

# Sustainable Development Goal indicator for ambient water quality - SDG 6.3.2

UN Environment Global Environment Monitoring System for Water (GEMS/Water)



## SDG indicator 6.3.2

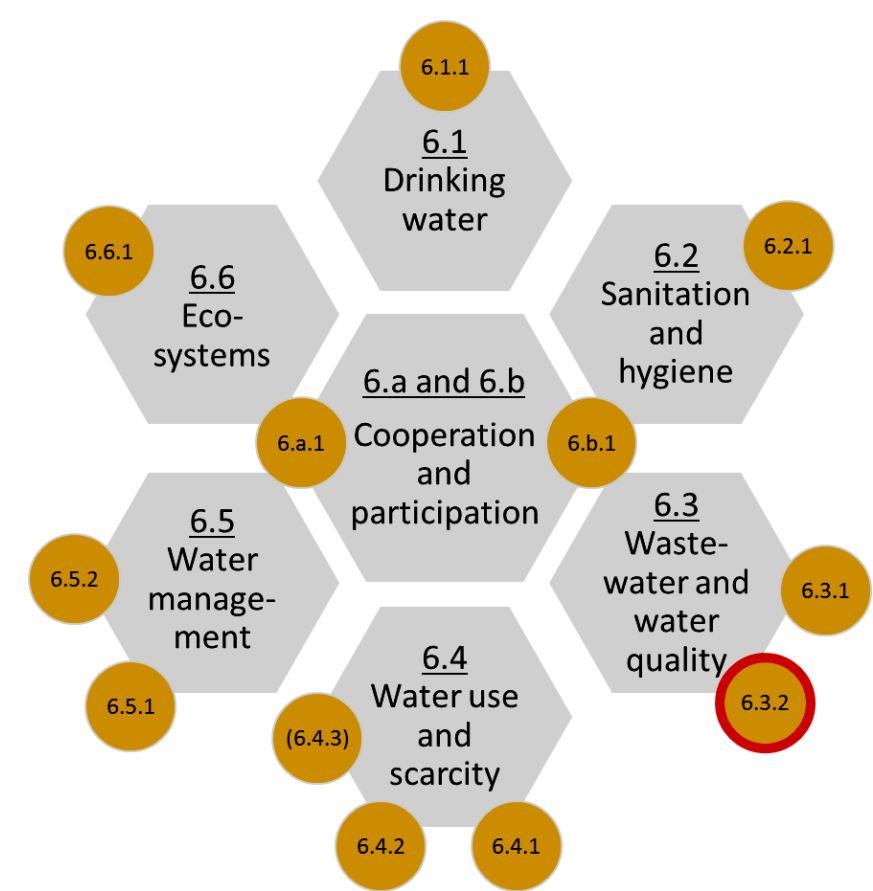
**Goal 6:** Ensure access to water and sanitation for all

**Target 6.3:** By 2030 improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

**Indicator 6.3.2: Proportion of water bodies with good ambient water quality**

UN Environment is the custodian agency for indicator 6.3.2 and has delegated responsibility to GEMS/Water for:

- Methodology development and implementation
- Country support and capacity development
- Data collection, quality control and reporting

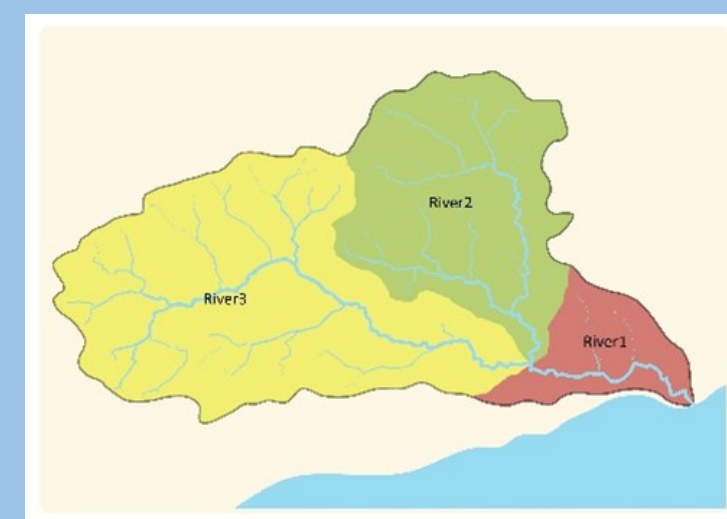


## Methodology

Waterbodies need to be defined within the country - rivers, lakes and groundwaters

Good water quality is assessed by comparing measurements with designated target values for specific parameters\* from specific parameter

