

# SDG indicator metadata

(Harmonized metadata template - format version 1.1)

## 0. Indicator information (SDG\_INDICATOR\_INFO)

### 0.a. Goal (SDG\_GOAL)

Goal 3: Ensure healthy lives and promote well-being for all at all ages

### 0.b. Target (SDG\_TARGET)

Target 3.b: Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

### 0.c. Indicator (SDG\_INDICATOR)

3.b.3: Health product access index

### 0.d. Series (SDG\_SERIES\_DESCR)

### 0.e. Metadata update (META\_LAST\_UPDATE)

2025-07-14

### 0.f. Related indicators (SDG\_RELATED\_INDICATORS)

3.b.1- Proportion of the target population covered by all vaccines included in their national programme

3.b.2- Total net official development assistance to medical research and basic health sectors 3.8.1-

Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, new born and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)

3.8.2-Proportion of population with large household expenditures on health as a share of total household expenditure or income

### 0.g. International organisations(s) responsible for global monitoring

(SDG\_CUSTODIAN\_AGENCIES)

World Health Organization (WHO)

## 1. Data reporter (CONTACT)

### 1.a. Organisation (CONTACT\_ORGANISATION)

World Health Organization (WHO)

## 2. Definition, concepts, and classifications (IND\_DEF\_CON\_CLASS)

### 2.a. Definition and concepts (STAT\_CONC\_DEF)

The health product access index is based on a series of health services coverage indicators that involve the use of any or a combination of health products for their fruition.

The list of the included indicators is as follows:

1. Prevalence of cervical cancer screening among women aged 30-49 years (%) -
2. Women accessing antenatal care (ANC) services who were tested for syphilis (%), reported
3. New cases tested for RR-/MDR-TB (%)
4. Tuberculosis treatment coverage
5. Estimated antiretroviral therapy coverage among people living with HIV (%)
6. Antenatal care attendees positive for syphilis who received treatment (%), reported
7. Tuberculosis effective treatment coverage
8. Women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods (%)
9. Measles-containing-vaccine second-dose (MCV2) immunization coverage by the nationally recommended age (%)
10. Pneumococcal conjugate vaccines (PCV3) immunization coverage among 1-year-olds (%)
11. HPV immunization coverage estimates among primary target cohort (9-14 years old girls) (%)
12. Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%)
13. Hepatitis B (HepB3) immunization coverage among 1-year-olds (%)
14. Neonates protected at birth against neonatal tetanus (PAB) (%)
15. Hib (Hib3) immunization coverage among 1-year-olds (%)
16. Polio (Pol3) immunization coverage among 1-year-olds (%)
17. Measles-containing-vaccine first-dose (MCV1) immunization coverage by the nationally recommended age (%)
18. Population with access to an insecticide-treated bed net (ITN) for malaria protection (%)
19. Prevalence of met need of assistive products (%)

## 2.b. Unit of measure (UNIT\_MEASURE)

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The index is computed with geometric means, using the mean scores calculated for each tracer indicator group (or category of product) that is linked to the use of different health products. The index is reported on a unitless scale of 0 to 100, with 100 being the optimal value.

## 2.c. Classifications (CLASS\_SYSTEM)

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# 3. Data source type and data collection method (SRC\_TYPE\_COLL\_METHOD)

## 3.a. Data sources (SOURCE\_TYPE)

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Tracer indicators are measured by household surveys, facility data, sentinel surveillance systems and administrative data. In terms of values used to compute the index, values are taken from existing published sources. See Annex 1 for details.

## 3.b. Data collection method (COLL\_METHOD)

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The mechanisms for collecting data from countries vary across the 19 tracer indicators, however in many cases a UN agency or interagency group has assembled and analysed relevant national data sources and

then conducted a formal country consultation with country governments to review or produce comparable country estimates. WHO does not undertake new estimation activities to produce tracer indicator values for the health products access index; rather, the index is designed to make use of existing and well-established indicator data series to reduce reporting burden. See Annex 1 for details.

### 3.c. Data collection calendar (FREQ\_COLL)

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Data collection varies from every 1 to 5 years across tracer indicators. For example, country data on immunizations and HIV treatment are reported annually. See Annex 1 for details.

