

# Maldives

## Green Roads Profile

### General

Road length (2022)  
**1,479 kilometers**

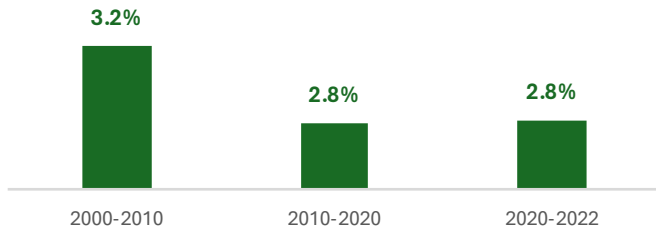
Subregion  
(1) **South Asia**

Income class  
**Upper middle income**

Average annual growth rate of road length

Population (2024)  
(1) **517.9 thousand**

Land area  
**0 thousand sqkm** (2,3)



Urban population  
**42%** (2)

Rural population  
**58%** (2)

Gross domestic product (GDP PPP, 2022)  
**13.16 billion USD** (2,3)

GDP per capita (PPP, 2022)  
**25,125 USD** (2,3)

*Maldives's road network is comprised of 0.4% motorways, highways, and primary roads and 99.6% secondary roads, local roads, and other roads*

Road infrastructure availability (2022)  
**2.8 kilometers per thousand population**

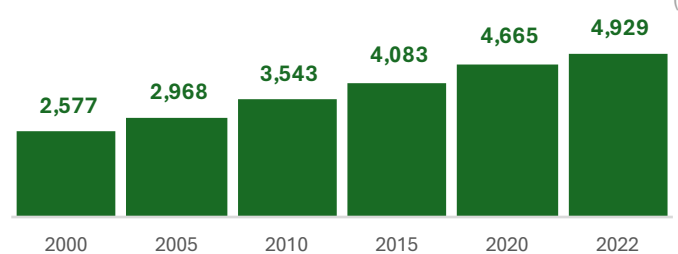
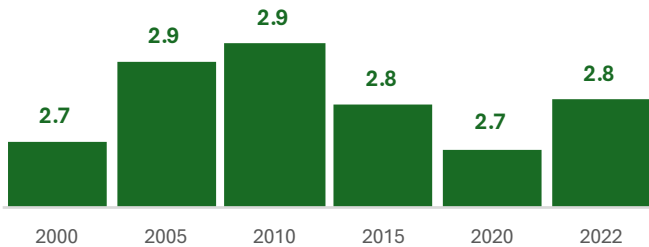
Road infrastructure density (2022)  
(1,2) **4,929 meters per square kilometer** (1,3)

Road infrastructure availability trend, kilometers per thousand population

Road infrastructure density trend, meters per thousand population

(1,2)

(1,3)

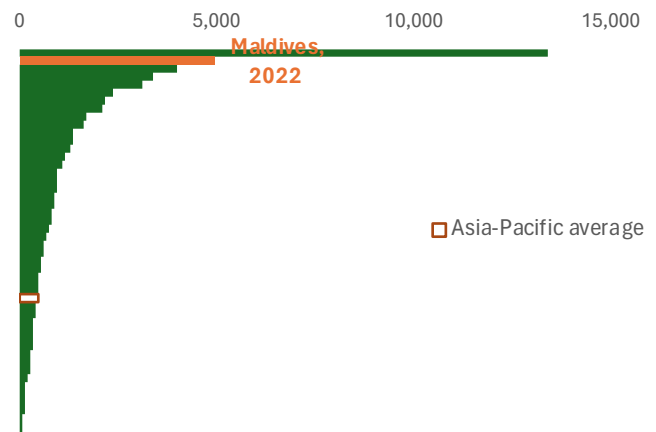
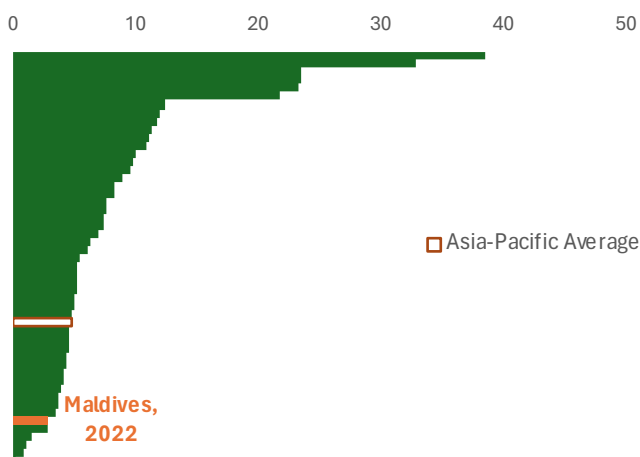


