC). (2023). SDG Indicator 11.2.1: Urban Access to Public Transport, 2023. https://sedac.ciesin.columbia.edu/data/set/sdgi-11-2-1-urban-access-publictransport-2023	(CIESIN-urban, 2023)
Socioeconomic Data and Applications Center (SEDAC). (2023). SDG Indicator 9.1.1: The Rural Access Index (RAI), 2023. https://sedac.ciesin.columbia.edu/data/set/sdgi-9-1-1-rai-2023	(CIESIN-rural, 2023)
Asian Transport Outlook (ATO). (2024). ATO National policy tracker. The trackers are based on the national level policies.	(ATO National policy tracker)
Emissions Database for Global Atmospheric Research (EDGAR). (2023). EDGAR - Emissions Database for Global Atmospheric Research. https://edgar.jrc.ec.europa.eu/	(EDGAR, 2023)
Ember. (2023). Yearly electricity data. https://ember-climate.org/data-catalogue/yearly-electricity-data/	(EMBER, 2023)
Global Burden of Disease (GBD). (2021). GBD Results. http://ghdx.healthdata.org/gbd-results-tool	(GBD, 2021)
International Council on Clean Transportation (ICCT). (2023). https://theicct.org/	(ICCT, 2023)
International Energy Agency (IEA). (2022). Fossil Fuels Consumption Subsidies 2022. https://www.iea.org/reports/fossil-fuels-consumption-subsidies-2022	(IEA, 2022)
International Monetary Fund (IMF). (2024). Climate Change Dashboard. https://climatedata.imf.org/pages/access-data	(IMF, 2024)
International Road Federation (IRF). (2024). https://irfnet.ch/data-statistics/4	(IRF, 2024)
International Trade Centre (ITC). (2024). Trademap. https://www.trademap.org/	(ITC, 2024)
Institute for Transportation and Development Policy (ITDP). (2022). Rapid Transit Database. https://www.itdp.org/rapid-transit-database/	(ITDP, 2022)
International Telecommunication Union (ITU). (2023). Statistics. https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx	(ITU, 2023)

Koks, et al. (2023). A global assessment of national road network vulnerability. https://iopscience.iop.org/article/10.1088/2634-4505/acd1aa	(Koks, et al., 2023)
McDuffie et al. (2021). Global Burden of Disease-Major Air Pollution Sources. https://costofairpollution.shinyapps.io/gbd_map_global_source_shinyapp/	(McDuffie et al., 2021)
Organisation for Economic Co-operation and Development (OECD). (2022). Data Explorer. https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#	(OECD, 2022)
International Organization of Motor Vehicle Manufacturers (OICA). (2023). Statistics. https://www.oica.net/production-statistics/	(OICA, 2023)
Tracking SDG 7. (2024). The energy progress report. https://trackingsdg7.esmap.org/	(Tracking SDG 7, 2024)
International Union of Railways (UIC). (2024). https://uic-stats.uic.org/	(UIC, 2024)
UN. (2023). Downloads. https://unstats.un.org/unsd/snaama/Downloads	(UN, 2023)
UN. (2018). Environmental Vulnerability Indicators. https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html	(UN, 2018)
UN. (2021). Energy Statistics. https://unstats.un.org/unsd/energystats/	(UN, 2021)
UN. (2022). Population Database. https://population.un.org/wpp/	(UN, 2022)
UN Conference on Trade and Development (UNCTAD). (2024). Statistics. https://unctadstat.unctad.org	(UNCTAD, 2024)
UNEP. (2023). Global Materials Flow Database. https://www.resourcepanel.org/global-material-flows-database	(UNEP, 2023)
World Bank. (2022). https://data.worldbank.org/	(WB, 2022)
World Bank. (2023). PPI Database. https://ppi.worldbank.org/en/ppi	(WB, 2023)
World Economic Forum (WEF). (2020). Global Competitiveness Report Special Edition 2020. https://www.weforum.org/publications/the-global-competitiveness-report-2020/	(WEF, 2018)
World Helath Organisation (WHO). (2023). Global Status Report on Road Safety 2023. https://www.who.int/teams/social-determinants-of-health/safety-and-mobility/globalstatus-report-on-road-safety-2023	(WHO, 2023)
International Labour Organization (ILO). (2024). Statistics. https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm	(ILO, 2024)
Asian Transport Outlook (ATO). (2024). ATO compilation of the MDB projects. The database is a compilation of the transport relevant projects undertaken by 3 MDBs - ADB, AIIB and World Bank having the project approval year 2019 or after.	(MDB Projects database)
Country official statistics. (varies). Country official statistics in the form of statistical yearbooks, handbooks, databanks etc.	(Country official statistics)

GDP data is sourced from (WB, 2022) and Population data from (UN, 2022)