### 3.d. Data release calendar (REL\_CAL\_POLICY)

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The first release of baseline values for the health product access index takes place upon approval of the indicator. Updates are released every two years.

### 3.e. Data providers (DATA\_SOURCE)

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In most cases, Ministries of Health and National Statistical Offices oversee data collection and reporting for health service coverage indicators.

### 3.f. Data compilers (COMPILING\_ORG)

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The World Health Organization, drawing on inputs from other international agencies such as UNICEF, UNAIDS, UN DESA.

### 3.g. Institutional mandate (INST\_MANDATE)

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The General Programme of Work (GPW) approved by WHO's Member States requires the Secretariat to monitor access to health products and technologies.

## 4. Other methodological considerations (OTHER\_METHOD)

### 4.a. Rationale (RATIONALE)

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Access to health products (medicines, vaccines, medical devices including diagnostics, assistive products, blood and other products of human origin) is a core element of providing quality health services that people need. The health product access index is designed to summarize data from existing essential health service coverage indicators to reduce duplication and reporting burden.

### 4.b. Comment and limitations (REC\_USE\_LIM)

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These tracer indicators are meant to be indicative of access to health products and not a complete or exhaustive list of all health products required to deliver essential health services, under universal health coverage. The 19 tracer indicators were selected because they are well-established. Therefore, the index can be computed with existing data sources and does not require initiating new data collection.

### 4.c. Method of computation (DATA\_COMP)

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The index is computed with geometric means, using the mean scores calculated for each tracer indicator group (or category of product) that is linked to the use of different health products. The index is reported on a unitless scale of 0 to 100, with 100 being the optimal value.

The 19 tracer indicators were first standardized so that they can be combined into the index, and then computing the index from those values. A squared dataset was generated by extrapolating missing data periods for all countries and indicators, provided that each country had at least one data point available. Interpolation models then applied between existing data points to fill in missing values, effectively bridging the gaps between years. Subsequently, the dataset underwent a hierarchical mean calculation process, initially aggregating data from 2010 to 2022 for each indicator, followed by grouping indicators and calculating means at that level. Finally, means were computed for each country and region.

#### 4.d. Validation (DATA\_VALIDATION)

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The data obtained to calculate the index have typically already been checked for quality through separated processes.

#### 4.e. Adjustments (ADJUSTMENT)

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Not applicable

#### 4.f. Treatment of missing values (i) at country level and (ii) at regional level (IMPUTATION)

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1. **Identify Missing Data:** Begin by identifying which data points are missing within your dataset. This typically involves examining your dataset and identifying any gaps or missing values.
2. **Extrapolation:** Extrapolation involves estimating missing values based on the trend or pattern observed in the available data. In the context of time series data, extrapolation predicts missing values by extending the trend observed before and after the missing data points.
3. **Choose Extrapolation Method:** There are various methods for extrapolating missing data, such as linear extrapolation, exponential smoothing, or curve fitting techniques like polynomial regression. The choice of method depends on the nature of the available data and the underlying patterns.
4. **Apply Extrapolation:** Once selected an appropriate extrapolation method, apply it to estimate the missing values in your dataset. This involves using the available data points to predict the values for the missing time periods.
5. **Validate Extrapolated Values:** After extrapolating the missing values, it's important to validate the accuracy of the estimates. You can do this by comparing the extrapolated values to actual observed data, if available, or by assessing the reasonableness of the estimates based on domain knowledge.
6. **Create Squared Dataset:** Once missing values have been extrapolated and validated, a squared dataset created by ensuring that each country and indicator has complete data for all time periods of interest.
7. **Interpolation:** After creating the squared dataset, further refine the data may apply by using interpolation techniques to fill in any remaining gaps between existing data points. Interpolation helps smooth out the dataset and provides more accurate estimates for missing values between known data points.

8. Data Analysis: With the squared dataset containing extrapolated and interpolated values, a data analysis can be started with proper model, such as calculating means.

#### 4.g. Regional aggregations (REG\_AGG)

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Any needed imputation is done at country level. These country values can then be used to compute regional and global values.

