SDG 6 - Clean water and sanitation (statistical annex)

Statistics Explained

Ensure availability and sustainable management of water and sanitation for all (statistical annex)

Data extracted in May 2021.
Planned article update: June 2022.

EU trend of SDG 6 on clean water and sanitation

This article provides an overview of statistical data on SDG 6 'Clean water and sanitation' in the European Union (EU) . It is based on the set of EU SDG indicators for monitoring of progress towards the UN Sustainable Development Goals (SDGs) in an EU context.

This article is part of a set of statistical articles , which are based on the Eurostat publication 'Sustainable development in the European Union — Monitoring report on progress towards the SDGS in an EU context — 2021 edition' . This report is the fifth edition of Eurostat's series of monitoring reports on sustainable development, which provide a quantitative assessment of progress of the EU towards the SDGs in an EU context.

Indicator	Long-term trend (past 15 years)	Short-term trend (past 5 years)
Sanitation		
People living in households without basic sanitary facilities (such as bath, shower, indoor flushing toilet)	:	
Population connected to at least secondary waste water treatment	:	:
Water quality		
Biochemical oxygen demand in rivers	 (1)	 (1)
Nitrate in groundwater	 (1)	 (1)
Phosphate in rivers	 (2)	 (2)
Inland water bathing sites with excellent water quality (*)	:	
Water use efficiency		
Water exploitation index (WEI+)	:	:

(*) Multi-purpose indicator.
(1) Data refer to an EU aggregate based on 16 Member States.
- (2) Data refer to an EU aggregate based on 18 Member States.

Table 1: Indicators measuring progress towards SDG 6, EU

Symbol	With quantitative target	Without quantitative target
	Trends for indicators marked with this 'target' symbol are calculated against an official and quantified EU policy target. In this case the arrow symbols should be interpreted according to the left-hand column below. Trends for all other indicators should be interpreted according to the right-hand column below.	
	Significant progress towards the EU target	Significant progress towards SD objectives
	Moderate progress towards the EU target	Moderate progress towards SD objectives
	Insufficient progress towards the EU target	Moderate movement away from SD objectives
	Movement away from the EU target	Significant movement away from SD objectives
:	Calculation of trend not possible (for example) time series too short)	

Table 2: Explanation of symbols for indicating progress towards SD objectives and targets

People living in households without basic sanitary facilities (such as bath, shower, indoor flushing toilet)

This indicator reflects the share of total population having neither a bath, nor a shower, nor an indoor flushing toilet in their household. Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC) .

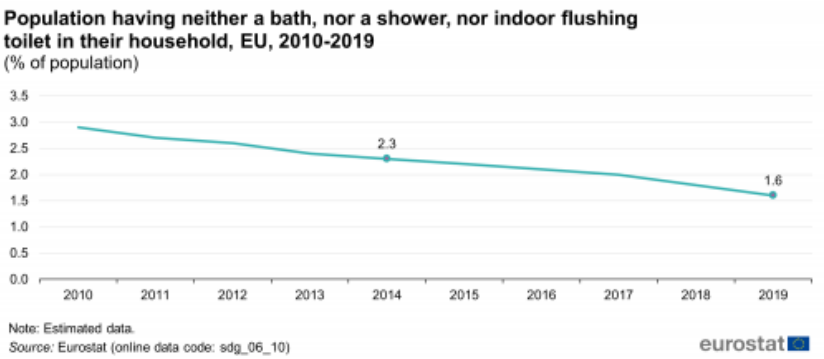

Figure 1: Population having neither a bath, nor a shower, nor indoor flushing toilet in their household, EU, 2010-2019 (% of population) Compound annual growth rate (CAGR) for the total rate: – 7.0 % per year in the period 2014–2019. Source: Eurostat (sdg_06_10)

