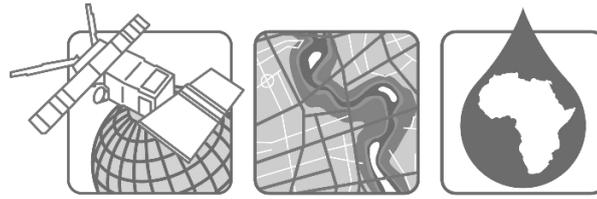


LOOKING AFTER WATER IN AFRICA



Enabling Integrated Water Resource Management (IWRM) through development and implementation of a satellite-based, “user-driven, open-source, cost-free” Water Observation and Information System (WOIS)



Knowledge Sharing BBL

Tuesday, Sep 30, from 12:30 pm to 2:00 pm

Lunch will be served

Water represents one of the major development drivers in Africa. In spite of this potential Africa faces significant challenges to ensure an effective use and efficient management of its water resources. In this complex context, water information systems are fundamental for improving water governance and implementing Integrated Water Resource Management (IWRM) successfully. This is even more demanding in Africa, where, in several countries, water information systems are severely degraded, policies and management decisions are based on unreliable information, and donor institutions are reluctant to provide long-term support for remnants of out-dated observation networks. **To respond to the urgent information needs for IWRM in Africa, the European Space Agency (ESA) has launched TIGER-NET as a major initiative to develop and demonstrate a user-driven information system fulfilling operational requirements and providing a solid base for extension and roll-out to other basins in Africa.** TIGER-NET is a major component of TIGER, a long-term initiative existing since 12 years. Its main goal is to support the African Earth Observation capacity from watershed to cross-border basin levels through the provision of a powerful software package, with associated capacity building to water authorities. The provided Water Observation and Information System (WOIS) is a user-driven, open-source and cost-free software tool for monitoring, assessing and inventorying water resources in a cost-effective manner using Earth Observation (EO) data. A comprehensive range of data processing solutions for water resource management tasks have been developed, in correspondence with the requirements of the participating key African water authorities and demonstrated with dedicated case studies utilizing the software in operational scenarios. They cover a wide range of themes and information products, including basin-wide characterization of land and water resources, lake water quality monitoring, hydrological modelling and flood forecasting and mapping. For each monitoring task, step-by-step workflows were developed, which can either be adjusted by the user or largely automatized to feed into existing data streams and reporting schemes. The WOIS enables the participating African water authorities (Nile Basin Initiative, Lake Chad Basin Commission, Department of Water Affairs, Namibia; Department of Water Affairs, South Africa; Department of Water Affairs, Zambia; Zambezi Watercourse Commission; Volta Basin Authority; Mettelsat, Democratic Republic of Congo)) to fully exploit the increasing EO capacity offered by current and upcoming generations of satellites. Still significant development demand is required in both the technical and human capacity building to make IWRM in Africa a reality and enable a long-term operation.

The aim of this discussion is to enhance the knowledge on the capacity and efficiency of satellite based water observation and information systems to enable Integrated Water resource Management in Africa and the need to implement such capacities in focal countries with very high benefits of investments in the water sector.