

Sri Lanka

Green Roads Profile

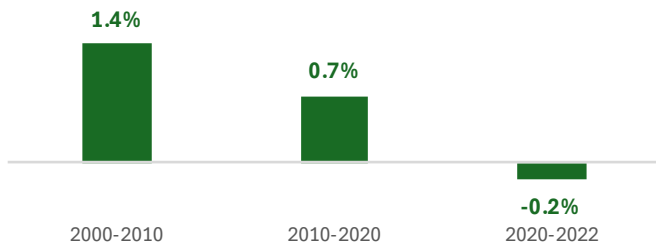
General

Road length (2022)
100,923 kilometers

Subregion
(1) **South Asia**

Income class
Upper middle income

Average annual growth rate of road length



Population (2024)
(1) **21.9 million**

Land area
62 thousand sqkm (2,3)

Urban population
19%

Rural population
81% (2)

Gross domestic product (GDP PPP, 2022)
319.63 billion USD

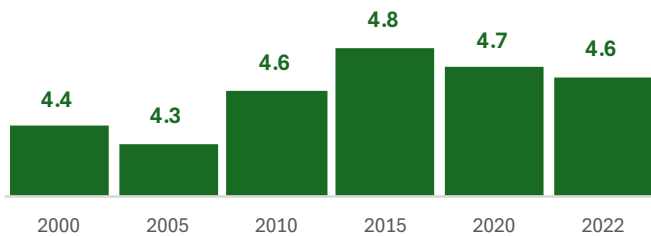
GDP per capita (PPP, 2022)
14,640 USD (2,3)
(3)

Sri Lanka's road network is comprised of 6.7% motorways, highways, and primary roads and 93.3% secondary roads, local roads, and other roads

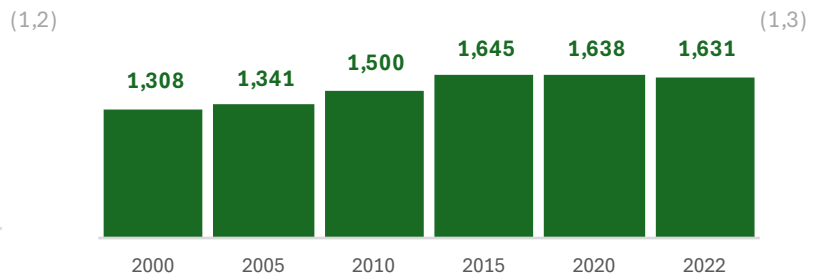
Road infrastructure availability (2022)
4.6 kilometers per thousand population

Road infrastructure density (2022)
(1,2) **1,631 meters per square kilometer** (1,3)

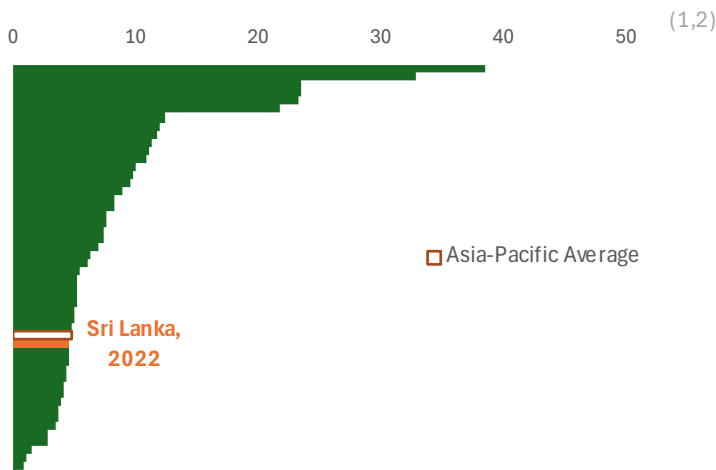
Road infrastructure availability trend, kilometers per thousand population



