

*Workshop on Protecting Water Quality
and Biodiversity for Improved Water
Management Meeting*

SDG Indicator 6.3.2 – Water Quality



Kilian Christ, UNEP GEMS/Water

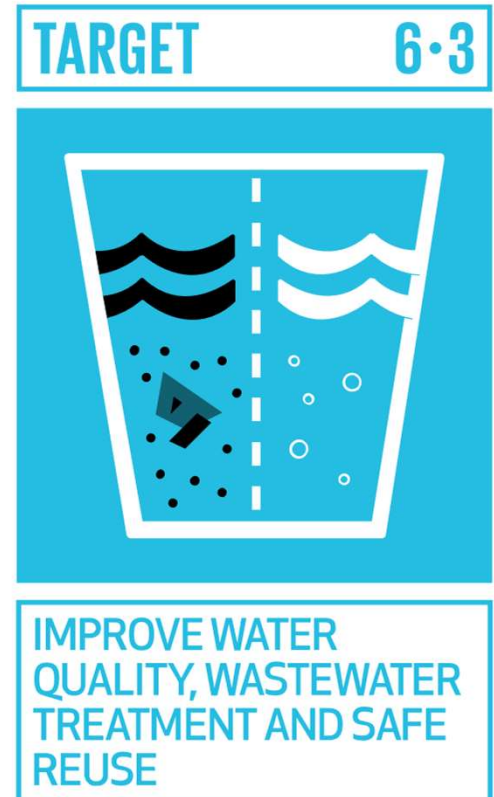
SDG Indicator 6.3.2 – Progress Summary

- 3rd global data drive complete (2017 > 2020 > 2023)
 - 120 Countries have reported
- Indicator Progress Report will be published in August 2024
- 2024 Feedback Process underway
- Continue to provide support
- Prepare for 2026 Data Drive

Target 6.3 and Indicator 6.3.2

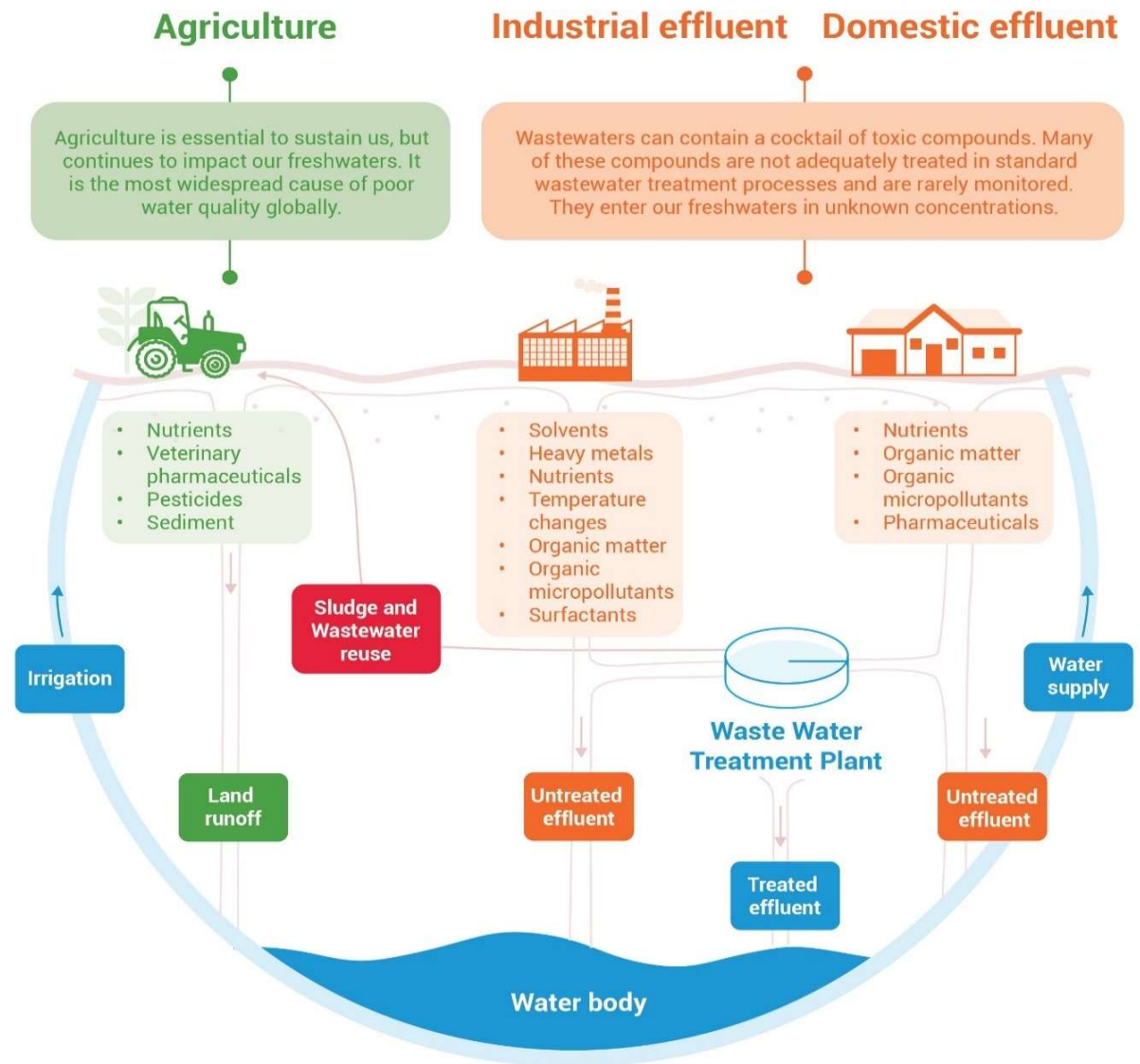
By 2030, **improve water quality** by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

- Indicator 6.3.1 - Proportion of wastewater safely treated
- **Indicator 6.3.2 - Proportion of bodies of water with good ambient water quality**



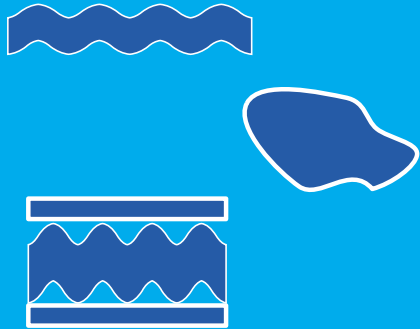
Pressures on quality

- **Agriculture**
- **Wastewater**
- Mining
- Deforestation
- Sediment/sand mining
- Hydromorphological changes (dams)
- Invasive species
- Habitat loss
- Over abstraction
- Multi-stressor effects