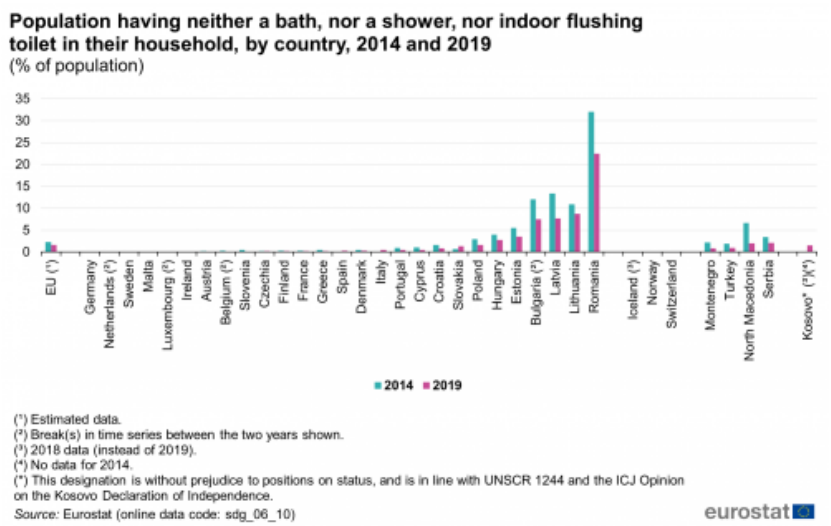

Figure 2: Population having neither a bath, nor a shower, nor indoor flushing toilet in their household, by country, 2014 and 2019 (% of population) Source: Eurostat (sdg_06_10)

Population connected to at least secondary wastewater treatment

This indicator measures the percentage of the population connected to waste water treatment systems with at least secondary treatment. Thereby, waste water from urban or other sources is treated by a process generally involving biological treatment with a secondary settlement or other process that removes organic material and reduces its biochemical oxygen demand (BOD) by at least 70 % and chemical oxygen demand (COD) by at least 75 %. Data presented in this section stem from the Water Statistics of the European Statistical System (ESS).

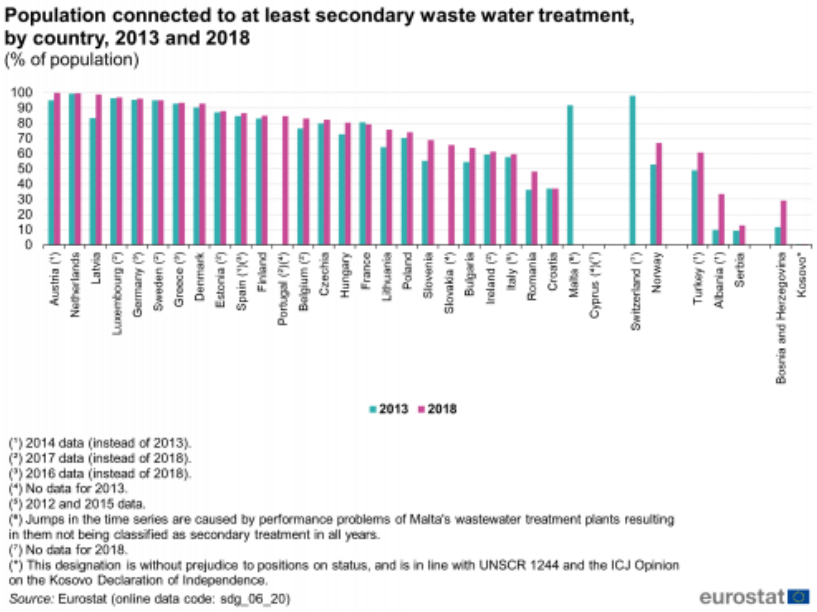

Figure 3: Population connected to at least secondary wastewater treatment, by country, 2013 and 2018 (% of population) Source: Eurostat (sdg_06_20)

Biochemical oxygen demand in rivers

This indicator measures the mean annual five-day biochemical oxygen demand (BOD5) in rivers, weighted by the number of measuring stations. BOD5 is a measure of the amount of oxygen that aerobic microorganisms need to decompose organic substances in a water sample over a five-day period in the dark at 20 °C. High BOD5 values are usually a sign of organic pollution, which affects water quality and aquatic environment. Organic pollution caused by discharges from waste water treatment plants, industrial effluents and agricultural run-off increase concentrations of this parameter. The cleanest rivers have a five-day BOD of less than 1 milligram per litre (mg/L). Moderately polluted rivers show values ranging from 2 to 8 mg/L. Data presented in this section stem from the EEA Waterbase database on the status and quality of Europe's rivers.