Road infrastructure availability in Asia-Pacific, kilometers per thousand population

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

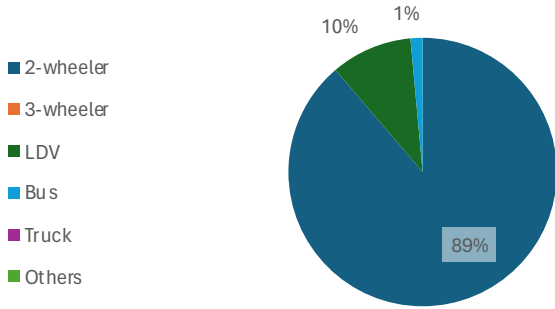
(1,2)

(1,3)



Road vehicles (2022)  
**125 thousand vehicles**

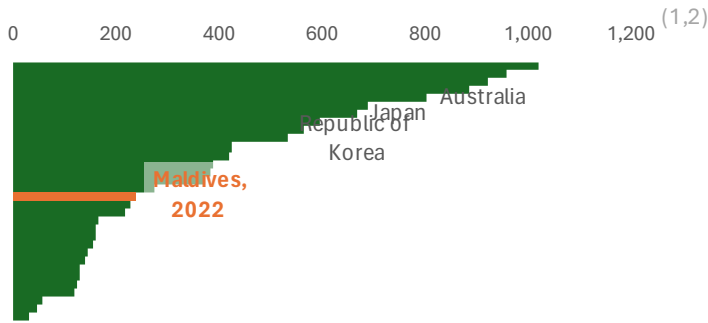
Share of vehicles by type



Motorization rate (2022)  
**239 vehicles per thousand population**

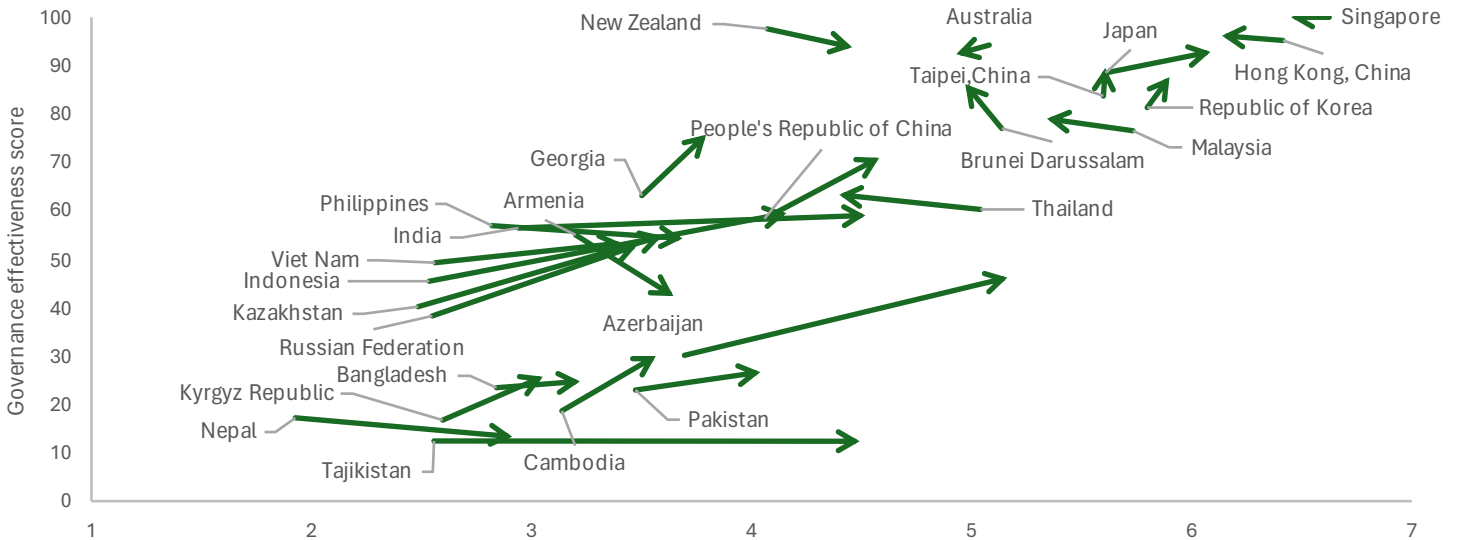
*In 2000, Maldives had 58 vehicles per thousand population. By 2022, this has increased to 239 compared with Asia-Pacific average of 577 in 2022.*

