

Irrigation Development Support Program (PADI)

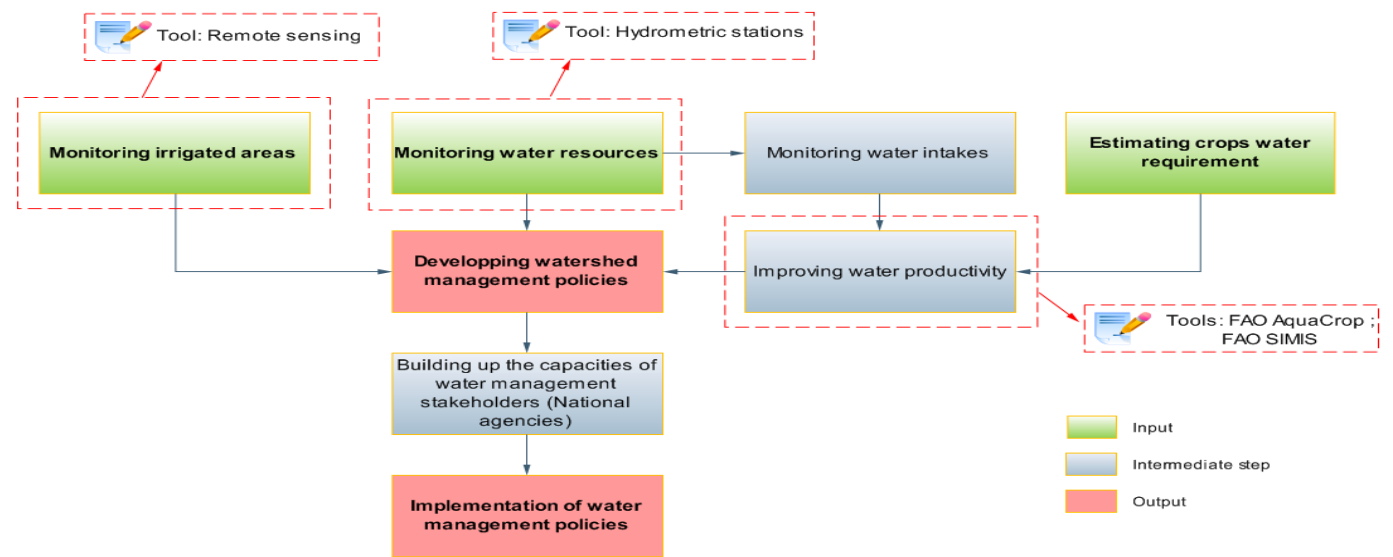
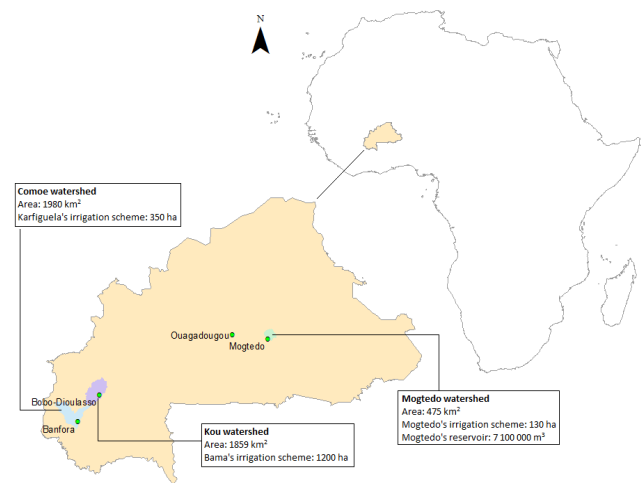
Result 2: Agricultural water management in Burkina Faso

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Objectives:

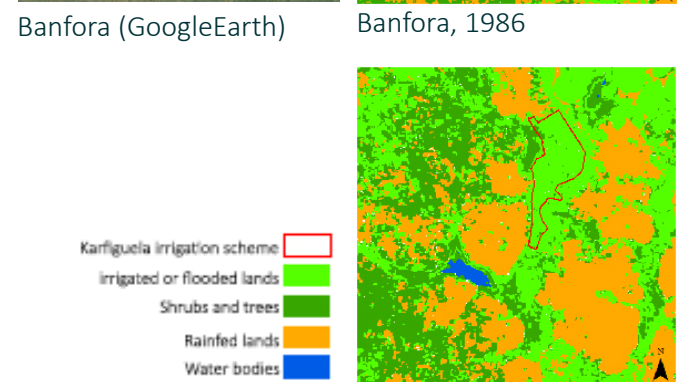
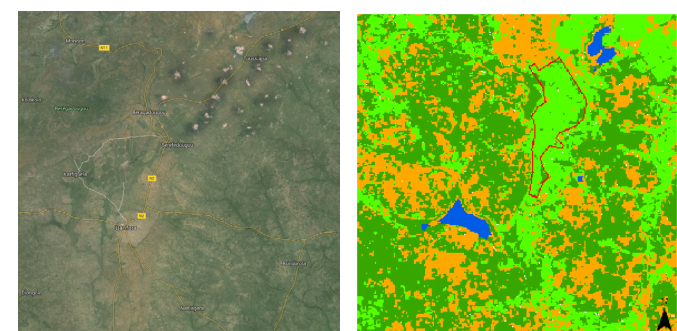
The goal of the PADI-BF102 project is to contribute to improving water management for agriculture at sub-basin level. In order, PADI-BF102 works to strengthen the capacity of national agencies in charge of agriculture in the design and implementation of water management tools. The project is present in 3 (target) regions: the Kou watershed, the Comoe watershed and the Mogtiedo watershed.



