

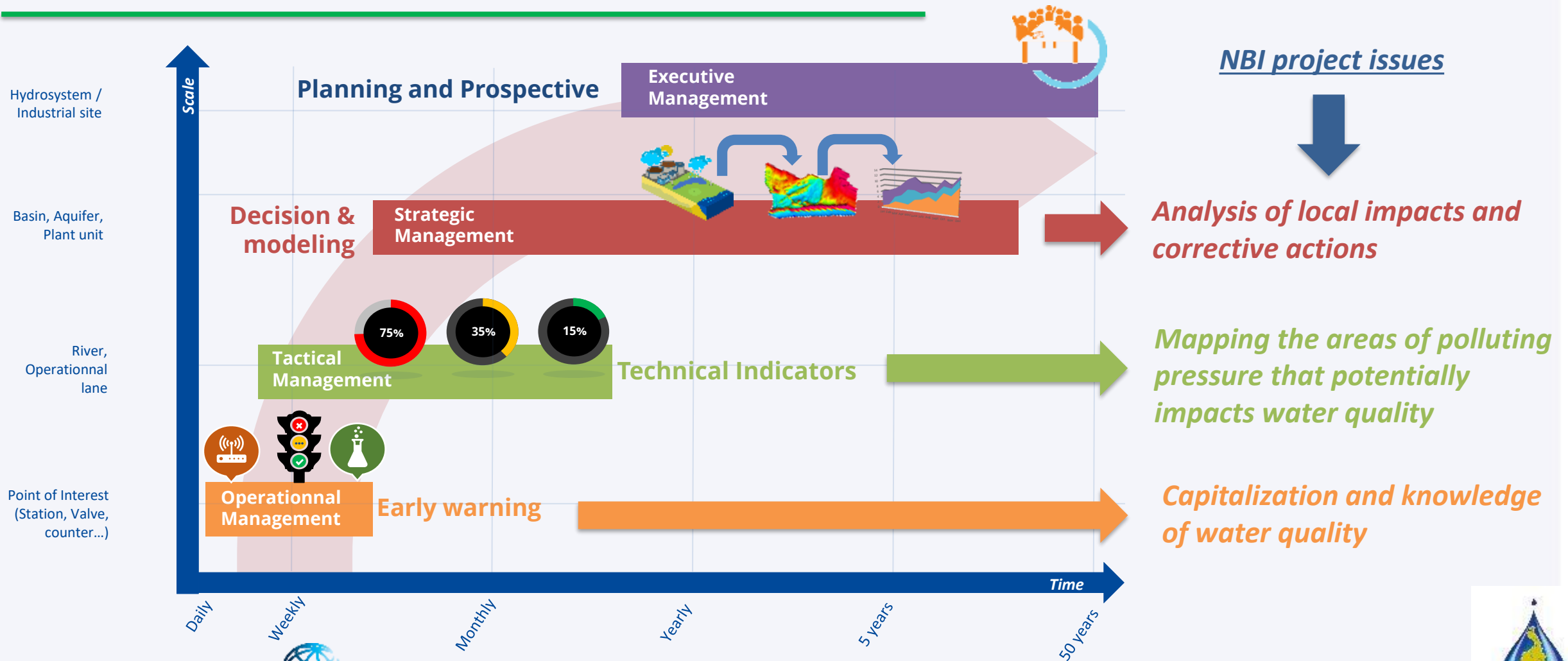


Paper at the **NBDF7 Webinar**

Implementation of decision-making and strategic planning tools on water quality at the scale of the Nile basin. A comprehensive approach to data capitalization, data analysis and modelling of surface water quality in key areas of the Nile basin

