

Uzbekistan

Green Roads Profile

General

Road length (2022)
175,371 kilometers

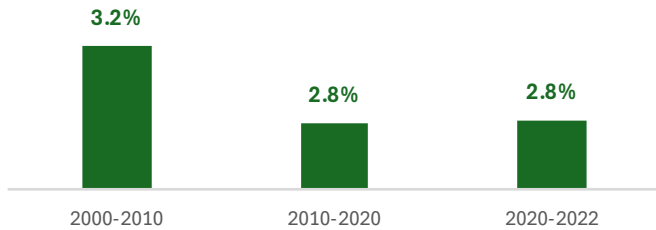
Subregion
(1) **Central and West Asia**

Income class
Low and lower middle income

Average annual growth rate of road length

Population (2024)
(1) **35.7 million**

Land area
441 thousand sqkm (2,3)



Urban population
51% (2)

Rural population
49% (2)

Gross domestic product (GDP PPP, 2022)
339.93 billion USD (3)

GDP per capita (PPP, 2022)
9,817 USD (2,3)

Uzbekistan's road network is comprised of 6.1% motorways, highways, and primary roads and 93.9% secondary roads, local roads, and other roads

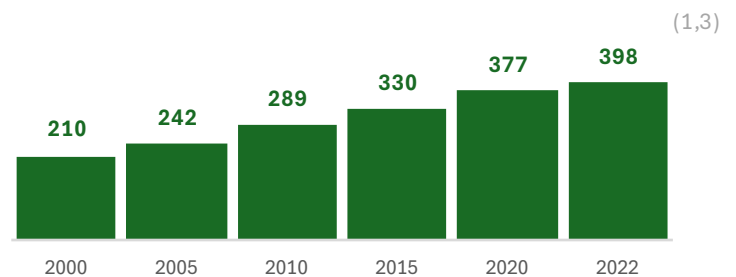
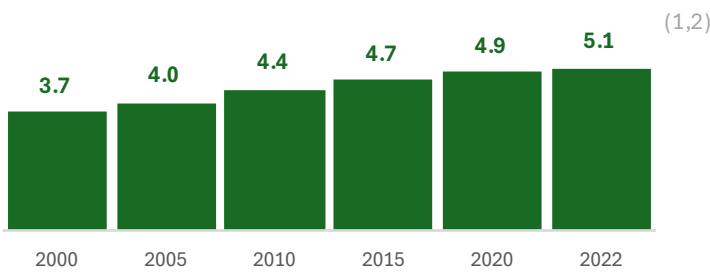
Further information on road length, pavement, and quality by road class is available in Appendix A

Road infrastructure availability (2022)
5.1 kilometers per thousand population

Road infrastructure density (2022)
(1,2) **398 meters per square kilometer** (1,3)

