

**Data sources for outcome indicators
on Article 20:**

Personal Mobility



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20.19 Number of persons with disabilities accessing publicly funded mobility devices, disaggregated by sex, age, disability, and geographical location.

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

This information could be obtained from the administrative data of the agency providing the funding, or from a disability-specific survey.

Viet Nam has collected information on the percentage of people who use different mobility devices but did not specify who paid for them, as found in Table 1. This could be added if the survey is repeated.

Table 1: Percentage of people with a mobility disability, aged 18 and over, with supports

	Walking Stick	Walking frame	Crutches	Wheelchair	Prosthesis	Assistance	Others
Whole country	21,74	1,84	3,43	5,63	0,91	24,32	3,27
Area							
Urban	19,07	3,57	5,43	8,16	1,47	29,12	3,31
Rural	22,65	1,24	2,74	4,77	0,72	22,68	3,25
Regions							
ĐBSH/ RRD	23,22	1,49	3,91	4,90	0,87	22,66	2,51
TD-MNPB/ NMM	30,94	1,48	3,03	4,63	1,58	28,09	3,91
BTB-DHMT/ NCCC	19,78	1,48	3,43	3,98	0,50	21,73	2,56
TN/ CH	20,25	0,29	3,86	5,69	0,55	21,76	0,91
ĐNB/ SE	19,39	4,35	5,18	9,87	1,50	29,44	2,84
ĐBSCL/ MRD	20,27	1,69	2,00	6,76	0,95	25,54	5,38
Sex							
Male	25,18	1,79	6,32	7,76	1,75	28,25	4,37
Female	19,75	1,87	1,76	4,41	0,43	22,05	2,63
Age groups							
18-40	10,31	1,62	10,12	16,82	2,48	33,82	5,30
41-64	13,46	1,37	5,75	4,16	1,33	19,09	2,73
65+	25,95	2,04	1,97	5,33	0,62	25,65	3,32

Source: General Statistics Office, *Viet Nam National Survey on People with Disabilities* (Ha Noi, Viet Nam, 2016), p.57

The United States of America provides another example. The country conducted the National Health Interview Survey on Disability in 1995, a report of which is available at <https://www.disabled-world.com/pdf/mobility-report.pdf>. It included the use of mobility devices, but it did not specify who paid for them – an extract of the data can be found in table 2. The survey has not been repeated, but information on payment could be added if it is.

Table 2: Number of persons and proportion of the population using mobility devices, by age and device used

	All Persons		Under 18		18-64		65 and over	
	N (1000s)	%	N (1000s)	%	N (1000s)	%	N (1000s)	%
Any mobility device	6,821	2.62	145	0.21	2,310	1.45	4,366	13.97
Wheelchair or scooter	1,679	0.64	88	0.12	658	0.41	933	2.99
Wheelchair	1,599	0.61	88	0.12	614	0.39	897	2.87
Manual wheelchair	1,503	0.58	79	0.11	560	0.35	864	2.76
Electric wheelchair	155	0.06	18	0.02	90	0.06	47	0.15
Scooter	142	0.05	0	0	78	0.05	64	0.21
Other mobility device	6,126	2.35	73	0.1	1,987	1.25	4,065	13.01
Cane	4,755	1.82	19	0.03	1,535	0.96	3,200	10.24
Crutches	566	0.22	36	0.05	375	0.24	155	0.5
Walker	1,820	0.7	27	0.04	373	0.23	1,421	4.55

Source: H. Stephen Kaye, Taewoon Kang and Mitchell P. LaPlante, “Mobility Device Use in the United States”, Disability Statistics Report, 14 (Washington, D.C., U.S. Department of Education, National Institute on Disability and Rehabilitation Research, 2000)

20.20 Number of persons with disabilities benefiting from specific measures, such as tax and customs exemptions, and financial support or subsidies, to purchase mobility, vision, hearing and communication devices and assistive technologies, disaggregated by age, sex, disability, geographical location, and kind of measure.