#### 4.h. Methods and guidance available to countries for the compilation of the data at the national level (DOC\_METHOD)

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Not applicable

#### 4.i. Quality management (QUALITY\_MGMNT)

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Not applicable

#### 4.j Quality assurance (QUALITY\_ASSURE)

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Not applicable

#### 4.k Quality assessment (QUALITY\_ASSMNT)

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Not applicable

### 5. Data availability and disaggregation (COVERAGE)

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Data availability for the 19 tracer indicators has been reviewed between 2010 to 2020 and found to vary.

In 2010, among the indicators with available country data, the highest were: (Estimated antiretroviral therapy coverage among people living with HIV), (Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds), (Polio (Pol3) immunization coverage among 1-year-olds) and (Measles-containing-vaccine first-dose (MCV1) immunization coverage among 1-year-olds) reported by 194 countries followed by (Tuberculosis treatment coverage) by 189 countries then (Hepatitis B (HepB3) immunization coverage among 1-year-olds) by 180 countries.

By 2020, in addition to the indicators dominating in 2010, several vaccine indicators emerged as the highest with the most country data, including: (Hepatitis B (HepB3) immunization coverage among 1-year-olds) reported by 194 countries and (Hib (Hib3) immunization coverage among 1-year-olds) reported by 191 countries.

On the other hand, the lowest indicator in 2010 was (Antenatal care attendees positive for syphilis who received treatment) reported by 9 countries. This indicator remained the least reported in 2022, though reporting improved to 49 countries.

## 6. Comparability / deviation from international standards (COMPARABILITY)

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The health product access index draws on existing, publicly available data and estimates for tracer indicators. These numbers have already been through a country consultation process (e.g., for immunization coverage), or are taken directly from country reported data.

## 7. References and Documentation (OTHER\_DOC)

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<https://www.who.int/data/gho>

## Annex 1: Metadata for tracer indicators used to calculate the health products access index for monitoring SDG indicator 3.b.3.

1. Prevalence of cervical cancer screening among women aged 30-49 years (%) - [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-cervical-cancer-screening-among-women-aged-30-49-years-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-cervical-cancer-screening-among-women-aged-30-49-years-(-))
2. Women accessing antenatal care (ANC) services who were tested for syphilis (%), reported [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/women-accessing-antenatal-care-\(anc\)-services-who-were-tested-for-syphilis-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/women-accessing-antenatal-care-(anc)-services-who-were-tested-for-syphilis-(-))
3. New cases tested for RR-/MDR-TB (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/new-cases-tested-for-rr--mdr-tb-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/new-cases-tested-for-rr--mdr-tb-(-))
4. Tuberculosis treatment coverage <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/tuberculosis-treatment-coverage>
5. Estimated antiretroviral therapy coverage among people living with HIV (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/estimated-antiretroviral-therapy-coverage-among-people-living-with-hiv-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/estimated-antiretroviral-therapy-coverage-among-people-living-with-hiv-(-))
6. Antenatal care attendees positive for syphilis who received treatment (%), reported [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/antenatal-care-attendees-positive-for-syphilis-who-received-treatment-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/antenatal-care-attendees-positive-for-syphilis-who-received-treatment-(-))
7. Tuberculosis effective treatment coverage <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/treatment-success-rate-new-tb-cases>
8. Women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/married-or-in-union-women-of-reproductive-age-who-have-their-need-for-family-planning-satisfied-with-modern-methods-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/married-or-in-union-women-of-reproductive-age-who-have-their-need-for-family-planning-satisfied-with-modern-methods-(-))
9. Measles-containing-vaccine second-dose (MCV2) immunization coverage by the nationally recommended age (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/measles-containing-vaccine-second-dose-\(mcv2\)-immunization-coverage-by-the-nationally-recommended-age-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/measles-containing-vaccine-second-dose-(mcv2)-immunization-coverage-by-the-nationally-recommended-age-(-))
10. Pneumococcal conjugate vaccines (PCV3) immunization coverage among 1-year-olds (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/pneumococcal-conjugate-vaccines-\(pcv3\)-immunization-coverage-among-1-year-olds-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/pneumococcal-conjugate-vaccines-(pcv3)-immunization-coverage-among-1-year-olds-(-))
11. HPV immunization coverage estimates among primary target cohort (9-14 years old girls) (%) <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/girls-aged-15-years-old-that-received-the-recommended-doses-of-hpv-vaccine>
12. Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/diphtheria-tetanus-toxoid-and-pertussis-\(dtp3\)-immunization-coverage-among-1-year-olds-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/diphtheria-tetanus-toxoid-and-pertussis-(dtp3)-immunization-coverage-among-1-year-olds-(-))
13. Hepatitis B (HepB3) immunization coverage among 1-year-olds (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/hepatitis-b-\(hepb3\)-immunization-coverage-among-1-year-olds-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/hepatitis-b-(hepb3)-immunization-coverage-among-1-year-olds-(-))
14. Neonates protected at birth against neonatal tetanus (PAB) (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/neonates-protected-at-birth-against-neonatal-tetanus-\(pab\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/neonates-protected-at-birth-against-neonatal-tetanus-(pab)-(-))

