United Nations
Educational, Scientific and
Cultural Organization

International Centre
for Water Resources and Global Change
under the auspices of UNESCO

GEMS/Water Data Centre

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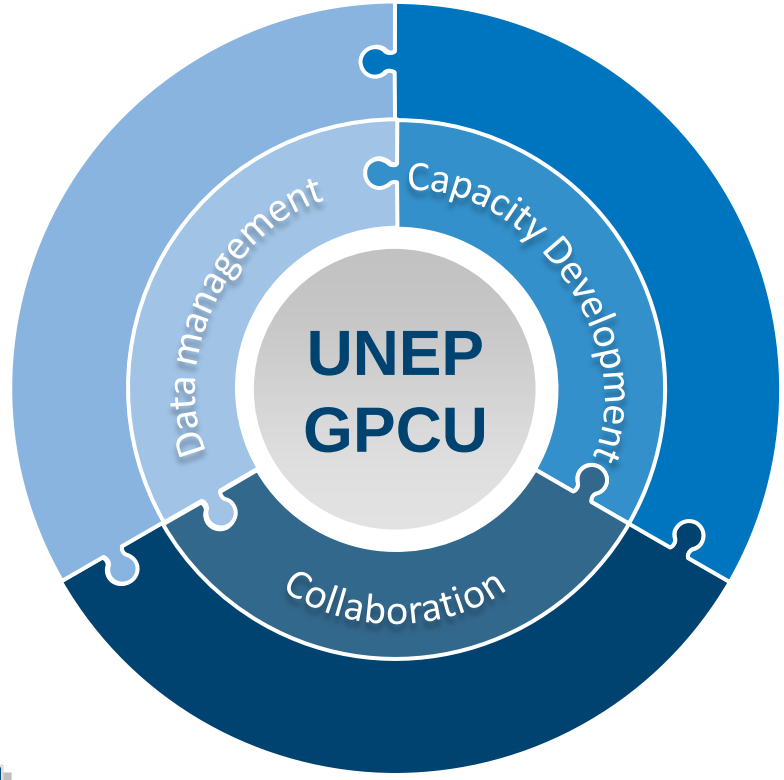
The revised GEMS/Water Programme