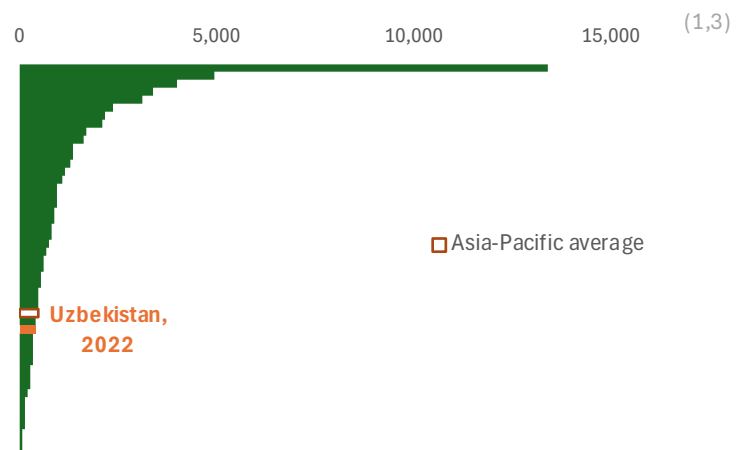
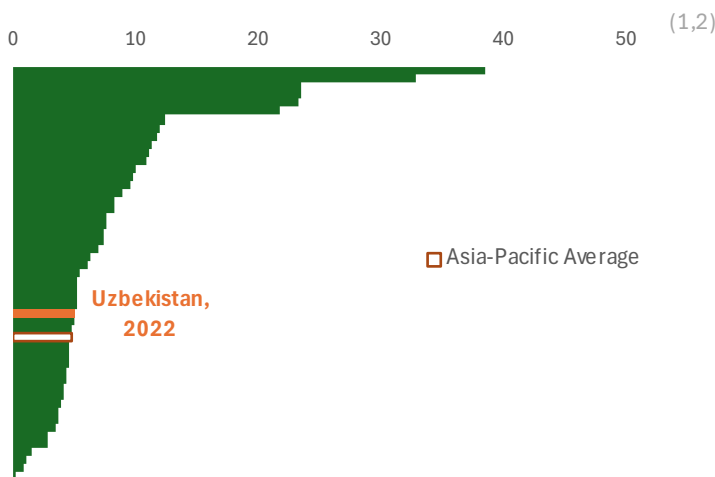
Road infrastructure availability trend, kilometers per thousand population

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 (2023)
n.d.

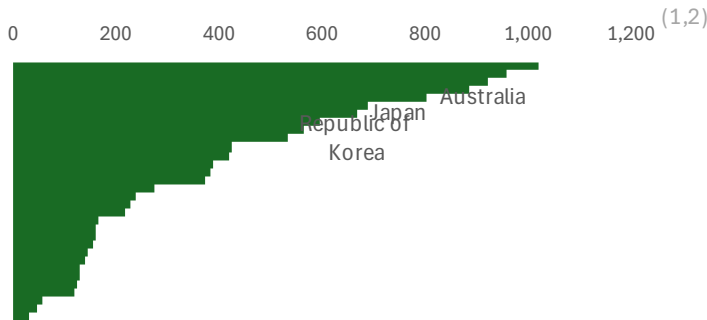
(1) Public-private partnership investments in road sector, cumulative million USD

Share of vehicles by type

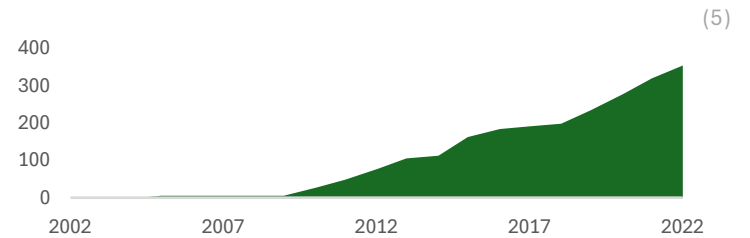
Motorization rate (2023)
n.d.

(1,2) Official development assistance in road sector, cumulative million USD

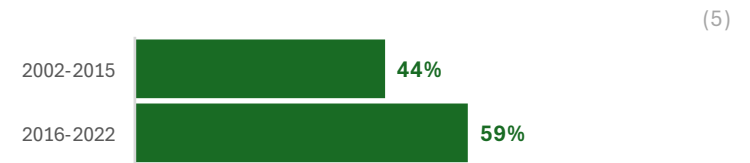
Motorization rate in Asia-Pacific, vehicles per thousand population