Good water quality represents at least 80% compliance of measurements with



## Core parameters for water quality index

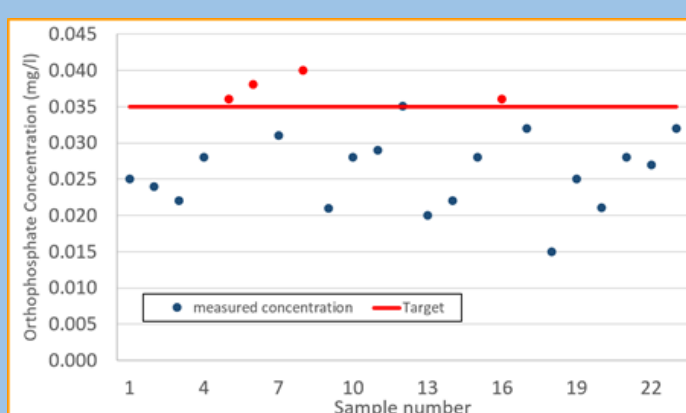
Parameter group	Parameter*	River	Lake	Ground-water
Oxygen	Dissolved oxygen			
	Biological oxygen demand, Chemical oxygen demand	x	x	
Salinity	Electrical conductivity			
	Salinity, Total dissolved solids	x	x	x
Nitrogen <sup>#</sup>	Total oxidised nitrogen			
	Total nitrogen, Nitrite, Ammoniacal nitrogen	x	x	
	Nitrate**			x
Phosphorous <sup>#</sup>	Orthophosphate			
	Total phosphorous	x	x	
Acidification	pH	x	x	x

<sup>#</sup> Countries should include the fractions of N and P which are most relevant in the national context

\*\* Nitrate is suggested for groundwater due to associated human health risks

## Level 1

Reported by all countries where possible  
- core parameters only combined into water quality index

