



Uganda Country Experience Ecosystem-based Approaches to Climate Change Adaptation And Disaster Risk Reduction

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**NAP Expo 2016 - Monday, 11 July 2016, from 14:00 – 17:30
CBD session: Ecosystem-based approaches to CCA and DRR,
Bonn Germany**

Key Climate Change and Disasters

- Increasingly frequency and intensity from prolonged droughts, floods affecting agriculture, water supplies, infrastructure damage and disrupt livelihoods, reduced potential of the grazing areas and the economy;
- Increasing land degradation due to vegetation clearing and charcoal burning – leading to increased sediment loads, soil fertility loss, increased surface runoff;
- Increasing encroachment and degradation of forests and wetlands
- Increasing frequency of landslides in the Mt. Elgon and Rwenzori regions, causing loss of lives, livestock, damage to property and economic disruption.
- All uncertainties resulted into low adaptive capacity at national, district, societies and at community and ecosystem levels.

Ecosystem destruction



Impact of land degradation and deforestation

- Soil erosion and siltation of water bodies
- Reduced water levels and flows leading to seasonally insufficient water supply for the local communities and water dependent businesses and other activities
- Flooding
- Poor water quality



Crop cultivation on deforested bare hill slopes and encroachment on wetlands



Challenges posed by CC Risks



Water resources related challenges (cont.)



Climate Change Adaptation at policy and strategic level

- NAPA: Uganda developed NAPA (2007)
- National Climate Change Policy and its Costed Implementation Strategy (NCCP-IS):
- Institutional framework for coordination of CC and Biodiversity in the country exist.
- NCCP-Performance Measurement Framework (PMF) finalized.
- Nationally Determined Contribution were finalized
- NAP-Framework for Uganda -The process is being initiated at National level, a road map was developed and submitted to UNFCCC.
- NCC –Legislation/Law - Principals of the law are already developed and tabled for Parliamentary approval.
- Pilot Program for Climate Resilience (PPCR). The country is preparing Strategic Program for Climate Resilience (SPCR). Process ongoing expected to be completed in October 2016 ready for submission to CIF.

CCA Mainstreaming

- **National CC Mainstreaming Guidelines** for sector plans and budgets in place.
 - Mainstreamed CCA in NDPI & II and the country's vision 2040
- **The National Biodiversity Strategies and Action Plans(NBSAPs-Uganda)** are mainstreamed with CCA/M
- **Final Draft Standard National Climate Change Indicators for OBT and for Annual Local Govt Assessment Tool** developed to strengthen the mainstreaming of CCA/M.
- Mainstreaming of CCA,M in select District Development Plans (DPP)

NBSAPS -UGANDA

STRATEGIC OBJECTIVE OF NBSAP - **TO REDUCE AND MANAGE NEGATIVE IMPACTS ON BIODIVERSITY**

1.To enhance GHGs sinks and storage

- ✓ Mainstreaming **cc** into sector policies and plans
- ✓ Afforestation
- ✓ Re forestation
- ✓ Re-vegetation of wetland systems

2.To enhance biodiversity and ecosystems' resilience to climate change impacts

- ✓ Build capacity of all stakeholders particularly policy makers, technocrats and local communities in biodiversity hotspots
- ✓ Controlling and maintaining bush fires where possible
- ✓ Collection of diverse gene pools as a basis of genetic adaptation to climate change
- ✓ Establish and maintain ecological networks especially parallel to climatic gradient
- ✓ Establishing buffer zone for adjustment of reserve boundaries

EbA –Program in Uganda

- Ecosystem-based adaptation uses biodiversity and ecosystem services in an overall adaptation strategy.
- Includes the **sustainable management, conservation and restoration of ecosystems** to provide services that help people adapt to the adverse effects of cc and **institutional strengthening**.
- Focused on:
 - multiple social, economic and cultural co-benefits for local communities.
 - conservation and sustainable use of biodiversity.
 - contribute to CCA/M, by conserving carbon stocks, reducing emissions caused by ecosystem degradation and loss, or enhancing carbon stocks.
 - applied at regional, national and local levels, at both project and programmatic levels, and benefits can be realized over short and long time scales.
 - cost-effectiveness, accessibility to rural or poor communities and traditional and local knowledge and cultural values.

