# First International Environment Forum for Basin Organizations

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## Basin - wide Decision Support System for the Management of Flood and Drought: The Case of the Volta

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# The Volta Basin



| Country | % of Basin Area | % of Country |
|---|---|---|
| Benin | 3.41 | 12.1 |
| Burkina Faso | 42.9 | 62.4 |
| Cote d'Ivoire | 2.48 | 3.1 |
| Ghana | 41.6 | 70.1 |
| Mali | 3.12 | 1.0 |
| Togo | 6.41 | 45.0 |

**VBA established 2007**

Bénin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Togo

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# Situations Requiring Joint Action for Food Management

- **Parts of Volta basin prone to flooding: e.g., 2007-2010**

- **Lery dam operation in Burkina Faso (BF-Mali)**

- **Operation of Bagre dam Spillway; BF-GH**

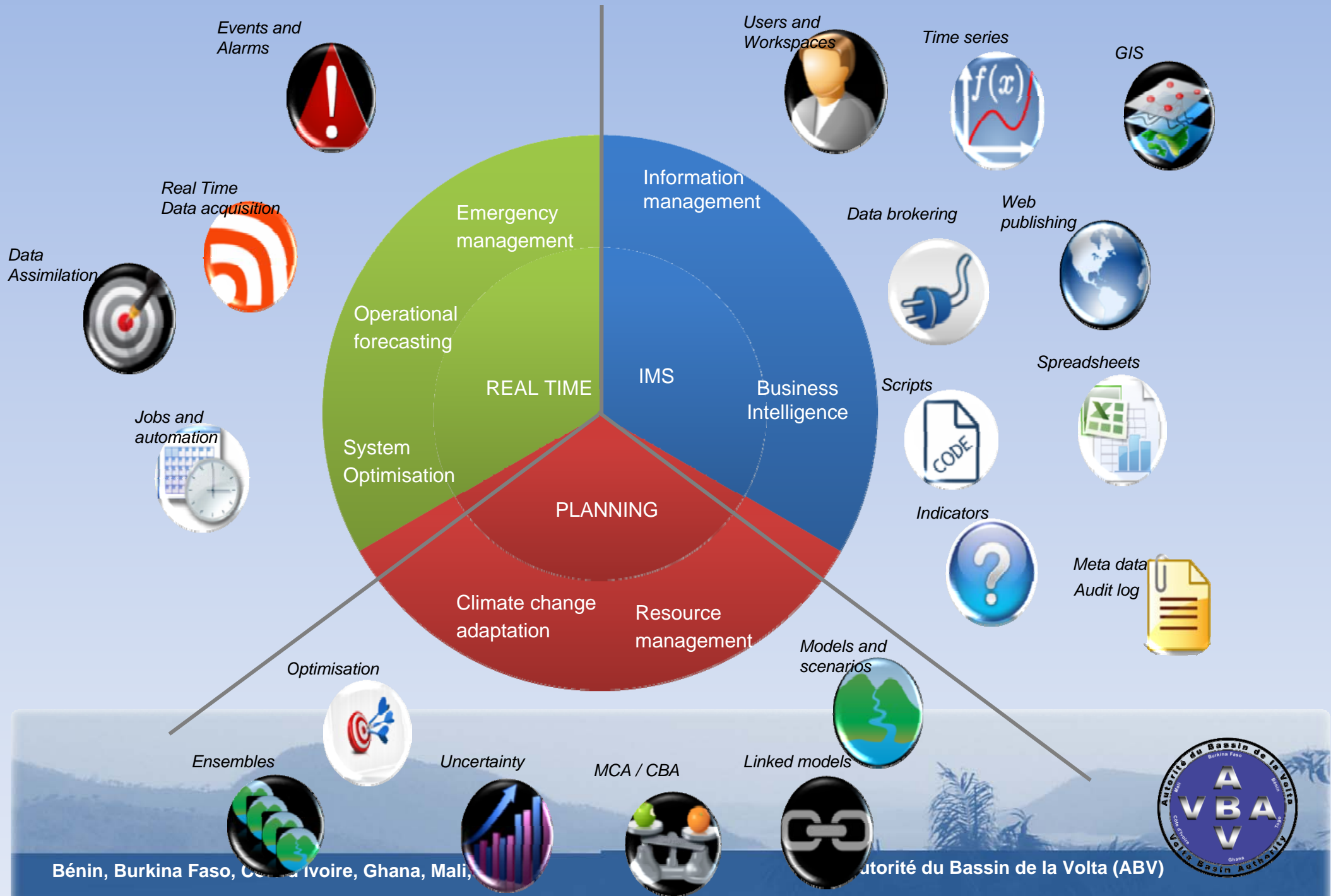- **Drought in Sahel and Savannah Zones**

# Basin - wide Decision Support System

- **Currently, no comprehensive system available**

- **Attempts by various studies and projects**

- **Volta Basin Authority - hydrological model will integrate a sub-regional flood forecasting module**
  - **Volta-HYCOS Project**
  - **VBA Observatory**

- **UNEP GEF Flood and Drought Managt Tools**

# MIKE CUSTOMISED Functional Components



Events and Alarms

Real Time Data acquisition

Data Assimilation

Jobs and automation

Users and Workspaces

Time series

GIS

Data brokering

Web publishing

Spreadsheets

Scripts

Indicators

Meta data Audit log

Emergency management

Information management

Operational forecasting

REAL TIME

IMS

Business Intelligence

System Optimisation

PLANNING

Climate change adaptation

Resource management

Optimisation

Models and scenarios

Ensembles

Uncertainty

MCA / CBA

Linked models

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# Other Sub-regional initiatives on flood management

- **Flood information exchange between SONABEL and VRA on Bagre dam releases**

- **Joint flood management between Burkina Faso and Mali Sourou River**

- **West African Science Service Centre for Climate Change and adapted Land Use (WASCAL)**

# Major Challenges

- **Weakening and degradation of data collection and information systems in many countries**

- **Inadequate human and financial resources**

**ANBO Strategy 2015-2025:**

*Objective 4: Data, information and knowledge management capacity to support transboundary water resources management is strengthened;*

# Roles of Basin & Regional Institutions

- **ANBO** Common platform to strengthen African BOs

- **RECs (ECOWAS):** Coordination, Financial and Political support.

- **ACMAD, AGRHYMET:** Training, Research, Implementation , Coordination and Dissemination

- **BOs:** Capacity Building and Data Collection; Lead partnerships for basin development

# THANK YOU FOR YOUR ATTENTION