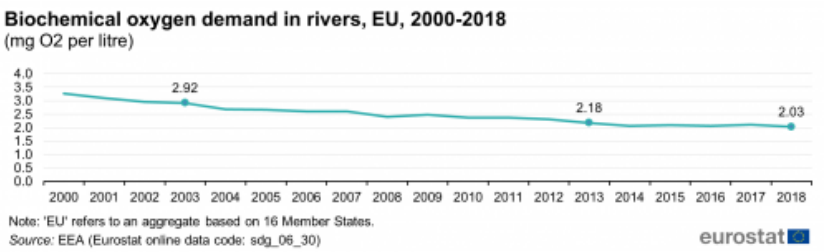

Figure 4: Biochemical oxygen demand in rivers, EU, 2000-2018 (mg O2 per litre) Compound annual growth rate (CAGR) for the total rate: – 2.4 % per year in the period 2003–2018; – 1.4 % per year in the period 2013–2018. Source: EEA (Eurostat (sdg_06_30))

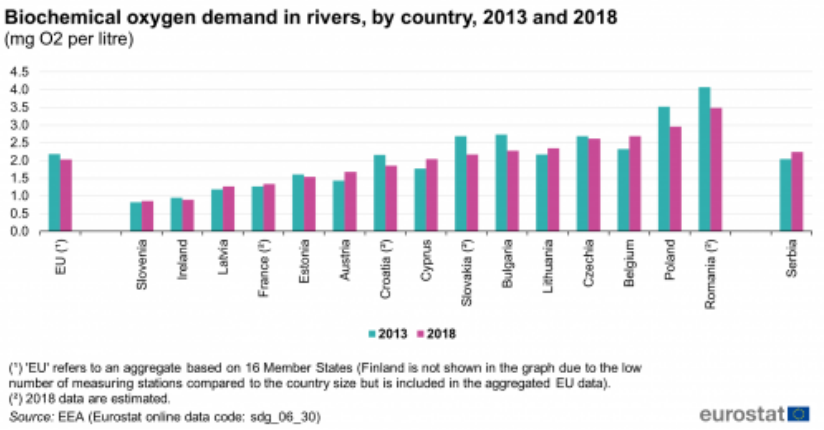

Figure 5: Biochemical oxygen demand in rivers, by country, 2013 and 2018 (mg O2 per litre).png Source: EEA (Eurostat (sdg_06_30))

Nitrate in groundwater

This indicator refers to concentrations of nitrate (NO3) in groundwater measured as milligrams per litre (mg NO3/L). Data are taken from well samples and aggregated to annual average concentrations for groundwater bodies in Europe. Only complete series after inter/extrapolation are included. The indicator is relatively robust in presenting the overall trend in water quality, however, the distribution of measuring stations over groundwater bodies might mask exceedances of nitrate levels in certain polluted areas. The data stem from the EEA Waterbase database on the status and quality of Europe's rivers.

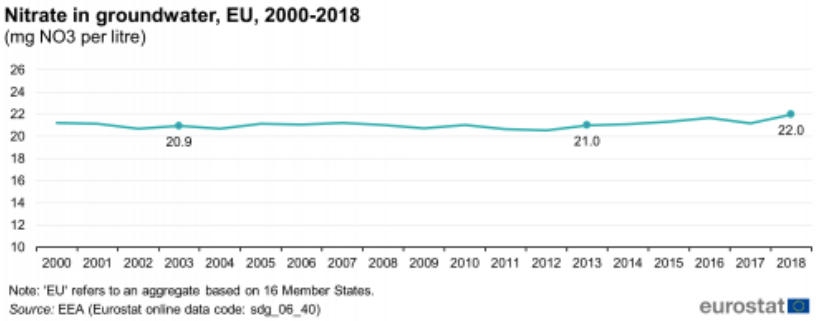

Figure 6: Nitrate in groundwater, EU, 2000-2018 (mg NO3 per litre) Compound annual growth rate (CAGR) for the total rate: 0.3 % per year in the period 2003–2018; 0.9 % per year in the period 2013–2018. Source: EEA (Eurostat (sdg_06_40))

