

# Iran

Iran's transport sector was the fourth largest GHG-emitting sector in the country in 2023. Transport emissions have remained relatively stable since 2015, contributing 14.62% of national emissions, with per capita emissions nearly double the global average. While passenger rail activity has stagnated, freight rail has seen modest growth. Iran records 20.6 road traffic fatalities per 100,000 people. Renewable energy, including biofuels and electricity, represented a mere 0.1% of Iran's total transport energy consumption, whereas the carbon intensity of its electricity remains very high, at 641.7 gCO<sub>2</sub>/kWh in 2023. Beyond climate impacts, transport accounted for 11.1% of national air pollutant emissions in

2019. Transport-induced air pollution, in turn, caused 5.56 premature deaths per 100,000 people in Iran in 2019. Iran is also the country with the highest number of road traffic fatalities in Asia, with 20.6 deaths per 100,000 people, accounting for 6.80% of Iran's GDP in 2021. In 2020, 37.7% of Iran's population had convenient access to public transport, whereas no data is available for access to all-season roads in rural contexts. Despite having urban and intercity rail networks, policies for sustainable mobility are limited. Iran has not included transport in its NDC and lacks a national urban mobility framework. However, planned rail expansions aim to enhance freight capacity and efficiency.

\$	Income group: Middle-income	
👤	Human Development Index (2023): 0.80	
👤	Population size (2023): 83.19 million	+9.81% (2015 - 2023)
🏠	Urban population share (2023): 73.40%	+13.61% (2015 - 2023)
💰	GDP per capita (2023): 5 680.71 USD	+14.19% (2015 - 2023)
👤	Share of transport and storage jobs in workforce (2023)	11.4%
♀	Share of women employed in transport and storage (2023)	3.3%

## Transport Demand Trends

### Passenger transport activity

14 890

million passenger-km of rail transport in 2019

-0.3%  
(2015 to 2019)

Modal share for passenger travel

### Freight transport activity

33 798

million ton-km of aviation and rail transport in 2019

+0.35%  
(2015 to 2019)

Modal share for freight transport

SDG 9.1

SDG 9.1

### Transport energy consumption (2022)

2 067 645 TJ

+3.7%  
(2015 to 2023)

### Oil products

84.0% of total transport energy consumption

### Per capita fossil fuel subsidies (2022)

No data USD per capita

### Fuel quality standards (2022)

No data ppm

### Average light duty vehicle fuel consumption (2022)

No data Lge/km

### Road traffic fatalities (2021), WHO estimates

SDG 3.6

20.6 deaths per 100,000 people

15.6 Regional  
15.0 Global

### Road traffic fatality cost as percentage of GDP (2021)

6.8%

### Premature deaths linked to transport air pollution (2019)

SDG 11.6

5.6 deaths per 100,000 people

3.2 Regional  
2.3 Global

### Contribution of transport to air pollution (2019)

11.1%

## Transport Emission Trends

### Transport GHG emissions (2023)

145.7

million tonnes of CO<sub>2</sub> equivalent

+0.4%  
(2015 to 2023)

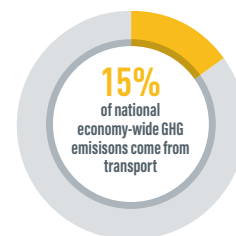
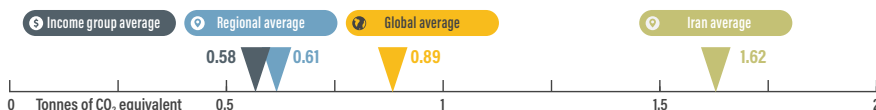
-1.1%  
(2022 to 2023)

### Per capita transport GHG emissions (2023)

1.62

tonnes of CO<sub>2</sub> equivalent per capita

### PER CAPITA EMISSION COMPARISON



Transport is the fourth-largest GHG-emitting sector in the country in 2023.