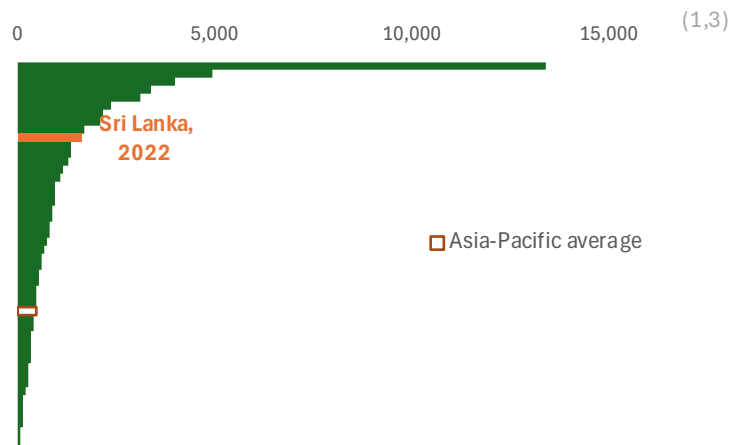
Road infrastructure density trend, meters per thousand population



Road infrastructure availability in Asia-Pacific, kilometers per thousand population

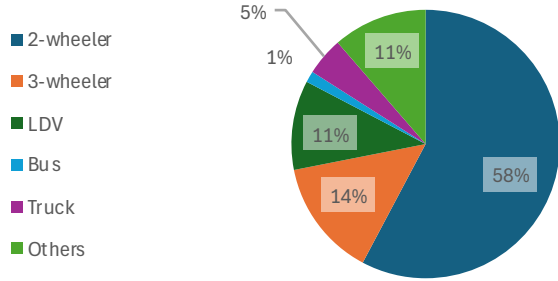


Road infrastructure density in Asia-Pacific, meters per square kilometer



Road vehicles (2022)
8.37 million vehicles

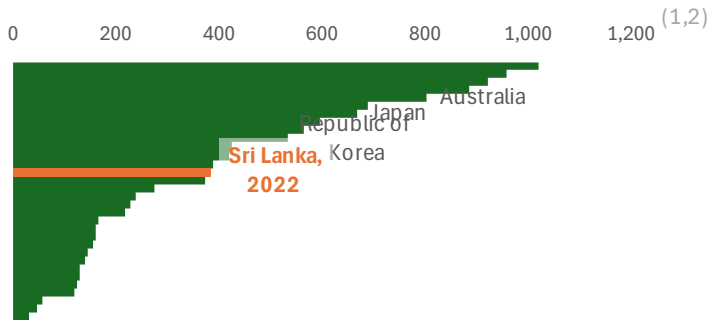
Share of vehicles by type



Motorization rate (2022)
384 vehicles per thousand population

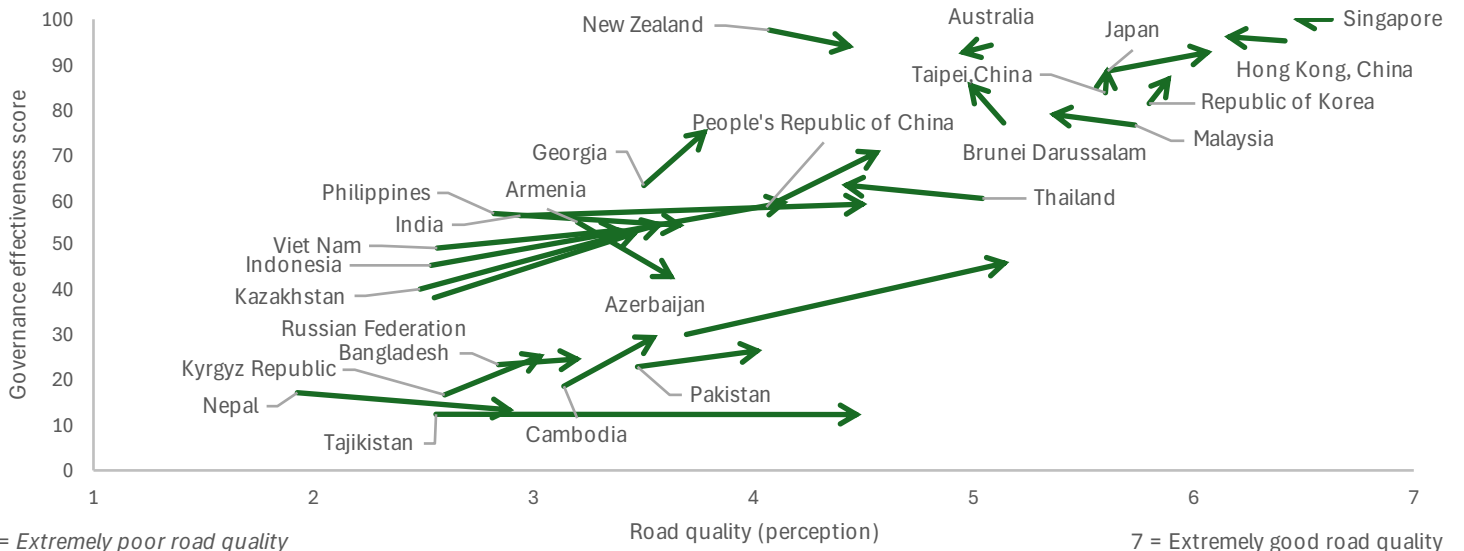
In 2000, Sri Lanka had 104 vehicles per thousand population. By 2022, this has increased to 384 compared with Asia-Pacific average of 577 in 2022.

Motorization rate in Asia-Pacific, vehicles per thousand population



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

Road quality (perception) vs. governance effectiveness score (2009-2019)



1 = Extremely poor road quality

7 = Extremely good road quality

Public-private partnership investments in road sector, cumulative million USD