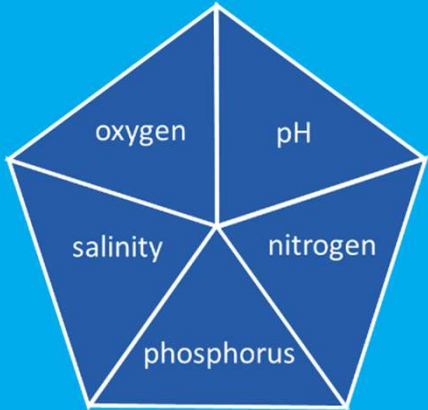


Proportion of bodies of water with good ambient water quality

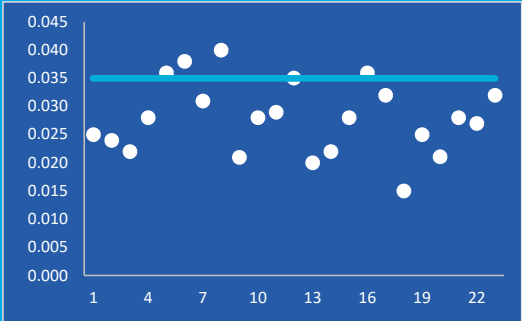
Waterbodies need to be defined within the country:
rivers,
lakes, and
groundwaters



Water quality is classified by comparing measurements with **target values** for specific **parameters** from specific **parameter groups**

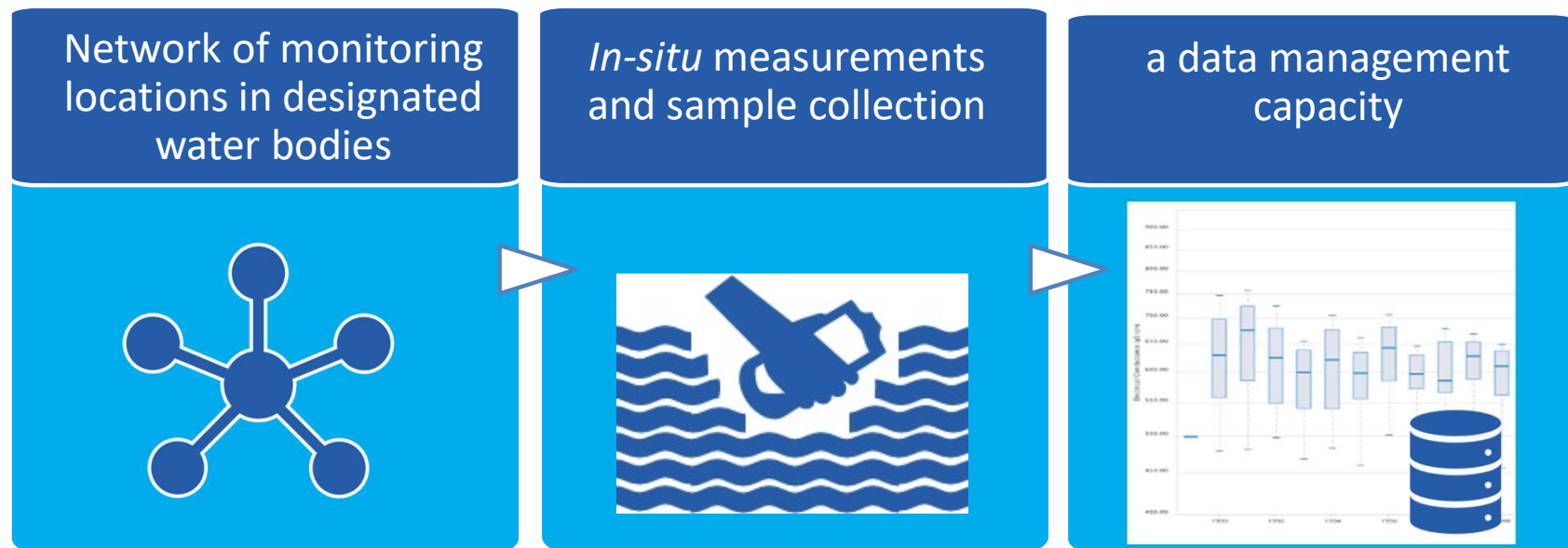


Good water quality represents at least **80%** compliance of measurements with target values



Methodology Description

Indicator 6.3.2 provides information on the current status of freshwater bodies, and how water quality changes over time. But you need:



We have learnt that many countries have data gaps, and do not have a clear understanding of the quality of their freshwaters.

Core Parameter Groups

Parameter group	Parameter	River	Lake	Groundwater	Reason for Inclusion / Pressure
Oxygen	Dissolved oxygen	•	•		Measure of oxygen depletion
	<i>Biological oxygen demand, Chemical oxygen demand</i>	•			Measure of organic pollution
Salinity	Electrical conductivity <i>Salinity, Total dissolved solids</i>	•	•	•	Measure of salinisation and helps to characterises the water body
Nitrogen*	Total oxidised nitrogen <i>Total nitrogen, Nitrite, Ammoniacal nitrogen</i>	•	•		Measure of nutrient pollution
	Nitrate**			•	Health concern for human consumption
Phosphorous*	Orthophosphate <i>Total phosphorous</i>	•	•		Measure of nutrient pollution
Acidification	pH	•	•	•	Measure of acidification and helps to characterises the water body

