SDG indicator metadata

(Harmonized metadata template - format version 1.1)

0. Indicator information (SDG_INDICATOR_INFO)

0.a. Goal (SDG_GOAL)

Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

0.b. Target (SDG_TARGET)

Target 2.2: By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

0.c. Indicator (SDG_INDICATOR)

2.2.4 Prevalence of minimum dietary diversity, by population group (children aged 6 to 23.9 months and non-pregnant women aged 15 to 49 years)

0.d. Series (SDG_SERIES_DESCR)

Prevalence of minimum dietary diversity among children aged 6-23 months (MDD-C)

0.e. Metadata update (META_LAST_UPDATE)

2025-04-23

0.f. Related indicators (SDG_RELATED_INDICATORS)

Healthy diets are fundamental for achieving SDG 2 and a prerequisite for reaching many other SDGs including SDG 3 (ensuring healthy lives), playing a role in ending poverty (SDG 1), ensuring quality education (SDG 4), achieving gender equality (SDG 5), promoting economic growth (SDG 8), and reducing inequalities (SDG 10). Unhealthy diets are the leading cause of poor health and non-communicable disease worldwide and so minimum dietary diversity is also strongly linked to SDG target 3.4, which aims to reduce premature mortality from non-communicable diseases by one third by 2030.

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

United Nations Children's Fund (UNICEF)

1. Data reporter (CONTACT)

1.a. Organisation (CONTACT_ORGANISATION)

United Nations Children's Fund (UNICEF)

2. Definition, concepts, and classifications (IND_DEF_CON_CLASS)

2.a. Definition and concepts (STAT_CONC_DEF)

- **Definition:**
- Percentage of children 6–23 months of age who consumed foods and beverages from at least five out of eight defined food groups during the previous day.
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- **Concepts:**
- UNICEF and WHO have defined eight key food groups for infant and young children, which include: 1) breast milk; 2) grains, roots, and tubers; 3) pulses (beans, peas, lentils), nuts and

seeds; 4) dairy products (milk, infant formula, yogurt, cheese); 5) flesh foods (meat, fish, poultry, organ meats; 6) eggs; 7) vitamin-A rich fruits and vegetables; and 8)other fruits and vegetables. Minimum dietary diversity is defined as the consumption of at least five out of the eight food groups. Consumption of any amount of food or beverage from a food group is sufficient to "count", i.e., there is no minimum quantity.

2.b. Unit of measure (UNIT_MEASURE)

Proportion

2.c. Classifications (CLASS_SYSTEM)

Not applicable

3. Data source type and data collection method (SRC_TYPE_COLL_METHOD)

3.a. Data sources (SOURCE_TYPE)

Population based nationally representative household surveys are the primary source of country level minimum dietary diversity data. During these surveys, the parents or caregivers of children aged 6–23 months are asked to recall all the foods and beverages that their child consumed during the previous 24 hours, both at home and elsewhere as recommended in UNICEF-WHO guidance on "Indicators for assessing infant and young child feeding practices".

3.b. Data collection method (COLL_METHOD)

For UNICEF, the cadre of dedicated data and monitoring specialists working at national, regional and international levels in 190 countries routinely provide technical support for the collection and analysis of nutrition data. Up until 2017, the consultative process UNICEF used to collate and review potential estimates to ensure adherence to standard definitions and data quality criteria was known as Country Data Reporting on the Indicators for the Goals (CRING).[1] As of 2018, UNICEF launched a new system called "Country Reporting and Validation Exercise" (CRAVE) which adheres to many of the same principles as CRING, and which continues on an annual basis for future updates. The CRAVE process places strong emphasis on technical rigour, country ownership and use of official data and statistics. The consultative process is done in close collaboration with UNICEF country offices with the purpose of ensuring that UNICEF global databases contain updated and internationally comparable data. UNICEF country offices are invited to submit, through an online system, nationally representative data sources which contain key indicators on the well-being of women and children, including minimum dietary diversity. The country office staff work with local counterparts to ensure the most relevant data are shared. Updates sent by the country offices are then reviewed by sector specialists at UNICEF headquarters to check for consistency and overall data quality of the submitted estimates. This review is based on a set of objective criteria to ensure that only the most reliable information is included in the databases. Re-analysis according to standard definitions is also undertaken where possible. Once reviewed, feedback is made available on whether specific data points are accepted, and if not, the reasons why. Feedback is also provided to explain differences between country reported and UNICEF

[1] For more on CRING, see Murray C, Newby H. Data resource profile: United Nations Children's Fund (UNICEF). Int J Epidemiol. 2012;41(6):1595-601.

reanalysed estimates. UNICEF also relies on a data source catalogue that is regularly updated using data sources from catalogues of other international organizations and national statistics offices.

3.c. Data collection calendar (FREQ_COLL)

Data collection is carried out by UNICEF throughout the year.