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

Road quality (perception)

7 = Extremely good road quality

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

(1) (4)

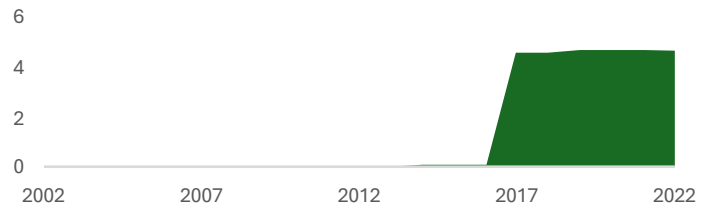
(1)

Share of road in total public-private partnership investments

(4)

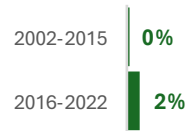
Official development assistance in road sector, cumulative million USD

(5)



Share of road in total official development assistance

(5)



Quality of Life and Fostering Inclusive Growth

Rural access index (2023)  
**94%**

(6)

*Based on 2015 estimates, only 42% of the population could reach the nearest city in 30 minutes, another 0% could reach in 1 hour, and another 4% could reach only after 3 hours.*

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

(2,6)

Logistics performance index score (2023)

**n.d.**

(10)

National street network disconnectedness index

(7)

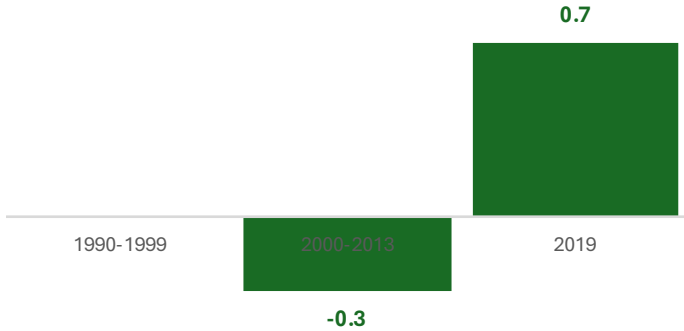
| Infrastructure score

**n.d.**

(10)

Logistics performance index ranking trend

(10)



*This indicator is a summary scalar measure for street-network sprawl describing connectivity of local street networks across the world*



Road crash fatalities (2019)  
**9 deaths**

(8)

Road crash fatality rate per 100 thousand population

(2,8)

Percent of firms choosing transportation as their biggest obstacle - Manufacturing

**n.d.**

(11)

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

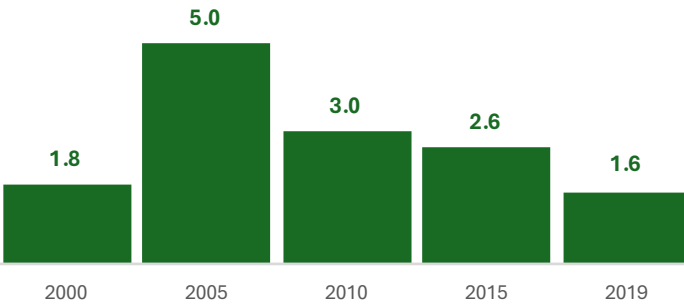
**n.d.**

(11)

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

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

(9)



*Asia-Pacific average is 15.7 fatalities per 100 thousand population*



Mean speed (2022)  
**n.d.**

(9)

Employment in transport sector (2022)

**24.4 thousand employees**

Share of transport sector in total employment (2022)

(12) **9.8%**

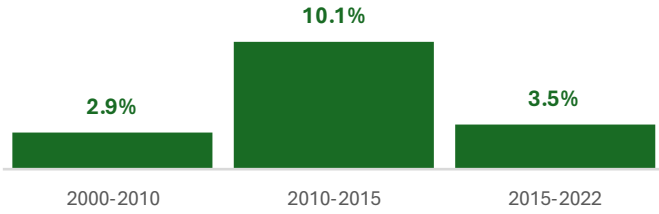
(12)

