## **TEMBO Africa**

Transformative Environmental Monitoring to Boost Observations in Africa

## **River Discharge Data**



#### **Overview**

River discharge refers to the volume of water flowing through a river channel over a given period, typically expressed in cubic meters per second (m<sup>3</sup>/s). Monitoring river discharge is essential for understanding water availability, flood forecasting, hydropower management, irrigation planning, etc. TEMBO provides an innovative approach for monitoring river discharge, eliminating the need for traditional repetitive and costly field measurements.

#### Where?

River Discharge data can be offered in Ghana (through TAHMO Ghana), Kenya (through TAHMO Kenya), and Zambia (through LocalDevices Technologies Zambia Ltd.)

#### For whom?

Ideal for stakeholders interested in providing Flood Early Warnings, dam reservoir managers, water management authorities and hydrometeorological agencies.

# Better monitoring for safer rivers and smarter water management

Suitable for both small and large rivers.
Improved flood forecasting, detecting changes quickly to protect communities and infrastructure.
Better planning and operation of dams and hydroelectric facilities.
Accurate water availability insights, supporting sustainable management of water resources.
Reduced costs.
Reduced labour-intensive field efforts.





This project has received funding from the European Union under the Horizon Europe Research & Innovation Programme 2021-2027 (grant agreement no. 101086209). The Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither can the European Union nor the granting authority be held responsible for them.

### Flexible, customizable, and adaptable!

**TEMBO** River Discharge Data are characterised by a "Lego<sup>®</sup>-ised" approach, integrating a range of sensors and enabling customisation and application under different conditions and needs, supporting two services.



Specifically:

- Camera-based discharge monitoring can function independently to estimate river discharge by analysing surface velocity, but the estimates are stronger if calibrated with water level and cross-section bathymetry data.
- GNSS water level monitoring can also operate independently to track changes in water height, but when combined with bathymetry, it can also provide full discharge (volume) data.
- Bathymetry as a Service delivers essential riverbed maps that help improve discharge calculations by accurately measuring the river's shape and size.

#### Partners involved in River Discharge Data



## **Contact us and learn more!**

🌐 temboafrica.eu 🖂 info@temboafrica.eu 📊 TEMBO Africa