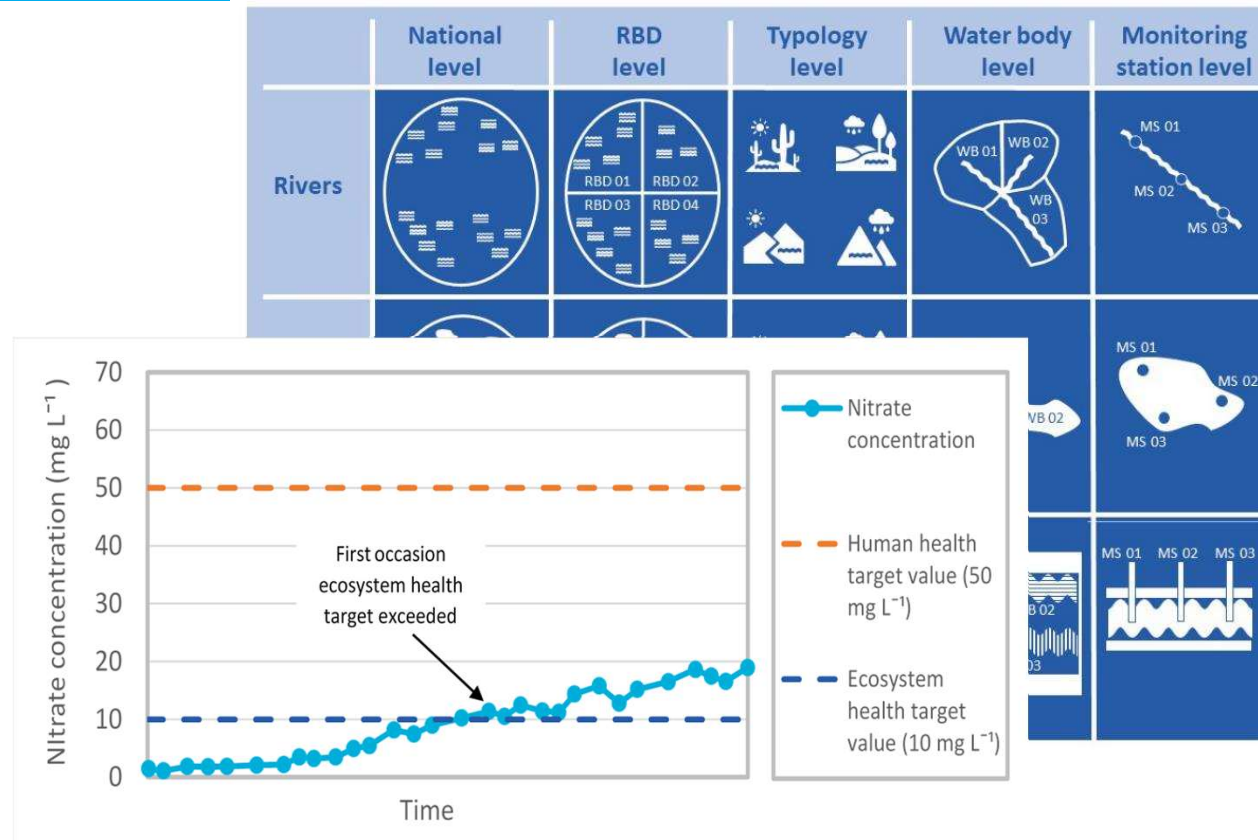
* Countries should include the fractions of N and P which are most relevant in the national context

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

Target-based approach

Measured values are compared to numerical target values that represent “good ambient water quality”

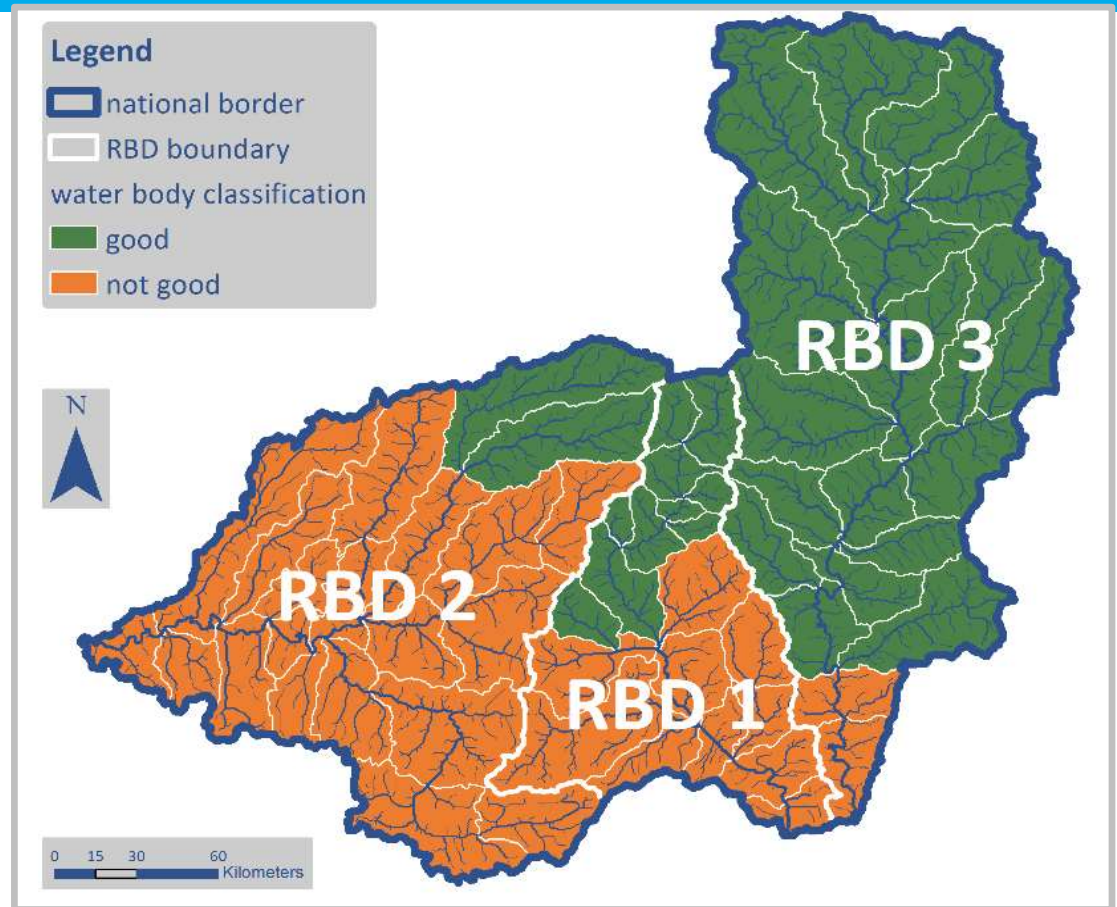
These targets can be national, or more specific.