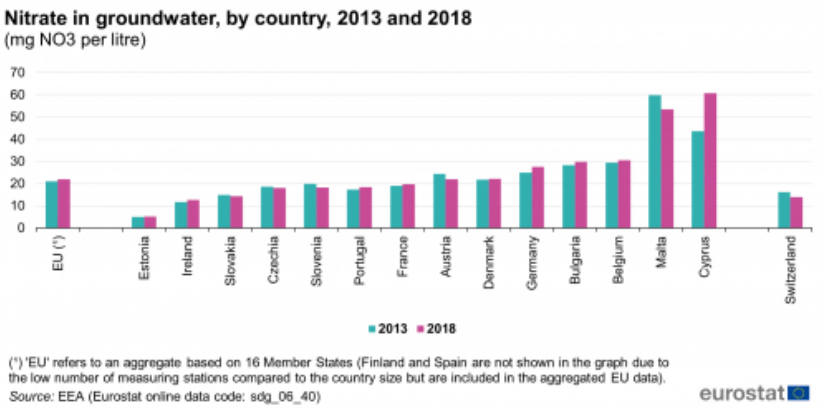

Figure 7: Nitrate in groundwater, by country, 2013 and 2018 (mg NO3 per litre) Source: EEA (Eurostat (sdg_06_40))

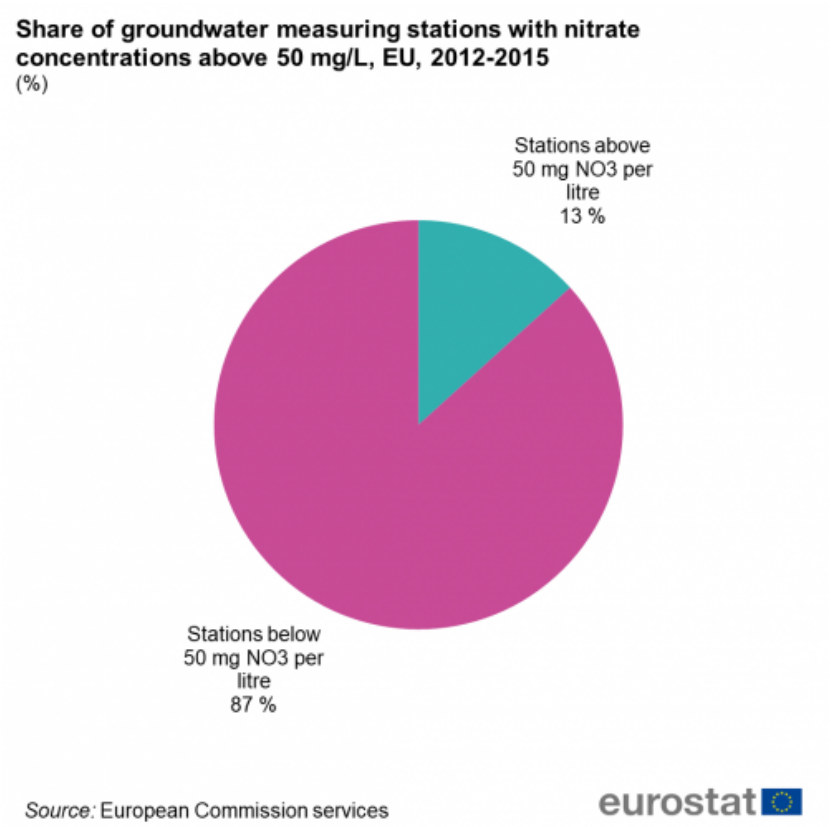

Figure 8: Share of groundwater measuring stations with nitrate concentrations above 50 mg_L, EU, 2012-2015 (%) Source: European Commission services.

Phosphate in rivers

This indicator measures the concentration of phosphate (PO4) per litre in the dissolved phase from water samples from river stations and aggregated to annual average values. At high concentrations phosphate can cause water quality problems, such as eutrophication , by triggering the growth of aquatic plants including algae. The data stem from the EEA Waterbase database on the status and quality of Europe's rivers.

