

TEMBO Africa

Transformative Environmental Monitoring to Boost Observations in Africa

Open Water Data



Overview

TEMBO Africa Open Water Data delivers critical information about water bodies (rivers, floodplains, lakes and reservoirs) generating:

- **River discharge time-series**, recording the volume of water flows.
- **Operational Maps**, illustrating the extent of open water surfaces.
- **Bathymetry Maps**, indicating the underwater depth variations.

These outputs are enabled by the use of low-cost cameras and other affordable technologies, eliminating the need for repeated site visits to measure different water levels.

Where?

Open Water Data is piloted in Ghana and Zambia (dam reservoir management) and Kenya (flood early warning), and is available anywhere in Sub-Saharan Africa, subject to availability of the required sensors.


For whom?


Ideal for stakeholders interested in providing Flood Early Warnings and dam reservoir managers.


Smarter and faster monitoring of water

 **Cost reduction.**

 **No need** to construct a stage-discharge curve by revisiting the site at different water levels many times.

 Determination of **area-discharge curves**, whereby areas can be determined by satellites.

 On site recording of flow velocity and discharge data in **real time** including proof-images.

 Better management of the **volume** of water that is stored and released from dams.

 **Early alerts** and better preparedness in the case of floods.

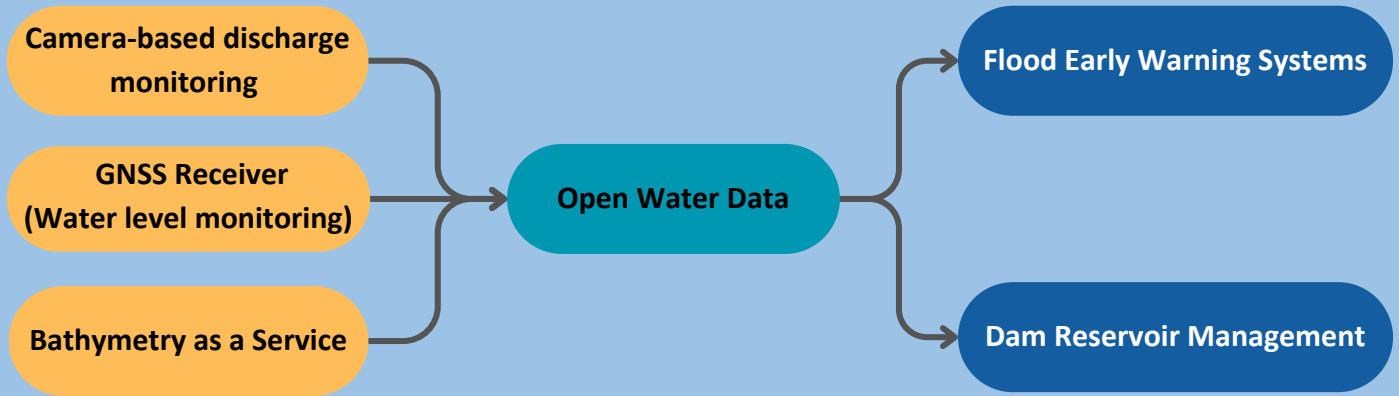
 **Scalability.**



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Flexible, customizable, and adaptable!

TEMBO **Open Water Data** are characterised by a “Lego®-ised” approach, combining different **sensors** to customise solutions based on the needs of each water body, supporting two **services**.



Specifically:

- Camera-based monitoring tracks surface changes like water extent and level. When combined with bathymetry and GNSS, it can also support accurate volume and flow estimations.
- GNSS water level monitoring measures real-time water height. Together with bathymetry, it helps estimate how much water is stored or flowing.
- Bathymetry as a Service maps the underwater shape of rivers, lakes, and reservoirs, improving the understanding of volume, capacity, and flood risks.

Partners involved in Open Water Data



Contact us and learn more!