Share of road in total public-private partnership investments



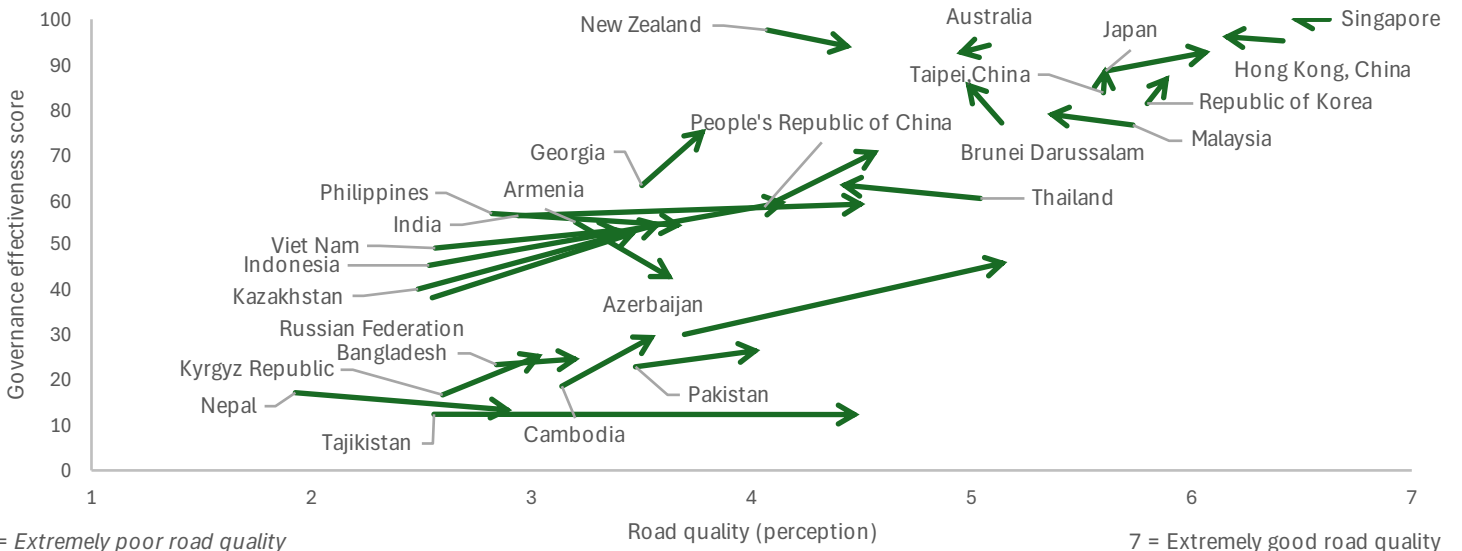
Share of road in total official development assistance



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

Road maintenance budget and deficit is available in Appendix B. Road user charging revenue information is available in Appendix C

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



1 = Extremely poor road quality

7 = Extremely good road quality

Developed with the support of:



Quality of Life and Fostering Inclusive Growth

Rural access index (2023)
62%

(6)

Based on 2015 estimates, only 42% of the population could reach the nearest city in 30 minutes, another 15% could reach in 1 hour, and another 23% could reach only after 3 hours.

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

(2,6)

Logistics performance index score (2023)

2.6/5

(10)

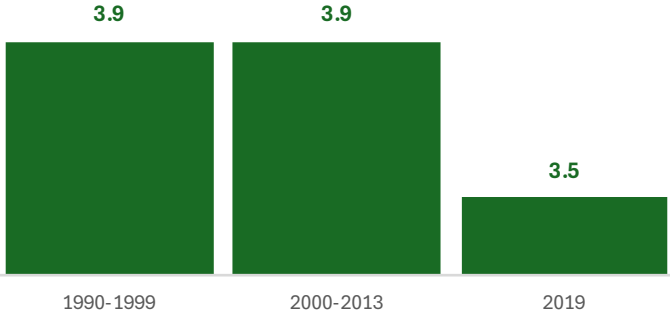
| Infrastructure score

(7)

2.4/5

(10)

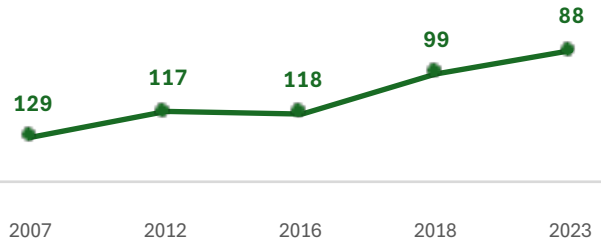
National street network disconnectedness index