GEMS/Water Data Centre

- Data collection
- QA/QC
- Reporting
- Data products



GEMS/Water Capacity Development Centre

- Workshops
- Training courses
- Guidelines & handbooks

Regional offices & collaborating centres

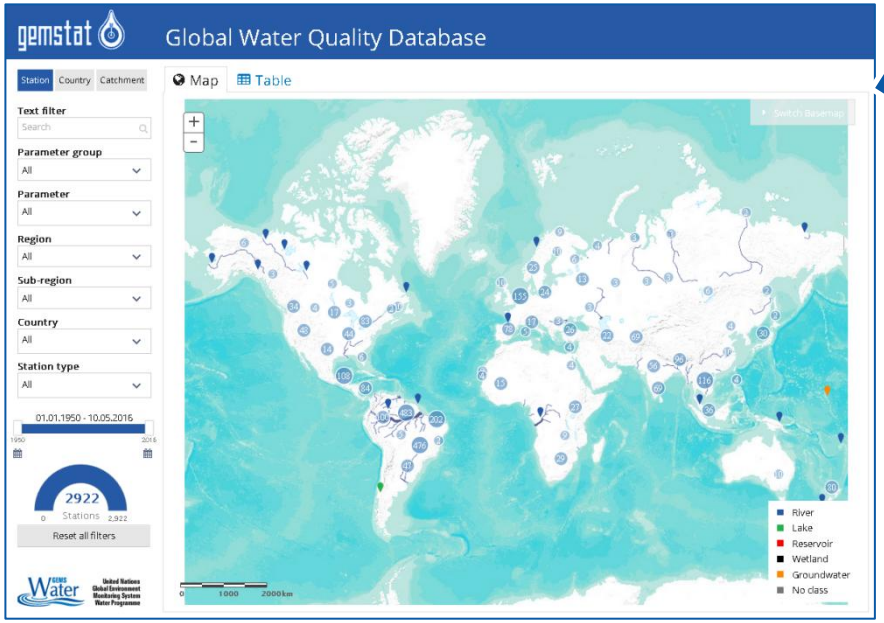
National/Collaborating Focal Points

Regional hubs

Global Water Quality Database GEMStat