Level 2: Indicator that can be produced with existing data but has not been reported on

Theoretically, this could be obtained from the administrative data of any programs that provide specific measures. However, as different measures may be provided through different systems, this would require coordination – and a unique personal identifier – in order not to double count people who are receiving multiple measures.

In some countries, such as in Western Europe, most of these products are non-taxable, which makes this data difficult to track.

With respect to benefitting from assistive technology, the WHO individual-level “[Rapid Assistive Technology Assessment tool](#)” asks respondents using assistive technology about who paid for the products they use. The response options include the government, but the survey does not specify government measures.

Further, a country-level questionnaire by WHO, with progress indicators related to improving access to assistive technology, includes a question about measures that fully or partly cover users’ costs for assistive technology. The response options include public schemes and additional details may be provided voluntarily.

Another country-level tool by WHO is the Assistive Technology Assessment-Capacity, that identifies the capacity of a country to provide assistive technology. It includes questions related to financing schemes, which persons are covered by each scheme and the proportion of the population that is covered by each scheme. This tool has been used in seven African countries and a summary of assessment results is published at https://at2030.org/static/at2030_core/outputs/Final_Draft_CCA_in_7_African_Countries_web_16eOgiE.pdf. This assessment identified key barriers related to data, including lack of a centralized or integrated information system that tracks data on assistive technology and none or limited routine data collection (from healthcare facilities, rehabilitation centres, schools, and other government agencies) to capture data on the provision of assistive technologies. When such data collection exists, it is usually fragmented, incomplete and rarely shared outside of the organization or reported centrally, to inform national data. One of the key recommendations emerging from the assessment is to develop a system that provides reliable data to estimate the need for, and access to, assistive technologies.

In 2001, the Rehabilitation Engineering and Assistive Technology Society of North America, under its Technical Assistance Project funded by the National Institute on Disability and Rehabilitation Research, surveyed 1,414 individuals with disabilities in the “National Survey of Use and Need of Assistive Technology and Information Technology by Individuals With Disabilities.” This [study](#) included information on the source of expenditures on assistive technology, an extract of which can be found in table 3.

Table 3: Source of expenditures on assistive technology

Payer	Percentage of total expenditures for Assistive technology
Self	37%
Medicare	18%
Private Insurance	16%
Free	7%
Medicaid	5%
Veteran's Administration	5%
Employer	3%
Vocational Rehabilitation	2%
Family or Household Member	2%
Other	5%

Source: Dawn Carlson PhD & Nat Ehrlich PhD (2006) Sources of Payment for Assistive Technology: Findings From a National Survey of Persons With Disabilities, *Assistive Technology*, 18:1, 77-86, DOI: [10.1080/10400435.2006.10131908](https://doi.org/10.1080/10400435.2006.10131908)

20.21 Number of persons with disabilities accessing publicly funded trainings on mobility skills and the use of mobility, vision, hearing and communication devices and assistive technologies, disaggregated by sex, age, disability, and geographical location.

Level 2: Indicator that can be produced with existing data but has not been reported on

This information could be obtained from the administrative data of the agencies providing or paying for the services.

For example, in the United States of America, the vocational rehabilitation program is one of the major publicly funded providers of assistive technology training. Each state agency reports the number of people who received “rehabilitation technology services” to the Federal Rehabilitation Services Administration. Unfortunately, the government of the United States of America has recently removed the ad hoc query of this reporting mechanism, so a current number is not available without a signed non-disclosure agreement.

The population-based household survey “rapid Assistive Technology Assessment” includes questions on current use, demand of various assistive products and access to related services, which can provide indicator information. A call for the globalized use of this survey can be found at [https://www.who.int/news-room/articles-detail/global-call-for-measuring-access-to-assistive-technology-using-the-who-rapid-assistive-technology-assessment-\(rata\)](https://www.who.int/news-room/articles-detail/global-call-for-measuring-access-to-assistive-technology-using-the-who-rapid-assistive-technology-assessment-(rata)). For each of the top three assistive devices a person uses, this survey asks:

Thinking about your [product], how satisfied are you with the assessment and training you received? Very dissatisfied – Dissatisfied – Neither satisfied nor dissatisfied – Quite Satisfied – Very Satisfied.