Average annual growth rate of transport sector employment

Share of females in total transport sector employment (2022)

(12) **8.5%**

(12)

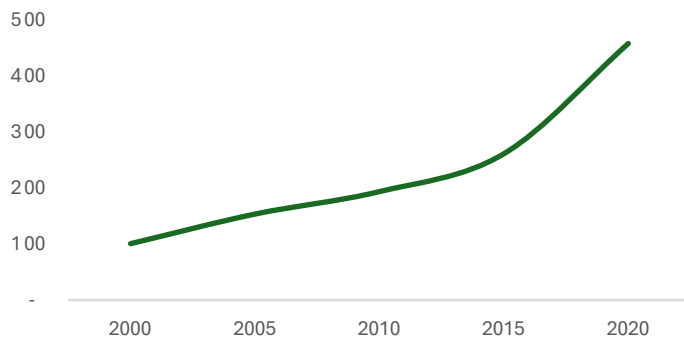


## Decarbonization

Road transport energy consumption trend

Assuming 2000 value as base (100)

(13)

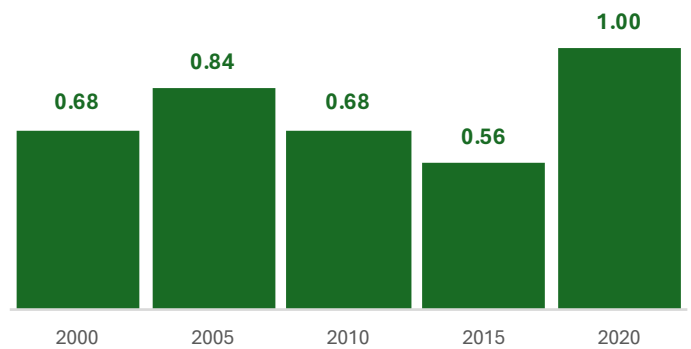


Between 2000-2010, Maldives's road transport energy consumption grew 6.8% annually. Between 2010-2020, road transport energy consumption grew 9.0% annually.

59% of Maldives's transport energy consumption is in the road sector.

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

(3,13)



Asia-Pacific average is 0.4 MJ per USD in 2020

Grid emission factor (2022)

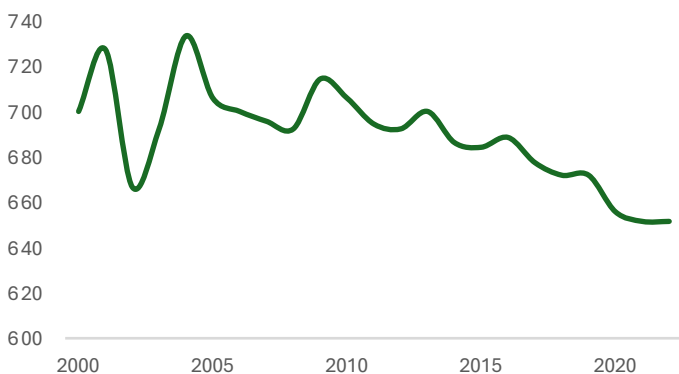
**651.5 gCO2 per kWh**

Grid emission factors in Asia-Pacific, gCO2 per kWh

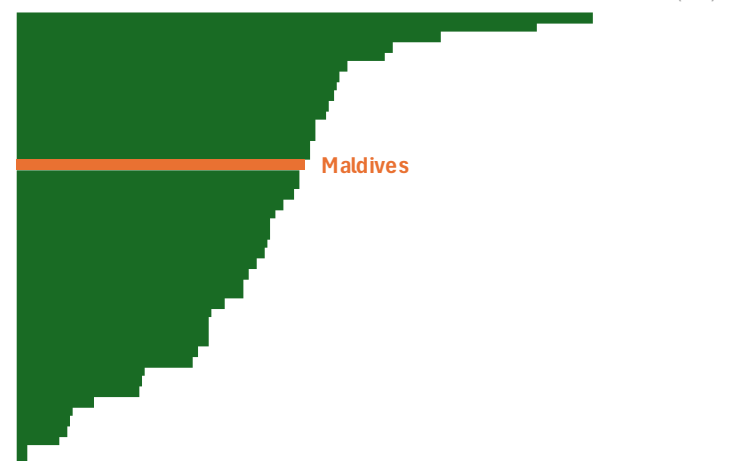
(14)