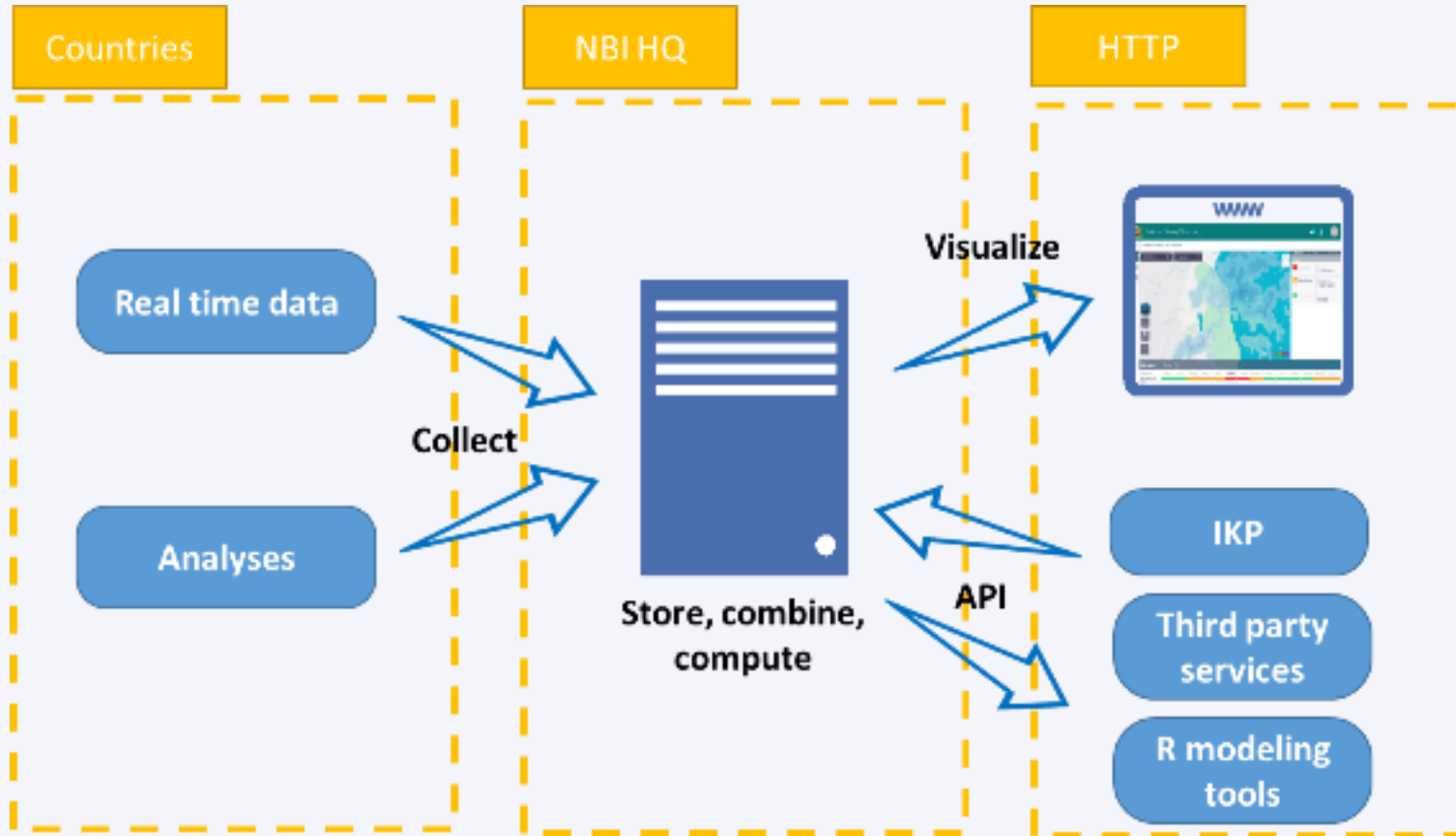
Axel Aurouet , Jules Wijtings , Julien Verdonck, Stéphane Delichère, John Sekajugo, Michael Kizza, Jean Namugize, Alain Amahoro, Zeleke Challa and Patrick Rutagwera

