

Germany

Germany's transport sector faces challenges in decarbonisation and sustainability despite progress in rail and electric mobility. Passenger transport activity declined by 9% from 2015 to 2022, with cars remaining dominant (85% share). The rate of private cars was at 625 vehicles per 1,000 people in 2020. Freight activity grew by 7% in the same period, with road transport accounting for 71% of volumes. Transport GHG emissions dropped by 11% from 2015 to 2023, but the sector remained the second-largest emitter as of 2023. Renewable energy use in transport reached 8.1%, and electric vehicles accounted for 24% of car sales in 2023. The carbon intensity of Germany's electricity

remained high, at 371.3 gCO₂/kWh in 2023. Beyond climate impacts, transport accounted for 12.2% of national air pollutant emissions in 2019. Transport-induced air pollution, in turn, caused 3.94 premature deaths per 100,000 people in Germany in 2019. Road traffic injuries, on the other hand, claimed 3.3 lives per 100,000 people and accounted for 1.40% of Germany's GDP in 2021. In 2020, a significant share (88.83%) of France's population had convenient access to public transport, whereas no data is available on the rural population's access to all-weather roads. Policies support rail expansion, e-mobility, carbon pricing and the 2035 EU target of internal combustion engine sales phase-out.

Income group: High-income

Human Development Index (2023): 0.96

Population size (2023): 82.57 million **+3.45%** (2015 - 2023)

Urban population share (2023): 76.07% **+1.78%** (2015 - 2023)

GDP per capita (2023): 42 920.15 USD **+4.30%** (2015 - 2023)

Share of transport and storage jobs in workforce (2023) **8.9%**

Share of women employed in transport and storage (2023) **27.5%**



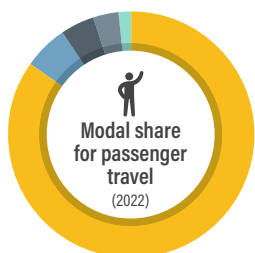
Transport Demand Trends

Passenger transport activity

1 001 920

million passenger-km in 2022

-9.0%
(2015 to 2022)



84.7% Cars
4.6% Buses and coaches
5.8% Rail
3.4% High-speed rail
1.4% Tram and metro

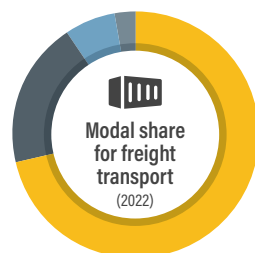
SDG 9.1

Freight transport activity

666 918

million ton-km in 2023

+7.0%
(2015 to 2020)



71.4% Road
19.3% Rail
6.6% Inland waterways
2.7% Oil pipeline

SDG 9.1

Transport energy consumption (2022)

2 126 670 TJ

-8.8%
(2015 to 2022)

Oil products

90.5% of total transport energy consumption

Per capita fossil fuel subsidies (2022)

645.6 USD per capita

SDG 12

Fuel quality standards (2022)

<15 ppm

Average light duty vehicle fuel consumption (2022)



Road traffic fatalities (2021), WHO estimates

SDG 3.6

3.3 deaths per 100,000 people

5.8 Regional
15.0 Global

Road traffic fatality cost as percentage of GDP (2021)

1.4%

Premature deaths linked to transport air pollution (2019)

SDG 11.6

3.9 deaths per 100,000 people

4.1 Regional
2.3 Global

Contribution of transport to air pollution (2019)

12.2%

Transport Emission Trends

Transport GHG emissions (2023)

141.3

million tonnes of CO₂ equivalent

-11.4%
(2015 to 2023)

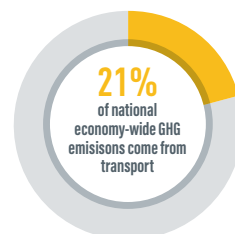
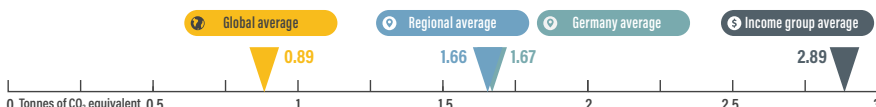
-5.4%
(2015 to 2023)

Per capita transport GHG emissions (2023)

1.67

tonnes of CO₂ equivalent per capita

PER CAPITA EMISSION COMPARISON



Transport is the **second-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:

1st and Updated NDC

NDC highlights transport for GHG mitigation ☒

Transport mitigation targets in NDC

☒ reduce emissions from existing EU ETS sectors and from maritime of 62% by 2030, compared to 2005 levels