EBA-Benefits

- 4 mountainous (Mount Elgon) districts of in Ugnada **Kapchorwa, Kween, Bulambuli and Sironko**
- The program is funded by The German federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) through its international climate change initiative, and implemented through a partnership with UNEP, UNDP, IUCN and MWE. Other EbA projects are in Rwenzori Mt.
- The program goal and objective is to ;-
“strengthen Uganda’s Capacity for promoting ecosystem based Adaptation (EBA) options and to reduce the vulnerability of communities to cc with particular emphasis on mountain ecosystems”

The program support;-

- ✓ The development of methodologies and tools for mountain ecosystem,
 - ✓ The application of the above methodologies at the national level,
 - ✓ The implementation of the EbA pilots at the ecosystem level and,
 - ✓ The formulation of national policies and building an economic case for EbA at the national level.
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- Opportunities for experimental learning Btn regions & amongst countries within the same region. Thru parallel & cooperative development & application of the methodologies and tools and implementation of pilot project.
 - Facilitate transfer of knowledge & experience to build ecosystems resilience.

EBA-Benefits

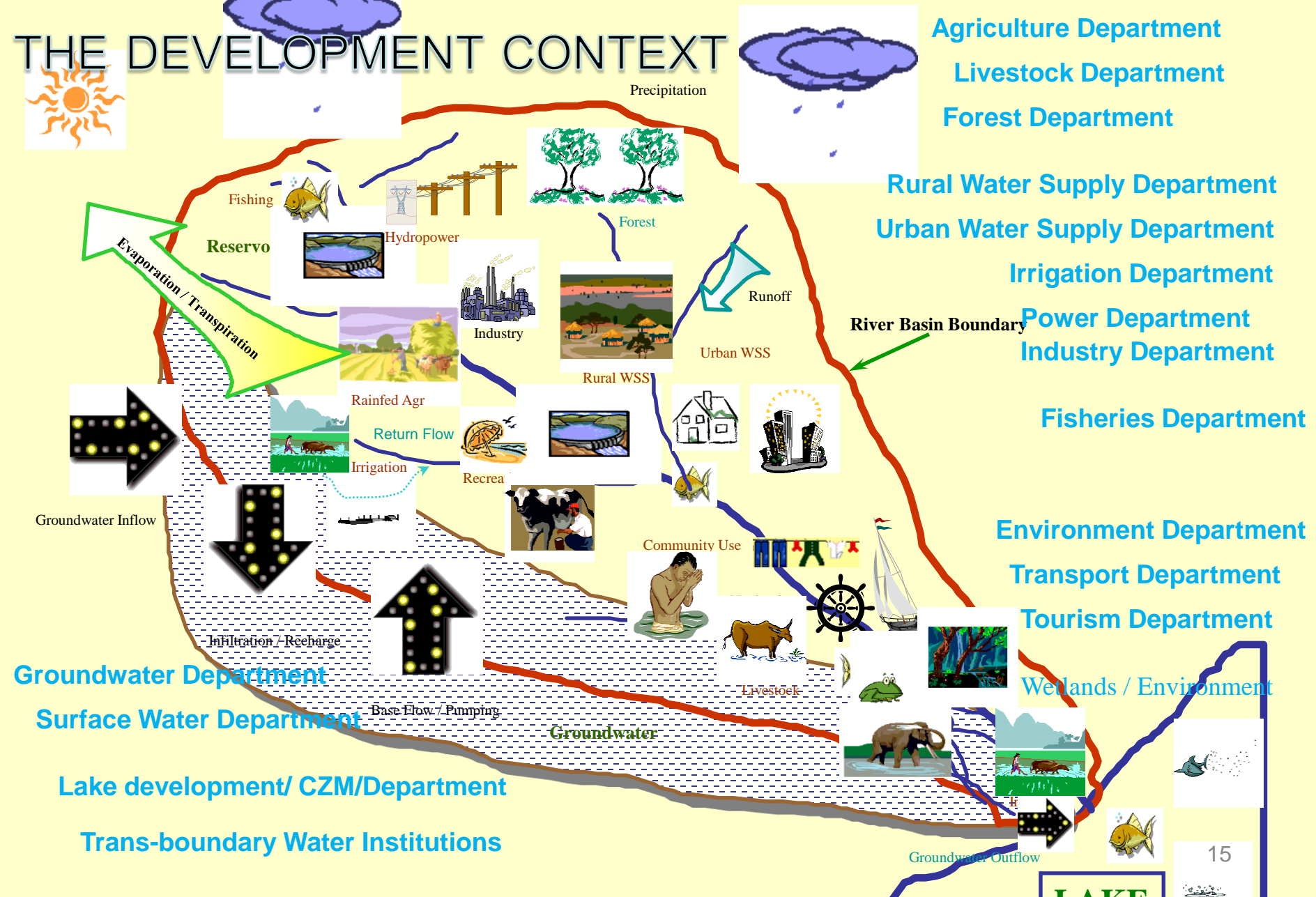
- *The comprehensive watershed management*. Determining project area boundary by the major river drainage boundaries in the 4 districts all of which ends in Lake Kyoga through Lake Opeta, Lake Bisina & Awoja swamp.
- The higher parts of Kapchorwa, Kween, Bulambuli and Sironko Districts are at the upstream where most of the water originates, & therefore are the areas with more *soil erosion and landslides (Interventions for SLM were piloted)*
- While the districts' lower parts/downstream are subjected to *floods (Flood control interventions)*
- Based on field assessment, EbA approach options for sustainable management, conservation and restoration of Mt. Elgon ecosystems (**project area**) addressed broadly the;
 - a. Community based wildlife management
 - b. Comprehensive watershed management
 - c. Increasing crop diversity (multiple crop varieties)
 - d. Restoration of degraded ecosystems
 - e. Ecosystem resilience & food security

