

# Japan



Japan as a high-income and high-urbanised country is successful on reducing transport CO<sub>2</sub> emissions by providing a very efficient transport system, strong rail transport and high density cities. Japan has regulations (e.g. the Low Carbon City Act) prioritising sustainable mobility and long-term vision aim to transition the vehicle fleet to zero-emission vehicle by 2050.

	Population size (2020)	Urban population share (2020)	GDP per capita (2019)
<b>Total</b>	126.5 million	91.8%	48 957
<b>Growth</b> <small>(2010 to 2020)</small>	-1.6%	-0.6%	9%

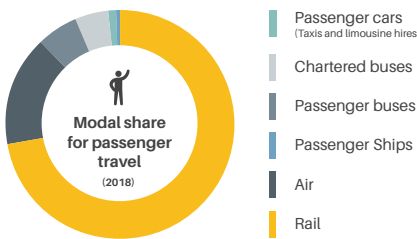
Income group: High-income  
Human Development Index: 0.92

## Mobility Demand Trends

### Passenger travel activity

611 250

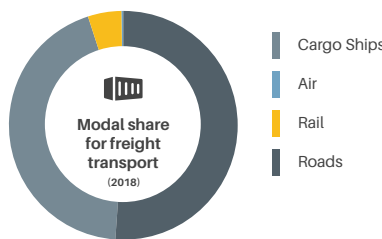
million passenger-km in 2018  
+11% (2010 to 2018)



### Freight transport activity

409 902

million ton-km in 2018  
-7.7% (2010 to 2018)



### Fuel consumption (2018)

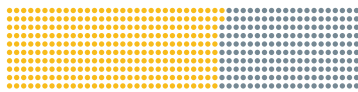
70 549

thousand tonnes of oil equivalent  
-10% (2010 to 2018)

Average light duty fuel economy consumption (2017)  
6.2 Lge/100 km (WLTP)



**Car ownership growth (2005 to 2015)**  
604.8 vehicles per 1,000 people



+3.2%

### Vehicle sales (2019)

**Passenger** (Growth 2010 to 2019)  
430 1091 **-2.1%**  
**Commercial**  
894 125 **1.5%**

**Diesel**  
US cents per litre (2018)

110

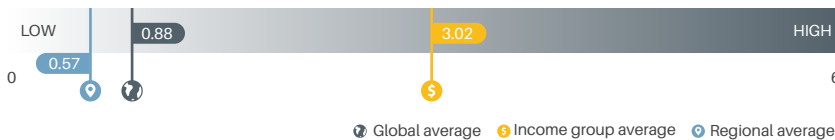
**Super gasoline**  
US cents per litre (2018)

129

## Transport Emission Trends

**Transport CO<sub>2</sub> emissions (2019)**  
187.2 million tonnes

**Per capita transport CO<sub>2</sub> emissions (2019)**  
1.5 tonnes

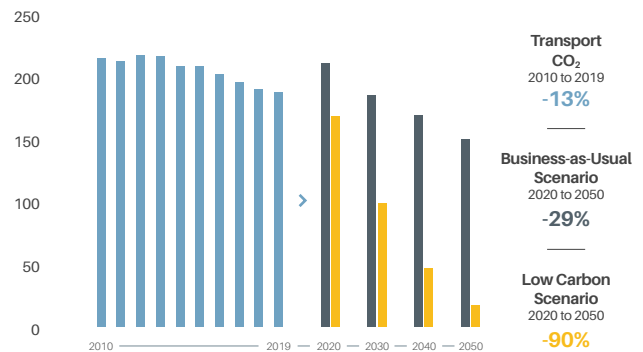


### Third-largest CO<sub>2</sub> producing sector in the country



## Low Carbon Transport 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	27% below 2013 (163 million tCO <sub>2</sub> less by 2030)
Other non-emission related transport targets in NDC	Not available
Voluntary National Review highlights transport	✗



