Data sources guidance for outcome indicators on article 9:

Accessibility

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9.22: Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities (Sustainable Development Goal indicator 11.2.1)

Level 2: Indicator can be produced with straightforward additions or modifications to existing data collection

Link to the metadata related to this Sustainable Development Goal indicator

According to the metadata:

> The actual and recommended data sources for this indicator are as follows:
>
> 1. For data on the location of public transport stops in a city: city administration or service providers and Geographic Information System data;
> 2. For data on dwelling units within 500 m of public transport stops: censuses and Geographic Information System data;
> 3. For the number of residents per dwelling unit: censuses and household surveys;
> 4. Household surveys that collect information on the proportion of households that declare that they have access to public means of transport within 0.5 km. These surveys can also collect information about the quality of the service.
>
> Due to the spatial nature of this indicator, the use of the urban agglomeration is a precondition for its measurement and comparability.
>
> At the global level, all of the data are compiled for international consumption and comparison by the United Nations Human Settlements Programme (UN-Habitat) and other partners. UN-Habitat and partners explore several capacity-building options to ensure that uniform standards for the generation, reporting and analysis of the data for this indicator are applied by all countries and regions.
>
> This indicator is categorized under tier II, which means that the indicator is conceptually clear and that an established methodology exists but data are not easily available.
>
> No internationally agreed methodology exists for measuring the convenience and service quality of public transport. In addition, global or local data on urban transport systems do not exist. Moreover, data are not harmonized or comparable at the global level. Obtaining the data requires collecting them at the municipal or city level; however, there are serious deficiencies in some areas, such as data on mass transit and on transport infrastructure. To assist in this area, an open-source software platform for measuring accessibility – the Open Trip Planner Analyst accessibility tool – is available to government officials and all urban transport practitioners. Developed by the World Bank in conjunction with Conveyal, this tool leverages the power of the Open Trip Planner Analyst engine and open standardized data to model block-level accessibility. The added value of the tool (free of charge and

user-friendly) is its ability to easily calculate the accessibility of various opportunities and transportation scenarios.

Canada is an example of a country reporting close to this indicator; regarding transportation, it conducts the Core Public Infrastructure Survey every two years. The respondents are employees of municipal governments, regional governments and selected provincial ministries that own one or more core public infrastructure assets. While the indicator does not directly relate the percentage of people with access to accessible transportation, the percentage of the infrastructure that is accessible is reported and this should be highly correlated. A sample of the survey results can be found in table 1.

Table 1: Percentage of publicly owned public transit passenger stations and terminals that are accessible, 2016

Geography	Number of passenger stations and terminals	Percentage of passenger stations and terminals that are accessible
Canada	740	79.3
Alberta	120	99.9
British Columbia	175	100
Manitoba	7	100
New Brunswick	..	..
Newfoundland and Labrador	..	..
Northwest Territories	..	..
Nova Scotia	14	100
Nunavut	..	..
Ontario	270	84.3
Prince Edward Island	..	..
Quebec	150	26.4
Saskatchewan	3	100
Yukon	..	..

Source: Infrastructure Canada, "Percentage of publicly owned public transit passenger stations and terminals that are accessible", 2016.

In 2013, the European Commission coordinated a survey on Europeans' satisfaction with urban transport. The survey respondents were asked: "Do you or someone in your household have any accessibility issues when using transports?" The respondents could answer that they had faced accessibility issues for one of three reasons: disability, temporary impairment or ageing. However, because problems with ageing could well be related to disability, using only the first category would mean the percentage of people with accessibility issues related to disability would be underreported. Using all three categories together may result in overreporting beyond persons with disabilities. Across the European Union, 5 per cent of

people cited disability, 1 per cent cited temporary impairment and 3 per cent cited ageing as the cause of their accessibility problems.

Maria Kett, Ellie Cole and Jeff Turner, in their 2020 study entitled "Disability, mobility and transport in low- and middle-income countries: a thematic review", highlighted the challenge of identifying accessibility (beyond physical accessibility) and referred to the limits of data in low- and middle-income countries.

A team of researchers from Australia developed and tested the "journey access tool", developed for use by persons with disabilities and organizations of persons with disabilities, which combines a road safety audit approach with a disability-inclusive access/design audit approach. The tool has the potential to provide data for Sustainable Development Goal indicator 11.2.1 and indicator 9.22 on the Convention on the Rights of Persons with Disabilities. While it was tested in Cambodia in 2018, no published reports of its use were located.