EbA Uganda -Experimental Benefits

1. A VIA for Mount Elgon with a focus on links between ecosystems and people, to enable EbA was conducted.
2. Maps of the vulnerability to the most relevant types of cc impacts of local communities and ecosystem services that support them in the Mount Elgon.
3. Maps of current and possible future ecosystem service supply for the Mount Elgon region
4. GIS data sets suitable for the national and district project stakeholders to explore options for locations suitable for EbA activities.
5. Institutional capacity strengthened for local governments & other key national institutions to plan, monitor & enforce EBA enhancement.
6. EbA regional resource centre launched and operational
7. Piloted EbA project interventions focusing on H2O Resource Management & enhancement of soil conservation measures.
8. Training manual ecosystem based DRR for district and national level policy makers for EbA in the Mt. Elgon

WHY CATCHMENT OR RIVER BASIN MANAGEMENT?

THE DEVELOPMENT CONTEXT



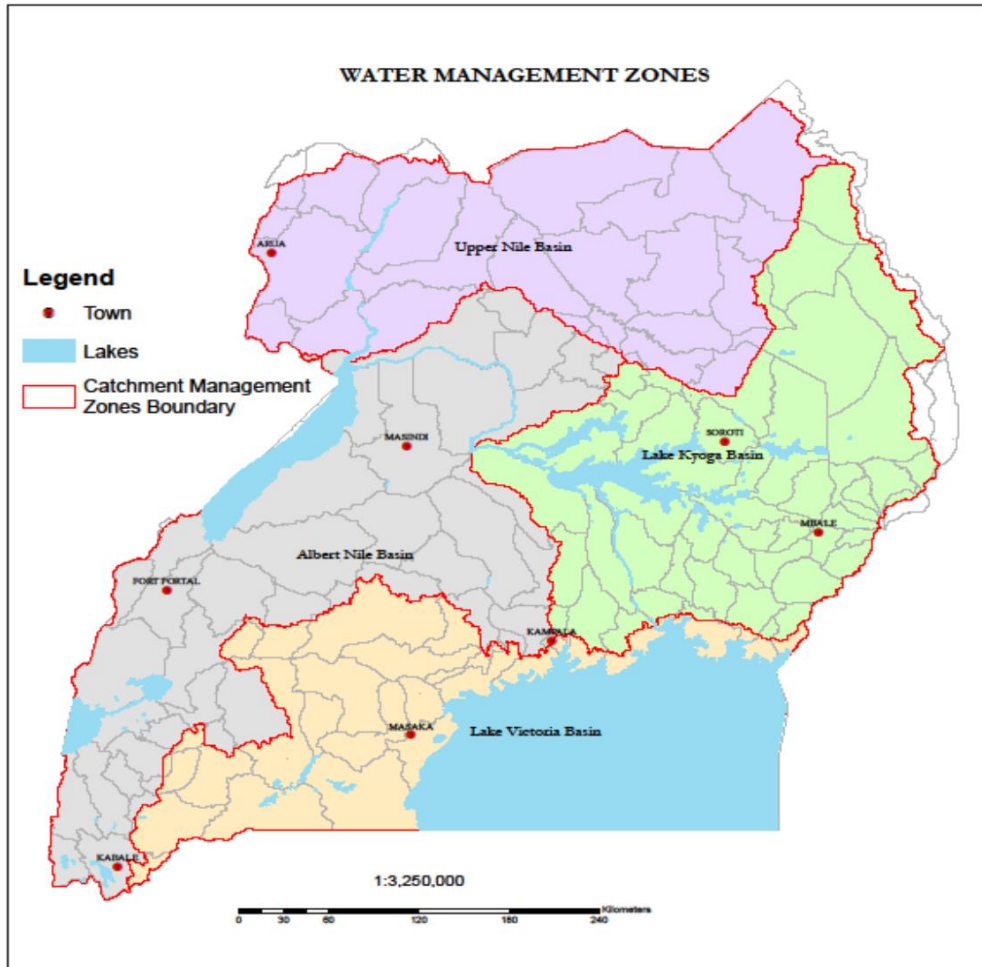
Paradigm shift in WRM from centralised to Catchment/Basin