(1)

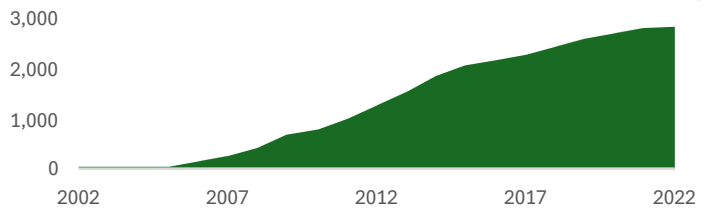
Share of road in total public-private partnership investments

Official development assistance in road sector, cumulative million USD

(1,2) (5)

Share of road in total official development assistance

(5)



Quality of Life and Fostering Inclusive Growth

Rural access index (2023)
97%

(6)

Based on 2015 estimates, only 70% of the population could reach the nearest city in 30 minutes, another 19% could reach in 1 hour, and another 11% could reach only after 3 hours.

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

(2,6)

Logistics performance index score (2023)

2.8/5

(10)

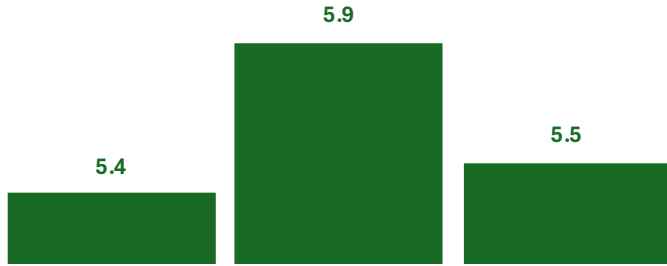
| Infrastructure score

(7)

2.4/5

(10)

National street network disconnectedness index



Logistics performance index ranking trend

(10)



Road crash fatalities (2019)
4.2 thousand deaths

(8)

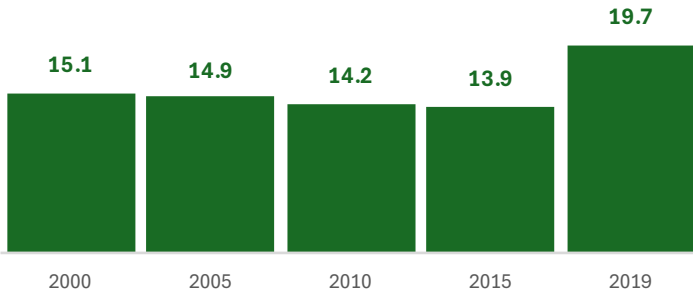
Road crash fatality rate per 100 thousand population