3.d. Data release calendar (REL_CAL_POLICY)

UNICEF releases country, regional and worldwide estimates annually with the next release planned for September 2025.

3.e. Data providers (DATA_SOURCE)

Most data sources used are nationally representative household surveys (e.g., Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS) and National Nutrition Surveys (NNS). Data providers vary and most commonly are ministries of health, national offices of statistics or national institutes of nutrition.

3.f. Data compilers (COMPILING_ORG)

United Nations Children's Fund (UNICEF)

3.g. Institutional mandate (INST_MANDATE)

UNICEF is responsible for global monitoring and reporting on the wellbeing of children. UNICEF actively supports countries in data collection and analysis for reporting on children's diets primarily through high-quality MICS surveys, as well as providing technical and financial support to other surveys. UNICEF not only supports household surveys but also works with global partners to define technical standards for the collection and analysis of diet data. UNICEF also ensures the availability of internationally comparable estimates through its publicly available databases on infant and young child feeding. In-depth analyses of the data on children's diets, which are included in relevant data-driven publications, including in its flagship publication, *The State of the World's Children,* and the *Child Nutrition Report* are also conducted by UNICEF.

4. Other methodological considerations (OTHER_METHOD)

4.a. Rationale (RATIONALE)

The WHO guidelines for complementary feeding recommends that infants and young children are fed a variety of foods to ensure their nutritional needs are met and to support healthy growth and development. This guideline provides global, normative evidence-based recommendations on complementary feeding of infants and young children 6–23 months of age living in low, middle- and high-income countries. Food group diversity is associated with improved linear growth in young children and a diet lacking in diversity can increase the risk of micronutrient deficiencies, which may have a damaging effect on children's physical and cognitive development. Consuming a diverse diet is also important for reasons beyond meeting nutritional requirements; young children who receive a diverse diet are exposed to different food tastes and textures.

4.b. Comment and limitations (REC_USE_LIM)

Minimum dietary diversity is a long-standing indicator (*first defined in 2008 and revised in 2017*) where time-series data already exist for many countries. As household surveys are the primary source of data on minimum dietary diversity, the estimates come with levels of uncertainty due to both sampling and non-sampling error (e.g. misclassification of food items in food groups, recording error etc.).

4.c. Method of computation (DATA_COMP)

This indicator is calculated in two steps. The first step is to construct a food group score summing the eight defined food groups. The eight defined food groups are:

1. breast milk;
2. grains, white/pale starchy roots, tubers and plantains;
3. beans, peas, lentils, nuts and seeds;
4. dairy products (milk, infant formula, yogurt, cheese);
5. flesh foods (meat, fish, poultry, organ meats);
6. eggs;
7. vitamin A-rich fruits and vegetables; and
8. other fruits and vegetables

Begin with a score of 0. For each of the 8 food groups, add one point if any food in the group was consumed.

The second step is to calculate as a percentage as follows:

$$\frac{\text{Child age in days} \geq 183 \textbf{ AND } \text{Child age in days} < 730 \textbf{ AND } \text{Food group score} \geq 5}{\text{Age in days} \geq 183 \textbf{ AND } \text{Age in days} < 730} \times 100$$

4.d. Validation (DATA_VALIDATION)

UNICEF reviews newly available data against a set of quality assessment criteria. These criteria include;

- National representativeness: Sufficient documentation should be available to assess sampling at various stages such as methodology to select primary sampling units, develop household listing and selection of households. The documents should allow for determination of household and individual response rate.
- Minimum sample size: A minimum unweighted sample size of 25 is required for inclusion of estimates into UNICEF global databases.
- Plausible time trends: Country level data are reviewed for plausible time trends. In case of outliers UNICEF country offices are contacted to get additional information to explain available data/trends.
- Adherence to standard questions and calculations: Survey questionnaires are reviewed to confirm adherence to global guidance in terms of methods and questions used to assess minimum dietary diversity. Only estimates based on 24-hour recall of a standard list of liquids and food groups (with no major deletions) are allowed.

UNICEF will undertake country consultation with SDG 2.2 focal points to ensure all recent and relevant primary data sources have been included and to receive feedback from national governments.

4.e. Adjustments (ADJUSTMENT)

The indicator definition for minimum dietary diversity was revised in 2017. The previous indicator was based on a cut-off of four out of seven food groups. In 2017, breast milk was added as a separate food group, thereby increasing the total number of food groups to eight and increasing the cut-off to five groups. The indicator was revised because the previous indicator included infant formula but not breast milk, thereby conferring an advantage to formula-fed infants when counting food groups. As such, data sources published prior to the revision of the indicator in 2017 had to be re-analysed using the new indicator definition to obtain comparable estimates across time and location. When raw data were not available, data sources were not included in the global database.

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

- At country level

There is no imputation for countries with no data on minimum dietary diversity.

- At regional and global levels

There is no imputation for individual countries with missing data. Global and regional aggregates for this indicator are based on countries with available data.

