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|---|---|
| **SDG Goal 6** | **Clean water and sanitation** |
| **SDG Target 6.4** | **By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity** |
| **SDG Indicator 6.4.1** | **Change in water-use efficiency over time** |
| **Time series** | **Water use efficiency** |

## 1. General information on the time series

- Date of national metadata: 04 November 2021
- National data: http://sdg-indikatoren.de/en/6-4-1/
- Definition: The time series measures the change in the ratio of the value added in relation to the volume of water use over time.
- Disaggregation: economic activity

## 2. Comparison with global metadata

- Date of global metadata: July 2021
- Global metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-06-04-01.pdf
- The time series is not compliant with the global metadata, but provides additional information. According to the global metadata, only irrigated agriculture is included in the calculation, whereas here all types of agriculture are considered. The currency used to calculate the water use efficiency is euro and not US dollar.

## 3. Data description

- The sectors included to calculate the water use efficiency are: agriculture (including forestry and fishery); mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; constructions and all service sectors. The sectors correspond to the ISIC classification A-T. Water use efficiency (WUE) is defined as the water used per unit of production (in terms of gross value added in Euro). The data on GDP is calculated by the Federal Statistical Office's National Accounts as a secondary statistic. GDP is adjusted based on a price base changing every year (previous year's price base). After several revisions due to new data input, final results are available four years after the first preliminary release.
  Change in water use efficiency (CWUE) depicts the development of water use efficiency in relation to a baseline year (in this case year 2010).

## 4. Accessibility of source data

- Water consumption by each economic activity (only available in German): https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Umwelt/Materialfluesse-Energiefluesse/_inhalt.html#sprg238692
- Data on the gross value added for each sector (only available in German): https://www.destatis.de/DE/Themen/Wirtschaft/Volkswirtschaftliche-Gesamtrechnungen-Inlandsprodukt/_inhalt.html#sprg233858

## 5. Metadata on source data

- Quality Report - National Accounts: https://www.destatis.de/EN/Methods/Quality/QualityReports/National-Accounts-Domestic-Product/national-accounts.pdf

## 6. Timeliness and frequency

- Timeliness: Not available.
- Frequency: Every 3 years

## 7. Calculation method

- Unit of measurement: 2010 = 100
- Calculation method:

$$CWUEt = \frac{WUEt - WEUt{-}1}{WUEt{-}1} \cdot 100[\%]$$

with:
CWUE = Change in water use efficiency
WUE = Water use efficiency
t = reporting year