An integrated approach for water quality



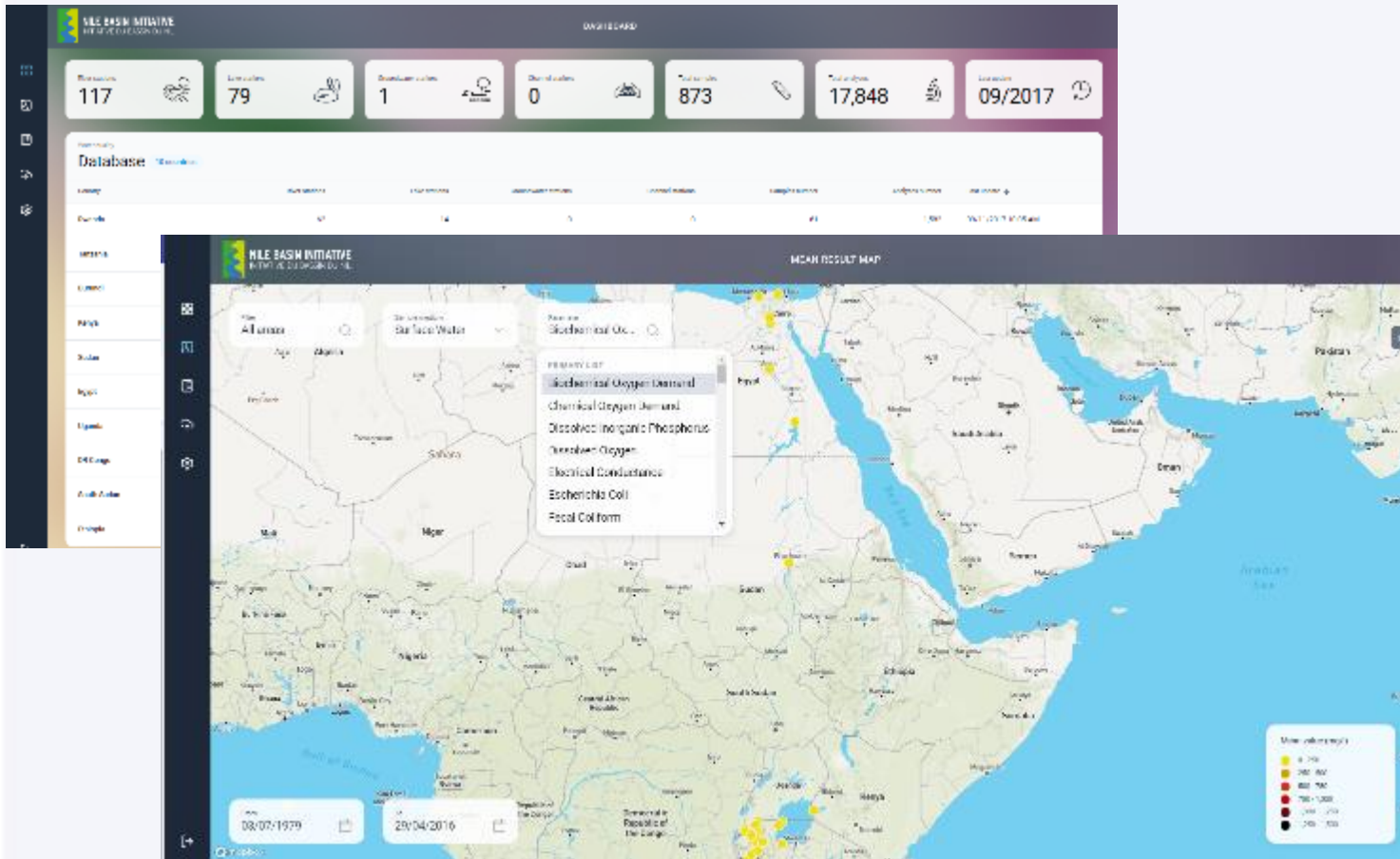
Water quality database

A Web base tool for water quality data management and dissemination



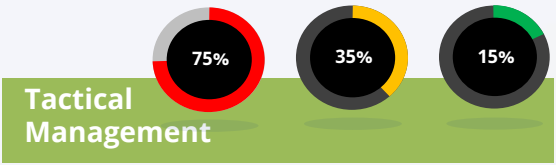
Water quality database

