



African Center for Aquatic Research and Education

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AFRICA USE CASES – LAKE VICTORIA BASIN

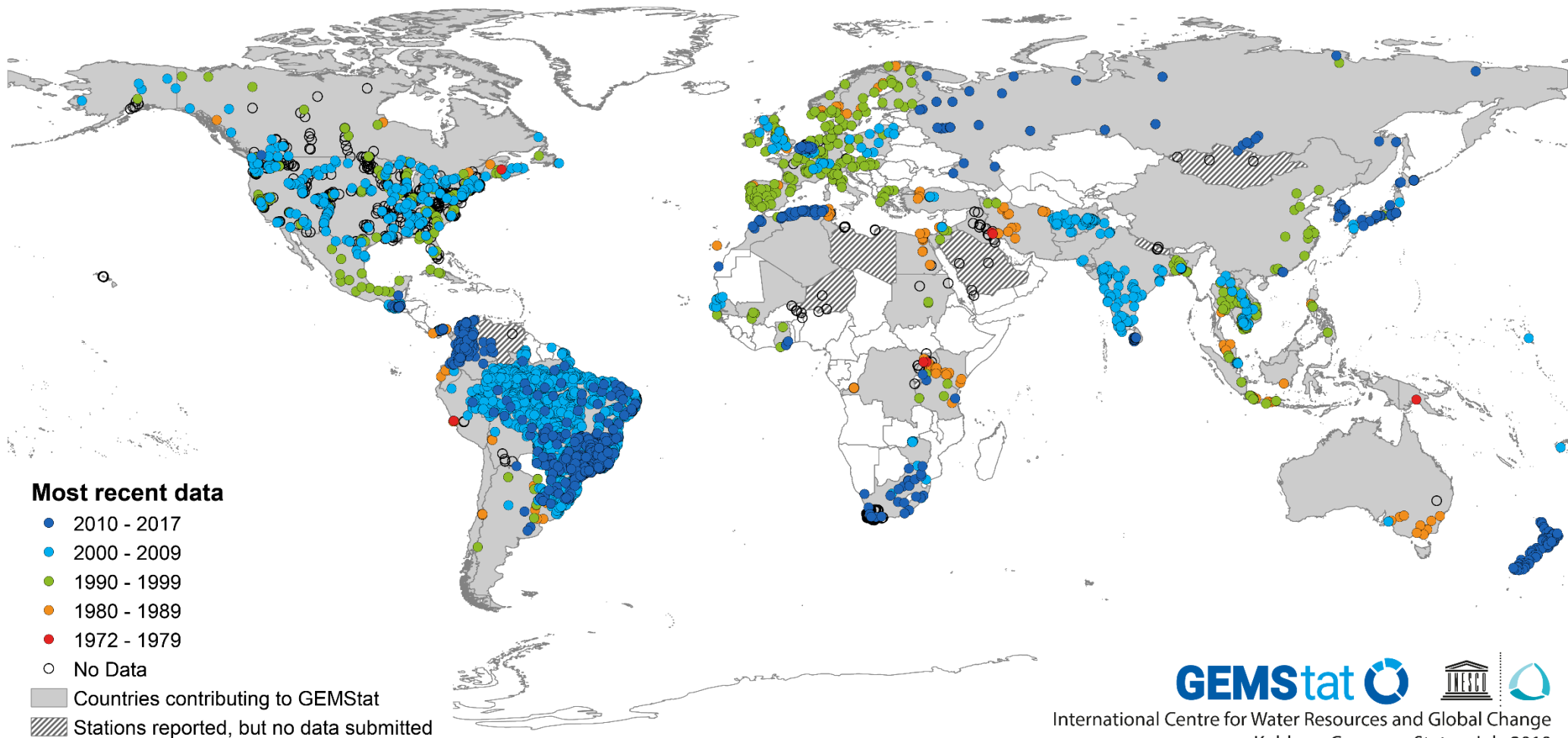
Water Quality, Data, Services and Products