15. Hib (Hib3) immunization coverage among 1-year-olds (%)  
<https://www.who.int/data/gho/data/indicators/indicator-details/GHO/hib-hib3-immunization-coverage-among-1-year-olds>
16. Polio (Pol3) immunization coverage among 1-year-olds (%)  
[https://www.who.int/data/gho/data/indicators/indicator-details/GHO/polio-\(pol3\)-immunization-coverage-among-1-year-olds-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/polio-(pol3)-immunization-coverage-among-1-year-olds-(-))
17. Measles-containing-vaccine first-dose (MCV1) immunization coverage by the nationally recommended age (%) [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/measles-containing-vaccine-first-dose-\(mcv1\)-immunization-coverage-among-1-year-olds-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/measles-containing-vaccine-first-dose-(mcv1)-immunization-coverage-among-1-year-olds-(-))
18. Population with access to an insecticide-treated bed net (ITN) for malaria protection (%)  
[https://www.who.int/data/gho/data/indicators/indicator-details/GHO/population-with-access-to-an-insecticide-treated-bed-net-\(itn\)-for-malaria-protection-modelled](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/population-with-access-to-an-insecticide-treated-bed-net-(itn)-for-malaria-protection-modelled)
19. Prevalence of met need of assistive products (%)  
[https://www.who.int/data/gho/data/indicators/indicator-details/GHO/met-need-of-assistive-products-as-proportion-of-need-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/met-need-of-assistive-products-as-proportion-of-need-(-))



## Definitions of Metadata Concepts

**0.a. Goal:** SDG Goal number and name.

**0.b. Target:** SDG Target number and name.

**0.c. Indicator:** SDG Indicator number and name.

**0.d. Series:** Codes and descriptions of all series to which the metadata set applies.

**0.e. Metadata update:** The date when this metadata report was last updated.

**0.f. Related indicators:** Linkages with any other Goals and Targets.

**0.g. International organisation(s) responsible for global monitoring:** (*also known as custodian agency(ies)*) Global reporting: International organizations (departments/offices) responsible for monitoring this indicator at the global level. Country reporting: This concept has no national counterpart.

**1.a. Organisation:** Organisation unit information of the contact points for the data or metadata.

**1.d. Contact person function:** Functional title(s) of the contact points for the data or metadata.

**1.e. Contact phone:** Phone number(s) of the contact points for the data or metadata.

**1.f. Contact mail:** Mailing address(es) of the contact points for the data or metadata.

**1.g. Contact emails:** E-mail address(es) of the contact points for the data or metadata.

**2.a. Definition and concepts:** Precise definition of the indicator preferably relying on internationally agreed definitions. The indicator definition should be unambiguous and be expressed in universally applicable terms. Precise definition of all different concepts and terms associated with the indicator, also including reference to any associated classifications.

**2.b. Unit of measure:** Description of the unit of measurement (proportion, dollars, number of people, etc.)

**2.c. Classifications:** Describe references to both national and international standards and classification being used. [Information to be provided where applicable.]

**3.a. Data sources:** Description of all actual and recommended sources of data. This description should include, when applicable, any changes of the data source over time, details of denominator (if from a different source) and any other relevant information related to the origin of the source or indicator. Similar details should be given for administrative sources.

**3.b. Data collection method:** Description of all methods used for data collection. This description should include, when applicable, the sample frame used, the questions used to collect the data, the type of interview, the dates/duration of fieldwork, the sample size and the response rate. Some additional information on questionnaire design and testing, interviewer training, methods used to monitor non-response etc. should be provided here. Questionnaires used should be annexed (if very long: via hyperlink).