(14)

Grid emission factor trend, gCO2 per kWh

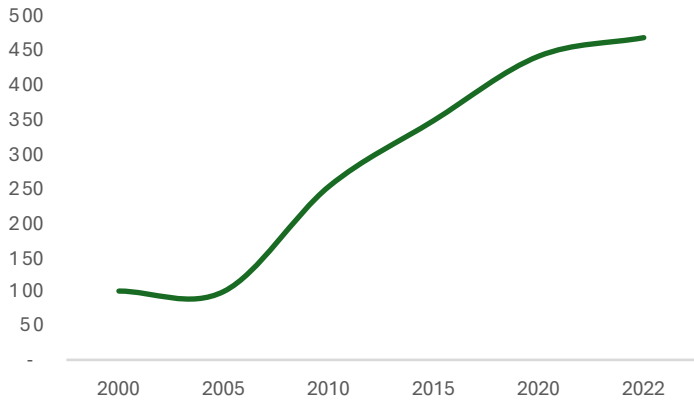


(14)



## Road transport CO2 emissions trend

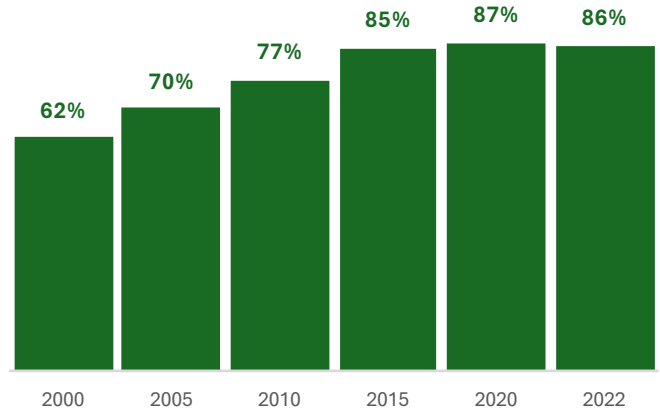
Assuming 2000 value as base (100)



(15)

## Share of road transport in total transport CO2 emissions

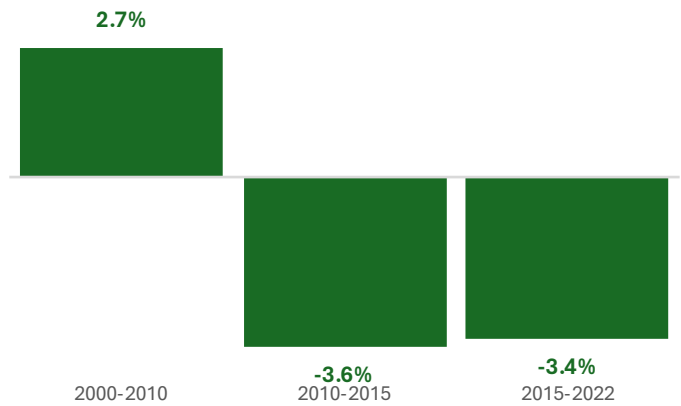
(15)



Between 2010-2019, Maldives's road transport fossil CO2 emissions was growing 9.5% annually. After the COVID-19 pandemic, road transport CO2 emissions was growing 3.0% annually.

## Road transport CO2 emissions intensity with GDP trend

(3,15)



## Transport fossil fuel subsidies, cumulative from 2010 to 2022

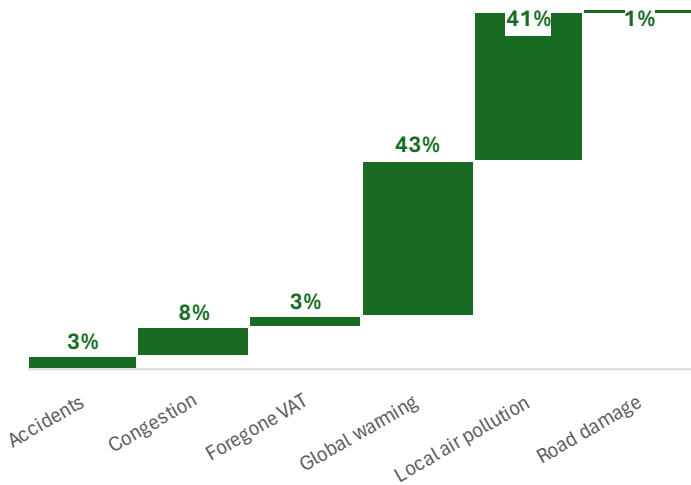
None

0.0% of Asia-Pacific total

(16)