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

Logistics performance index ranking trend

(10)



Road crash fatalities (2019)
3.9 thousand deaths

(8)

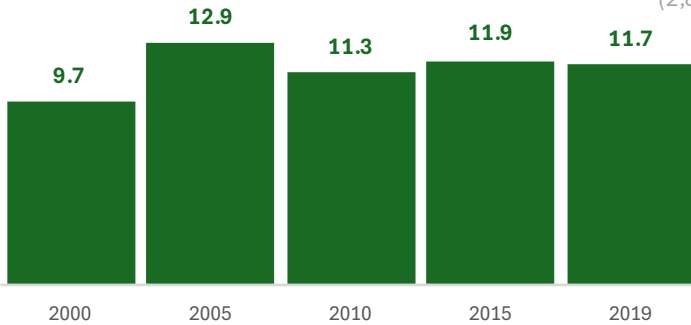
Road crash fatality rate per 100 thousand population

(2,8)

Percent of firms choosing transportation as their biggest obstacle - Manufacturing (2019)

3.3%

(11)



Asia-Pacific average is 15.7 fatalities per 100 thousand population

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

20.0%

(11)

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

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

(9)

Mean speed (2022)
83 kilometers per hour

(9)



Employment in transport sector (2022)

648.1 thousand employees

Share of transport sector in total employment (2022)

(12) **5.0%**

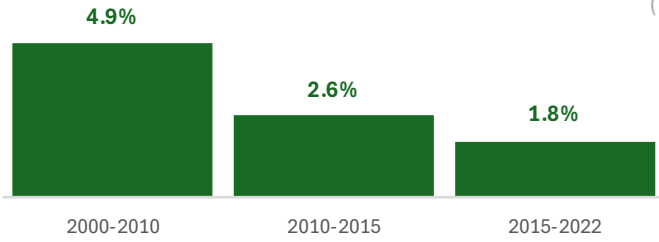
(12)

Average annual growth rate of transport sector employment

Share of females in total transport sector employment (2022)

(12) **9.6%**

(12)



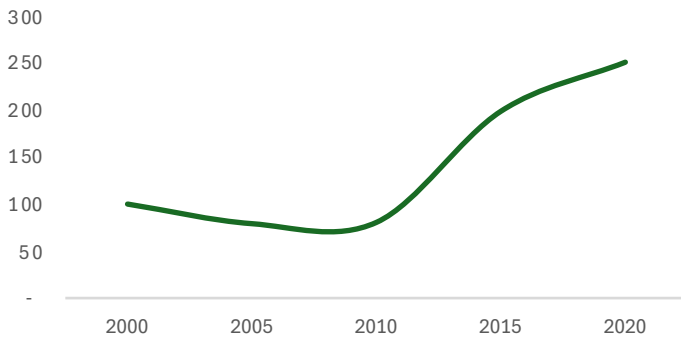
Decarbonization

Road transport energy consumption trend

Assuming 2000 value as base (100)

(13)

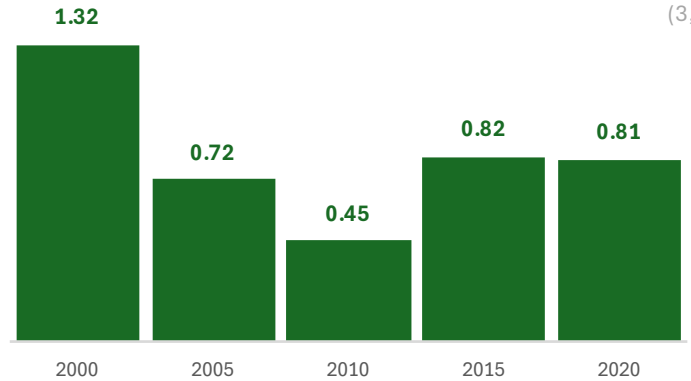
97% of Uzbekistan's transport energy consumption is in the road sector.