Remote sensing:

Using remote sensing (change detection analysis) for irrigated area monitoring:

- Collect a set of satellite images well distributed over a given period (i.e. 2-3 decades);
- Classify each satellite image (Support Vector Machine);
- Perform a pixel trajectory analysis in order to correct unlikely trajectories for each image pixel. Some rules are set up based on ancillary data (surveys, interviews, etc.) about the general evolution of the land use and cover;
- Correct the classified images based on a backward and forward change detection analysis.

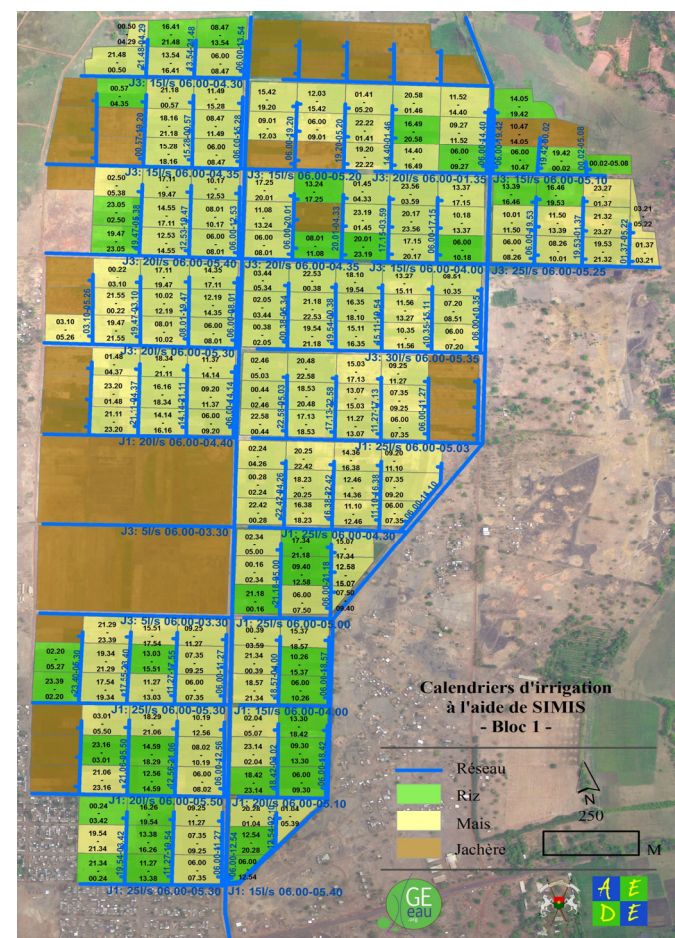


Classes	1986 (ha)	2015 (ha)	Variations (%)
Irrigated/flooded lands	3 794	5 244	38
Shrubs and trees	6 101	3 789	-37
Rainfed lands	3 774	4 713	24
Water bodies	153	64	-58

Decision support:

Developing (or customizing) agricultural water management tools :

- Multi-scale approach for agricultural water management (from watershed to parcel level);
- Watershed level: automated hydrometric stations (and land use maps) for water resources monitoring;
- Irrigation scheme level: using SIMIS (Scheme Irrigation Management Information System) (FAO) as a decision support system for better water allocations;
- Field level: using AquaCrop (FAO) to improve water productivity.

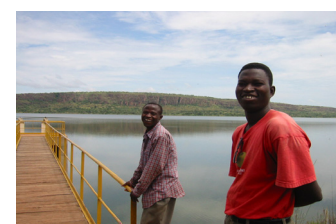


SIMIS: Proposed irrigation schedule (Bama rice perimeter, Kou watershed)

Capacity building:

Reinforcing capacities of National agencies in charge of agriculture and water resources management:

- Organizing training sessions for the National agencies in charge of agriculture and water resources management;
- Building an operational 'GIS and remote sensing unit' to respond to GIS and remote sensing needs, and to build a geodatabase to centralize national irrigation schemes spatial data.



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