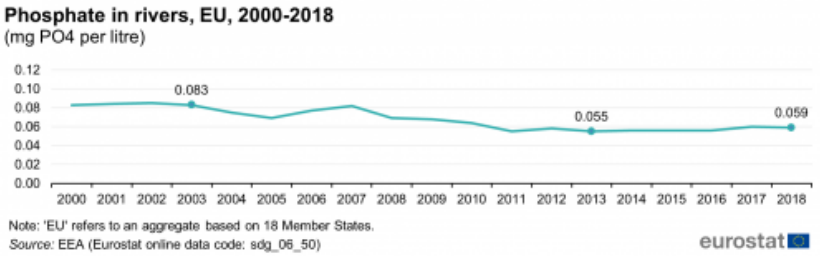

Figure 9: Phosphate in rivers, EU, 2000-2018 (mg PO4 per litre) Compound annual growth rate (CAGR) for the total rate: – 2.2 % per year in the period 2003–2018; 1.4 % per year in the period 2013–2018. Source: EEA (Eurostat (sdg_06_50))

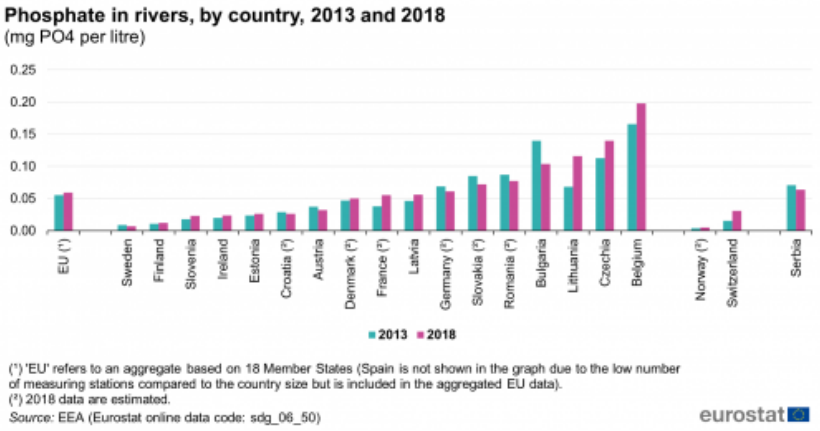

Figure 10: Phosphate in rivers, by country, 2013 and 2018 (mg PO4 per litre) Source: EEA (Eurostat (sdg_06_50))

Water exploitation index (WEI+)

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The regionalised water exploitation index (WEI+) measures total fresh water use as a percentage of the long-term annual average available water (LTAA) from renewable fresh water resources (groundwater and surface water) at a given time and place. It quantifies how much water is abstracted and how much is returned after use to the environment via basins. The difference between water abstraction and return is regarded as water consumption, and in combination with LTAA, illustrates the pressure on renewable freshwater resources due to water abstraction. In the absence of Europe-wide agreed formal targets, values above 20 % are generally considered to be a sign of water scarcity, while values equal or greater than 40 % indicate situations of severe water scarcity[1], meaning the use of freshwater resources is unsustainable. Annual calculations of the WEI+ at national level do not reflect uneven spatial and seasonal distribution of resources and may therefore mask water stress which occurs on a seasonal or regional basis. The indicator is a result of data modelling by the EEA based on data from the WISE SoE-Water quantity database (WISE 3) and other open sources (JRC, Eurostat, OECD, FAO) and including gap filling methods.

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Figure 11: Water exploitation index plus (WEI+), EU, 2000-2017 (% of renewable water resources) Source: EEA (Eurostat (sdg_06_60))

[1]European Environment Agency (2020), Use of freshwater resources in Europe.

Figure 12: Water exploitation index plus (WEI+), by country, 2012 and 2017 (% of renewable water resources) Source: EEA (Eurostat (sdg_06_60))

See also

- All articles on sustainable development goals

Database

- Sustainable Development Indicators

Dedicated section

- Sustainable Development Indicators

Methodology

More detailed information on EU SDG indicators for monitoring of progress towards the UN Sustainable Development Goals (SDGs), such as indicator relevance, definitions, methodological notes, background and potential linkages, can be found in the introduction of the publication 'Sustainable development in the European Union — Monitoring report on progress towards the SDGS in an EU context — 2021 edition' .