Between 2000-2010, Uzbekistan's road transport energy consumption contracted -2.1% annually. Between 2010-2020, road transport energy consumption grew 12.0% annually.

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)

1176.7 gCO₂ per kWh

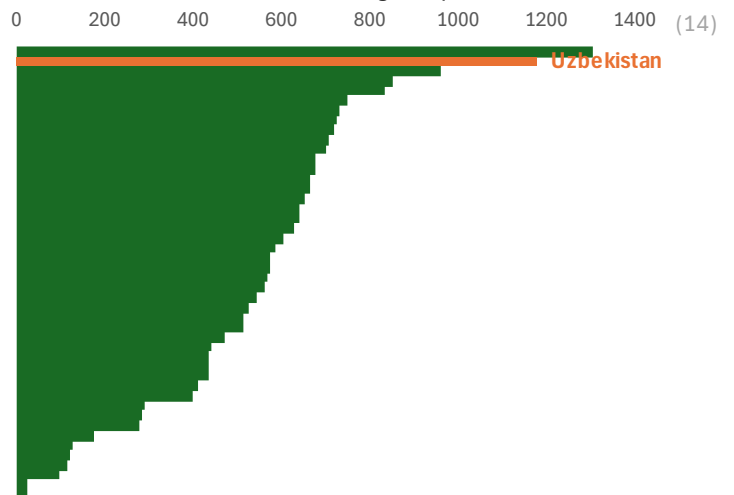
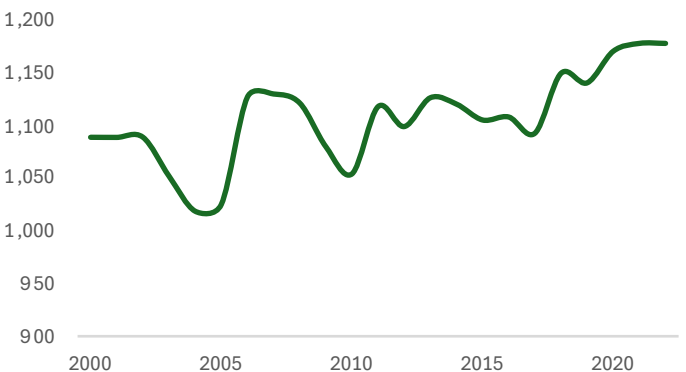
Grid emission factors in Asia-Pacific, gCO₂ per kWh

(14)

(14)

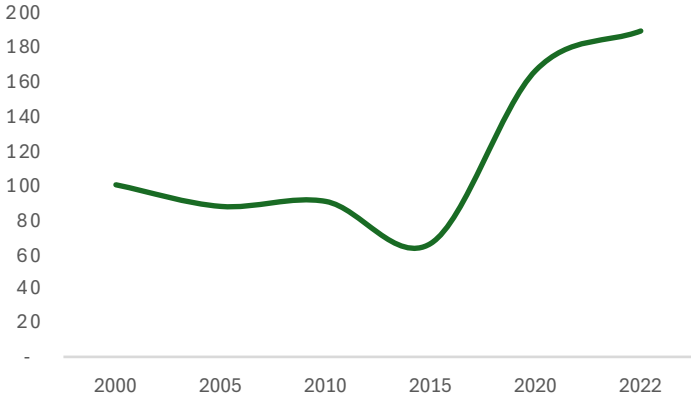
Grid emission factor trend, gCO₂ per kWh

(14)



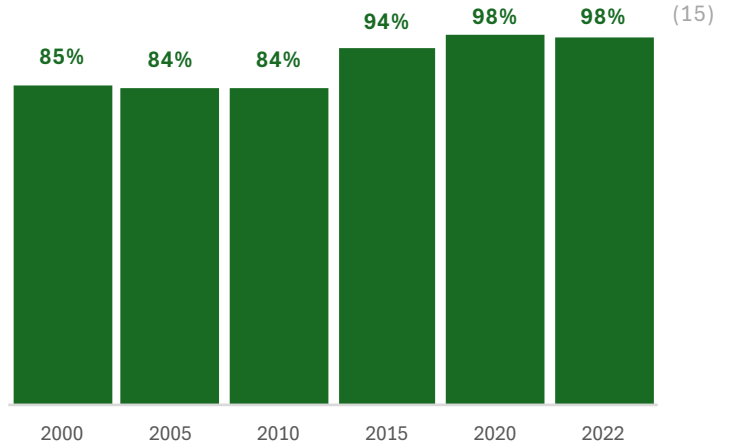
Road transport CO2 emissions trend

Assuming 2000 value as base (100)