Global Network

Quality Assurance

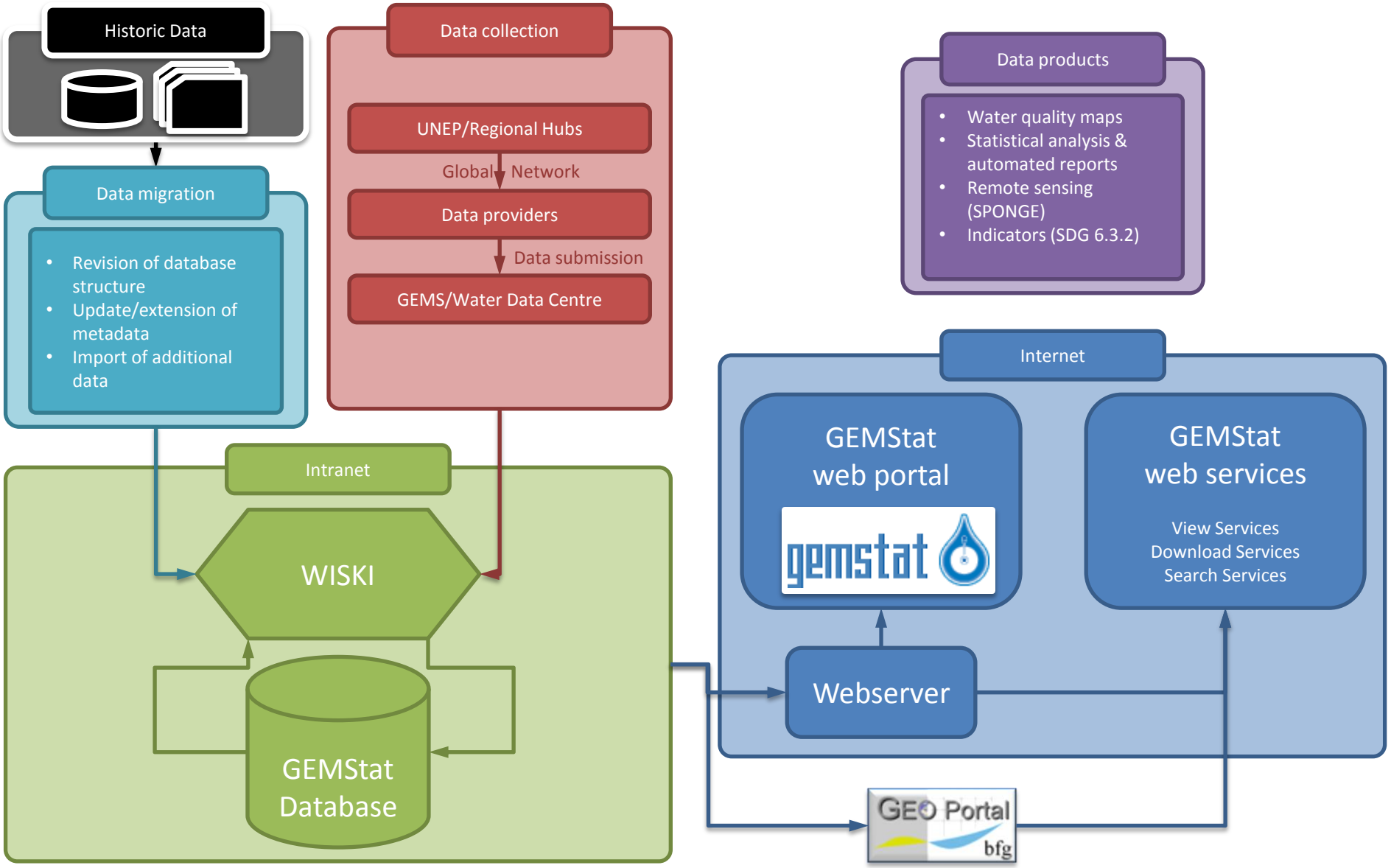


UNEP Live
OUR CHANGING ENVIRONMENT: PLACE BY PLACE

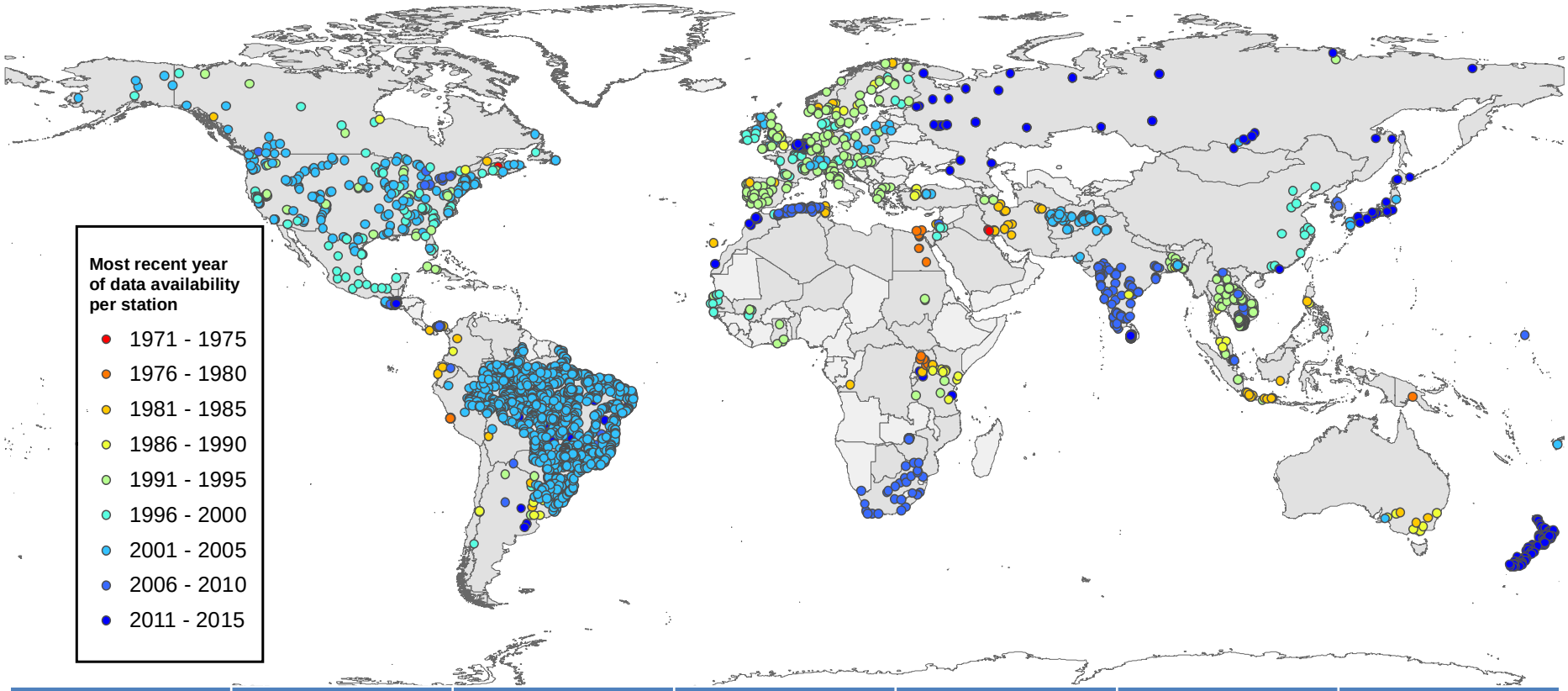
GEO 6
GLOBAL ENVIRONMENT OUTLOOK

A Snapshot of the World's Water Quality: Towards a global assessment

GEMStat revision



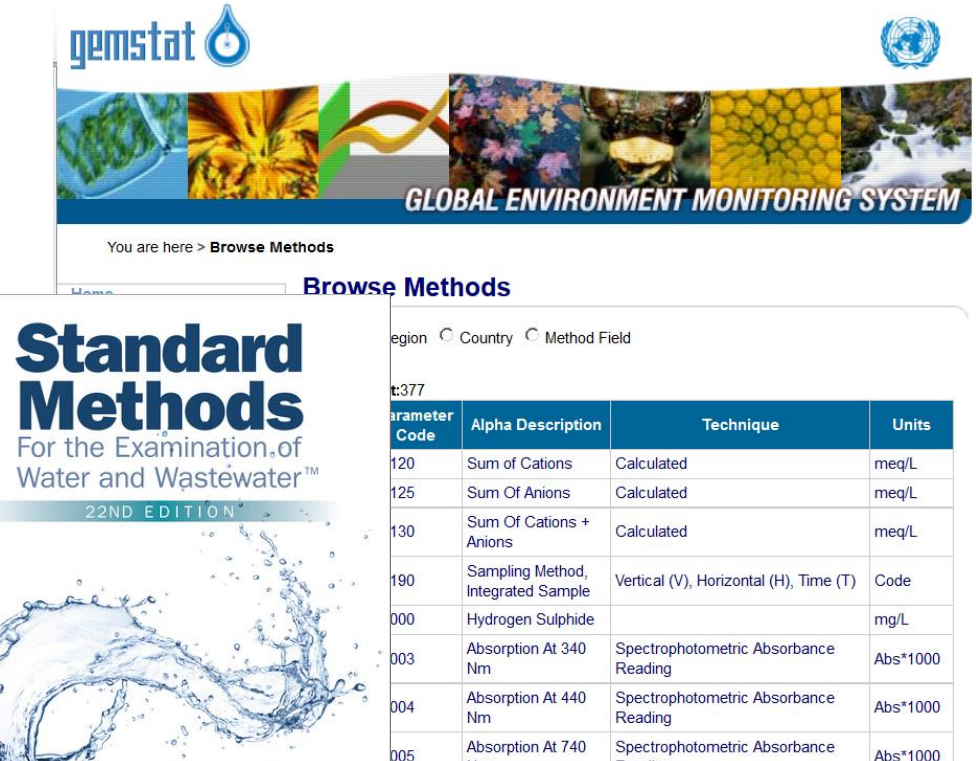
Data collection