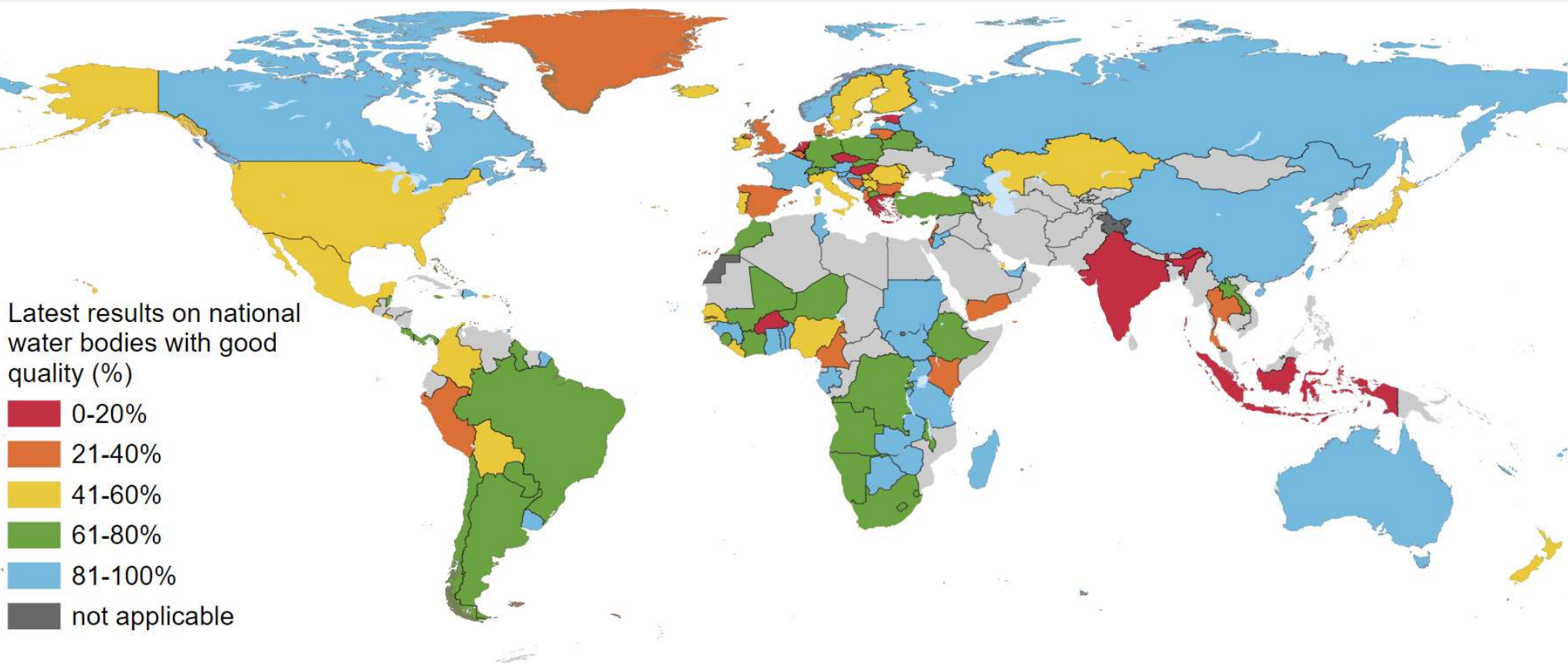
Reporting Basin Districts and Water bodies

The indicator is the “Proportion of water bodies...”, these can be sections of a river, a lake or an aquifer.

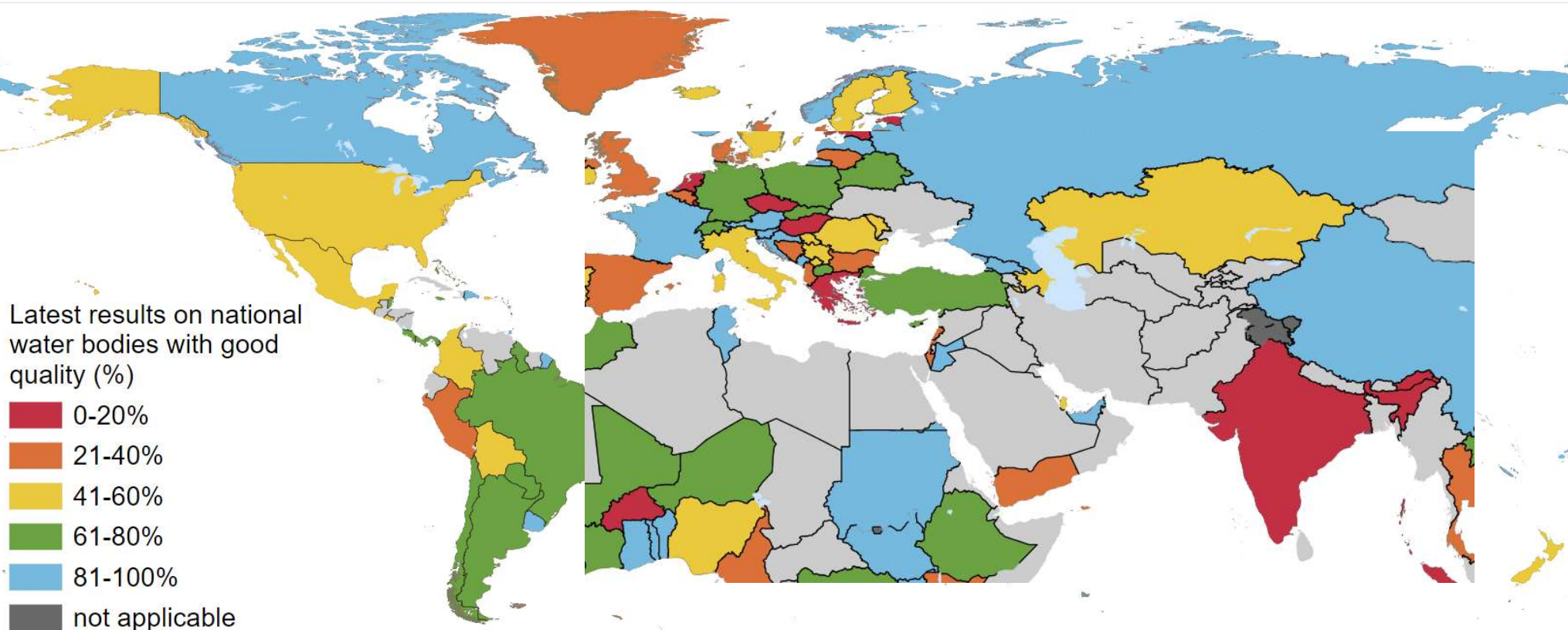
These water bodies are grouped into Reporting Basin Districts