(15)

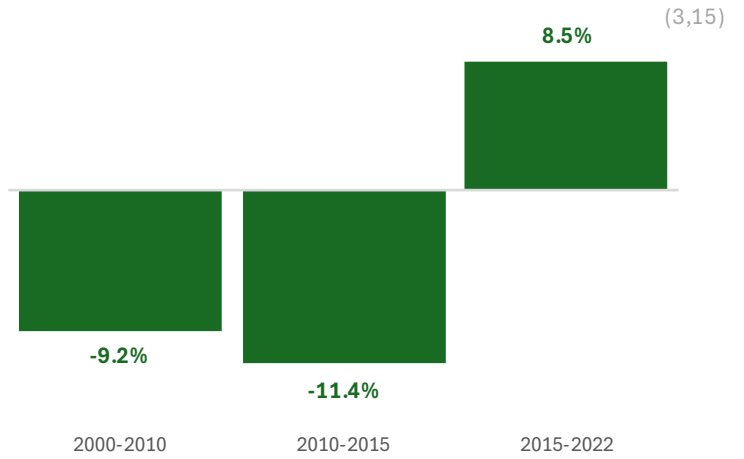
Share of road transport in total transport CO2 emissions



(15)

Between 2010-2019, Uzbekistan's road transport fossil CO2 emissions was growing 6.3% annually. After the COVID-19 pandemic, road transport CO2 emissions was growing 6.6% annually.

Road transport CO2 emissions intensity with GDP trend



(3,15)

Transport fossil fuel subsidies, cumulative from 2010 to 2022

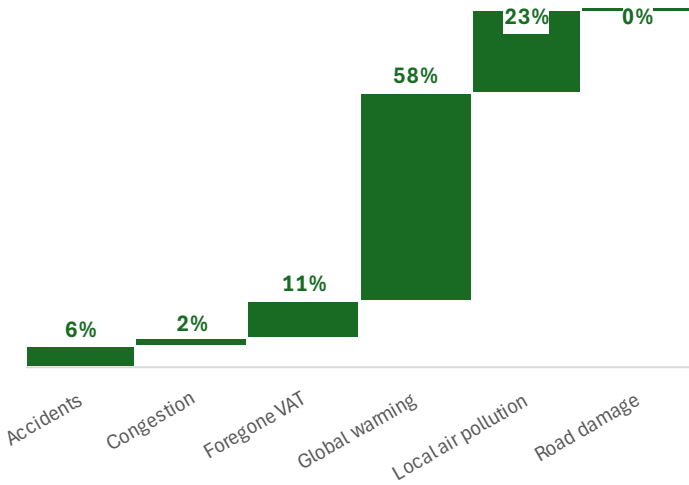
3.86 billion USD

0.6% 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)

45.04 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)

69.5%

(19)

Share of population in low elevated coastal zones (2018)

0.0%

(21)