- Victoria Water Management Zone

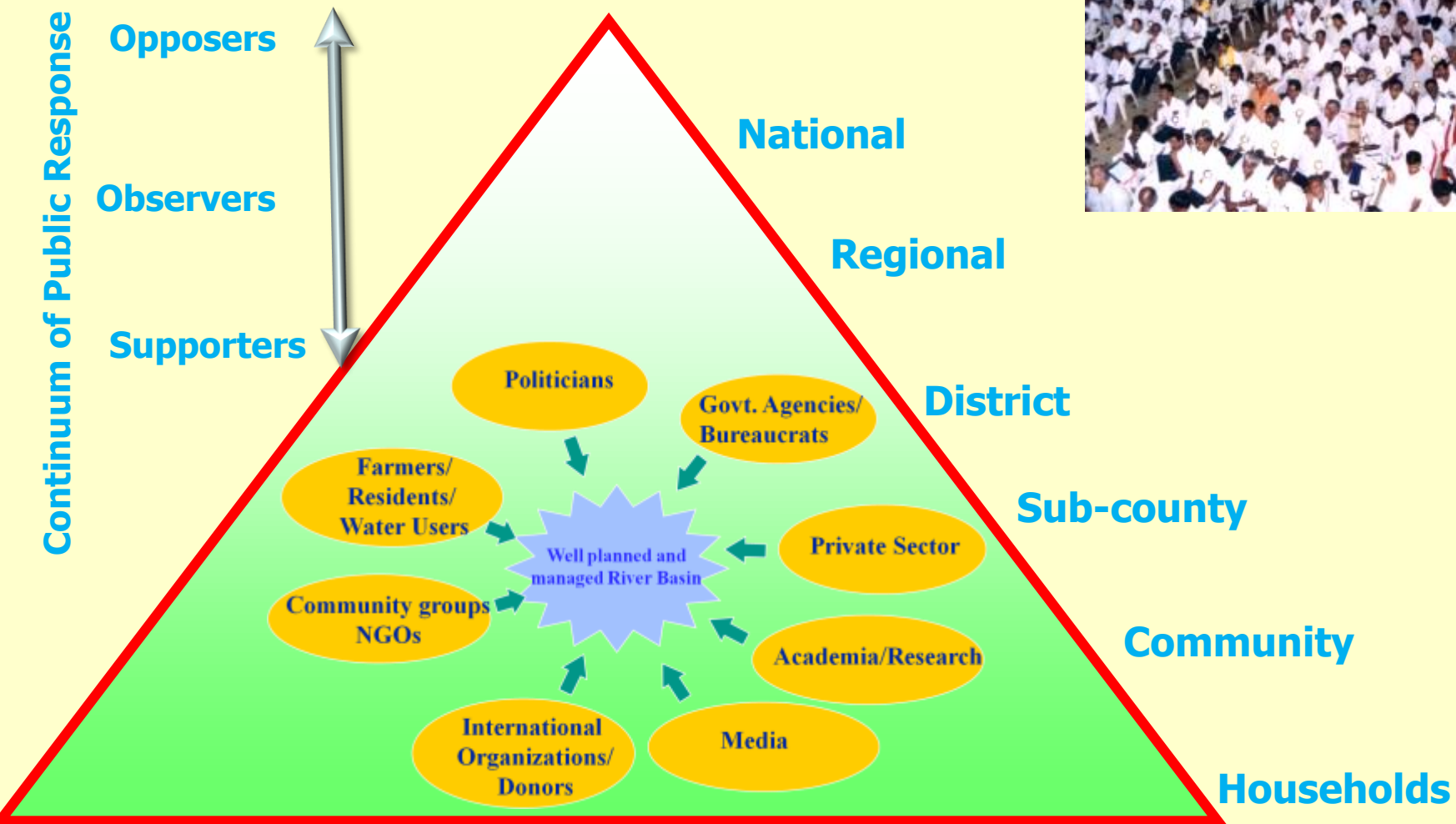
- Kyoga Water Management Zone

- Albert Water Management Zone

- Upper Nile Water Management Zone



CATCHMENT STAKEHOLDERS ARE MANY...



Preparation of a Catchment Plan

Shared decision making supported by facts and sound analysis

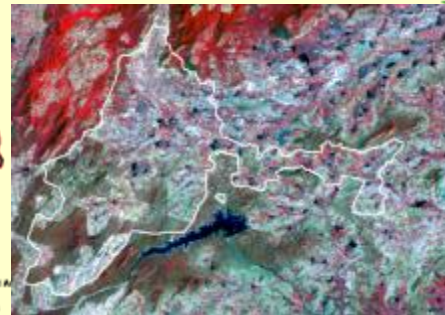
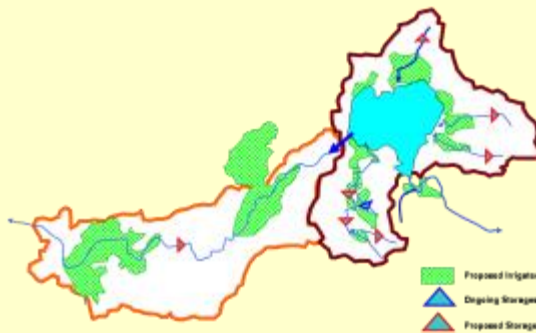
Decisions→

Stakeholder Identification
 Understanding Basin Issues/Problems
 (Pt. A – where now?)
 Shared vision for future potential
 (Pt. Bs – where could the Basin be?)
 Selection of development options
 (getting from A to B)
 Agreement on Basin Development Plan
 Investment Facilitation/Implementation/Supervision
 Consensus on Additional Needs