### Transport measures in NDC

- Mitigation**
- General fuel improvement policies
  - General vehicle improvements
  - General innovations and digitalisation
  - National mobility plans

- Adaptation**
- Not available

Sustainable Mobility Planning & Transport Demand Management	
National Urban Mobility Framework (2020)	✓
<b>Targets</b>	<ul style="list-style-type: none"> <li>Support activities of local governments through grants to develop comprehensive transport strategy</li> </ul>
Sustainable Urban Mobility Plans (2020)	No but Low Carbon City Act
<b>Targets</b>	<ul style="list-style-type: none"> <li>Realize compact urban structure</li> <li>Promote measures to address traffic flow</li> <li>Promote the use of public transport</li> </ul>
Low Emission Zones (2020)	1 city

Walking and Cycling	
National walking strategies (2020)	Not available
National cycling strategies (2020)	✓
Cycling infrastructure in capital (2020)	10 km of separated bikelanes

Urban Passenger and Freight Transport	
Bus rapid transit (2020)	29 km of BRT in 2 cities
Urban rail (LRT, metro, tram) (2020)	Over 1000 km in 26 cities
Bus rapid transit daily passenger volume (2020)	9 100
Rapid Transit to Resident Ratio (2019)	18.7

Passenger and Freight Railways	
Rail network (2018)	19 123 km
High-speed rail (2018)	2848 km
High-speed rail travel activity (2018)	103.7 billion passenger-km
National plans for passenger and freight rail expansion	✓
<b>Targets</b>	<ul style="list-style-type: none"> <li>25% energy consumption reduction of 2014 levels by 2031</li> </ul>
Rail travel activity (2018)	437363 million passenger-km
Rail freight activity (2016)	20 117 million ton-km

Shared Mobility Services	
Bike-sharing systems (2020)	28 systems
Electric scooter services (2020)	1 operator in 2 cities
Carsharing services (2021)	12 services
National legal frameworks for shared mobility (2020)	Yes
Autonomous vehicles in operation or in preparation (2020)	3
Autonomous vehicles strategies (2020)	✓

Fuel Economy	
Emission standards for LDVs (2018)	Euro 5
CO <sub>2</sub> emissions performance for LDVs (2017)	144 gCO <sub>2</sub> /km
Emission standards for HDVs (2018)	Euro VI
Targeted CO <sub>2</sub> emissions performance	74 gCO <sub>2</sub> /km by 2030

Electric Mobility	
Electric vehicles (2019)	294 000
Market share of electric vehicles (2019)	0.9%
No. of cities with electric buses (2019)	5
ICE phase-out targets	2050

Renewable Energy	
Biofuel blend mandate (2019)	Not available
Renewable energy (biofuels and electricity) share in transport (2018)	2.7%
Targeted % of renewable energy	Not available

Aviation	
Air passengers carried (2019)	130.2 million people
Air freight activity (2019)	8919.5 million ton-km
Carbon-accredited airports (2020)	4 airports
<i>of which carbon neutral</i>	✗

Shipping	
Liner shipping connectivity index (2019)	71.2
Container port traffic (2019)	21 708 860 TEU

COVID-19	
Traditional transport infrastructure investment	Not available
Clean transport infrastructure investment	USD 0.14 billion
<b>Examples</b>	<ul style="list-style-type: none"> <li>Local public transport support</li> </ul>

This fact sheet is part of the SLOCAT Transport and Climate Change Global Status Report - 2nd edition.

The information shown is based on desk research. Data has been collected to the best knowledge and availability. However, it might not be complete or reflect the most recent status. 'Not available' is indicated, when no information has been retrieved. The content does not represent the opinion of the SLOCAT Partnership. Find data sources and indicator glossary here.

#### 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
UNFCCC	United Nations Framework Convention on Climate Change
VNR	Voluntary national review of the Sustainable Development Goals
WLTP	Worldwide harmonised light vehicles test procedure