## Implicit fossil fuel subsidies due to externalities

(17)



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)

**n.d.** (18)

National road vulnerability index ranking (2023)

**114th out of 208 countries** (20)

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

**16.7%** (19)

Share of population in low elevated coastal zones (2018)

**100.0%** (21)

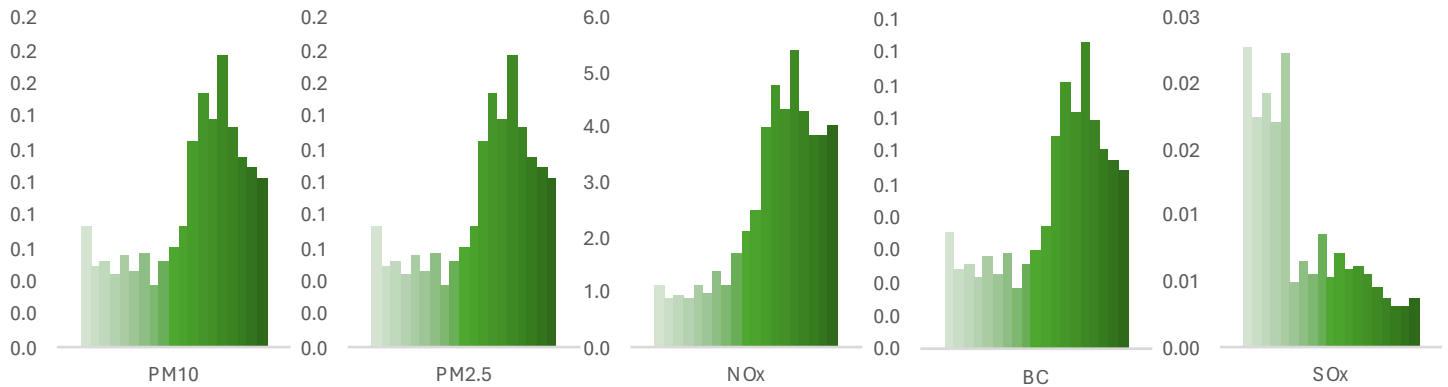
Pollution, Water and Land Management, Preserving Biodiversity, and Sustainable Materials

Paved roads (2023)

**n.d.** (1)

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

(15)



*In 2022, road transport contributed 22.1%, re-suspended dust contributed 17.6% in transport PM10 emissions. In total, road transport contributed about 18.1% in total PM10 emissions in Maldives.*

Deaths due to occupational exposure to diesel engine exhaust | 2000-2010

**2 deaths**

| 2011-2018

**3 deaths**

Terrestrial and marine protected areas (2022)

**0.1%** (3)

(22) (% of total territorial area)

Terrestrial protected areas

**2.3%** (13)

(% of total land area)

Marine protected areas

**0.1%** (3)

(% of territorial waters)

Share of biofuels in road transport energy consumption (2020)

**n.d.**

Domestic consumption per capita, tonnes (2024)

| Maldives  
**17.8 tonnes**

| Asia-Pacific  
**13.8 tonnes**

Forest area (2021)

**2.7%** (3)

(23) (% of land area)