*As part of the: World Water Quality Assessment mandated by UNEP/EA.3/Res.10 – Dec. 2017
and building on the WWQA Inception Workshop, UNEP/WMO Geneva 28-29 November 2018*

UMVOTO

EARTH | WATER | SCIENCE | LIFE

Background



International Centre for Water Resources and Global Change
Koblenz, Germany, Status: July 2019

Collaboration

Kevin Obiero – KMFRI and ACARE:

1. Address problems of disparate, parochial, short-term research resulting in:

- a) Lack of comprehensive, comparable scientific data
- b) Lack of long-term, continuous, and constant data sets
- c) Country- or project-specific results
- d) Lack of focused resources (financial and research)

2. To respond to >3 decades of ongoing calls for increased research and collaboration in Africa

Lake Victoria Challenges: Robert Kayanda – LVFO/ACARE:

- “Fragmented data and information to guide management”
- “Non-effective involvement of all stakeholders in the management process”
- “Limited funding”

World Water Quality Alliance

Open, global consortium, pooling expertise on water quality science and technology innovation.

AIMS:

- A **participatory platform** for water quality assessments and **co-design** of tailored and demand-driven services.
- Address priority topics relevant to water governance, scalable **water solutions** and emerging issues in water management.



Africa Use Cases Approach



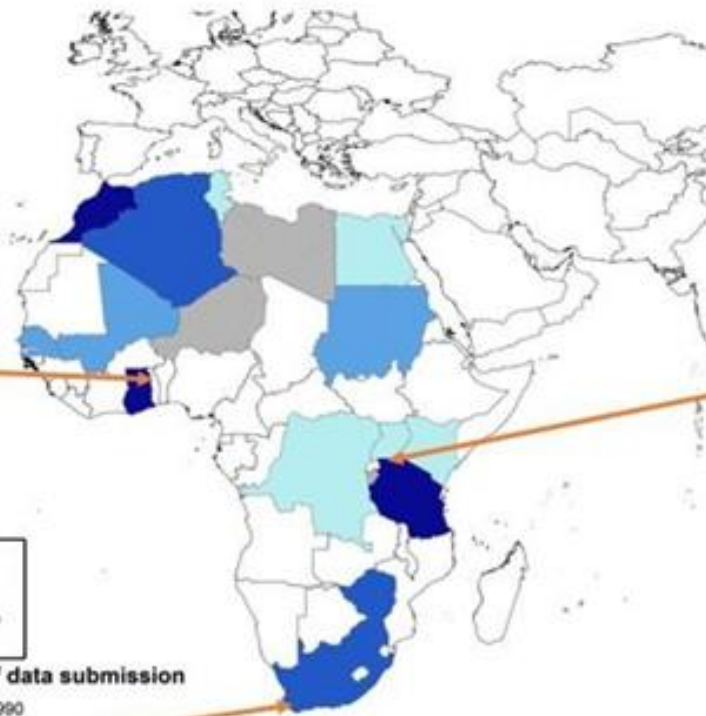
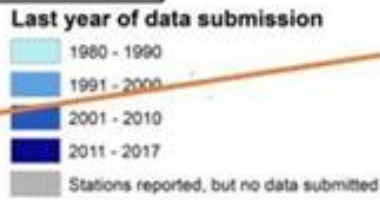
**The Volta -
Pathogens
(Ghana)**

The Volta Basin (map by GLOWA)



**Cape Town
Urban Groundwater**

Cape Town, Ground Water Abstraction Points – Wright & Jacobs 2016



**Lake Victoria -
Ecosystems
(Kenya)**



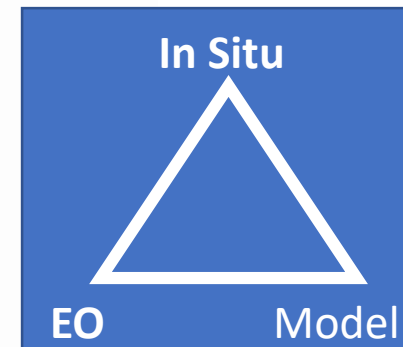
Lake Victoria (Encyclopaedia Britannica)