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

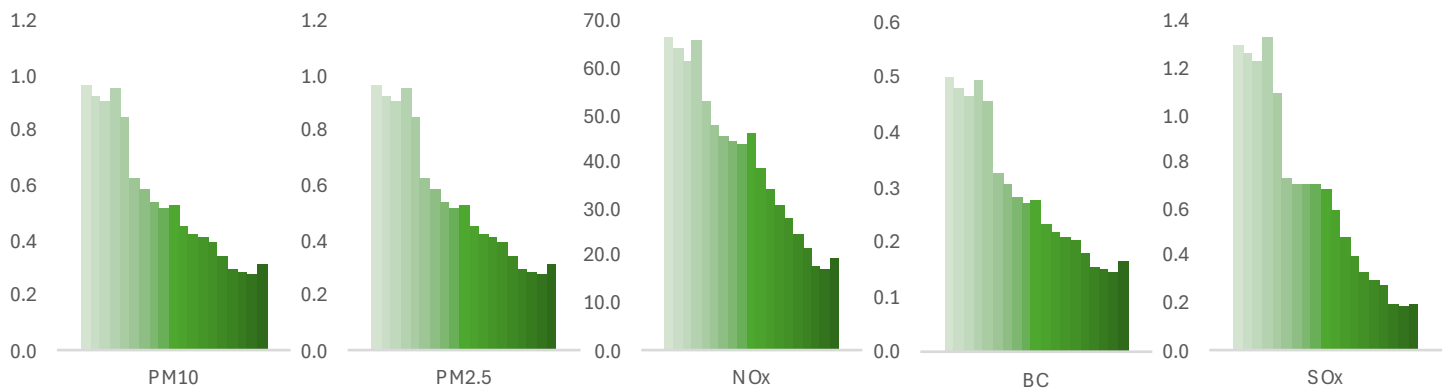
Paved roads (2020)

99%

(1)

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

(15)



In 2022, road transport contributed 39.4%, re-suspended dust contributed 45.4% in transport PM10 emissions. In total, road transport contributed about 3.8% in total PM10 emissions in Uzbekistan.

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

539 deaths

| 2011-2018

472 deaths

(22)

Terrestrial and marine protected areas (2022)

5.8%

(3)

(% of total territorial area)

Terrestrial protected areas

5.8%

(13)

(% of total land area)

Marine protected areas

n.d.

(3)

(% of territorial waters)

Share of biofuels in road transport energy consumption (2020)

n.d.

Domestic consumption per capita, tonnes (2024)

| Uzbekistan

9.3 tonnes

| Asia-Pacific

13.8 tonnes

(23)

Forest area (2021)

8.4%

(3)

(% 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
Draft Strategy for the Development of the Transport System of the Republic of Uzbekistan until 2035	2019	General infrastructure improvements, Reduction of transport/ logistics costs, Vehicle inspection and maintenance, Technical standards for road infrastructure, Target - Transport activity, General transport asset management, Road charging and tolls, General economic instruments, General transport finance, Investment volume for transport, Accreditation of road inspection and auditing agencies, Measures to improve rural-urban connectivity, Road infrastructure expansion, Passenger and freight load limits, Road-side checks on overloading
Third National Communication of the Republic of Uzbekistan under the UN Framework Convention On Climate change	2016	Active transport infrastructure expansion, General infrastructure improvements, Vehicle inspection and maintenance, Disaster notification/ early warning system, Relocation from climate-risk areas, Road infrastructure expansion, Development of road plan/ policy, Development of transport plan/ policy
Traffic laws	2000	National speed law, Passenger and freight load limits
The Law of the Republic of Uzbekistan "On road safety"	2013	Vehicle inspection and maintenance, Upgrading high risk locations for road safety
On measures to improve transport infrastructure and diversify foreign trade routes for the transportation of goods for 2018 - 2022	2017	General infrastructure improvements, Road infrastructure expansion
Global Status Report on Road Safety 2018	2018	Design standards for sidewalks and bicycle paths, Upgrading high risk locations for road safety, National speed law, Audits/ star rating for existing roads for road safety, Audits/ star rating required for new road infrastructure for road safety
Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030	2017	General infrastructure improvements, Vehicle inspection and maintenance, Technical standards for road infrastructure, Request for financial support to develop transport, National road safety strategy, Passenger and freight load limits, Audits/ star rating for existing roads for road safety, Audits/ star rating required for new road infrastructure for road safety
First Biennial Update Report of the Republic of Uzbekistan	2021	General infrastructure improvements, Road infrastructure expansion
Strategy on the Transition of the Republic of Uzbekistan to a "Green" Economy 2019-2030	2019	General infrastructure improvements, Road infrastructure expansion, Development of transport plan/ policy
Concept of Road Safety in the Republic of Uzbekistan for 2018-2022	2018	General infrastructure improvements, Vehicle inspection and maintenance, General transport asset management, General transport finance, Measures to improve rural-urban connectivity, Upgrading high risk locations for road safety
Updated Nationally Determined Contribution - UZB	2021	Disaster notification/ early warning system, Transport infrastructure resilience
Voluntary National Review 2023 - UZB	2023	Target - Transport activity, General transport asset management, Road infrastructure expansion
Development Strategy of New Uzbekistan for 2022-2026	2022	General infrastructure improvements, Disaster notification/ early warning system, Target - Transport activity, General transport finance, Road infrastructure expansion
Intended Nationally Determined Contributions of the Republic of Uzbekistan (INDC)	2015	General infrastructure improvements, Disaster notification/ early warning system, General transport asset management
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Vehicle inspection and maintenance, Implementation of vertical deflections on roads
The Law of the Republic of Uzbekistan "On transport"	2021	Passenger and freight load limits