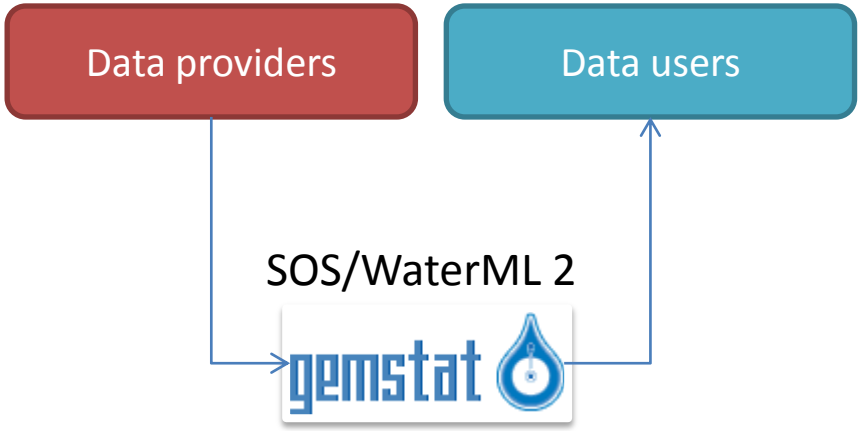
Region	Africa		Americas		Asia		Europe		Oceania		Totals	
# Stations	262	368	1795	5339	536	656	336	368	94	95	2923	6926
# of Values	302126	317884	704526	2740219	983291	979276	1075370	1086407	444792	447336	3510105	5571122
Date Range	1977 – 2014		1965-2013		1969-2015		1974-2013		1979 – 2015		1965 - 2015	