Work with Countries, AMCOW, Partners, Donors to:

- demonstrate the Water Quality - Alliance capacity in supporting the Agenda 2030
- identify / address the needs of national operational services and related products
- demonstrate the role of quality assured data on water quality, and the hydrological cycle
- establish a data, model and observation driven state of water quality, and
- causal chains in the water, food, health, ecosystems nexus and future scenarios

Africa Use Case Approach

- At the 2018 Inception Workshop, the WWQA decided to pilot and demonstrate current capabilities and future water quality information services through **three use case studies in Africa**.
- Puts the quality of surface and ground waters into the context, localising the **2030 Agenda** and its multiple linkages across the **SDGs**.
- **Objective:** Provide an evidence base that links **water quality hotspots** to **solutions and investment priorities**. Central is the **Integration of data** to derive the best possible current state of water quality (baseline) with a **multi-stakeholder** driven process.
- “Lightning” project
- “From global problems to local solutions”



Africa Use Case – Work Plan

Initiation
Phase

WP1 – Identify Stakeholders and Assess Capacity

- 1.1 Identify availability of data (in situ, RS/EO, model)
- 1.2 Identify local Use Case stakeholders
- 1.3 Assess Use Case capacity & gaps

WP2 – Set Visions and Objectives

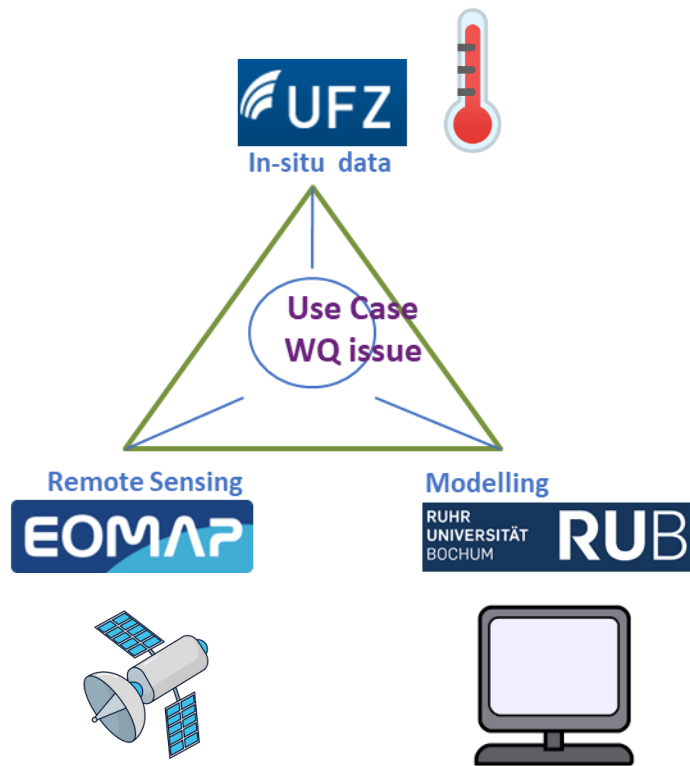
- 2.1 Consult local Use Case stakeholders to co-design
- 2.2 Compile Use Case databases of existing data

WP3 – Desktop Assessment

- 3.1 Integrate water quality data (triangle approach)
- 3.2 Assess drivers, pressures & state of water quality
- 3.3 Develop water quality pilot products and services

Identification
Phase

Desktop Screening and Assessment (WP3)



Description of a WQ issue, e.g. eutrophication:

- Complementary information from three data sources
- Corresponding variables (turbidity, totP, chl-a)
- Matching spatial & temporal representation
- **Target:** Integration of the WQ information of the different sources
- **Target:** Exemplary WQ analysis, e.g. of hot spots



Request for Collaboration:

- **Who** are the key in-country stakeholders assoc. with water quality?
- **What** water quality data is available?
- **Limitations** to sharing data?

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