4.g. Regional aggregations (REG_AGG)

Regional aggregates are calculated as population weighted averages of the prevalence of minimum dietary diversity in each country over a specific time-period, using the population by single age (age 6-23 months i.e. sum of half of age 0 and age 1) from the United Nations Population Division World Population Prospects as weights.

Regional aggregates are available for the following classifications: UN, SDG, UNICEF, WHO, The World Bank income groups. As a rule, regional aggregates are only displayed if available data represents at least 50 percent of the region's population

4.h. Methods and guidance available to countries for the compilation of the data at the national level (DOC_METHOD)

Methods and analysis:

Indicators for assessing infant and young child feeding practices: Definitions and measurement methods Reconsidering, refining, and extending the World Health Organization infant and young child feeding indicators

4.i. Quality management (QUALITY_MGMNT)

UNICEF is responsible for the management of processes for the regular update of the country-level database of surveys used to generate the regional and global aggregation of data on minimum dietary diversity. UNICEF secures microdata for re-analysis according to the standard method through regular communication with regional and country teams. UNICEF also collaborates with global partners and leads the Technical Advisory Group for UNICEF's global database on Infant and Young Child feeding to review and improve methods as needed. Additionally, a Technical Expert Advisory Group on Nutrition

Monitoring (TEAM), jointly established by UNICEF and WHO, provides advice on nutrition monitoring methods and processes, including on infant and young child feeding.

4.j Quality assurance (QUALITY_ASSURE)

UNICEF provides support to countries which undertake Multiple Indicator Cluster Surveys (MICS). The MICS are an important source of data on minimum dietary diversity. Questionnaires are designed and customized by the MICS country team, then reviewed by the regional office, followed by a review by sector data specialists at headquarters level to verify that they follow global guidance. These reviews help to ensure that the country customization did not change the basic structure or content of the questionnaires in relation to standard indicator definitions and also aim to support development of an appropriate locally relevant food and liquid list with items correctly categorized in their respective food groups.
UNICEF also provides support, as outlined above for MICS, when a country conducting non-MICS surveys contact us for technical guidance when planning the DHS or NNS.

The quality criteria outlined above in section 4.d. are used to update a standard template that UNICEF has developed to review primary data sources for minimum dietary diversity. The review form is used to abstract key information including methodological details (e.g., sampling procedures, response rates, questions about food and fluids, flagging misclassified food items). One person fills in the review form for each data source and when information is missing or further details are required, the country teams are contacted. Once all information is available and the primary data source review form is completed, each data source is discussed within a team comprising of UNICEF colleagues working on nutrition data and programs. This allows for a thorough and efficient standard joint review of each data source by specialists.

4.k Quality assessment (QUALITY_ASSMNT)

Data consistency and quality checks described above are conducted for each potential primary data source (e.g., household survey) before inclusion in the database that are used to generate regional and global data on minimum dietary diversity. UNICEF collaborates with its regional and country offices throughout the year to ensure all recent and relevant data are included in the country-level database.

5. Data availability and disaggregation (COVERAGE)

Data availability:
Minimum dietary diversity data for children are available for 110 countries.

Time series:
Country level data for minimum dietary diversity is available from 2005 onwards and is updated annually to ensure most recent data are reflected in the database.

Disaggregation:
Disaggregated country level data are available by sex of child, place of residence (urban, rural), wealth status of household, age of child (6-11, 12-15, 16-19, 20-23 months), maternal education and administrative/geographic regions.

6. Comparability / deviation from international standards (COMPARABILITY)

Sources of discrepancies:

The standard analysis approach to construct the database aims for a maximum comparability of country estimates. For the inclusion of estimates into the database, quality assessment criteria described above are applied. When there is insufficient documentation, the source is not included until information becomes available and clears quality criteria. Further as the indicator definition for minimum dietary diversity was revised in 2017, data sources released prior to the revision were re-analysed to conform to the new indicator definition. When raw data were not available for re-analysis, those sources were not included in the country-level database.

There may be a discrepancy between country reported estimates and the global database for minimum dietary diversity given a difference in the treatment of the response “Don’t Know/Missing” to questions about foods, liquids or breastfeeding status; handling of customised food groups or data being based on pre-2017 (old) indicator definition. Re-analysis of data for the country-level database on minimum dietary diversity is aligned with the global guidance and thus, ensures comparability over time and across countries.

7. References and Documentation (OTHER_DOC)

URL:

https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding/

References:

Indicators for assessing infant and young child feeding practices: definitions and measurement methods. Geneva: World Health Organization and the (UNICEF), 2021. Licence: CC BYNC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo.

WHO Guideline for complementary feeding of infants and young children 6–23 months of age. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Meeting Report on reconsidering, refining and extending the WHO Infant and Young Child Feeding Indicators. United Nations Children’s Fund (UNICEF) and the World Health Organization and the (UNICEF). https://data.unicef.org/resources/meeting-report-infant-young-child-feeding-indicators/