This survey has already been piloted in Pakistan, with over 63000 participants, which was reported on in the [consultations on the Global Report on Assistive Technology \(GReAT\)](#).

20.22 Number of persons with disabilities benefiting from specific measures, such as tax and customs exemptions, and financial support or subsidies to purchase and/or import adapted vehicles and adaptive equipment.

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

Theoretically, this could be obtained from the administrative data of any programs that provide specific measures. However, as different measures may be provided through different systems, this would require coordination – and a unique personal identifier – in order not to double count people who are receiving multiple measures.

In some countries, such as in Western Europe, most of these products are non-taxable, which makes this data difficult to track.

20.23 Number of vehicles adapted for persons with disabilities, registered by the relevant public authority.

Level 2: Indicator that can be produced with existing data but has not been reported on

For countries requiring such registration, these data could be obtained from administrative records.

In the United Kingdom of Great Britain and Northern Ireland, data collection is possible from existing sources (UK Blue Badge holder statistics; Motability client data; National Travel Survey data on disabled drivers). A related [study](#) reported that “Driver and Vehicle Licensing Agency (DVLA) data provided summary statistics on the total population of drivers who had notified DVLA of a medical condition and, where applicable were licensed to use adapted vehicles.”

In Ireland, the “[Disabled Drivers and Disabled Passengers Scheme](#)” provides a range of tax reliefs linked to the purchase and use of specially constructed or adapted vehicles by drivers and passengers with a disability. The [Central Statistics Agency of Ireland reports the number of](#)

[cars registered each year classified by taxation class](#). Unfortunately, drivers with disabilities are classified as “exempt,” a category that also includes state-owned, diplomatic and fire services vehicles, making data difficult to disaggregate.

20.24 Number of persons with disabilities who have a driving permit, disaggregated by age, sex and disability, kind of vehicle, and whether it is regular or adapted.

Level 2: Indicator that can be produced with existing data but has not been reported on

Information for this indicator could be obtained from administrative data. For example, the European Driving License Directive introduced harmonized driving licenses and included codes defining the minimal adaptations to enable a person with a physical disability to drive. A [study](#) from the United Kingdom of Great Britain and Northern Ireland recorded that 23,286 males and 13,896 females have vehicle restriction codes, as can be seen in table 4.

Table 4: Vehicle-restriction codes by gender (number and percentage out of all drivers with vehicle-restriction codes)

Vehicle restriction code	Gender				
	Male (n=23,286)		Female (n=13,896)		Total
	n	%	n	%	
78- restricted to vehicles with automatic transmission	14,100	61	8,327	60	22,427
40- modified steering	8,766	38	5,820	42	14,586
30- modified combined brake and accelerator	8,377	36	4,267	31	12,644
114- with any special controls required for safe driving	6,863	30	4,123	30	10,986
25 – modified accelerator	4,969	21	2,694	19	7,644
35 – modified control layouts	4,814	21	2,734	20	7,548
42 – modified rear-view mirror(s)	1,641	7	2,621	19	4,262
20 – modified brake	2,099	9	1,362	10	3,461
15 – modified clutch	1,309	6	369	3	1,678
43 – modified driver seat	695	3	563	4	1,258
10 – modified transmission	508	2	254	2	762

Source: S. Tong, J. Broughton and R. Tong, *Data gathering on disability and driving statistics – stage 2*, TRL Report TRL669 (TRL, 2008)

20.25 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities (SDG indicator 11.2.1)

Level 2: Indicator that can be produced with existing data but has not been reported on

[Link to the metadata related to this SDG indicator](#)

The actual and recommended data sources for this indicator are the following:

- Data on location of public transport stops in city: city administration or service providers, GIS data
- Dwelling units within 500m of public transport stops: Census, GIS data
- Number of residents per dwellings unit: Census/household survey
- Household surveys that collect information on the proportion of households that declare 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 its spatial nature, the use of the urban agglomeration is a precondition for the measurement and comparability of this indicator.

