

Japan



Japan as a high-income country with a high HDI and most people living in urban population. The country intends to reduce transport CO₂ emissions by 27% below 2013 levels by 2030.

Transport is responsible for 17% of national CO₂ emissions thanks to the well-developed public transport system, extensive rail (incl. high-speed rail) and high vehicle emission standards. Electric vehicle uptake is still low due to a lack of phase-out targets.

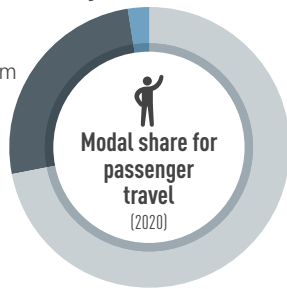
Income group: High-income	
Human Development Index (2021): 1.925	
Population size (2022): 124 278 310	-2.4% (2015 - 2022)
Urban population share (2022): 93%	+x% (2015 - 2022)
GDP per capita (2021): 35 485.90	+1.68% (2015 - 2021)

Transport Demand Trends

Passenger travel activity

1 007 058 million passenger-km in 2020

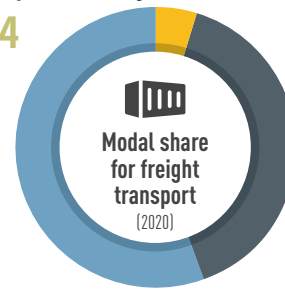
-8.8% (2015 to 2020)



Freight transport activity

385 584 million ton-km in 2020

-5% (2015 to 2020)



Energy consumption (2020)

62.4 million tonnes of oil equivalent

+14.3% (2015 to 2020)

Average light duty fuel economy consumption Lge/100 km (WLTP)

5.5 (2019)

97% Oil Products

0.64% Natural Gas

2.4% Electricity

Transport Emission Trends

Transport CO₂ emissions (2021)

179.9 million tonnes

+14.9% (2015 to 2021)

Per capita transport CO₂ emissions (2021)

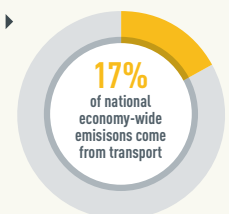
1.44 tonnes

Per capita transport CO₂ emissions

Global average Income group average Regional average Japan average



Transport is the third-largest CO₂ producing sector in the country



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 transport CO ₂ emissions 27% below 2013 levels by 2030, to reach 163 million tonnes of CO ₂ or less (continuation from first NDC)
Other non-emission related transport targets in NDC	✗
VNR highlights transport	✓ 2021 VNR with transport linkages to SDG 2, SDG 3, SDG 5, SDG 8, SDG 9, SDG 11, SDG 13, SDG 16 and SDG 17

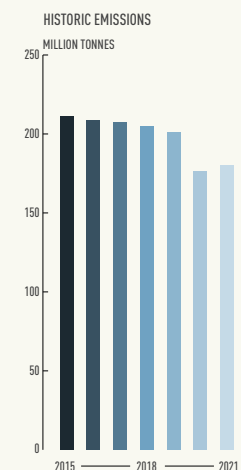
Transport actions in VNRs

- Promotion of public transport
- Construction of a safe, smart, and sustainable road transportation system
- On-demand transportation and other digitalisation options

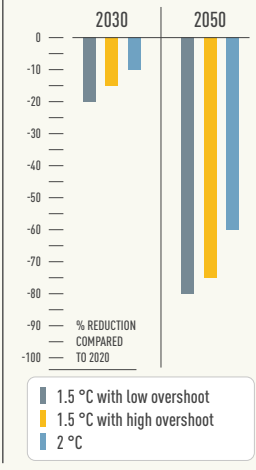
Transport actions in NDC

- Mitigation
- Not available
- Adaptation
- Not available

Required regional transport decarbonisation pathways



IPCC transport decarbonisation pathways for this region





Policy Areas: Indicators and Targets

Integrated Transport Planning

National urban mobility framework (2022)	✓
Sustainable urban mobility plans (2022)	No but Low Carbon City Act
Number of sustainable urban mobility plans (2022)	✗
Low emission zones (2022)	1 city

Walking

National walking strategies (2022)	Not available
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Cycling

National walking strategies (2022)	Yes
Cycling infrastructure in capital (2022)	10 km of separated bikelanes

Shared Mobility, Public Transport and Informal Transport

Bus rapid transit (2022)	29 km in 2 cities
Bus rapid transit daily passenger volume (2022)	9 100
Urban rail (LRT, metro, tram) (2022)	Over 1,000 km in 30 cities
Rapid Transit to Resident Ratio (2021)	19.1

Intercity Rail

Rail network (2011)	20 087 km
Rail travel activity (2020)	263 211 million-passenger-km
Rail freight activity (2020)	18 340 million ton-km
High-speed rail (2021)	2 849 km
High-speed rail travel activity (2021)	44 281 million passenger-km
National plans for passenger and freight rail expansion (2022)	✓

Target
 ▶ To promote a modal shift, raise rail freight transport volume from 19.34 billion ton-kilometres (in 2013) to 25.64 billion ton-kilometres (by 2030), resulting in 1.466 million tonnes less CO₂ emissions

Road Transport

Total road vehicles in use per 1,000 people (2020)	612.4
Average annual growth rate (from 2015 to 2020)	-0.20%

Aviation

Air passengers carried (2020)	51 million people
Air freight activity (2020):	7841.5 million ton-km
Carbon-accredited airports (2022)	4 airports
of which carbon neutral:	3 airports

Shipping

Liner shipping connectivity index (2021):	69.7
Container port traffic (2020):	21 385 632 TEU

Transport Energy Sources

Biofuel blend mandate (2022)	Not available
Renewable energy (biofuels and electricity) share in transport (2020)	3%
Targeted % of renewable energy	Not available

Vehicle Technologies

Emission standards for LDVs (2020)	Euro 6
CO ₂ emissions performance for passenger cars (2018)	114.6 gCO ₂ /km
Targeted CO ₂ emissions performance	73.5 gCO ₂ /km by 2030
Regulatory environment ranking on used vehicles by UNEP (2021)	Not available
Electric vehicles (2022)	210 000
Share of electric vehicles in car sales (2022)	3%
ICE phase-out targets:	Not available

COVID-19

Strongest impact of COVID-19 on...	(compared to pre-COVID-19 baseline)
... trips to public transport	-56.7% Week of 10 May 2020
... navigation request for walking	-37.5% Week of 26 April 2020
... navigation request for driving	-29.6% Week of 26 April 2020
... driven kilometres	Not available
Traditional transport infrastructure investment:	Not available
Clean transport infrastructure investment:	USD 0.14 billion
Examples	
▶ Local public transport support	

This fact sheet is part of the SLOCAT Transport, Climate and Sustainability Global Status Report 3rd Edition. Information shown in this country fact sheet is based on desk research and might not be complete or not show the most recent status. The data has been collected to the best knowledge and availability. If no information was able to be retrieved, then 'Not available' is being indicated. The content does not represent the opinion of the SLOCAT Partnership on Sustainable, Low Carbon Transport. For more information, please visit tcc-gsr.com

- List of acronyms**
- GDP Gross-domestic product
 - HDV Heavy-duty vehicle
 - ICE Internal combustion engine
 - LDV Light-duty vehicle
 - LRT Light-rail transit
 - NDC Nationally determined contribution
 - 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