SDG Indicator 6.3.2 – Global Map

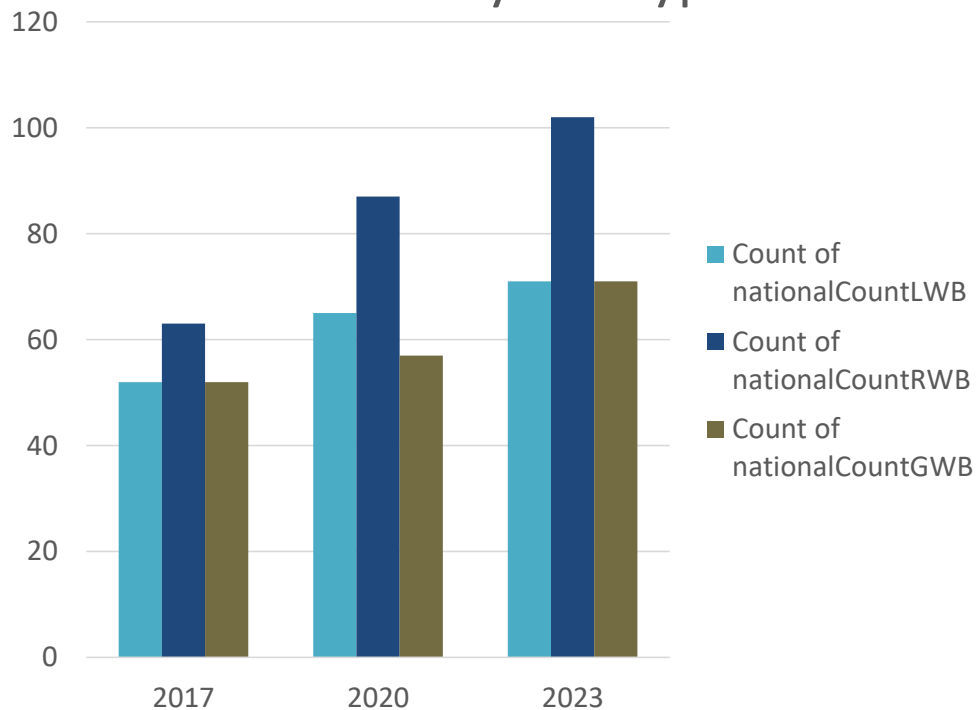


SDG Indicator 6.3.2 – Regional Focus

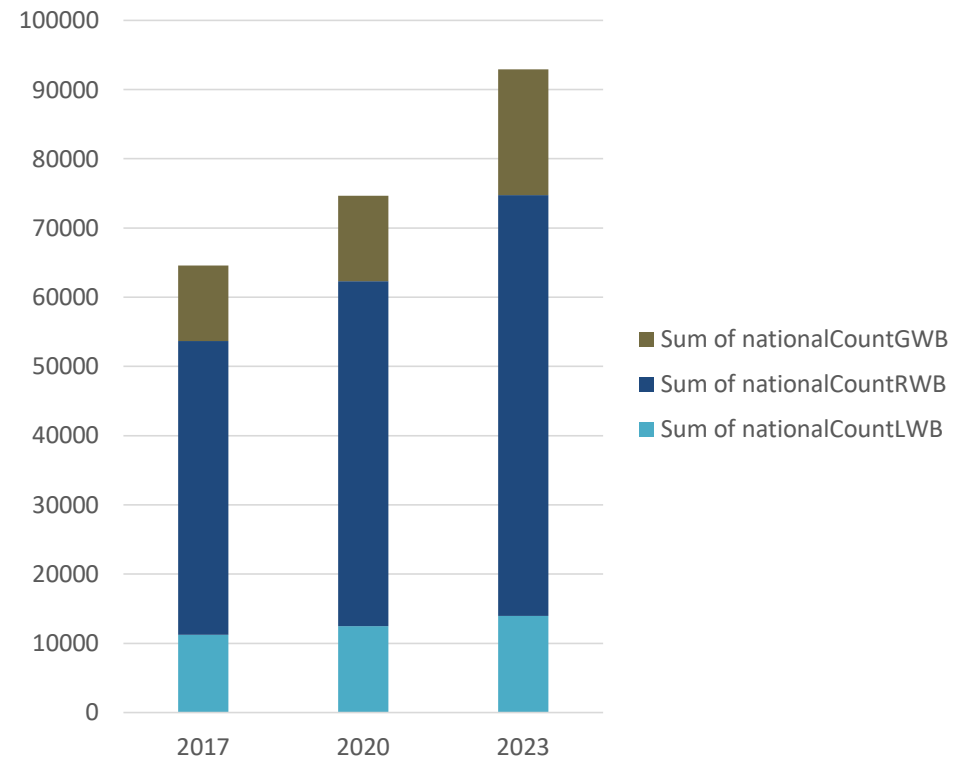


SDG Indicator 6.3.2 – Reporting summary

Number of Countries Reporting by WB type



Number of WBs Reported



SDG Water Quality Hub



UN WFP SDG Water Quality Hub

Submission Results 2020

Quick guide Log in

SDG Water Quality Hub

SDG indicator 6.3.2 tracks progress towards SDG target 6.3. This target aims to improve water quality of rivers, lakes and aquifers globally.

This portal is designed for those tasked with reporting on this indicator for their country. It streamlines the reporting process, provides real-time feedback and insight into submissions, as well as information on the supports available.

The third global data drive is taking place in 2023. During previous drives of 2020 and 2017, 97 countries have reported on this indicator so far. Those countries, as well as those that report in 2023 are shown on the map.

Translate page to other languages

Reported Not reported

Sustainable Development Goal 6: Ensure access to water and sanitation for all.

SDG 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.

SDG indicator 6.3.2: Proportion of bodies with good ambient water quality.

Submit data for SDG indicator 6.3.2: Level 1
Level 1 reporting focusses on the five core parameters. This is the same as that reported during previous data drives in 2017 and 2020.

Prepare for submission
Submit Level 1 Data

Submit data for SDG indicator 6.3.2: Level 2
Level 2 reporting is optional and allows countries to report on water quality beyond the five core parameters of Level 1.

Prepare for submission
Submit Level 2 Data

Results
Summary results for current and previous reporting years.

2017 Results
2020 Results
2023 Results

Support Available
Support is available to help with key aspects of the indicator methodology.

- Support platform
- Indicator calculation service
- Establish target values
- Additional support

Read more

Important Concepts

Level 1 and Level 2 Reporting

Level 1 reporting covers the pressures on water quality that are relevant at the global scale, whereas Level 2 goes further and provides the opportunity to include information that relates to pressures of national or sub-national relevance.

Level 1 reporting is essential because it provides global comparability which is essential for all SDG indicators.

Level 2 provides this flexibility and makes it possible to make water quality information available through the SDG reporting framework.

Read more

📍 National and subnational reporting

This indicator can be reported at three spatial scales: water body level, reporting basin/district level (based on river basin delineations), or, at the national level.

If the water body or RBD levels are chosen, the national indicator will be calculated automatically.

