Standardized metadata improves usability and comparability

- Metadata (and data) that follow specific standardized patterns:

  - are **easier for users** to interpret and lend themselves to **machine readability** and **electronic exchange**

  - use a **common template** for organizing metadata

  - **improve comparability** of data, both at the global level (between countries), and within countries – to understand comparability in time series over time
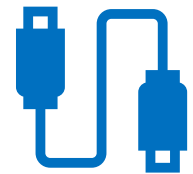
SDMX (Statistical Data and Metadata eXchange)

- [International initiative](#) that aims at standardising and modernising the mechanisms and processes for the exchange of statistical data and metadata

- Sponsored by seven international organisations: BIS, ECB, Eurostat, the IMF, OECD, UNSD and the World Bank

- Consists of:
  - technical standards
  - statistical guidelines
  - an IT architecture and tools
- Reduces reporting burden

- Enhances availability of statistical data and metadata for the users

- Data reporting = data dissemination = data sharing (one dataset is reported only once and then shared widely using modern technologies)

Metadata in SDMX

- Can be stored or exchanged separately from the data object it describes, but be linked to it

- Can be indexed and searched

- Reported according to a structure defined by the Metadata Structure Definition (MSD)

Overview of the SDG metadata template

- Metadata template approved by the SDG SDMX Working Group of the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs)

  ➢ Metadata template for National Reporting (containing instructions specific to countries developed by UNSD)

- Contains two main parts:

  - Metadata attachment

  - Metadata concepts

Attachment

The metadata **attachment** refers to the way in which the metadata is associated with the datasets it describes.

In SDMX for the SDGs, metadata is attached based on the following three parameters:

- **Reporting type** (Global, Regional or National)

- **SDG Series**

- **Reference Area** (Countries and regions)

In addition, **Language** is also specified (SDMX metadata is multilingual)

Attachment (Kyrgyzstan Example)

Metadata Attachment

This section is used to automate the association of your metadata file with the appropriate reporting type, series and reference area. If this metadata file corresponds to an already existing global SDG indicator series, please select the corresponding SDG series. For national indicators that are not part of the global SDG indicator list, please instead select the option "Other" in the SDG series dropdown. Select the appropriate reference area and the language that the metadata is in.

Reporting type
National

SDG series
3.2.1 Under-five mortality rate

Reference area
Kyrgyzstan

Metadata language
English

Concepts

- In the Metadata Structure Definition (MSD), the **concepts** describe all relevant characteristics of the metadata

- **SDG metadata concepts (7)**:

  - Indicator information

  - Data reporter

  - Definition, concepts and classifications

  - Data source type and data collection method

  - Other methodological considerations

  - Comparability/deviation from international standards

  - References and documentation

Concept: Indicator information (Kyrgyz Example)

0. Indicator information

Please fill out 0.a – 0.e, at minimum.

Concept name	*Insert text, lists, tables, and images.*
0. Indicator information	
0.a. Goal	3: Ensure healthy lives and promote well-being for all at all ages
0.b. Target	3.2: By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
0.c. Indicator	3.2.1: Under-five mortality rate
0.d. Series	Under-five mortality rate
0.e. Metadata update	6 April 2020
0.f. Related indicators	
0.g. International organisation(s) responsible for global monitoring	

Concept: Data reporter (Kyrgyz Example)

1. Data reporter

Please fill out as much contact information as you can in 1.a – 1.g.

Concept name	*Insert text, lists, tables, and images.*
1. Data reporter	
1.a. Organisation	National Statistical Committee of the Kyrgyz Republic, GDS; Ministry of Health of the Kyrgyz Republic
1.b. Contact person(s)	Maatkulova Zh.B.
1.c. Contact organisation unit	National Statistical Committee of the Kyrgyz Republic, GDS
1.d. Contact person function	
1.e. Contact phone	(0312) 32 46 36
1.f. Contact mail	
1.g. Contact email	Jmaatkulova@stat.kg

Concept: Definition, concepts and classifications (Kyrgyz Example)

2. Definition, concepts, and classifications

*You may choose to fill out only the main concept (2. Definition, concepts, and classifications) **or** you may choose to fill out all or some of the detailed concepts (2.a, 2.b, 2.c) separately.*

Concept name	Insert text, lists, tables, and images.
2. Definition, concepts, and classifications	
2.a. Definition and concepts	**Definition** An indicator that determines the mortality rate of children under five years of age, which shows the likelihood that a child born in a particular year will die before reaching the age of five. Links to the methodology: https://unstats.un.org/sdgs/metadata/files/Metadata; http://www.stat.kg/ru/statistics/download/methodology/68/ **Concepts** Mortality is the process of extinction of a generation, one of the two main sub-processes of population reproduction. Mortality of children under the age of five - the probability that a child born in a particular year or period will die before it reaches 5 years of age is the age-specific mortality rate for a given period, expressed per 1000 live births. According to the WHO definition used in the Kyrgyz Republic, ...
2.b. Unit of measure	per 1000 live births
2.c. Classifications	