9.23: Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities (Sustainable Development Goal indicator 11.7.1)

Level 3: Indicator for which acquiring data is more complex or requires the development of data collection mechanisms that are not currently in place

Link to the metadata related to this Sustainable Development Goal indicator

According to the metadata:

> The main sources of data are satellite imagery (open sources), documentation outlining publicly owned land and community-based maps.
>
> To estimate the total surface of a built-up area, data can be extracted from existing layers of satellite imagery ranging from open sources, such as Google Earth, the United States Geological Survey and the National Aeronautics and Space Administration's Landsat and Sentinel, to higher-resolution land cover data sets and commercial imagery. Images are to be analysed for the latest year available.
>
> For an inventory of open public space, information can be obtained from legal documents outlining publicly owned land and well-defined land use plans. In some cases, where this information is lacking, incomplete or outdated, open sources, key informants in the city and community-based maps, which are increasingly recognized as a valid source of information, can be a viable alternative.

> Information on the share of land occupied by public open spaces cannot be obtained directly from the use of high-resolution satellite imagery because it is not possible to determine the ownership or use of open spaces through remote sensing. However, fieldwork to validate and verify the open spaces derived from satellite imagery helps to map out land that is for public and non-public use.

Unfortunately, none of these sources reports on the accessibility of open spaces. If there were national accessibility standards, audits could be carried out to determine whether open spaces are accessible. These audits could be carried out by auditing teams or, if smartphone penetration were adequate, crowdsourced data could be used, so that persons with disabilities could report on their experience in open spaces, using an auditing application. An example of such an application can be found at AXS Map.

9.24: Proportion of persons with disabilities with access to public buildings in urban and rural areas, including government buildings in national and regional capitals

Level 2: Indicator can be produced with straightforward additions or modifications to existing data collection efforts

No examples were found, but this information could be obtained by adding the appropriate questions to a national disability survey or from a crowdsourced auditing application, such as the one found at AXS Map.

9.25: Proportion of individuals using the Internet (Sustainable Development Goal indicator 17.8.1), disaggregated by age, sex and disability

Level 1: Indicator is being produced and reported on in at least some countries

Link to the metadata related to this Sustainable Development Goal indicator

According to the metadata:

> The indicator for the proportion of individuals using the Internet is based on an internationally agreed definition and methodology, which were developed under the coordination of the International Telecommunication Union (ITU), through its expert groups and following an extensive consultation process with countries. It is also a core indicator of the Partnership on Measuring ICT for Development, which has been endorsed by the Statistical Commission (most recently in 2014). Data on individuals using the Internet are collected through an annual questionnaire that ITU sends to national

statistical offices. Through this questionnaire, ITU collects absolute values. The percentages are calculated a posteriori. The survey methodology is verified to ensure that it meets adequate statistical standards. The data are verified to ensure consistency with those of previous years and the situation in the country for other related indicators (information and communications technology and economic indicators).

For most developed countries, and an increasing number of developing countries, data on the percentage of individuals using the Internet are based on methodologically sound household surveys conducted by national statistical offices. If the national statistical office has not collected Internet user statistics, ITU estimates the percentage of individuals using the Internet.

Data are not usually adjusted, but discrepancies in the definition of individuals using the Internet, the age scope of individuals, the reference period and the break in comparability between years are noted in a data note. For this reason, data are not always strictly comparable.

Some countries conduct a household survey in which the question on Internet use is included every year. For others, the frequency is every two or three years. Overall, the indicator is available for 100 countries from at least one survey in the years 2011–2014.

ITU reports on the indicator each year for 200 economies by using survey data and estimates for almost all countries worldwide.

The Multiple Indicator Cluster Survey is a good source of data for this indicator. In the survey, respondents are asked a series of questions about the use of computers, mobile phones and the Internet, and it includes the Washington Group short set of questions on functioning. An example from the survey in Pakistan in 2017/18 is presented in table 2.

Table 2: Internet use among men and women aged 15–49 years, by sex and disability status, Pakistan

	Percentage who used the Internet		
	Ever (percentage)	**During the last 3 months (percentage)**	**At least once a week during the last 3 months (percentage)**
Women			
Has a functional difficulty	5.2	4.5	3.6
Has no functional difficulty	14.0	12.5	10.5
Men			
Has a functional difficulty	14.0	12.9	9.9
Has no functional difficulty	32.8	31.0	26.5

Source: Bureau of Statistics, Planning and Development Board, Government of the Punjab, *Multiple Indicator Cluster Survey 2017-18: Punjab – Survey Findings Report* (Lahore, Pakistan, 2018).

9.26: Proportion of persons with disabilities reporting satisfaction in their access to emergency services through alternative means of communication, disaggregated by sex, age and disability

Level 2: Indicator can be produced with straightforward additions or modifications to existing data collection efforts

No examples were found, but this information could be obtained from adding the appropriate questions to a national disability survey.

9.27: Proportion of persons with disabilities granted use of alternative communications in official interactions, disaggregated by the type of public service used, sex, age and disability

Level 2: Indicator can be produced with straightforward additions or modifications to existing data collection efforts

No examples were found, but this information could be obtained from adding the appropriate questions to a national disability survey.