

SDG Goal 11	Sustainable cities and communities
SDG Target 11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
SDG Indicator 11.2.1	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
Time series	Population with access to public transport (within 500 meters)

1. General information on the time series

- Date of national metadata: 3 January 2022
- National data: <http://sdg-indicators.de/11-2-1/>
- Definition: The time series measures the share of the population that has convenient access to public transport. The access to public transport is considered convenient when a public transport stop is accessible within 0.5 km linear distance from home.
- Disaggregation: länder

2. Comparability with the UN metadata

- Date of UN metadata: September 2021
- UN metadata: <https://unstats.un.org/sdgs/metadata/files/Metadata-11-02-01.pdf>
- The time series is not compliant with the UN metadata, but provides additional information. It provides information on the proportion of population that has convenient access to public transport for the entire country and not only for urban areas.

3. Data description

- The data is derived from a special evaluation of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). In a first step, all public transport stops with at least 28 departures on workdays are identified. For these stops, it is assumed that there is at least one departure in each direction hourly between 6am and 8pm. Based on these public transport stops, a layer with a 0.5 km buffer around each stop is produced.

Population data stems from an extrapolation of the population census from 2011 and is available with a resolution of 100*100 meter grid cells. In case the centroid of a population grid cell falls within a buffer zone of a public transport stop, the entire population of the grid cell is added to the share of the population that has a public transport stop within 0.5 km distance.

4. Access to data source

- Not available.

5. Metadata on source data

- Not available.

6. Timeliness and frequency

- Timeliness: t + 6 months
- Frequency: Every 2 years

7. Calculation method

- Unit of measurement: Percentage
- Calculation:

$$\text{Population that has access to public transport} = \frac{\text{Persons living within 0.5 km distance to a transport stop [number]}}{\text{Population [number]}} \cdot 100 [\%]$$

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SDG Indicator 11.2.1	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
Time series	Population with access to public transport (within 10 minutes walking distance)

1. General information on the time series

- Date of national metadata: 7 December 2022
- National data: <http://sdg-indicators.de/11-2-1/>
- Definition: The time series measures the share of the population that has convenient access to public transport. The access to public transport is considered convenient when a public transport stop is accessible within 10 minute walking distance from home.
- Disaggregation: age group; disability status; sex

2. Comparability with the UN metadata

- Date of UN metadata: September 2021
- UN metadata: <https://unstats.un.org/sdgs/metadata/files/Metadata-11-02-01.pdf>
- The time series is not compliant with the UN metadata, but provides additional information.

3. Data description

- The data is derived from the German Mobility Panel (Deutsches Mobilitätspanel). It is based on a voluntary annual household survey, which is carried out since 1993. In the first decades the annual sample size was about 1,000 households. Since 2013, it consists of observations from more than 1,500 households with a total of more than 2,700 persons. The time series calculates the share of individuals that lives within 10 minutes walking distance to the next public transport stop. Means of public transport include busses, tramways and all kinds of trains.

To calculate the share of the population that lives within 10 minutes walking distance to a stop, the personal answers to the survey are used and weighted such that the probability of taking part in the survey can be projected on the entire population of the country, based on socio-economic characteristics. Socio-economic characteristics included to calculate the weights are the accessibility probability for the survey (whether an individual is accessible via a landline and/or a mobile phone), size of the locality, sex and age of the person.

4. Access to data source

- Clearing House of Transport Data at the Institute of Transport Research:
<https://www.dlr.de/en/vf/research-and-transfer/research-infrastructure/clearingstelle-verkehr>
- German mobility panel (MOP) (only available in German):
<https://www.bmvi.de/SharedDocs/DE/Artikel/G/deutsches-mobilitaetspanel.html>

5. Metadata on source data

- Mobility Panel Germany (MOP) – final report (only available in German):
<http://daten.clearingstelle-verkehr.de/192/>

6. Timeliness and frequency

- Timeliness: t + 14 months
- Frequency: Annual

7. Calculation method

- Unit of measurement: Percentage
- Calculation:

$$\text{Population that has access to public transport within walking distance} = \frac{\text{Persons living within 10 minute walking distance to a public transport stop [number]}}{\text{Population [number]}} \cdot 100 [\%]$$

Note : The equation states the simplified calculation approach. For the calculation of the indicator, answers to the survey are weighted such that the probability to take part in the survey can be projected on the entire population.