

EARTH OBSERVATION FOR SUSTAINABLE DEVELOPMENT

THEMATIC BASE MAPPING

A thematic base map of the basin or sub-basin in question accurately depicts the main thematic features of interest in that region, including but not limited to hydrological networks, administrative boundaries, all relevant infrastructure (e.g. roads, bridges, dams, channels, etc.), settlements, basin delineations and other features. It would often also illustrate elevation through contour lines or coloration. It serves as a basic information carrier for activity planning and further GIS analysis.

Thematic maps are produced from existing national and/or international and/or global cartographic information products and user supplied geodata. As such its accuracy and topicality depends on that of the input data. In cases where such data is scarce or of insufficient reliability, the objects of interest may be derived from high resolution satellite imagery either through classification or digitization, depending on the project scale and available resources. In any case, a recently acquired high resolution satellite image should complement the topographic base map and serve as a reference for its validation.

Thematic base maps are designed to present their information in an intuitive manner and thus facilitate project related communication between stakeholders of various backgrounds.

SUMMARY

CHALLENGE

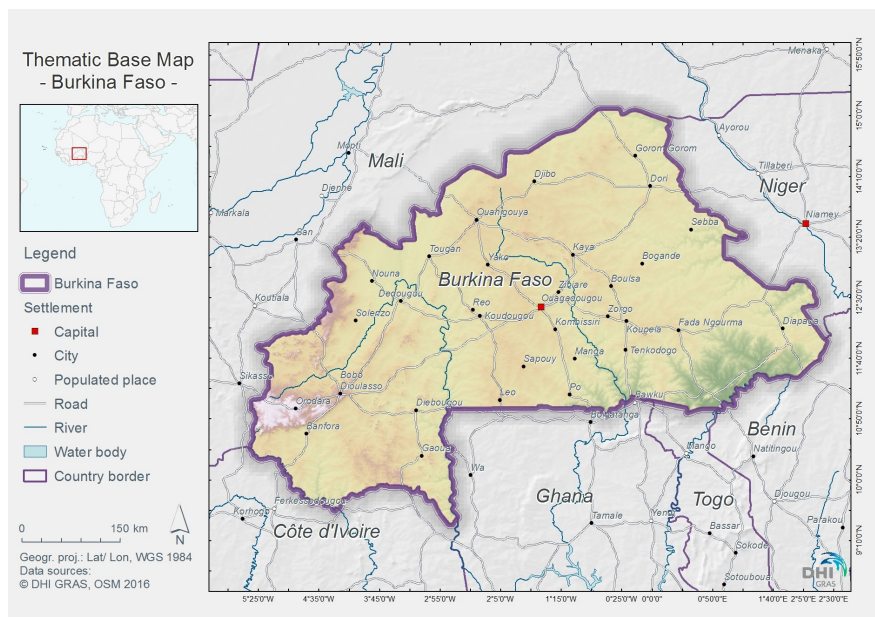
- Difficulties communicating messages using satellite imagery and maps without reference features such as cities, towns, roads, rivers, administrative boundaries etc.
- Sources of thematic information can often be disjointed and difficult to use
- In some cases, the thematic layer of interest does not yet exist in digital format

SOLUTION

- A central database for thematic layers that can easily be used in GIS software
- Creating thematic layers when needed using high resolution imagery

VALUE

- Provides overview of relevant project features and fosters a common understanding of location
- Intuitive maps that more people can use and relate to
- More effective communication between project actors and stakeholders



Thematic base map example, Burkina Faso.

Satellite Earth Observation (EO) technology has a tremendous potential to inform and facilitate international development work. Since 2008 the European Space Agency (ESA) has worked together with the International Financing Institutions (IFIs) and their client countries to harness the benefits of EO in their operations and resources management.

EO4SD – Earth Observation for Sustainable Development – is an ESA initiative which aims to achieve a step increase in the uptake of satellite-based information in the IFIs regional and global programs, aiming at more systematic data user approach in order to meet longer-term strategic geospatial information needs in the individual developing countries as well as international and regional development organizations.

The EO4SD initiative covers a wide range of thematic domains including Water Resources Management which is regarded as one of the most critical development challenges.

The activities will start in spring 2016 and will run for a period of three years. The first year will be dedicated to stakeholder engagement and requirements consolidation and with years two and three focusing on information production, delivery and capacity building.

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