Standardisation

- Analytical Methods Dictionary
  - Controlled vocabulary



- Data exchange
  - Development of a WaterML 2 WQ Profile



Remote sensing water quality products

- SPONGE: Spaceborne Observations to Nourish GEMStat
- ESA funded, 2-year project started in March 2015
- Goal: Derive water quality products from Landsat8 and Sentinel 2 data for selected water bodies in five countries (Guatemala, Finland, Ghana, Tanzania, Japan)
- GEMS/Water Data Centre collects in-situ data for ground-truthing from its partners
- Pilot service in 2016

SDG Water Quality Monitoring and Reporting

Proportion of **bodies of water** with **good** ambient water quality

6.3.2

6.3 Water quality

Indicator
- Classification of water bodies
- Aggregation

Pilot
- Proof-of-concept in 6 countries
- Improve methodology

Roll-out
- Regional
- Global

Indicator methodology

1. Screening

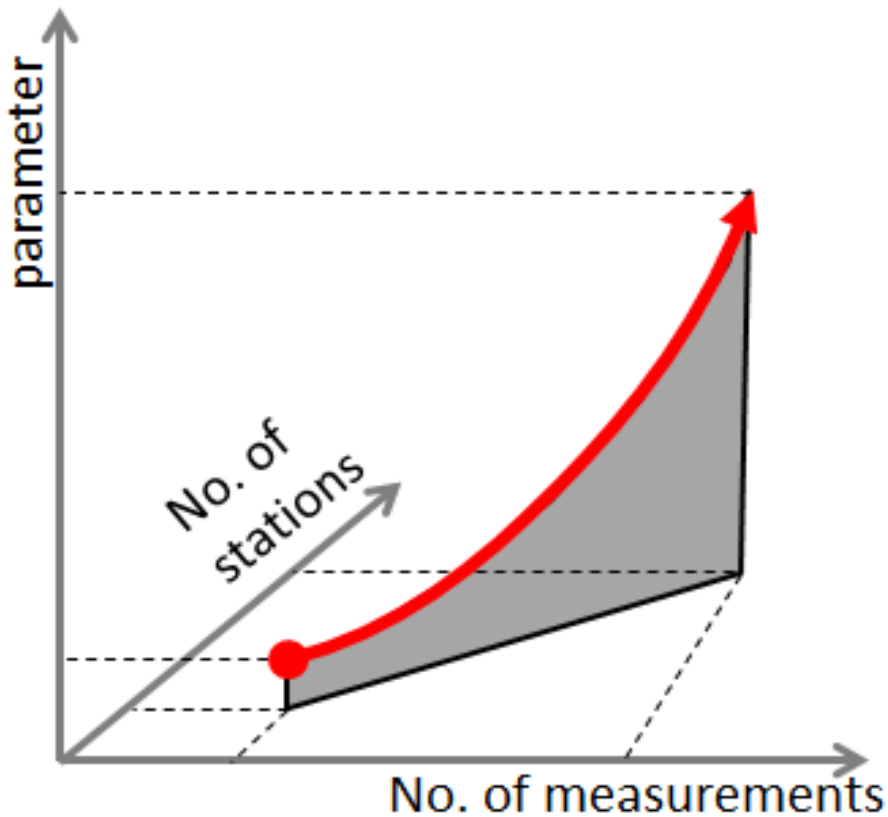
Categorisation	Delimitation

2. Classification of water bodies

Monitoring	WQI

3. Aggregation

Basin-level	Country-level	Final indicator

Progressive monitoring

- Increase spatial & temporal coverage
- Increase number of parameter
- Additional data sources (remote sensing, crowd-sourced monitoring)