Countries are encouraged to report at sub-national scales because national scores fail to provide insight into where water quality is improving or degrading within a country. Reporting at this finer resolution allows other data to be overlaid to provide greater insight into drivers of water quality and also, it allows transboundary water quality trends to be identified.

Read more

📍 Water body definitions

SDG indicator 6.3.2 is relevant for rivers, lakes and aquifers.

It is these hydrological units which are classified as either good or not good water quality. Defining lake water bodies is relatively straightforward, whereas for rivers and aquifers the task is more difficult.

Read more

📍 Target-based approach to classify water quality

Indicator 6.3.2 uses a target-based approach to classify water quality. This means that the measured values are compared with numerical values that represent "good water quality".

Show more

Thank you

Further info:

- Latest progress report:
<https://www.unwater.org/publications/progress-on-ambient-water-quality-632-2021-update/>
- Contact: SDG632@un.org



Change in extent of water-related ecosystems

SDG indicator 6.6.1

9th July 2024

Workshop on Protecting Water Quality and Biodiversity for Improved Water Management

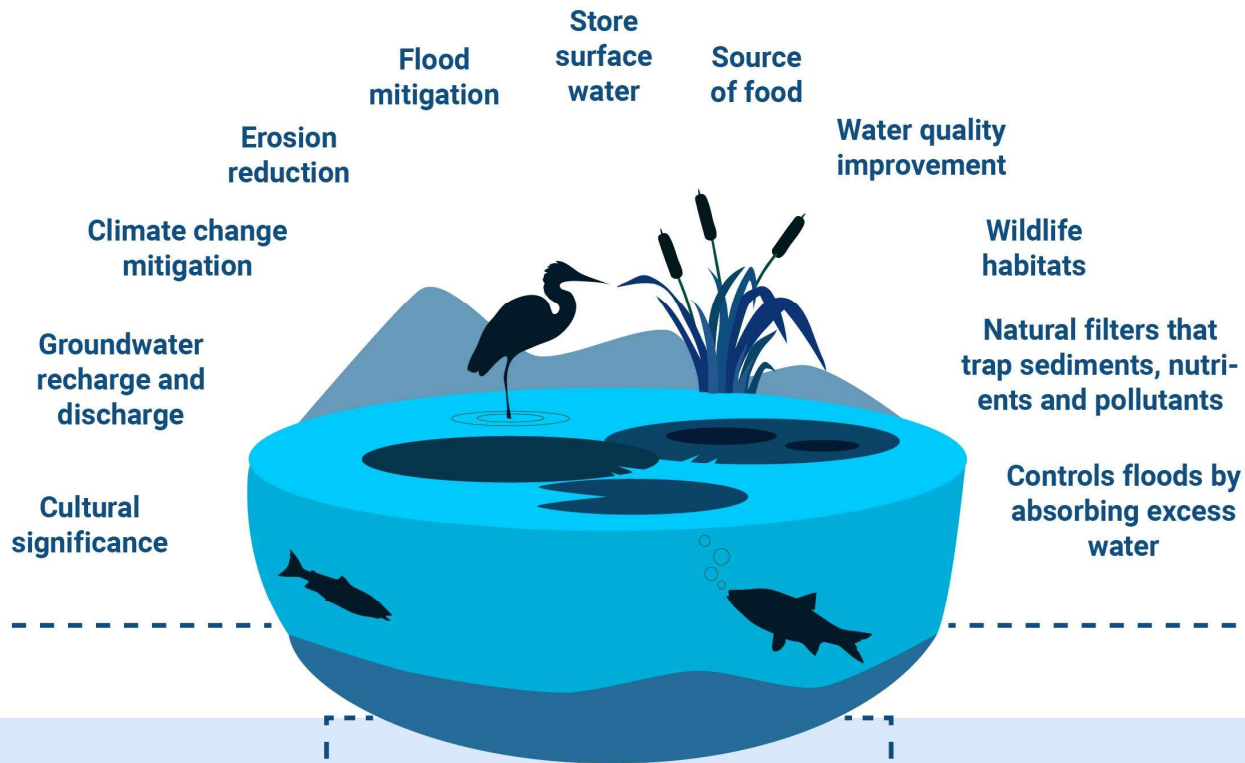
Stuart Crane

Freshwater Unit, UN Environment Programme

stuart.crane@un.org

UN 
environment
programme

50 
1972-2022



“Conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”



“A shared blueprint for peace and prosperity for people and the planet, now and into the future”



“... to guide actions worldwide through 2030, to preserve and protect nature and its essential services to people”



System of Environmental Economic Accounting

“an international statistical standard for reporting on ecosystem assets and services and to facilitate the development of indicators and analysis on the economy-environment nexus”

Protecting freshwater ecosystems and their biodiversity


- Freshwater ~1% of the planet
- Freshwater biodiversity = 140,000 species
- Last 50 years = 80% decline of freshwater biodiversity populations
- 25% facing extinction
- Inland wetlands decline of 60%
- 1 in 5 river basins now experiencing significant change in available freshwater
- Most endangered ecosystems globally.....



Protect and restore water-related ecosystems - target 6.6

Change in extent of water-related ecosystems - indicator 6.6.1









Current SDG 6.6.1 indicator status



Off-track Neutral On-track

The current status is an accumulation of recent data for all SDG 6.6.1 sub-indicators. For an in-depth explanation of this component [read the methods](#)

SDG 6.6.1 Data ^

-  River Flow Dynamics v
-  Permanent Surface Water Extent Dynamics v
-  Seasonal Surface Water Extent Dynamics v
-  Reservoir Extent Dynamics v
-  Water Quality of Large Lakes: Trophic State v
-  Water Quality of Large Lakes: Turbidity v
-  Inland Wetland Extent v
-  Mangrove Area Changes v

Check the status of freshwater ecosystems at UNEPs Freshwater Ecosystem Explorer

www.sdg661.app



The Freshwater Ecosystems Explorer is a free and easy to use data platform. It provides accurate, up-to-date, high-resolution geospatial data depicting the extent freshwater ecosystems change over time.

By helping decision-makers understand dynamic ecosystem changes, the data presented on this open access platform is intended to drive action to protect and restore freshwater ecosystems and enable countries to track progress towards the achievement of Sustainable Development Goal Target 6.6. Data can be visualized and downloaded at national, sub-national and basin levels. Data is available for the following:

Permanent & Seasonal Surface Waters | Reservoirs | Wetlands | Mangroves | Water Quality

All data on the site is updated annually and produced to align with the SDG indicator 6.6.1 methodology.