(2,8)

Percent of firms choosing transportation as their biggest obstacle - Manufacturing (2011)

4.2%

(11)



Percent of respondents answering high/very high - Level of Fees and Charges on Road transport (2018)

100.0%

(11)

Level of fees and charges for less than full truck loads are considered

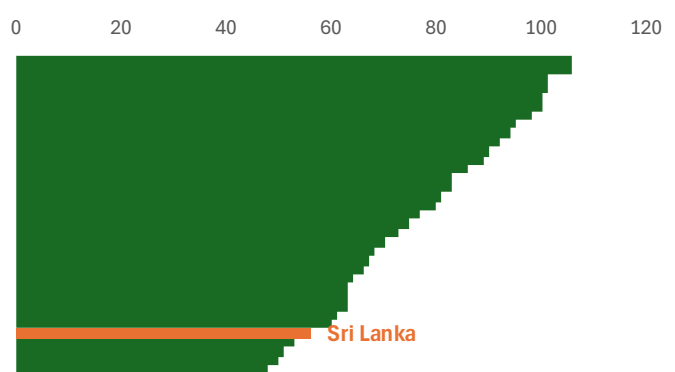
Asia-Pacific average is 15.7 fatalities per 100 thousand population

Mean speed in Asia-Pacific, kilometers per hour (2022)

(9)

Mean speed (2022)
56 kilometers per hour

(9)

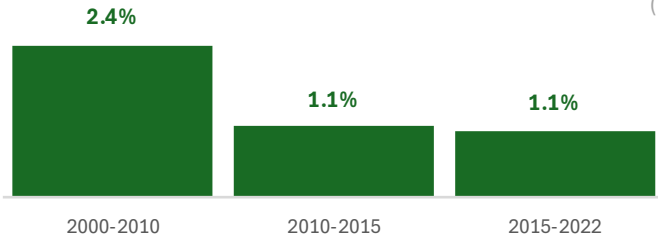


Employment in transport sector (2022)
600.6 thousand employees

Share of transport sector in total employment (2022)
 (12) **7.4%** (12)

Average annual growth rate of transport sector employment

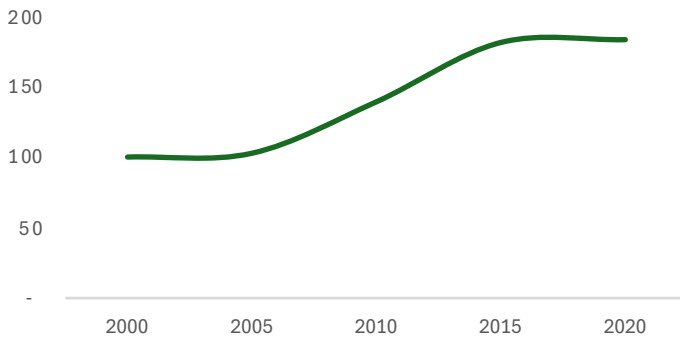
Share of females in total transport sector employment (2022)
 (12) **5.5%** (12)



Decarbonization

Road transport energy consumption trend

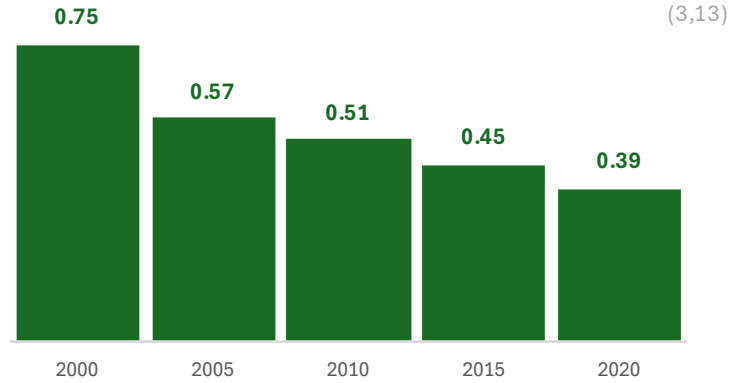
Assuming 2000 value as base (100)



Between 2000-2010, Sri Lanka's road transport energy consumption grew 3.4% annually. Between 2010-2020, road transport energy consumption grew 2.8% annually.

