

# Baseline World Water Quality Assessment



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### ABSTRACT

The Baseline Assessment workstream started with the 1st Annual WWQA Meeting Sept 2019. The UN Environment Assembly Resolution, UNEP/EA.3/RES.10, 'Addressing water pollution to protect and restore water-related ecosystems' called for an assessment of global water quality. The main objectives of the Baseline Assessment workstream is to review the state of freshwater quality and its potential impacts on human health, food security and ecosystem services, in conjunction with its drivers to raise awareness of the importance of water quality degradation on sustainable development and to enable countries to assess the situation better and effectively protect, maintain or restore water quality at sustainable levels. The Baseline Assessment will provide an understanding of the relative condition of water quality in different parts of the world and pinpoint hot spot areas requiring particular attention, describing a near present situation and/or providing a reference for future projections.

The ambition of the assessment is to work at different scales;

- 1) at the global scale to provide a consistent context regarding the state of water quality and to identify the water bodies being under at risk;
- 2) at the water body to river basin scale with the engagement of stakeholders to use and to tie the information produced in order to achieve their needs and inform the implementation of the 2030 Agenda for Sustainable Development at relevant scales.

### CONTACT

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### UPDATE ON PROGRESS

#### Main contributions in 2021:

- Supporting document 'World Water Quality Assessment: First Global Display of a Water Quality Baseline' for UNEA-5, in February
- Providing the Use Case flyer on Lake Victoria 'Piloting the triangulation approach for the World Water Quality Assessment for a snapshot view of water quality' for World Water Week in August
- Material from the Baseline Report and updates on current WQ hotspots for a UNEP presentation at World Water Congress in December
- First discussions on conception of a Full World Water Quality Assessment

Workstreams **GlobeWQ & Use Cases & Scenario Analysis for World Water Quality Assessment**

### ACHIEVEMENTS 2021

#### 'Baseline report'

- Community effort with 11 models, 4 remote sensing products and 1 in-situ WQ database
- Credits to the Writing Task Force (UFZ, RUB, WUR, Deltares, IIASA, UNEP) and the 37 co-authors
- Water quality impacts on ecosystem health, human health and food security using existing/published results
- Introducing Use Cases and Digital Platforms

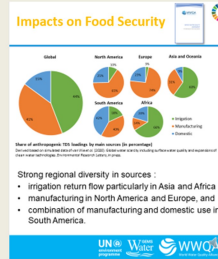


#### 'Lake Victoria flyer'

- Potential WQ hotspots identified based on data from modelling (TP loadings), in-situ data (TSS concentrations) and remote sensing (turbidity and chl-a)
- WQ hotspots may vary depending on the data source used for identification

#### 'WWC presentation'

- Including examples on WQ impacts on ecosystem health and food security from the Baseline report



### Requirements from the UNEA resolution (UNEP/EA.3/Res.10) with respect to the UNEP pre-study (2016):

- Global coverage (✓)
- Further parameters (✓)
- As current as possible (✓ - yet to be included)
- Water bodies beyond rivers and lakes (✓) => WS Friends of GW, WS Ecosystems
- Predictive capacity (✓) => WS Scenarios
- Services and solutions for management/governance (✓) => WS GlobeWQ, WS Use Cases

### FUTURE OUTLOOK 2022

- Wrapping-up the Baseline Assessment
  - global examples on current WQ hotspots such the ones from PBL & RUB
  - updates on further examples on the link from WQ status and potential impact (e.g., maps overlaying nutrient concentrations and protected wetlands)
- New workstream 'Full World Water Quality Assessment'
  - including creating something like an editorial board for the technical and substance issues
  - including exchange on the experience so far with WESR (technical issues encountered e.g., including some of the Baseline report maps) and additional technical and editorial support where necessary