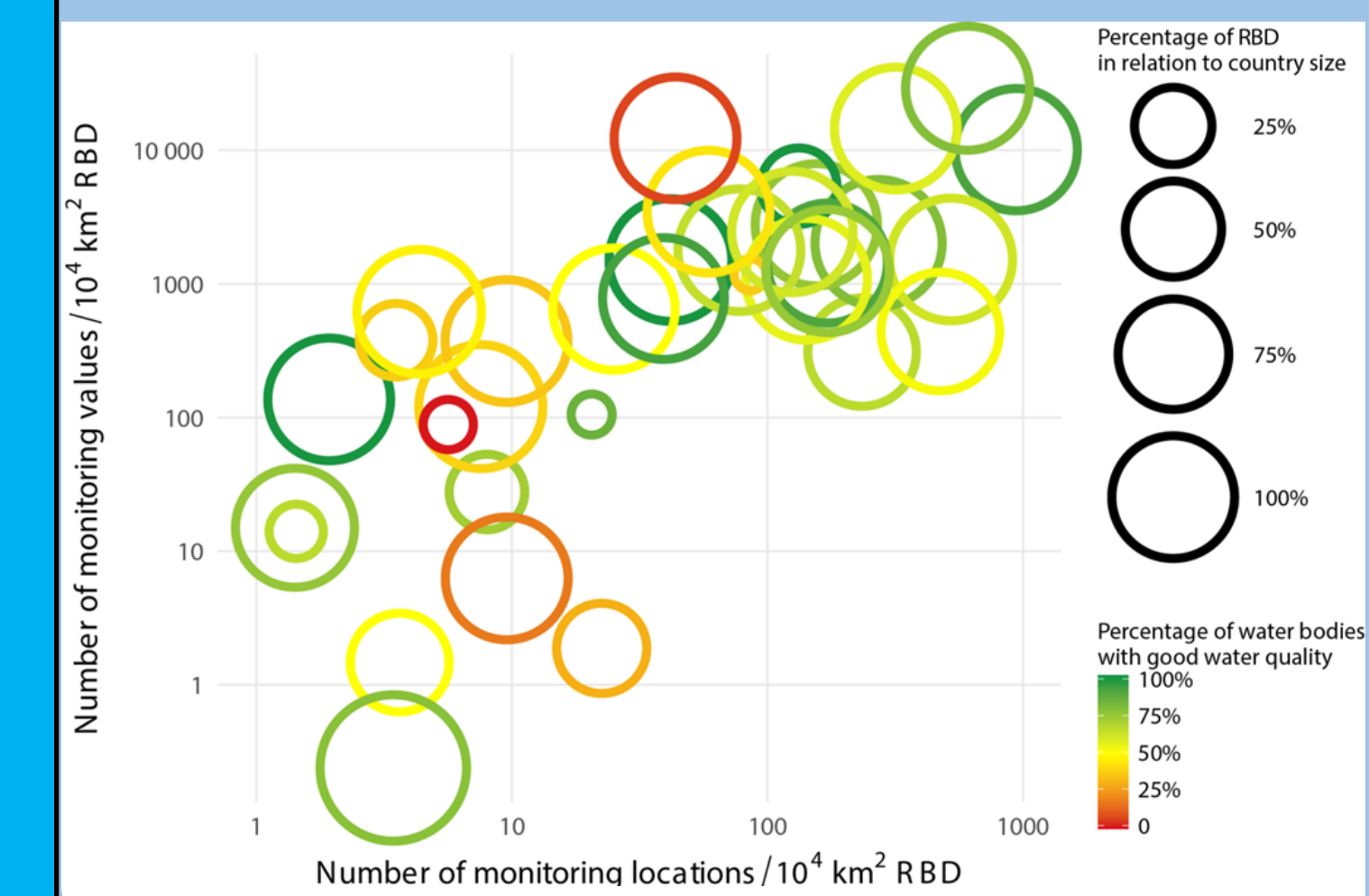


## Level 2

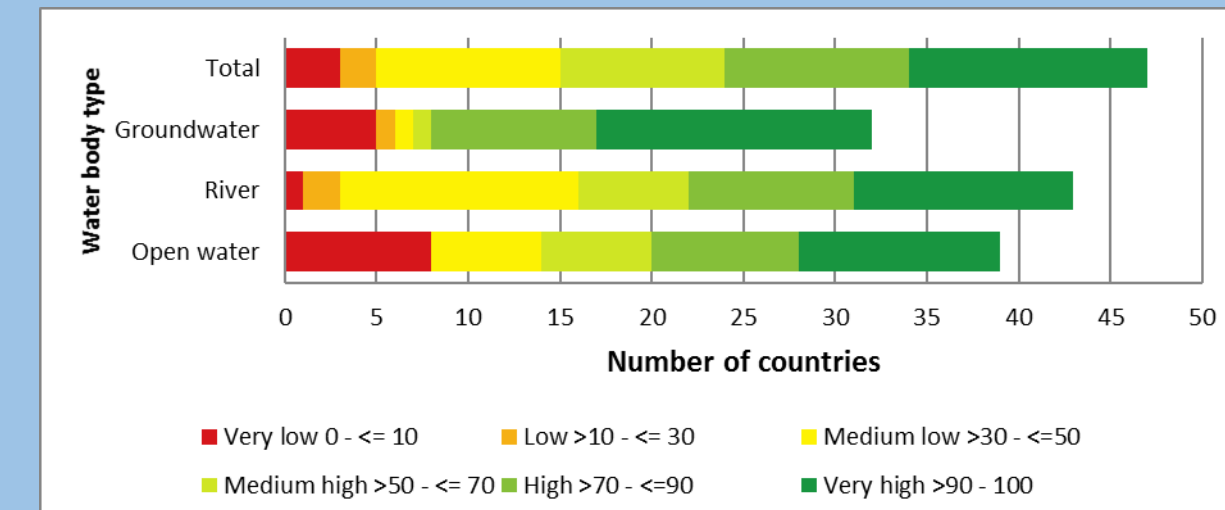
Optional, based on country's water quality monitoring capacity  
- additional parameters  
- additional approaches