Concept: Data source type and data collection method (Kyrgyz Example)

3. Data source type and data collection method

*You may choose to fill out only the main concept (3. Data source type and collection method) **or** you may choose to fill out all or some of the detailed concepts (3.a – 3.g) separately.*

Concept name	Insert text, lists, tables, and images.
3. Data source type and collection method	
3.a. Data sources	The source of information on under-five mortality are medical death certificates issued by a doctor or nursing staff describing the illness, accident, homicide, suicide and other external factors that caused the death. These documents, together with Death Certificates drawn up by the Civil Register…
3.b. Data collection method	Data collection is carried out on the basis of the submitted Death Certificates and the attached medical certificates of death and perinatal death, submitted by the SRS with RCC on a regular basis. Primary processing and compilation of data on the number of deceased children is carried out at the level of regional state statistics bodies…
3.c. Data collection calendar	
3.d. Data release calendar	The data are disseminated in the statistical publications of the NSC: the statistical collections "Demographic Yearbook of the Kyrgyz Republic", "Social Trends of the Kyrgyz Republic"…
3.e. Data providers	
3.f. Data compilers	
3.g. Institutional mandate	

Concept: Other methodological considerations (Kyrgyz Example) - Part 1

4. Other methodological considerations

*You may choose to fill out only the main concept (4. Other methodological considerations) **or** you may choose to fill out all or some of the detailed concepts (4.a – 4.k) separately.*

Concept name	Insert text, lists, tables, and images.
4. Other methodological considerations	
4.a. Rationale	The analysis of the indicator allows us to assess the level of effectiveness of state policy in the field of maternal and child health in the republic. Mortality rates among young children are the resultant indicator of the health and well-being of children and, in a broader sense, socio-economic development. The indicator reflects the state of public health, as it characterizes the access of children and the community to basic health interventions such as vaccination, treatment of infectious diseases and adequate nutrition.
4.b. Comment and limitations	According to experts, the coverage of the civil registration system is considered satisfactory, but needs to be improved, as it is based on the use of paper media. Since December 2014, the automated electronic system AIS "ZAGS" began to function as one of the components of the GDS information systems. However, data is received by the statistics offices on paper and is then entered into the special software by employees of the statistical agencies, which sometimes leads to errors or omissions. In the near future (until the end of 2019), one of the sources of statistical population data will be a database on the natural and migration movement of the population, created on the basis of GDS data.
4.c. Method of computation	Child mortality rate - an indicator that determines the mortality rate of children under the age of five years (0-4 years). It is calculated as the ratio of the number of deaths under the age of five to the number of those born alive. The coefficient is expressed in ppm.

Concept: Other methodological considerations (Kyrgyz Example) - Part 2

4.d. Validation	The analysis of the indicator allows us to assess the level of effectiveness of state policy in the field of maternal and child health in the republic. Mortality rates among young children are the resultant indicator of the health and well-being of children and, in a broader sense, socio-economic development. The indicator reflects the state of public health, as it characterizes the access of children and the community to basic health interventions such as vaccination, treatment of infectious diseases and adequate nutrition.
4.e. Adjustments	
4.f. Treatment of missing values (i) at country level and (ii) at regional level	
4.g. Regional aggregations	
4.h. Methods and guidance available to countries for the compilation of the data at the national level	
4.i. Quality management	Logical and arithmetic control of reporting data is carried out. The procedure for checking the correctness of data in register records is carried out by logical control embedded in the software for data entry and processing.
4.j Quality assurance	
4.k Quality assessment	

Concept: Data Availability and disaggregation (Kyrgyz Example)

5. Data availability and disaggregation

Concept name	Insert text, lists, tables, and images.
5. Data availability and disaggregation	Chronological series available since 1990. Data aggregation by territory: The indicator is calculated by territory and by region (Republic, regions, Bishkek City, Osh City and districts) on a monthly basis.

Concept: Comparability/deviation from international standards (Kyrgyz Example)

6. Comparability/deviation from international standards

Concept name	Insert text, lists, tables, and images.
6. Comparability/deviation from international standards	

Concept: References and documentation (Kyrgyz Example)

7. References and documentation

Detailed concept name	Insert text, lists, tables, and images.
7. References and Documentation	

Recommendations for drafting and compiling metadata

- Prepare metadata that is comprehensive but not overwhelming (mandatory fields vs. describing everything)

- Use standard terminology and avoid duplication (document necessary variations from standards)

- Create descriptions that are easy to understand for different stakeholders

- Preserve historical metadata e.g. changes when methods of data production change

- Document workflows e.g. around ownership, approval, date of operation

- Create metadata in local languages where possible

- Include contact details - and ensure contact points are monitored

DESA | **Statistics Division**