Policy Targets

Policy document	Target year	Road-related targets
Draft Strategy for the Development of the Transport System of the Republic of Uzbekistan until 2035	2035	Reducing the level of specific transportation costs in the price of products by 2035 according to the basic option - from 15 percent in 2018 to 10% in 2035, according to the innovative option - up to 7 percent.
Development Strategy of New Uzbekistan for 2022-2026	0	Expansion of "green corridors" and transit opportunities in the transport system for foreign trade, as well as an increase in the volume of transit cargo turnover up to 15 million tons.
Voluntary National Review 2023 - UZB	2026	increase the transit cargo turnover to 15 million tons.

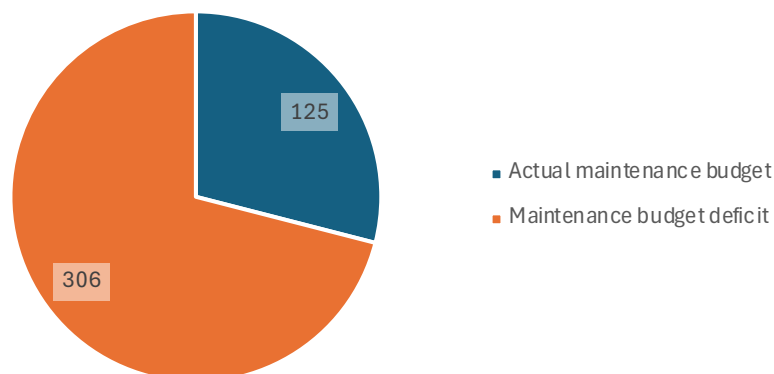
Appendix

A. Road length, pavement ratio, and quality by road class

Road class	Length	Paved	Quality			
			Good	Fair	Poor	Very Poor
International	3,981	95%	83%	8%	7%	2%
State	14,100	95%	40%	47%	12%	1%
Local	24,614	95%	21%	28%	49%	1%
Inter-farm	139,305	33%			58%	42%

Definitions and sources are available in "Asian Development Bank, 2024. The Future of Road User Charging in Developing Asia and the Pacific: Road Maintenance Financing and Cost Recovery Options"

B. Maintenance needs and budget, million USD



C. Road user charge revenues

Road user charge	Revenue (million USD)
Fuel excise tax	160.0
Fuel excise tax for end consumers	328.0
Vehicle value added tax	754.0
Vehicle customs duty	312.0
Foreign vehicle entry fee	20.0
Heavy vehicle fee	32.0

Notes



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

<https://bit.ly/ATOpolicyrepository>

References

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- (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>
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- (18) Koks, et al. (2019), <https://www.nature.com/articles/s41467-019-10442-3>
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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>

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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