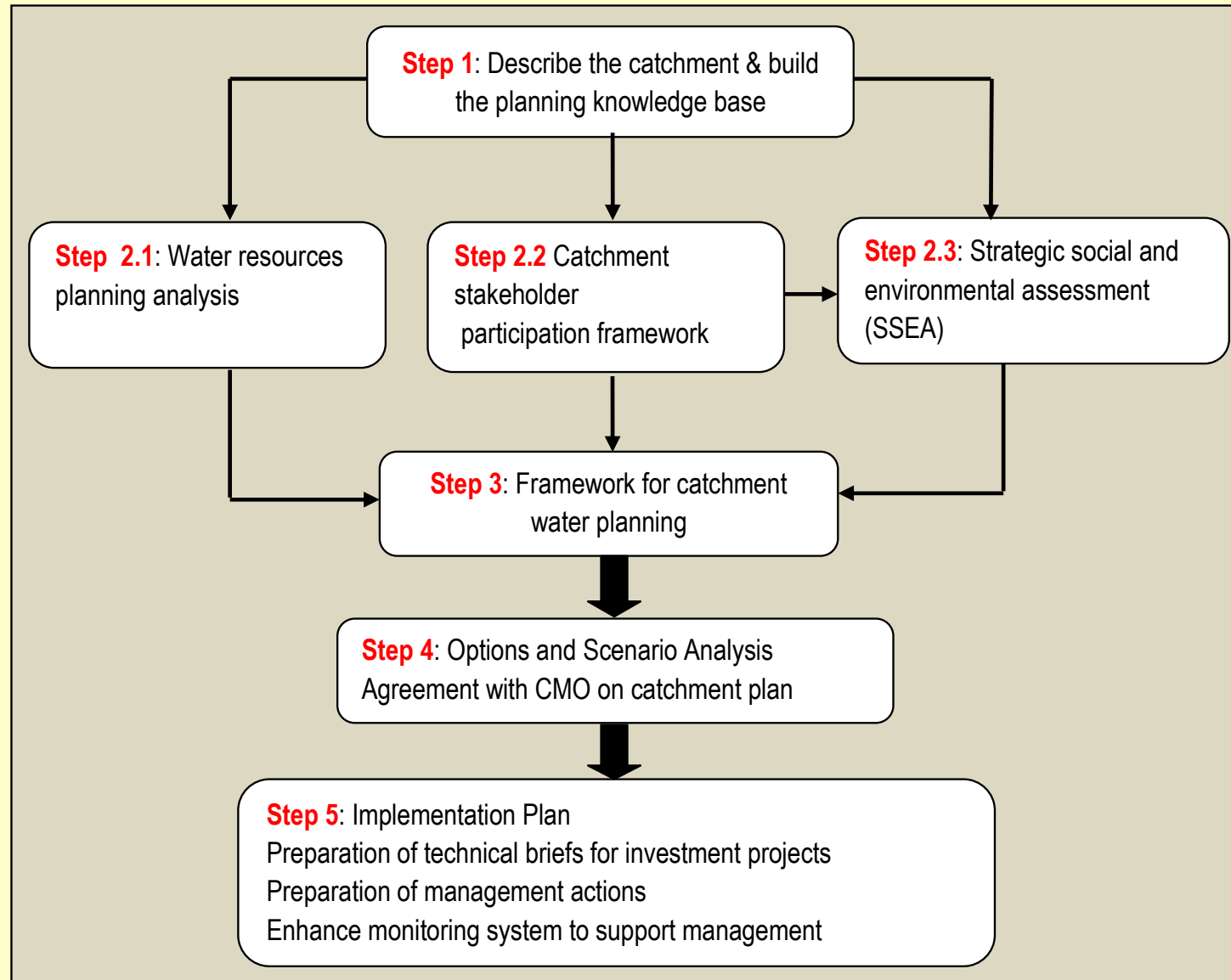
Participation
 Consultation→



Analysis→



Guidelines for catchment management planning in Uganda



Implementation of catchment based WRM

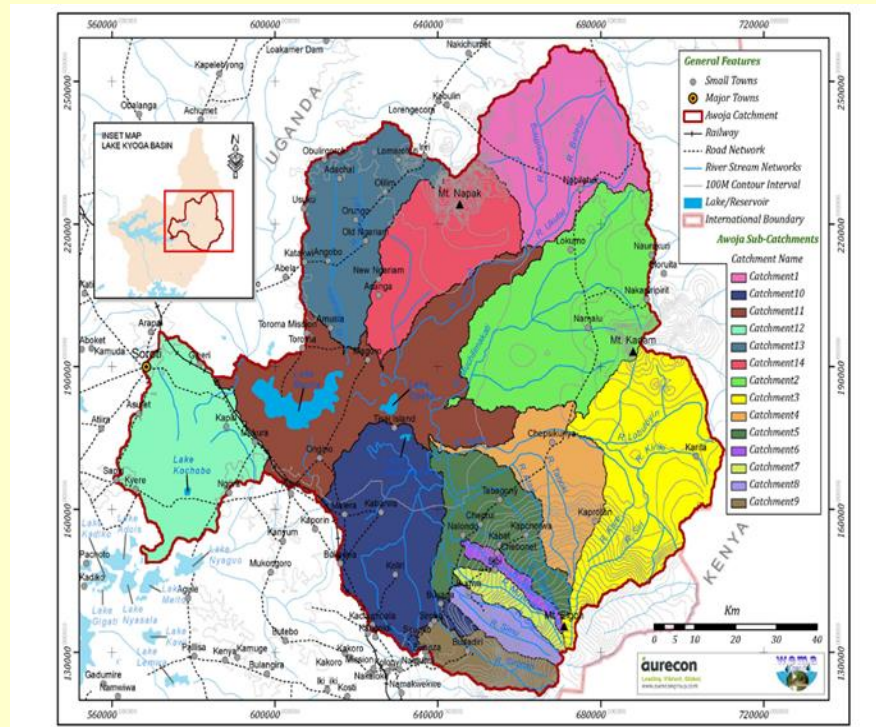
Piloting started in 2006

WRM related activities ongoing in 12 Catchment:

- Rwizi catchment in Victoria WMZ (with GIZ)- CMP 80% complete, expected to be done by end of June 16
- Manga catchment in Albert WMZ (with Protos)- CMP completed
- Semliki Catchment in Albert WMZ (with WWF)- CMP completed
- Maziba catchment in Victoria WMZ (with Kagera Project/NELSAP)- CMP completed
- Rubaya/Ruhenzamyenda catchment in Albert WMZ (with Kigezi Diocese)- CMP completed
- Lokok and Lokere catchments (Karamoja) in Kyoga WMZ (with FAO and GIZ)- CMP preparation has just started in March 16
- Awoja Catchment (with World Bank)- CMP completed
- Mpologoma and Victoria Nile Catchments in Kyoga WMZ (with World Bank)- CMP is 60% complete, expected to be done by June/July 16
- Albert Nile and Aswa Catchments in Upper Nile WMZ (with World Bank)- CMP is 60% complete, expected to be done by June/July 16

Mainstreaming Climate Change into Catchment Planning in Uganda

- Catchment planning involves evaluation of how climate change may affect water resources (infrastructure and management measures) planning.
