

→ SMALL WATER BODIES (RESERVOIRS) MONITORING

RURAL
livelihoods
SUSTAINABLE
SUSTAINABLE
development
FOOD
food SECURITY

IN COLLABORATION WITH:

Volta Basin Authority
Ouagadougou, Burkina Faso



AREAS OF INTEREST



The Member States of the Volta Basin Authority, through the support of AFD/FFEM, are implementing the Volta Basin Observatory as an information, communication and decision making tool. The Observatory supports the **sustainable use of water (e.g. livestock and farming) and related resources while preserving or even regenerating degraded ecosystems in the basin thus requiring detailed geo-information data.**

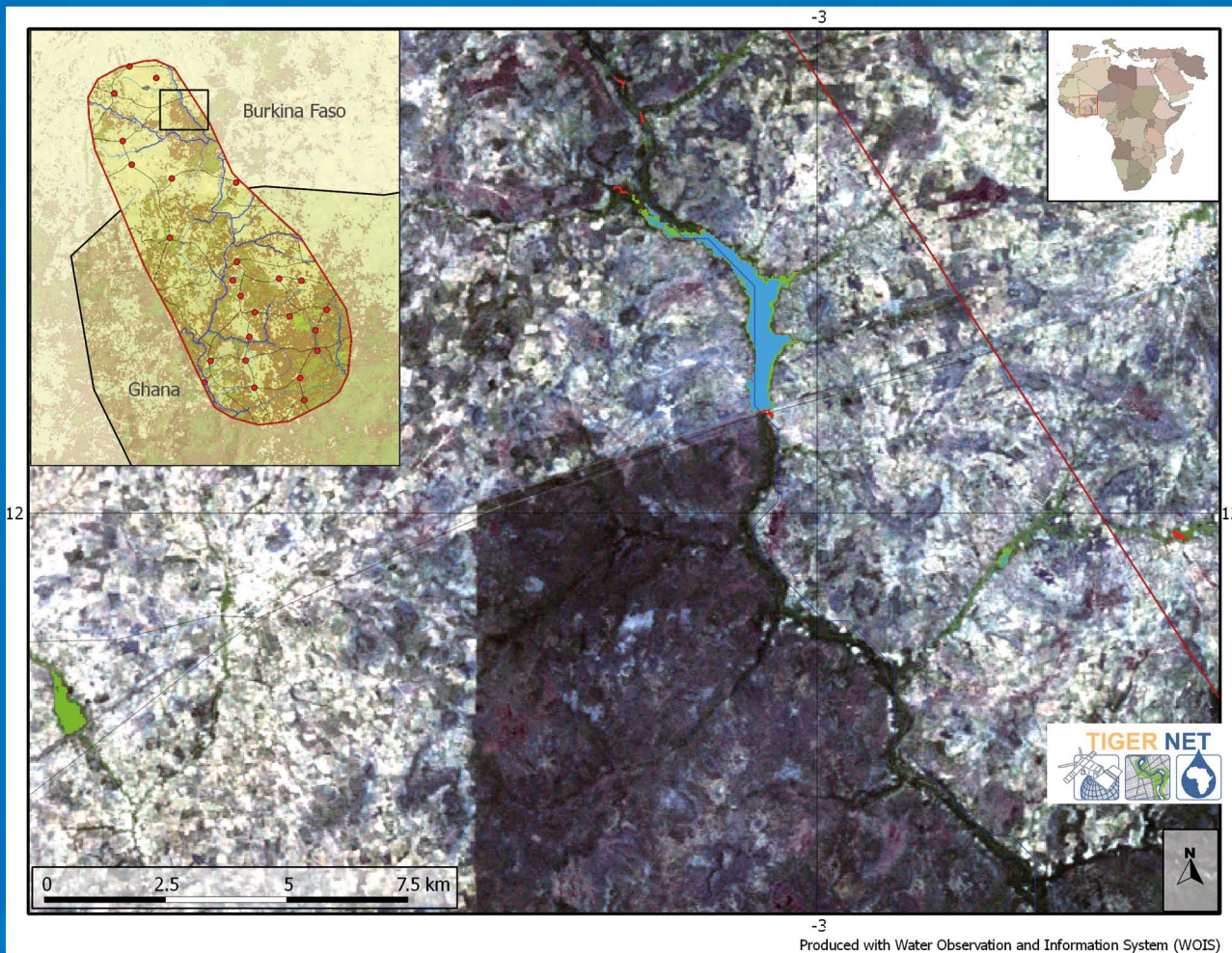
Maintenance of up to date inventories of water bodies is essential for planners to steer reservoir development and management. However in the past, no remote sensing products were integrated in the daily workflows. EO data can support the creation of inventories of small water bodies (location, extent, possibilities of access, seasonal variations) over large areas.

The WOIS allows to exploit Earth Observation (EO) data to monitor and get up to date information on the quantity and quality of water resources, as well as factors affecting these (e.g. land cover/use changes etc.), supported by in situ measurements. Data generation from EO data such as the free Sentinel data, are timely and cost effective compared to the traditional methods of data collection and analyses.



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CHANGE DRY/WET SEASON 2011, VOLTA BASIN AUTHORITY



“The WOIS and the enabled small water body mapping capacity provides crucial information for livestock watering in the Volta basin. It will be therefore critically important that operational Sentinel-1 and 2 data becomes available to the VBA in order to continue to turn out such information products to be shared with the general public and livestock managers in particular.”

Dr. Jacob Tumbulto, Director Volta Basin Authority

↑ Small water body change maps providing essential information on change and quantification of water resources for monitoring purposes

Description

The map shows [i] a Digital Elevation Model (DEM) georeferenced image background, transformed into a hillshade, [ii] a Vector dataset layer that gives an overall infrastructural information about the Demonstration Case within the Volta Basin Authority (VBA), (iii) a Raster dataset layer that provides information about the variation of Small Water Bodies inside a particular region of the DC within different time periods

Legend

- AOI DC19
- Small Water Bodies Detail
- Main cities
- Rivers
- Streams
- Small Water Bodies - Change
 - Decrease of small water bodies
 - Constant small water bodies
 - Increase of small water bodies
- Hillshade
- Globcover 2009

Cartographic References:
Projection: GCS_WGS_1984
Datum: WGS 1984

Source:
Landsat Satellite images:
(02/03/2011)
Resolution: 30m