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

## Policy Measures

Policy document	Year	Road-related measures
Low Carbon Strategy for Transport Sector	2014	Active transport infrastructure expansion, General infrastructure improvements, Vehicle inspection and maintenance, General transport asset management, Vehicle taxes, Investment required for specific projects, Reference to finance mechanisms within country, Ecodriving
Strategic Action Plan 19-23	2019	General infrastructure improvements, Vehicle inspection and maintenance, Disaster notification/ early warning system, General economic instruments, General transport finance, Measures to improve rural-urban connectivity, Road infrastructure expansion
Third National Environment Action Plan	2009	Active transport infrastructure expansion
Update of Nationally Determined Contribution of Maldives	2020	Disaster notification/ early warning system, Transport infrastructure resilience
Global Status Report on Road Safety 2018	2018	Design standards for sidewalks and bicycle paths, National road safety strategy, National speed law, Audits/ star rating required for new road infrastructure for road safety
National Action Plan on Air Pollutants	2019	Vehicle inspection and maintenance, Reference to finance mechanisms within country
National road safety action plan 2019 –2023	2019	Technical standards for road infrastructure, Routine transport asset maintenance, Reference to finance mechanisms within country, National road safety strategy
National Strategy for Sustainable Development	2009	General infrastructure improvements, Road-side vehicle technical checks, Vehicle inspection and maintenance, Development of transport plan/ policy
Flight Plan 2020-2025	2020	General infrastructure improvements, General economic instruments, General transport finance
First NDC	2016	Disaster notification/ early warning system, Relocation from climate-risk areas, Transport infrastructure resilience
Biennial update report (BUR). BUR 1	2019	General infrastructure improvements
National Development Plan (ppt)	2019	General infrastructure improvements
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Vehicle inspection and maintenance, Implementation of vertical deflections on roads
Strategic National Action Plan for Disaster Risk Reduction and Climate Change Adaptation 2010-2020	2010	Transport infrastructure resilience

## Notes



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

<https://bit.ly/ATOpolicyrepository>

## References

- (1) Country Official Statistics
- (2) UN Population Database (2022), <https://population.un.org/wpp/>
- (3) World Bank (2022), <https://data.worldbank.org/>
- (4) PPI Database (World Bank, 2023), <https://ppi.worldbank.org/en/ppi>
- (5) Organisation for Economic Co-operation and Development (OECD) (2022), <https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#>
- (6) Socioeconomic Data and Applications Center (CIESIN, 2023), <https://sedac.ciesin.columbia.edu/data/set/sdgi-9-1-1-rai-2023>
- (7) Millard-Ball, et al (2019), <https://sprawlmap.org/#globe>
- (8) Global Health Observatory (WHO, 2019), <https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/road-traffic-mortality>
- (9) Moszoro & Soto (IMF, 2022), <https://www.imf.org/en/Publications/WP/Issues/2022/05/20/Road-Quality-and-Mean-Speed-Score-518200>
- (10) Global Competitiveness Report (WEF, 2019), [https://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)
- (11) Enterprise Surveys (WB, 2019), <https://datacatalog.worldbank.org/dataset/enterprise-surveys>
- (12) International Labor Organization (ILO, 2023), <https://ilostat ilo.org/data/bulk/>
- (13) UN Energy Statistics (2021), <https://unstats.un.org/unsd/energystats/dataPortal/>
- (14) Ember (2023), <https://ember-climate.org/data-catalogue/yearly-electricity-data/>
- (15) Emissions Database for Global Atmospheric Research (EC, 2023), <https://edgar.jrc.ec.europa.eu/>
- (16) Fossil Fuels Consumption Subsidies 2022 (IEA, 2022), <https://www.iea.org/reports/fossil-fuels-consumption-subsidies-2022>
- (17) Climate Change Dashboard (IMF, 2024), <https://climatedata.imf.org/pages/access-data>
- (18) Koks, et al. (2019), <https://www.nature.com/articles/s41467-019-10442-3>
- (19) Coalition for Disaster Resilient Infrastructure (CDRI, 2023), <https://giri.unepgrid.ch/facts-figures/building-infrastructures>
- (20) Koks, et al. (2023), <https://iopscience.iop.org/article/10.1088/2634-4505/acd1aa>
- (21) Environmental Vulnerability Indicators (UN, 2018), <https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html>
- (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>

## Disclaimer

This profile was developed by Asian Transport Outlook in support of TA-6756 Improving Infrastructure Sustainability Through Better Asset Management – Developing a Green Roads Toolkit and Guidance for ADB Projects. The ATO is an initiative developed under TA-6763 REG: Accelerating Innovation in Transport - Asian Transport Outlook: Phase 3 (55119-001) of the Asian Development Bank (ADB) and is also being supported by the Asian Infrastructure Investment Bank (AIIB) through Purchase Order No. CW39446 AIIB Support: Asian Transport Outlook Phase 3.

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