A Web base tool for water quality data management and dissemination



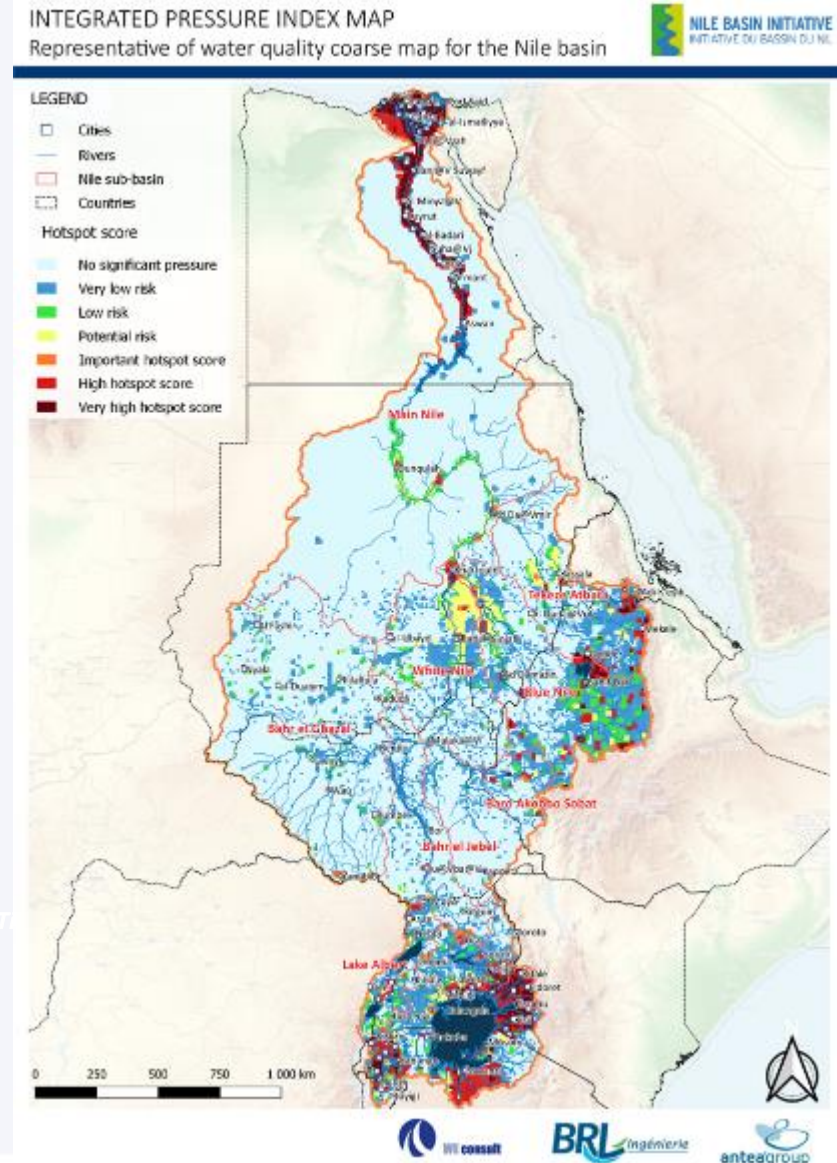
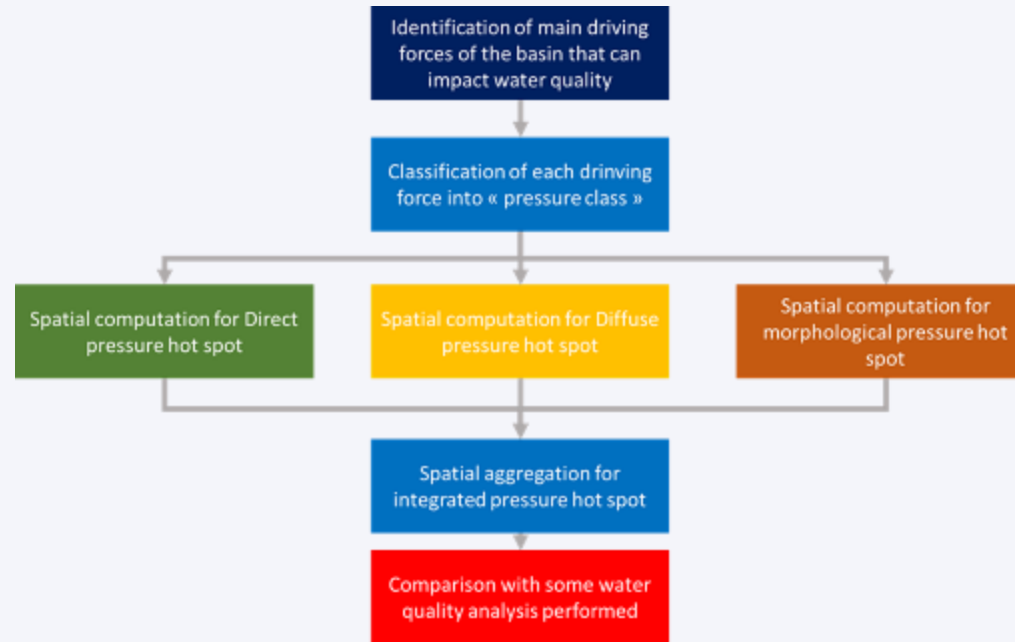
- **197** water quality stations
 - 123 for rivers
 - 79 for Lakes
 - 7 for groundwater
- **999** samples
- **45 171** Analytical results
- Results are covering data coming from **1978 to 2019**
- Most of results are concerning **Rwanda, Tanzania, Egypt, Sudan, Kenya and Uganda**
- Spatial datasets has been implemented for **Victoria Lake through maps**