**3.c. Data collection calendar:** Dates when source collection is next planned.

**3.d. Data release calendar:** Expected dates of release of new data for this indicator, including the year (or, ideally, the quarter/month when the next data point associated with the indicator will become available).

**3.e. Data providers:** Identification of national and/or international data provider(s), specifying the organization(s) responsible for producing the data.

**3.f. Data compilers:** Organization(s) responsible for compilation of this indicator either at national or global level.

**3.g. Institutional mandate:** Description of the set of rules or other formal set of instructions assigning responsibility as well as the authority to an organisation for the collection, processing, and dissemination of statistics for this indicator.

**4.a. Rationale:** Description of the purpose and rationale behind the indicator, as well as examples and guidance on its correct interpretation and meaning.

**4.b. Comment and limitations:** Comments on the feasibility, suitability, relevance and limitations of the indicator. Also includes data comparability issues, presence of wide confidence intervals (such as for maternal mortality ratios); provides further details on additional non-official indicators commonly used together with the indicator.

**4.c. Method of computation:** Explanation of how the indicator is calculated, including mathematical formulas and descriptive information of computations made on the source data to produce the indicator (including adjustments and weighting). This explanation should also highlight cases in which mixed sources are used or where the calculation has changed over time (i.e., discontinuities in the series).

**4.d. Validation:** Description of process of monitoring the results of data compilation and ensuring the quality of the statistical results, including consultation process with countries on the national data submitted to the SDGs Indicators Database. Descriptions and links to all relevant reference materials should be provided.

**4.e. Adjustments:** Global reporting: Description of any adjustments with respect to use of standard classifications and harmonization of breakdowns for age group and other dimensions, or adjustments made for compliance with specific international or national definitions. National reporting: This concept is typically not applicable for national reporting.

**4.f. Treatment of missing values (i) at country level and (ii) at regional level:** Global reporting: (National level) Description of the methodology employed for producing estimates for the indicator when country data are not available, including any mathematical formulas and description of additional variables used as input into the estimation process. (Regional level) Description of how missing values for individual countries or areas are imputed or otherwise estimated by international agencies to derive regional or global aggregates of the indicator. National reporting: This concept is not applicable for national reporting.

**4.g. Regional aggregations:** Global reporting: Description of the methodology, including any mathematical formulas, used for the calculation of the regional/global aggregates from the country values. Description of the weighting structure used for aggregating country indicator values to regional and global levels. Additional methodological details on how the data from countries or areas is assembled by custodian international agencies to provide regional and global aggregates. This is distinct from the method of computation, which looks at how the indicator is compiled at a national level. National reporting: This concept is not applicable for national reporting.

**4.h. Methods and guidance available to countries for the compilation of the data at the national level:** Global reporting: Description of methodology used by countries for the compilation of data at national level and the relevant international recommendations and guidelines available to countries. Descriptions and links to all relevant reference materials should be provided. National reporting: For national reporting a country may refer to the globally available metadata and explain how it is being used.

**4.i. Quality management:** Description of systems and frameworks in place within an organisation to manage the quality of statistical products and processes.

**4.j Quality assurance:** Description of practices and guidelines focusing on quality in general and dealing with quality of statistical programmes at your agency, including measures for ensuring the efficient use of resources.

**4.k Quality assessment:** Description of overall evaluation of fulfilling quality requirements, based on standard quality criteria.

**5. Data availability and disaggregation:** Global reporting: Indicate for how many countries the data for this indicator are already currently available on a regular basis. Data availability by regional breakdowns and time periods can also be described here. Describe the specification of the dimensions and levels used for disaggregation of the indicator (e.g., income, sex, age group, geographic location, disability status, etc.). National reporting: Data availability by sub-national breakdowns and time periods can be described here. Describe the specification of the dimensions and levels used for disaggregation of the indicator (e.g., income, sex, age group, geographic location, disability status, etc.).

**6. Comparability / Deviation from international standards:** Explanation on the differences between country produced and internationally estimated data on this indicator, highlighting and summarising the main sources of differences.

**7. References and Documentation:** Descriptions and links to all relevant reference materials related to this indicator.