(13) **97% of Sri Lanka's transport energy consumption is in the road sector.**

Road transport energy intensity with GDP, TJ per USD (PPP)



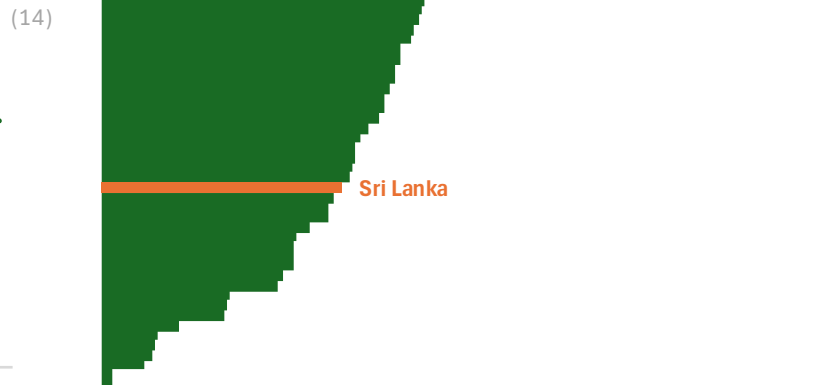
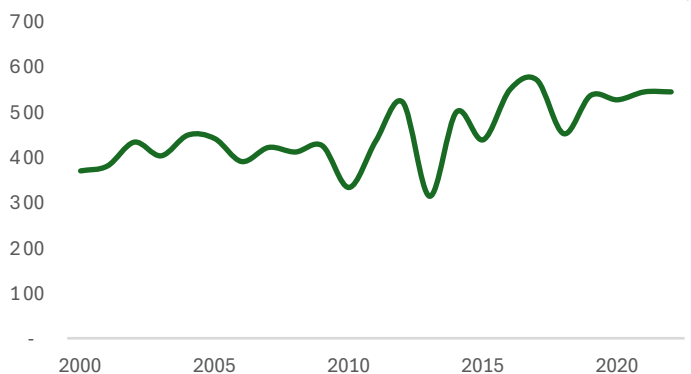
Asia-Pacific average is 0.4 MJ per USD in 2020

Grid emission factor (2022)

543.1 gCO2 per kWh

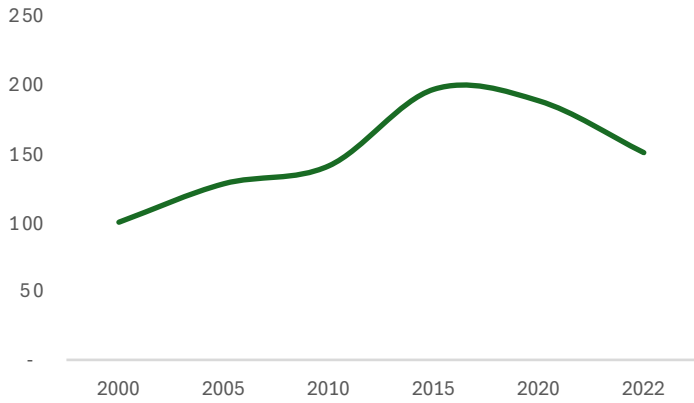
Grid emission factors in Asia-Pacific, gCO2 per kWh
 (14) 0 200 400 600 800 1000 1200 1400 (14)