## Results

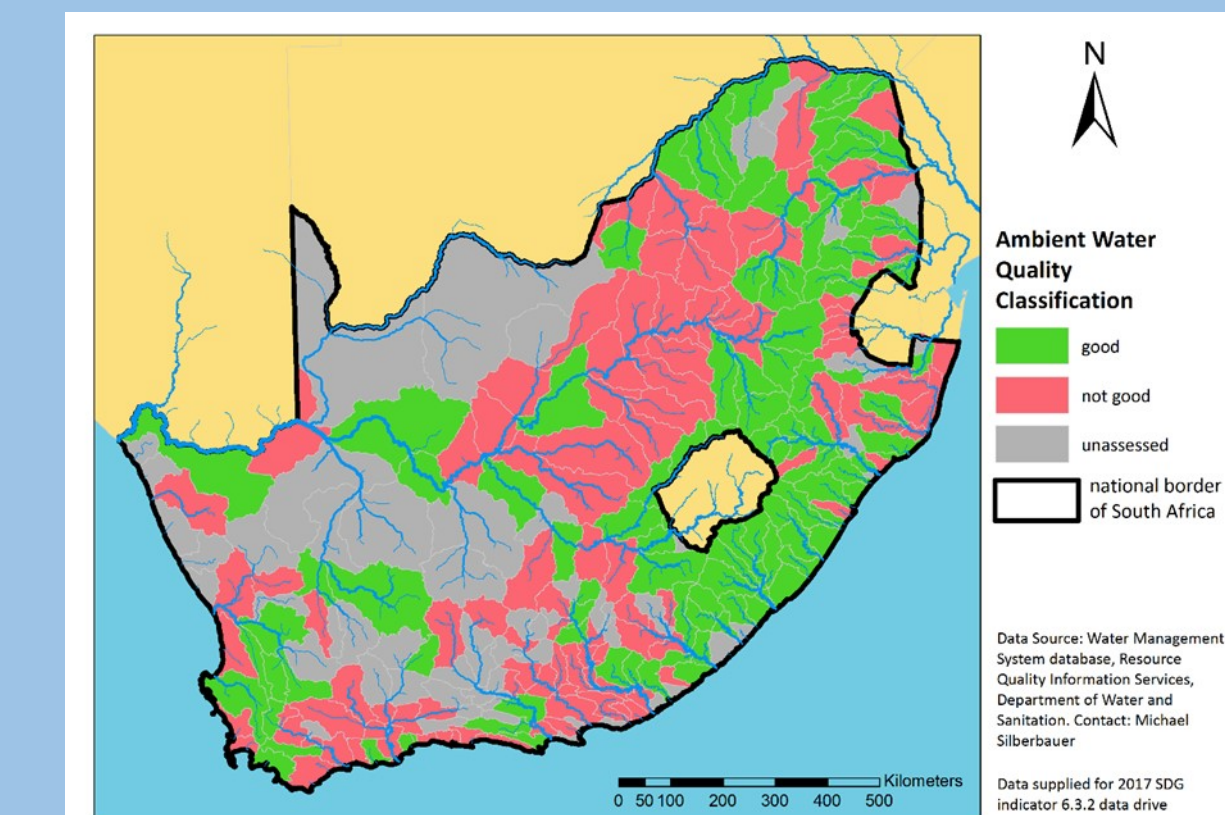
47 countries assessed and classified one or more water bodies  
• 39 countries included lakes  
• 43 included rivers  
• 32 included groundwater bodies



Colour of circle = proportion of water bodies with good ambient water quality; Size of circle = percentage of country included in the monitoring; Position of circle = number of monitoring stations (x axis) an monitoring values (y axis) used in



Some countries based their indicator calculation on a low density of monitoring stations and monitoring values over a large proportion of the country (large circles, located bottom left). As a result, it is unlikely that the submitted value will reflect the actual water quality, when compared with countries using many stations and monitoring values (top right).



Example of information provided by SDG indicator 6.3.2 - South Africa

Higher GDP countries used a far greater number of monitoring stations (y axis is a log scale). Several higher GDP countries only used data from a selection of their monitoring network stations.

Source: UN Environment and UN Water 2018 <http://www.unwater.org/publications/progress-on-ambient-water-quality-632/>

## Baseline data drive 2017

**52 countries out of 193 Member States attempted the methodology and reported an indicator value**

Submissions were received from:

- all world regions
- developed and least developed countries

Submissions highlighted that:

- Water quality monitoring capacity varies greatly
- Many countries did not have ambient water quality targets
- Some countries do not monitor the quality of ambient freshwater
- Some countries reported the indicator based on data from thousands of monitoring stations
- Some countries did not understand the requirements of the methodology

## Next steps

**Technical feedback process**

- Questionnaires, written submissions, on-line consultations
- Expert group workshop—Oct 2018

**Synthesis of feedback and draft revised methodology—Nov 2018**

**Finalisation of revised methodology 2019**

**Increased capacity development 2019-2020**

**Second data drive 2021**

**Development of Level 2**

- Exploring incorporation of ecosystem and biological quality indices
- Exploring use and integration of EO and Citizen Science water quality data

## Challenges

### Monitoring capacity challenges

- depending on sufficient monitoring activity
- reliable and accessible data management
- timely and consistent analytical capacity
- capacity to assess data data

### Methodology challenges

- setting of target values
- defining sub-national reporting units
- selection of water quality parameters
- aligning the assessment period

### Other challenges

- time needed to report
- reporting framework alignment (burden)
- institutional set-up for national reporting
- monitoring of groundwaters
- incorporating additional and new data sources

UN Environment GEMS/Water programme comprises: UN Environment, Global Programme Co-ordination Unit, Nairobi, Kenya; GEMS/Water Capacity Development Centre, Cork, Ireland; GEMS/Water Data Centre, Koblenz, Germany

Further information on indicator 6.3.2 is available at:  
<http://www.sdg6monitoring.org/indicators/target-63/indicators632/>  
<http://www.unwater.org/publications/progress-on-ambient-water-quality-632/>

## Development, testing and reporting