Other non-emission related transport targets in NDC ☒

VNR highlights transport

☒ 2021 VNR with transport linkages to SDG 7, SDG 8, SDG 9, SDG 11, SDG 12 and SDG 13

Transport actions in VNRs

- ▶ E-mobility
- ▶ Alternative fuels
- ▶ Digitalisation
- ▶ Carbon pricing for transport

Transport actions in NDC

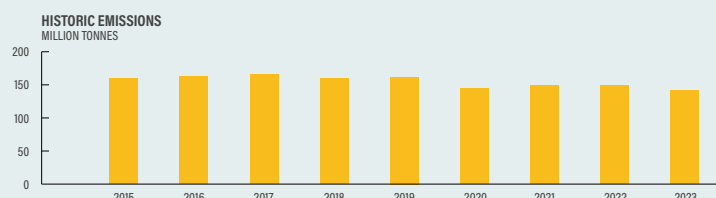
Mitigation

- ▶ Alternative fuels measures
- ▶ Vehicle efficiency standards
- ▶ Emissions trading and carbon pricing
- ▶ Aviation and shipping improvements

Adaptation

- ▶ No actions

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 (2024)	78 cities
Low emission zones (2024)	61 cities

Adaptation and Resilience

ND-GAIN Index (2022)	69.48
Vulnerability score for infrastructure (2022)	0.34

Walking

Walkability Score (2024)	0.83
National walking strategies (2024)	✓

Target

- Increase foot traffic and implement shorter distances

Cycling

Cycling infrastructure in capital (2022)	1000 km
Percent near protected bikeways (2024)	62%
Bike sharing systems (2024)	96
National cycling strategies (2024)	✓

Target

- 60% of citizens to cycle more in future
- Decrease the number of cyclists killed in traffic by 40% (compared to 2019 levels)

Public Transport

Bus rapid transit (2024)	31 km of total length in 2 cities
Bus rapid transit daily passenger volume (2024)	42 000 passengers per day
Urban rail (LRT, metro, tram) (2024)	Over 2 200 km in 62 cities
Proportion of population that has convenient access to public transport (2020)	88.83% SDG 11.2

Intercity Rail

Rail network (2021)	33 401 km
Rail travel activity (2020)	58 822 million passenger-km
Rail freight activity (2021)	123 067 million ton-km
High-speed rail (2023)	2 785 km
High-speed rail travel activity (2023)	37 957 million passenger-km
National plans for passenger and freight rail expansion (2024)	✓

Target

- 30% of rail freight traffic to be on rail by 2035
- 15% of passenger traffic to be on rail by 2035

Road Transport

Total road vehicles in use per 1,000 people (2020)	625.0
Road vehicle fleet growth (from 2015 to 2020)	795%
Rural Access Index (2019)	— SDG 9.1
Diesel prices (2022)	1.70 USD per litre
Gasoline prices (2022)	1.87 USD per litre

Aviation

Air passengers carried (2021)	33.1 million people
Air freight activity (2021)	11 533.0 million ton-km
Carbon-accredited airports (2023)	10 airports
of which carbon neutral:	none

Shipping

Logistics Performance Index (2023)	4.1
Liner shipping connectivity index (Q4 2024)	85.1
Container port traffic (2020)	18 028 702.0 TEU

Transport Energy Sources

Biofuel blend overall mandate (2023)	6.3%
Biofuel blend biodiesel mandate (2023)	4.4%
Biofuel blend ethanol mandate (2023)	2.8%
Carbon intensity of electricity (2023)	371.31 gCO ₂ /kWh
Renewable energy (biofuels and electricity) share in transport (2022)	8.1% of total transport energy consumption SDG 7.2.1
Biofuels (2022)	5.8% of total transport energy consumption
Electricity (2022)	2.2% of total transport energy consumption
Targeted renewable power share	80%

Vehicle Technologies

Emission standards for LDVs (2024)	Euro 4 and above
CO ₂ emissions performance for passenger cars (2024)	89 g CO ₂ /km in 2023
Targeted CO ₂ emissions performance (2024)	0 g CO ₂ /km by 2035
Regulatory environment ranking on used vehicles (2024)	—
Electric vehicles stock for passenger cars (2024)	1 900 000 vehicles
Share of electric vehicles in car sales (2024)	19%
ICE phase-out targets	✓ (2035)
Electric vehicles stock for vans (2024)	96 000 vehicles
Electric vehicles stock for trucks (2024)	9 500 vehicles

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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