Grid emission factor trend, gCO2 per kWh

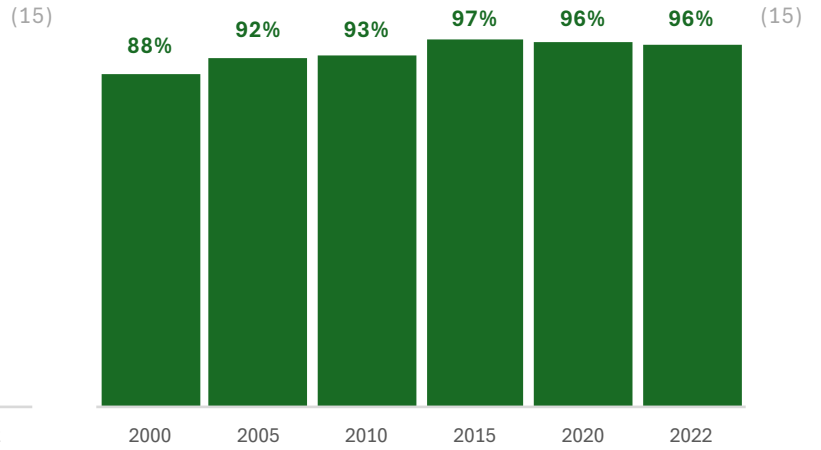


Road transport CO2 emissions trend

Assuming 2000 value as base (100)

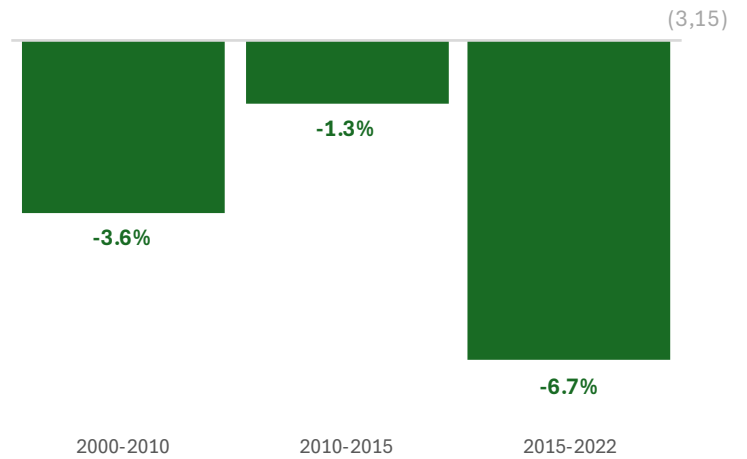


Share of road transport in total transport CO2 emissions



Between 2010-2019, Sri Lanka's road transport fossil CO2 emissions was growing 4.9% annually. After the COVID-19 pandemic, road transport CO2 emissions was contracting -10.6% annually.

Road transport CO2 emissions intensity with GDP trend

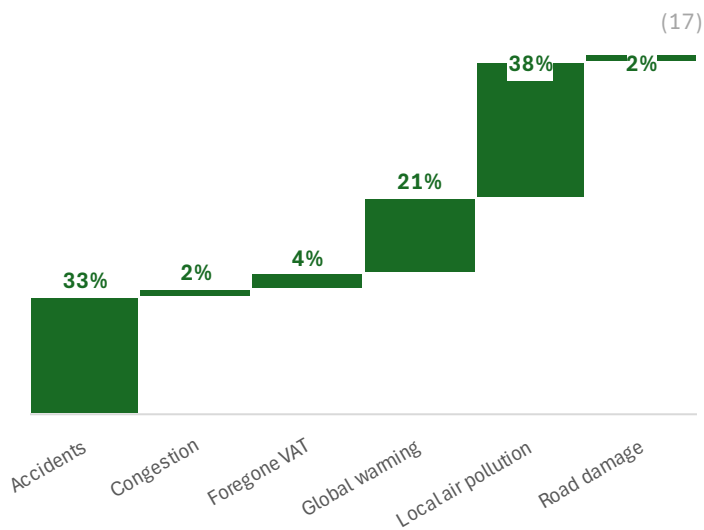


Transport fossil fuel subsidies, cumulative from 2010 to 2022

1.35 billion USD

0.2% of Asia-Pacific total

Implicit fossil fuel subsidies due to externalities



Data includes all sectors and all fuel types

Climate Resilience and Disaster Preparedness

Expected annual damages to road and rail infrastructure due to hazards (2019)
28.38 million USD

(18)

National road vulnerability index ranking (2023)
n.d.