At the Global level, all this data will be assembled and compiled for international consumption and comparison by the UN-Habitat and other partners. UN-Habitat and partners will explore several capacity building options to ensure that uniform standards for generation, reporting and analysing data for this indicator are applied by all countries and regions.

No internationally agreed methodology exists for measuring convenience and service quality of public transport. In addition, global/local on urban transport systems do not exist. Moreover, data is not harmonized and comparable at the global level. Obtaining this data will require collecting it at municipal/city level with serious deficiencies in some areas such as data on mass transit and on transport infrastructure. In addition, an open-source software platform for measuring accessibility, the Open Trip Planner Analyst (OTPA) accessibility tool, will be available to government officials and all urban transport practitioners. This tool was developed by the World Bank in conjunction with Conveyal (<http://conveyal.com>), this tool leverages the power of the OTPA engine and open standardized data to model block-level accessibility. The added value of the tool (free and user friendly) is its ability to easily calculate the accessibility of various opportunities and transportation scenarios. An Expert group meeting is planned later in 2016 that will harmonize the tools and existing data to ensure a more uniform and standard format for reporting on this indicator.

This indicator is categorized under Tier II, meaning that the indicator is conceptually clear and an established methodology exists, but data is not easily available.

In the United States of America, the Bureau of Transportation Statistics used the 2017 National Household Travel Survey to examine the [daily travel patterns of American adults with disabilities](#). Although it does not include questions about convenient access to public transport, it does report on the share of people using different types of transportation, as can be seen in table 5.

Table 5: Mode Share by Worker and Disability Status (age 18-64), US, 2017

	Workers		Non-workers	
	Has a disability	Does not have a disability	Has a disability	Does not have a disability
Personal Vehicle (driver)	54.5%	73.6%	42.6%	58.3%
Personal Vehicle (passenger)	23.5%	11.5%	3.1%	21.2%
Walk	13.0%	9.2%	14.6%	14.4%
Local transit	4.3%	2.7%	5.9%	3.3%
Other modes	3.5%	3.0%	4.3%	2.7%
Paratransit	1.2%	0.0%	1.6%	0.1%

Source: US Bureau of Transportation Statistics, “Travel Patterns of American Adults with Disabilities”, 11 December 2018, figure 7.

The United Kingdom of Great Britain and Northern Ireland used a variety of data sources to [study the experiences of people with disabilities on public transport in Great Britain](#), but the study does not address convenient access.

A survey from [Switzerland](#) showed that, in 2012, 66.8 per cent of “people with severe disabilities” reported they could use public transport easily, down from 77.5 per cent in 2007.

Another example from Switzerland, available at <https://www.bfs.admin.ch/bfs/en/home/statistics/sustainable-development/monet-2030/all-indicators/11-villes-communales/distance-nearest-public-transport-stop.html>, shows the average distance from homes to the nearest public transport stops, calculated based on the road network. Shorter average distances are naturally associated with easier access to the public transport system. The indicator thus shows whether the conditions are in place to ensure an environmentally friendly, easily accessible mobility for all, which is a step towards sustainable development.

20.26 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 (SDG indicator 11.7.1)

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

[Link to the metadata related to this SDG indicator](#)

Satellite imagery (open sources), documentation outlining publicly owned land and community-based maps are the main sources of data.

- For estimating the total surface of Built-up area - Data can be extracted from existing layers of satellite imagery ranging from open sources such as Google Earth, US Geological Survey/NASA Landsat imagery and Sentinel Imagery to higher resolution land cover data sets and commercial imagery. Images are to be analyzed for the latest available year.
- For the 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.
- 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 space. If there were national accessibility standards, then audits could be done to determine whether open spaces are accessible. These audits could be carried out by auditing teams or, if smartphone penetration were adequate, crowd-sourced 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 <https://www.axsmap.com/>.