- Measures to help adapt to impacts of climate change are included as priority interventions in Catchment management Plans
- These measures are implemented as part of implementation of the CMP



Catchment protection Interventions



River bank stabilization

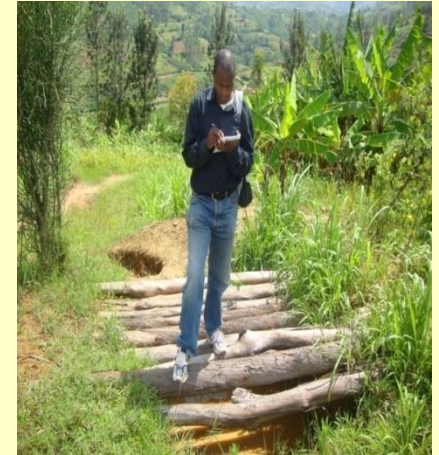


Terracing



**Elephant grass plantation along the
shores of river**

Water Harvesting/Erosion control on hillside



Soil conservation & Agroforestry



Improved schools and households Food security

- Promoting Kitchen gardens in schools and households



Promoting incentives for conservation

Promoting

- **planting of high yielding mangoes** in the buffer zones(wetlands and river banks) esp. at landing sites
- Introducing mud fish in wetlands



Planting trees

Promoting tree planting

- In schools
- Along river banks
- Eroded areas
- Through establishment of community tree nursery beds



Promoting drip irrigation as a form of resilient livelihood to reduce pressure on natural resource based during dry spells.

Catchment undergrounds water harvesting – for strengthening both crop and pastoral farmer resilience



Local Energy Efficient Stoves



Community –Ecosystem empowerment



Community –Ecosystem empowerment



Community –Ecosystem empowerment



Thank you for your attention