(20)

Share of road in total transport infrastructure in multihazard average annual loss to transport infrastructure (2023)
51.9%

(19)

Share of population in low elevated coastal zones (2018)
3.0%

(21)

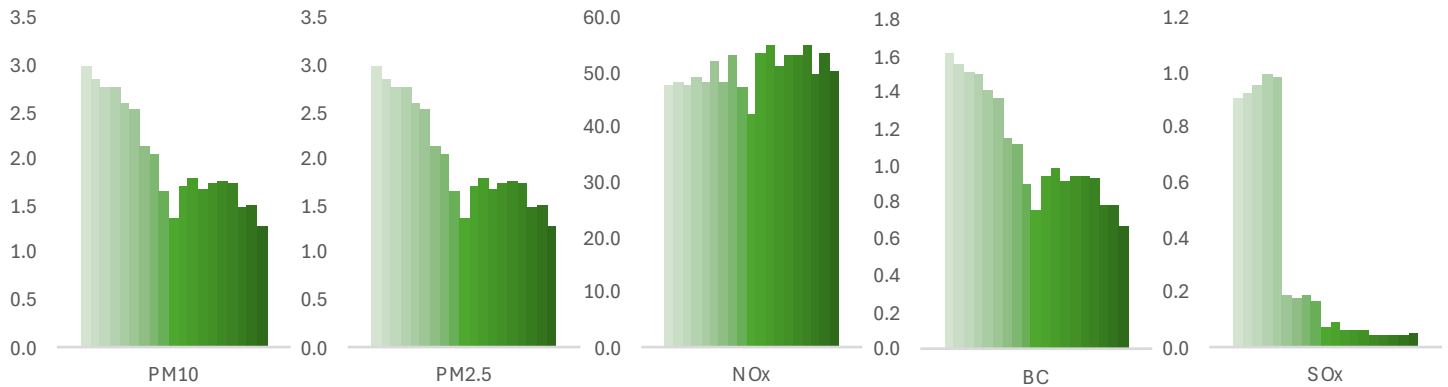
Pollution, Water and Land Management, Preserving Biodiversity, and Sustainable Materials

Paved roads (2023)
n.d.

(1)

Road transport air pollutant emissions, thousand tonnes (2000-2018)

(15)



In 2022, road transport contributed 32.9%, re-suspended dust contributed 27.3% in transport PM10 emissions. In total, road transport contributed about 7.7% in total PM10 emissions in Sri Lanka.

Deaths due to occupational exposure to diesel engine exhaust
 | 2000-2010 | 2011-2018
228 deaths | **304 deaths**

(22)

Terrestrial and marine protected areas (2022)
3.4%

(3)

Share of biofuels in road transport energy consumption (2020)
n.d.

(13)

Terrestrial protected areas
29.9%

(% of total land area)

Marine protected areas
0.1%

(% of territorial waters)

(3)

Domestic consumption per capita, tonnes (2024)
 | Sri Lanka | Asia-Pacific
4.2 tonnes | **13.8 tonnes**

(23)

Forest area (2021)
34.1%

(% of land area)

(3)

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

Developed with the support of:



Policy Measures

Policy document	Year	Road-related measures
Updated Nationally Determined Contributions	2021	Active transport infrastructure expansion, General infrastructure improvements, Vehicle inspection and maintenance, Disaster notification/ early warning system, Transport infrastructure resilience, Vehicle taxes, Adaptation-related education and training, Measures to improve rural-urban connectivity, Road infrastructure expansion, Development of transport adaptation/ emergency/ disaster plan/ policy, Development of transport plan/ policy, Ecodriving
First Nationally Determined Contributions	2016	Road-side vehicle technical checks, Transport infrastructure resilience, Road infrastructure expansion, Development of transport adaptation/ emergency/ disaster plan/ policy, Development of transport plan/ policy
National Action Plan for Haritha Lanka Programme	2009	Active transport infrastructure expansion, Vehicle inspection and maintenance, Technical standards for road infrastructure, Technologies on transport asset management, General transport asset management, Road charging and tolls, Vehicle taxes, Reference to finance mechanisms within country, Road infrastructure expansion
Climate Prosperity Plan	2022	Active transport infrastructure expansion
National Road Master Plan 2021-30	2021	Active transport infrastructure expansion, General infrastructure improvements, Transport asset management information system, Asphalt mix resurfacing, Routine transport asset maintenance, Road charging and tolls, Reference to finance mechanisms within country, Measures to improve rural-urban connectivity, Road infrastructure expansion, Audits/ star rating for existing roads for road safety
National transport Policy of Sri Lanka	2017	Active transport infrastructure expansion, Vehicle inspection and maintenance, Technical standards for road infrastructure, Transport infrastructure resilience, Reference to finance mechanisms within country, Development of transport adaptation/ emergency/ disaster plan/ policy
National Adaptation Plan for Climate change Impacts in Sri Lanka	2016	Disaster notification/ early warning system, Climate-resilient design standards, Relocation from climate-risk areas, Transport infrastructure resilience, Development of transport adaptation/ emergency/ disaster plan/ policy, Adaptation transport laws, regulations and programmes, Disaster monitoring and risk assessment for transport infrastructure
National Civil Aviation Policy for Sri Lanka	2016	General infrastructure improvements, General transport finance
Global Status Report on Road Safety 2018	2018	Design standards for sidewalks and bicycle paths, Upgrading high risk locations for road safety, National road safety strategy, National speed law, Audits/ star rating for existing roads for road safety
Sustainable Sri Lanka 2030 Vision and Strategic Path	2019	General infrastructure improvements, Transport infrastructure resilience, Fuel tax, Road charging and tolls, Vehicle taxes, Measures to improve rural-urban connectivity, Road infrastructure expansion, Development of road plan/ policy, Development of transport plan/ policy, National road safety strategy, Audits/ star rating for existing roads for road safety, General adaptation measures
Public Investment Program 2021	2017	General infrastructure improvements, Vehicle inspection and maintenance, Automated enforcement of speed limits, Transport asset management funding strategy, Transport asset management information system, Performance-based transport maintenance contracts, Transport infrastructure resilience, General transport asset management, General transport finance, Reference to finance mechanisms within country, Measures to improve rural-urban connectivity, Road infrastructure expansion
National Physical Planning Policy & The Plan — 2017-2050	2019	General transport asset management
Clean Air 2025 - Action plan for Air Quality Management	2016	Vehicle inspection and maintenance, Road infrastructure expansion, Ecodriving
The National Export Strategy (NES) of Sri Lanka	2018	Development of road plan/ policy
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Vehicle inspection and maintenance, Implementation of vertical deflections on roads
Vehicle Ordinance	1961	National speed law, Passenger and freight load limits

Policy Targets

Policy document	Target year	Road-related targets
Sustainable Sri Lanka 2030 Vision and Strategic Path	2025	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.
Sustainable Sri Lanka 2030 Vision and Strategic Path	2030	prioritizing steps to improve road safety and achieve the vision zero goal by 2030

Notes



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

<https://bit.ly/ATOpolicyrepository>

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- (20) Koks, et al. (2023), <https://iopscience.iop.org/article/10.1088/2634-4505/acd1aa>
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- (22) Global Health Data Exchange (GBD, 2019), <https://vizhub.healthdata.org/gbd-results/>
- (23) Global Materials Flow Database (UNEP, 2023), <https://www.resourcepanel.org/global-material-flows-database>

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