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# **WEAP Volta:** a collaborative tool on the (long) road to implementation

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Basin Focal Project – Volta

# A collaborative work

- The context: 2 projects using WEAP in the Volta basin
  - BFP Volta:
    - semi-distributed hydrologic modelling,
    - water demands for reservoirs,
  - *Project for Improving Water Governance in the Volta River Basin* (PAGEV), implemented by the IUCN:
    - with precise urban water demands,
    - groundwater.
- Aim:
  - combine both approaches into a single WEAP application,
  - relevant for the **Volta Basin Authority** (VBA).

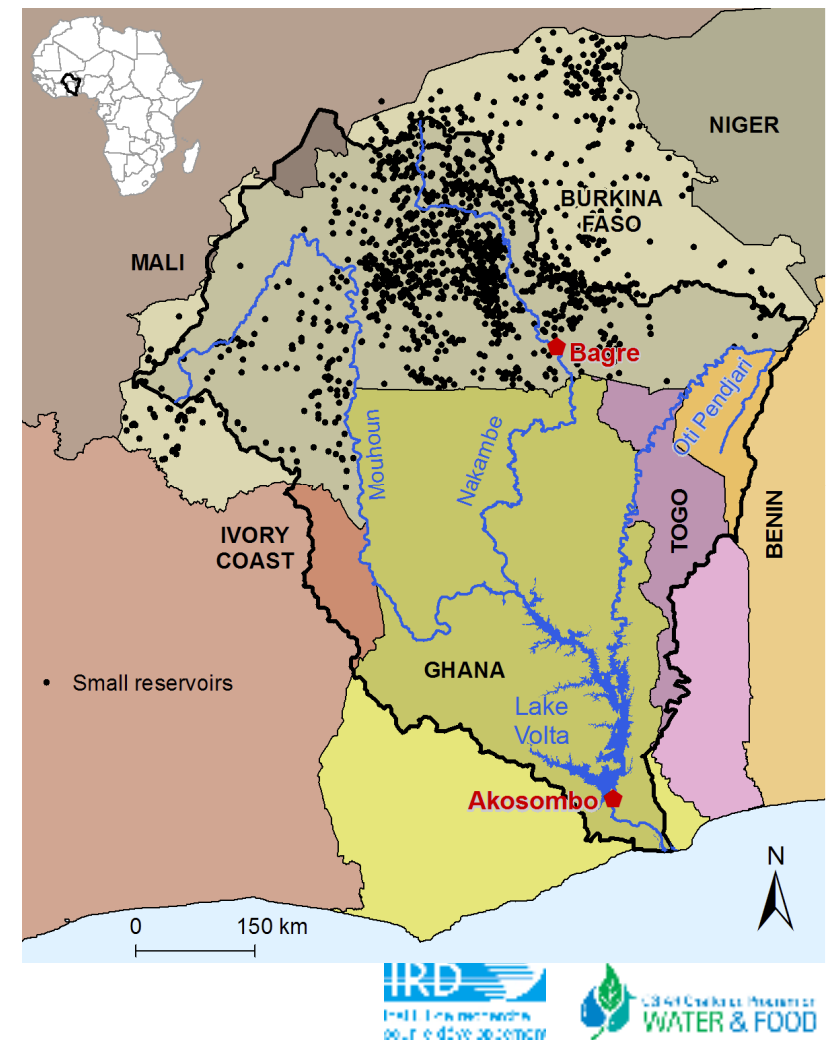
# WEAP Volta version 1.0 – Features

- The *Stockholm Environment Institute* (SEI) organised a 2 weeks collaborative work.
- Features of v 1.0 of WEAP Volta:
  - single tool (WEAP) with semi-distributed modelling:
    - Hydrology: DEM, Climate data, Landuse, observed river flows,
    - Water Allocation:
      - small reservoirs,
      - large irrigation reservoirs,
      - hydroelectric dams,
      - urban water demands and their trends.
  - scenarios:
    - Climate Change: considering IPCC's reports and past observations in the Basin,
    - further development of small reservoirs.

## Version 1.0 – Ex. result small reservoirs

- Rapid increase in water demand from small reservoirs:
  - growth of 5%/year,
  - equivalent to an increase of 2 times in irrigated area after 25 years.

	Bagre Burkina Faso	Akosombo Ghana
Average Inflow	960 Mm3/year	28,000 Mm3/year
At the end of the 25 years scenario		
Departure of Inflow	-200 Mm3/year	-330 Mm3/year
Relative to average inflow	≈-20%	≈-1%



# Version 1.0 – Ex. result small reservoirs

- Trade-off:
  - increase in 2 times in small farmers irrigated area in Burkina Faso,
  - VS.:
    - Bagre (Burkina Faso):
      - 20% reduction in inflows,
      - **national trade-off.**
    - Akosombo (Ghana):
      - 1% reduction in inflows,
      - **transboundary trade-off.**



# On the (long) road to implementation

- Hold discussions with the **Volta Basin Authority (VBA): is WEAP Volta useful?**
  - PAGEV is in regular contact with the VBA,
  - next week, BFP Volta & PAGEV will participate to the meeting of
    - the VBA Experts Committee and,
    - the VBA Council of Ministers.
- Future work plan (PAGEV – BFP Volta – SEI):
  1. Identification of key basin stakeholders who will be involved in the VBA.
  2. Stakeholder outreach to build confidence in WEAP Volta.
  3. WEAP training for interested stakeholders.
  4. Focused capacity building on the use of WEAP Volta within the VBA focal point organisations:
    - development of a regional user network,
    - continual WEAP Volta refinement.
- Future collaboration with **GLOWA Volta?**