Pressure / Impact map



A global map for highly potential water quality impact

- Direct Pressure:** A pressure can be considered as direct if the emission can be located at a single point.
- Diffuse Pressure:** A pressure can be considered as diffuse if the emission cannot be located at a single point but more in an area or a sector.
- Morphological pressure :** A pressure that has modified the bed of the river (low or major) in its shape. This type of pressure can affect the quality of water ecosystems and their related ecoservices.



Pressure / Impact map

Tactical Management

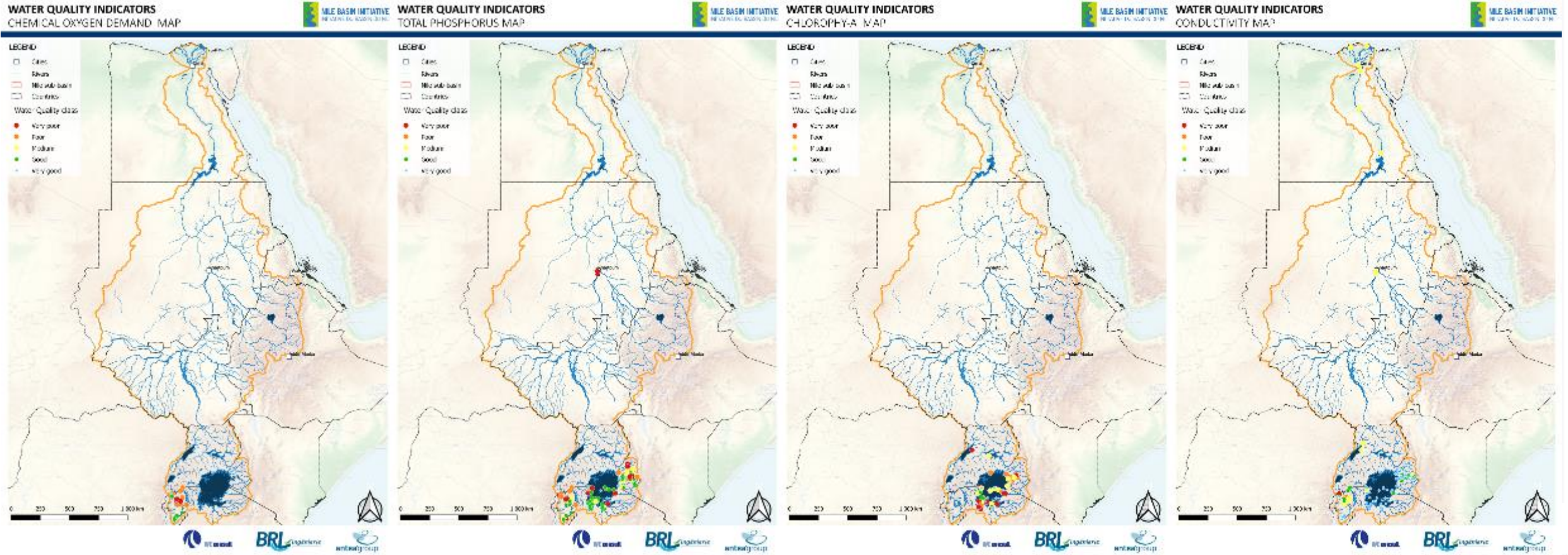
75%

35%

15%

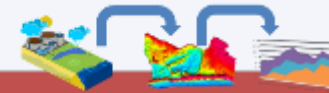


A global map for highly potential water quality impact



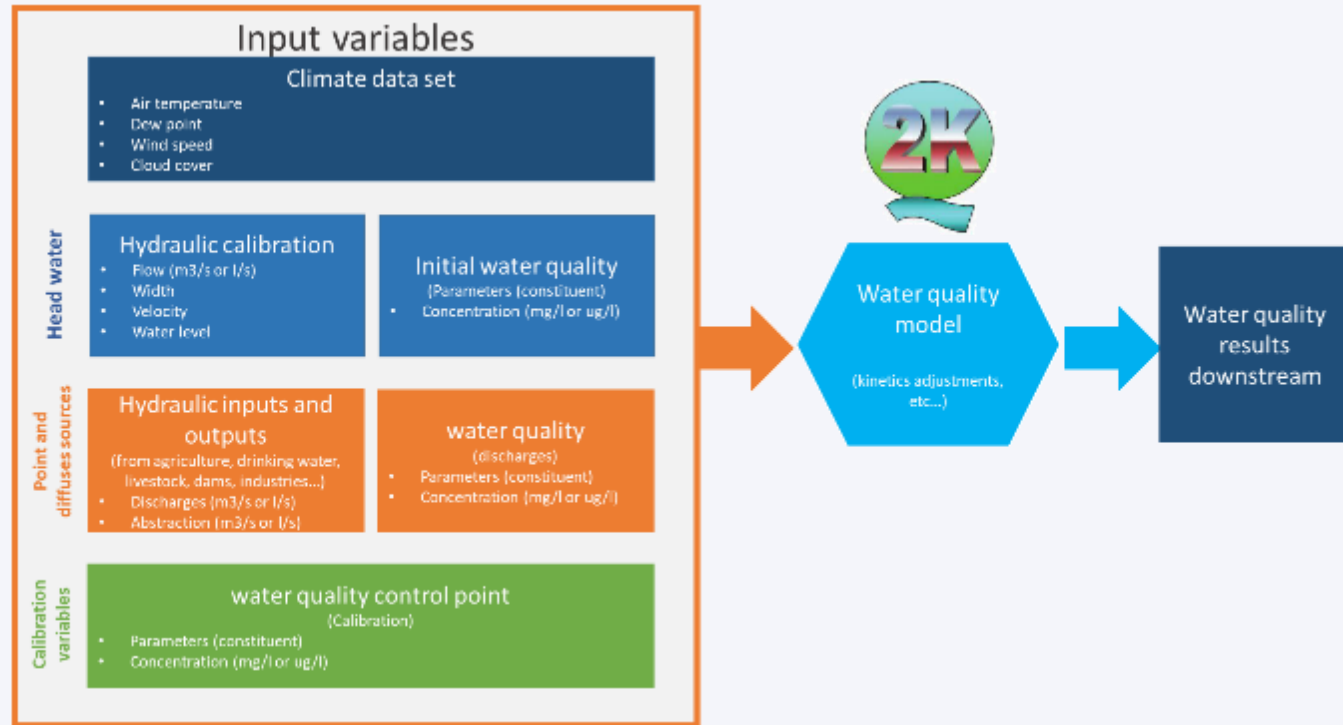
Modeling and planning

Strategic Management

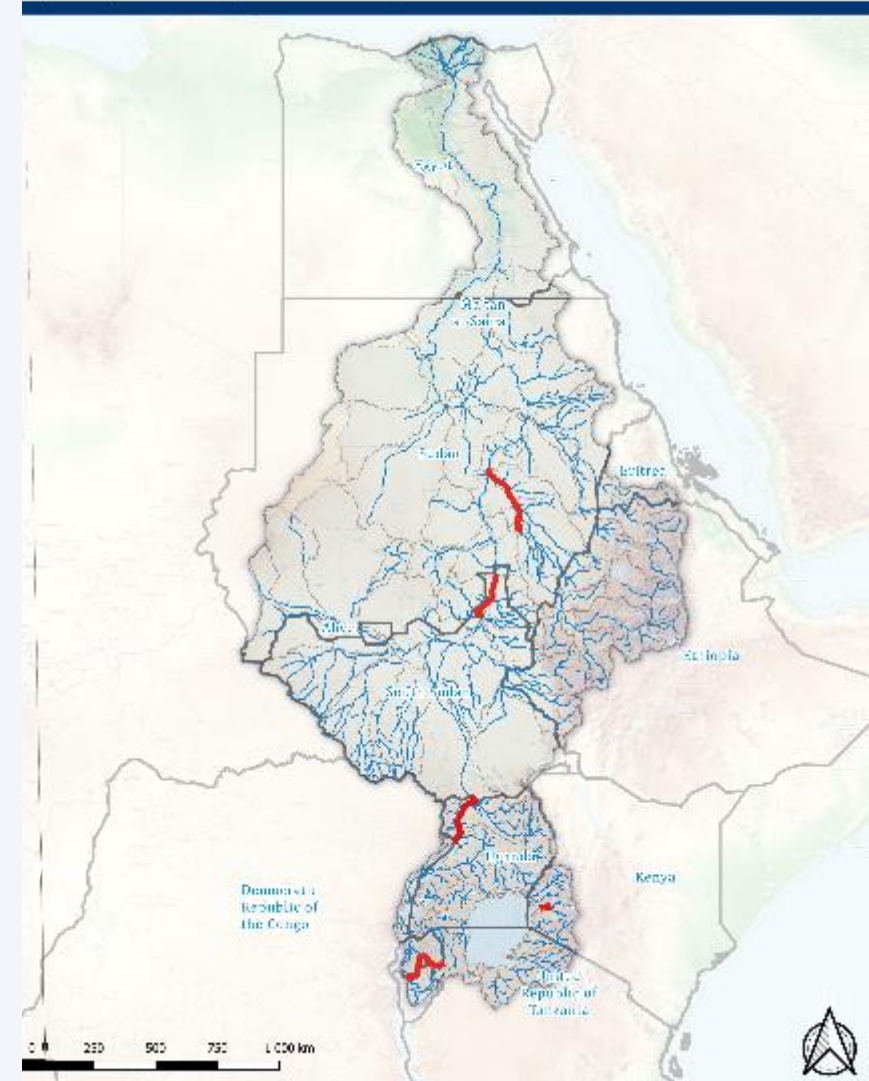


QUAL 2K model for Water quality modeling of impacts

DATA ISSUES



HOTSPOT FOR MODELING
(6 hotspots among the Nile basin)