The United Nations Environment Programme is the custodian agency for SDG indicator 6.6.1.

Example of SDG 6.6.1 country data and trends: river flow, Iran



Search for a country
Iran (Islamic Republic of)

Select basin level
Hydro Basin Level 6

Current SDG 6.6.1 indicator status

Off-track Neutral On-track

The current status is an accumulation of recent data for all SDG 6.6.1 sub-indicators. For an in-depth explanation of this component [read the methods](#)

SDG 6.6.1 Data

River Flow Dynamics

The river flow sub-indicator measures the changes in the volume of water flowing... [Read Full Definition](#)

Progression of subindicator data:

2000 2005 2010 2015

Permanent Surface Water Extent Dynamics

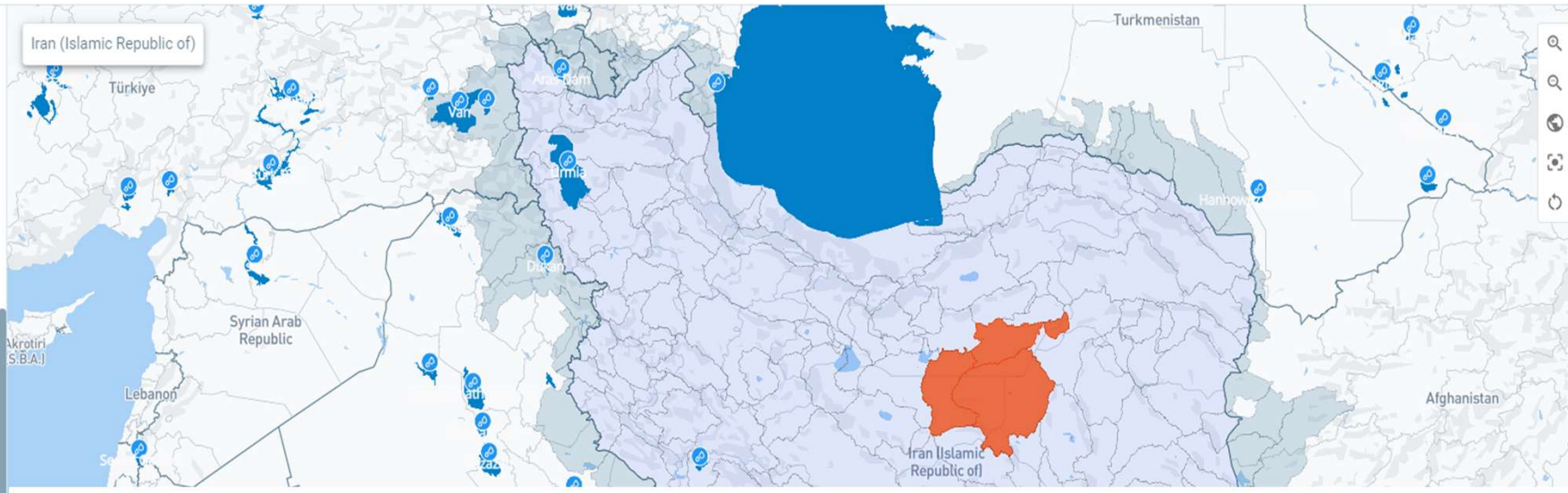
Seasonal Surface Water Extent Dynamics

Reservoir Extent Dynamics

Water Quality of Large Lakes: Trophic State

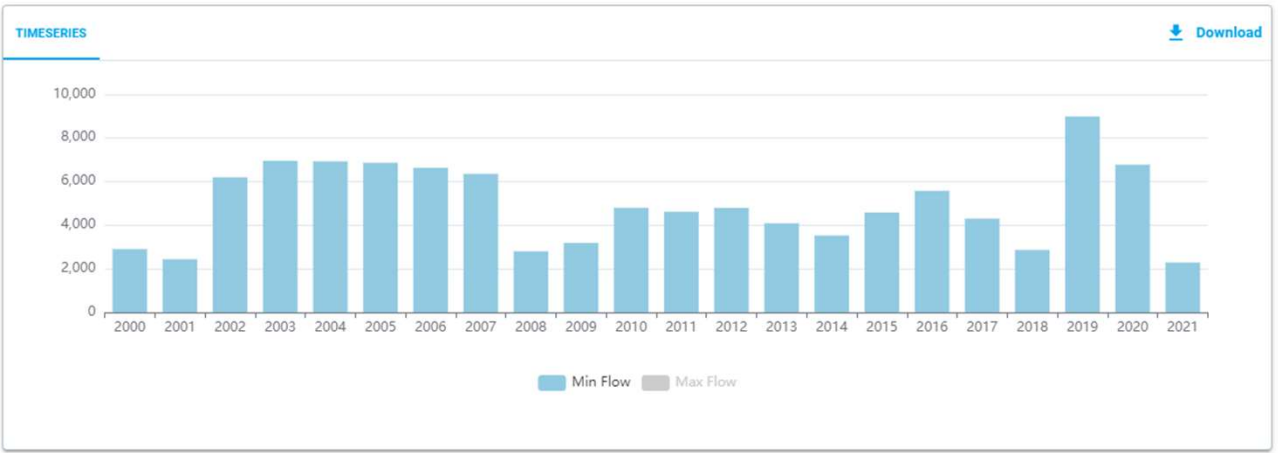
Water Quality of Large Lakes: Trophic State

NATIONAL SDG DATA



River Flow Dynamics
Data: 2017 - 2021 median value relative to 2000-2019 baseline

Min Flow -6.43% (-294.31 m³/s)



SHOW INFO AND METHODS

Example of SDG 6.6.1 country data and trends: lake turbidity, Jordan



Search for a country
 Jordan

Select basin level
 Hydro Basin Level 6

Current SDG 6.6.1 indicator status

Off-track Neutral On-track

The current status is an accumulation of recent data for all SDG 6.6.1 sub-indicators. For an in-depth explanation of this component [read the methods](#)

Seasonal Surface Water Extent Dynamics

Reservoir Extent Dynamics

Water Quality of Large Lakes: Trophic State

Water Quality of Large Lakes: Turbidity

The data show the total percentage deviation, from a baseline, for turbidity and... [Read Full Definition](#)

Progression of subindicator data:

2017 2018 2019 2020

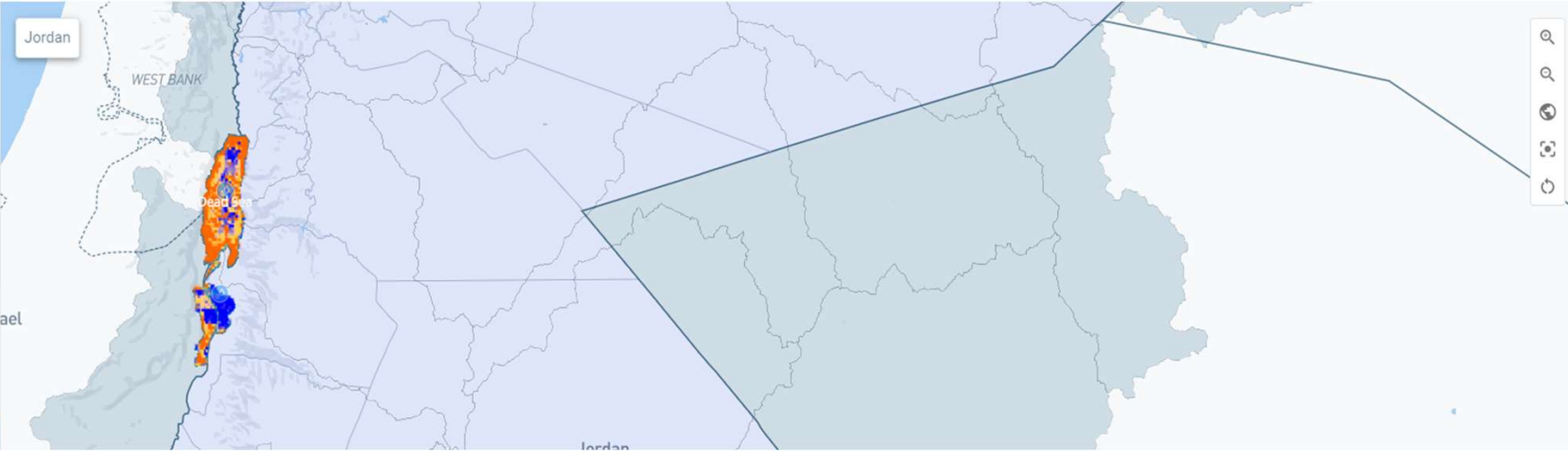
Inland Wetland Extent

Mangrove Area Changes

Contextual data [Coming soon](#)

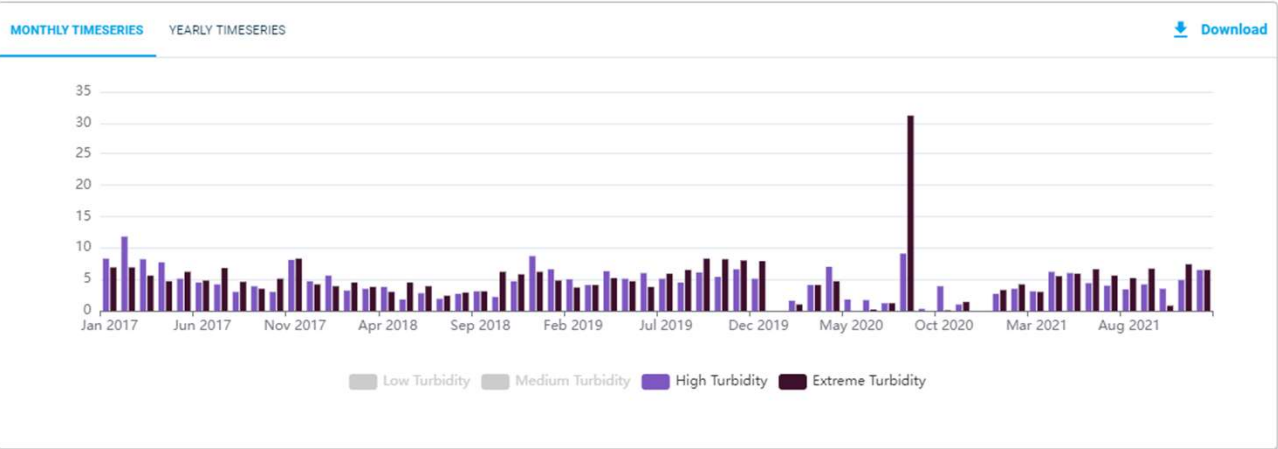
NATIONAL SDG DATA

Policy links [Coming soon](#)



Water Quality of Large Lakes: Turbidity
 Data: Year 2021 relative to a five-year baseline (2006-2010)

Trophic State **0 out of 1 lakes affected 0.00%**



SHOW INFO AND METHODS

Example of SDG 6.6.1 country data and trends: lake trophic state, Iraq



Search for a country
Iraq

Select basin level
Hydro Basin Level 6

Current SDG 6.6.1 indicator status

Off-track Neutral On-track

The current status is an accumulation of recent data for all SDG 6.6.1 sub-indicators. For an in-depth explanation of this component [read the methods](#)

SDG 6.6.1 Data

- River Flow Dynamics
- Permanent Surface Water Extent Dynamics
- Seasonal Surface Water Extent Dynamics
- Reservoir Extent Dynamics
- Water Quality of Large Lakes: Trophic State**
- Water Quality of Large Lakes: Turbidity
- Inland Wetland Extent

NATIONAL SDG DATA

Lake: Buhayrat ath Tharthar (GLWD00000077)
Data: Year 2021 relative to a five-year baseline (2006-2010)

Trophic State **0 out of 2 lakes affected 0.00%**

[SHOW INFO AND METHODS](#)

MONTHLY TIMESERIES [Download](#)

Water Quality of Large Lakes: Trophic State
Data: Year 2021 relative to a five-year baseline (2006-2010)

Trophic State **0 out of 14 lakes affected 0.00%**

[SHOW INFO AND METHODS](#)

MONTHLY TIMESERIES [Download](#)

The globally observed loss and degradation of freshwater ecosystems, characterized by changes in the quantity and quality of water and/or loss of ecosystem area, **directly impacts opportunities to develop sustainably and for nature to survive and thrive**

The interdependent and interconnected nature of freshwater ecosystems means that actions taken to address ecosystem degradation must ensure **all freshwater ecosystems remain hydrologically connected**, across rivers, lakes, wetlands, and groundwater systems.

Changing the direction of the global trend for SDG target 6.6 is achievable but requires Member States to honor environmental commitments with haste and immediately raise the profile and priority of safeguarding freshwater ecosystems within national development plans and policies.

UN 
environment
programme

5 
1972-2022

**Find out more about UNEP's work
and learn about UNEP's
freshwater work at
www.unep.org/water**