## Transport Decarbonisation Pathways

Transport strategy identifies climate change



Long-term strategy submitted to UNFCCC



NDC submitted:



NDC highlights transport for GHG mitigation



Transport mitigation targets in NDC



Other non-emission related transport targets in NDC



VNR highlights transport



No submission

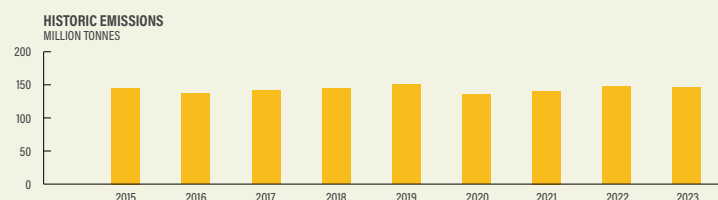
### Transport actions in VNRs

### Transport actions in NDC

Mitigation

Adaptation

### Transport GHG emissions from 2015 to 2023



## Policy Areas: Indicators and Targets

### Integrated Transport Planning

National urban mobility framework (2024)	—
Sustainable urban mobility plans (2024)	—
Number of sustainable urban mobility plans (2022)	—
Low emission zones (2022)	—

### Adaptation and Resilience

ND-GAIN Index (2022)	50.56
Vulnerability score for infrastructure (2022)	0.12

### Walking

Walkability Score (2024)	0.57
National walking strategies (2024)	—

### Cycling

Cycling infrastructure in capital (2022)	24km, 550 km of separated bikelanes planned to be constructed by 2024
Percent near protected bikeways (2024)	1%
Bike sharing systems (2024)	2
National cycling strategies (2024)	—

### Public Transport

Bus rapid transit (2024)	214 km of total length in 3 cities
Bus rapid transit daily passenger volume (2024)	848 696 passengers per day
Urban rail (LRT, metro, tram) (2024)	335 km in 6 cities
Proportion of population that has convenient access to public transport (2020) <span>SDG 11.2</span>	3770%

### Intercity Rail

Rail network (2021)	9 455 km
Rail travel activity (2019)	14 890 million passenger-km
Rail freight activity (2019)	33 646 million ton-km
High-speed rail	—
High-speed rail travel activity	—
National plans for passenger and freight rail expansion (2024)	✓

#### Target

- ▶ 34 rail projects with 3,200 km in construction and 6,000 km in planning increase freight capacity to 60 million tons annually

### Road Transport

Total road vehicles in use per 1,000 people (2020)	182.5
Road vehicle fleet growth (from 2015 to 2020)	12.97%
Rural Access Index (2019) <span>SDG 9.1</span>	—
Diesel prices (2022)	0.07 USD per litre
Gasoline prices (2022)	0.34 USD per litre

### Aviation

Air passengers carried (2021)	13.7 million people
Air freight activity (2021)	273.6 million ton-km
Carbon-accredited airports (2023)	—
of which carbon neutral:	—

### Shipping

Logistics Performance Index (2023)	—
Liner shipping connectivity index (Q4 2024)	31.1
Container port traffic (2020)	1853 000.0 TEU

### Transport Energy Sources

Biofuel blend overall mandate (2023)	—
Biofuel blend biodiesel mandate (2023)	—
Biofuel blend ethanol mandate (2023)	—
Carbon intensity of electricity (2023)	641.73 gCO <sub>2</sub> /kWh
Renewable energy (biofuels and electricity) share in transport (2022) <span>SDG 7.2.1</span>	0.1% of total transport energy consumption
Biofuels (2022)	—
Electricity (2022)	0.1% of total transport energy consumption
Targeted renewable power share	—

### Vehicle Technologies

Emission standards for LDVs (2024)	Below Euro 3
CO <sub>2</sub> emissions performance for passenger cars (2024)	—
Targeted CO <sub>2</sub> emissions performance (2024)	No target set
Regulatory environment ranking on used vehicles (2024)	Very Good
Electric vehicles stock for passenger cars (2024)	—
Share of electric vehicles in car sales (2024)	—
ICE phase-out targets	✗
Electric vehicles stock for vans (2024)	—
Electric vehicles stock for trucks (2024)	—

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#### List of acronyms

GDP	Gross-domestic product
HDV	Heavy-duty vehicle
ICE	Internal combustion engine
kWh	Kilowatt-hour
LDV	Light-duty vehicle
LRT	Light-rail transit
NDC	Nationally determined contribution
PST	Primary, secondary or tertiary roads

TEU	Twenty-foot Equivalent Unit
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VNR	Voluntary national review of the Sustainable Development Goals
WLTP	Worldwide harmonised light vehicles test procedure