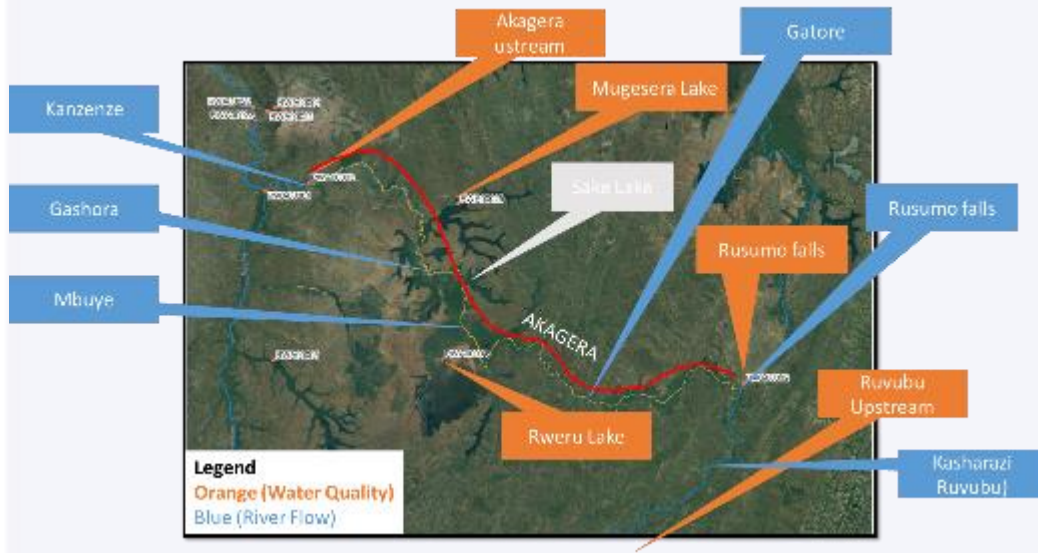
LEGEND
Hotspot tracks



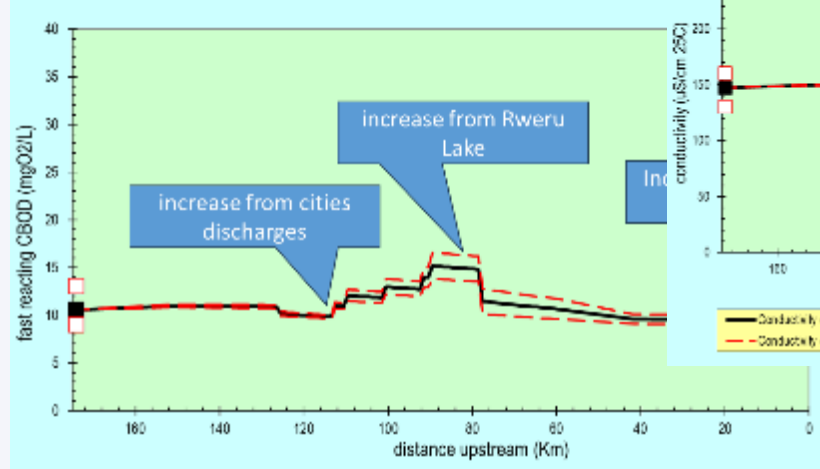
Modeling and planning



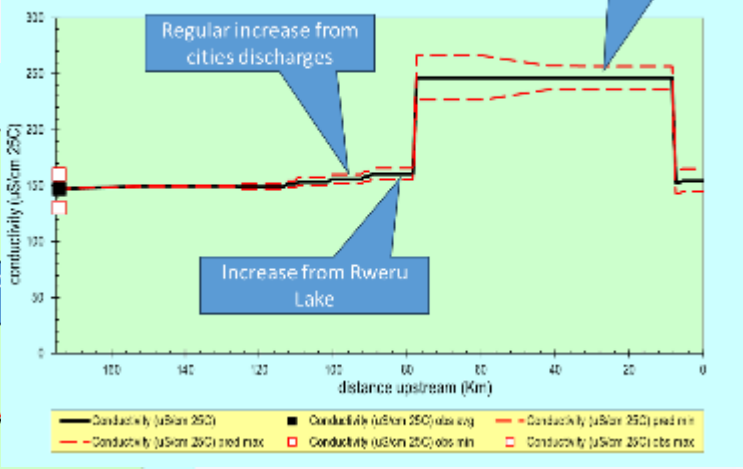
QUAL 2K model for Water quality modeling of impacts – Akagera Example



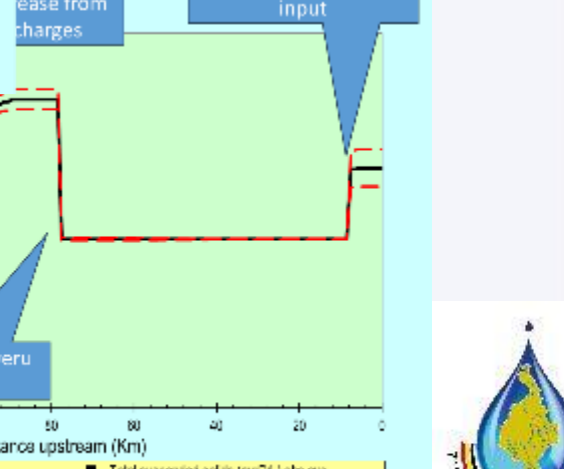
Akagera (7/15/2012)



Akagera (7/15/2012)



Akagera (7/15/2012)





NILE BASIN INITIATIVE
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THANK YOU!

