SDG Goal 3	Good health and well-being
SDG Target 3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
SDG Indicator 3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)
Time series	Mortality due to contact to unsafe water, unsafe sanitation and lack of hygiene

1. General information on the time series

- Date of national metadata: 09 March 2022
- National data: http://sdg-indikatoren.de/en/3-9-2/
- Definition: The time series measures the number of deaths from inadequate water, sanitation and hygiene, expressed per 100,000 inhabitants classified with the following ICD-10-diagnosis codes:
  - Fractions of diarrhoea: A00, A01,A03, A04, A06-A09,
  - Intestinal nematode infections: B76-B77, B79,
  - Protein-energy malnutrition: E40-E46)

  ICD-10 is the International Statistical Classification of Diseases and Related Health Problems 10th Revision (German Modification).
- Disaggregation: type of disease

2. Comparison with global metadata

- Date of global metadata: July 2017
- Global metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-03-09-02.pdf
- The time series is compliant with the global metadata.

3. Data description

- The data on deaths is derived from the causes of death statistics conducted by the Federal Statistical Office (analysis of the official death certificates).

  The population data comes from the intercensal population updates, the basis of which is the last census conducted in 2011. The population data is rolled forward using statistical results on natural population change (births, deaths) and migrations. For 2010, the population was calculated backwards using the 2011 census and migration, birth and death statistics.

4. Accessibility of source data

- Deaths - GBE:
  https://www.gbe-bund.de/gbe/pkg_isgbe5.prc_menu_olap?p_uid=gast&p_aid=36812520&p_sprache=E&p_help=2&p_indnr=6&p_version=1&p_ansnr=85812731
- Average population – GENESIS online 12411-0041:
  https://www-genesis.destatis.de/genesis//online?operation=table&code=12411-0041&bypass=true&levelindex=1&levelid=1639396599054#abreadcrumb
- Population data based on Census 2011 – 1991 to 2011 (only available in German):
  https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsstand/_inhalt.html#sprg233540

5. Metadata on source data

- Quality Report - Causes of Death Statistics (only available in German):
  https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Gesundheit/todesursachen.pdf
- Quality Report - Microcensus 2020 (only available in German):
  https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/mikrozensus-2020.pdf

6. Timeliness and frequency

- Timeliness: t + 8.5 months
- Frequency: Annual

7. Calculation method

- Unit of measurement: Per 100,000 inhabitants
- Calculation method:

$$\text{Mortality rate}_i = \frac{\sum_{k_i} \text{Death of persons with allocated ICD } k_i \text{ [number]}}{\text{Population [number]}} \cdot 100{,}000$$

$i \in \{\text{Diarrhora}; \text{Intestinal nematode infections}; \text{Protein-energy malnutrition}\}$

$k_{\text{Diarrhora}} \in \{A\,00; ...; A\,04; A\,06; ...; A\,09\}$
$k_{\text{Intestinal nematode infections}} \in \{B\,76; B\,77; B\,79\}$
$k_{\text{Protein-energy malnutrition}} \in \{E\,40; ...; E\,46\}$