

Presentation given the TransLinks workshop:

Modeling and Managing Watersheds

September 13-16, 2011

Kigali, Rwanda

Umubano Hotel, Boulevard de l'umuganda

This workshop was hosted by the Wildlife Conservation Society, the United States Forest Service (USFS) and the United States Agency for International Development (USAID)



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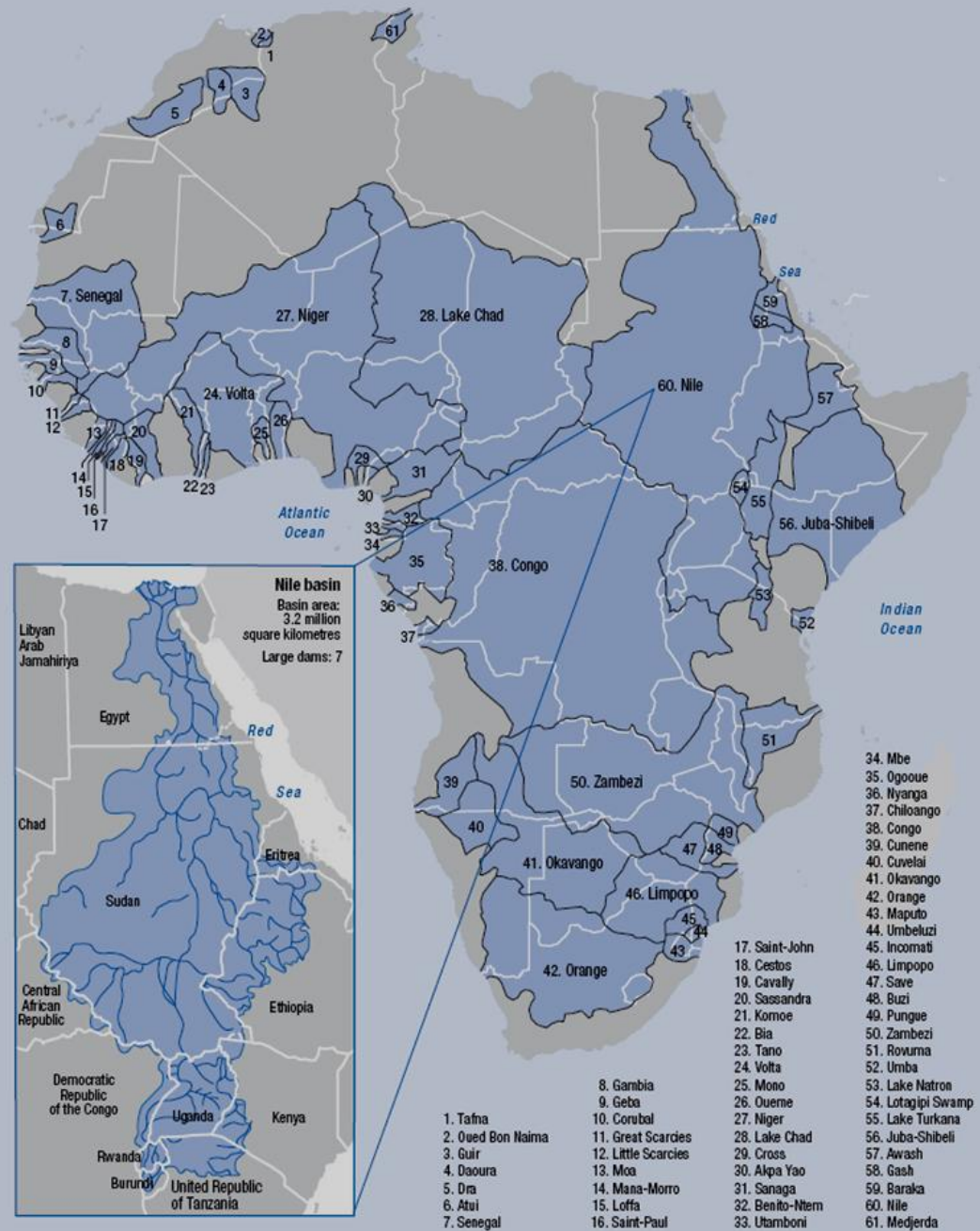
This workshop was generously supported by the American people through the United States Department of Agriculture (USDA) Forest Service and the United States Agency for International Development (USAID), under the terms of the TransLinks Cooperative Agreement No.EPP-A-00-06-00014-00 to the Wildlife Conservation Society (WCS). TransLinks is a partnership of WCS, The Earth Institute, Enterprise Works/VITA, Forest Trends and the Land Tenure Center. The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States government.



Nile Equatorial Lakes Subsidiary Action Program

Modeling and Managing watershed workshop

13-14 Sept 2011



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.
Source: Wolf and others 1999; Rewanga and others 1998; Rekasiewicz 2006; Jørgensen and Phillips 2006.





Structure of Presentation

NILE BASIN INITIATIVE
Initiative du Bassin du Nil

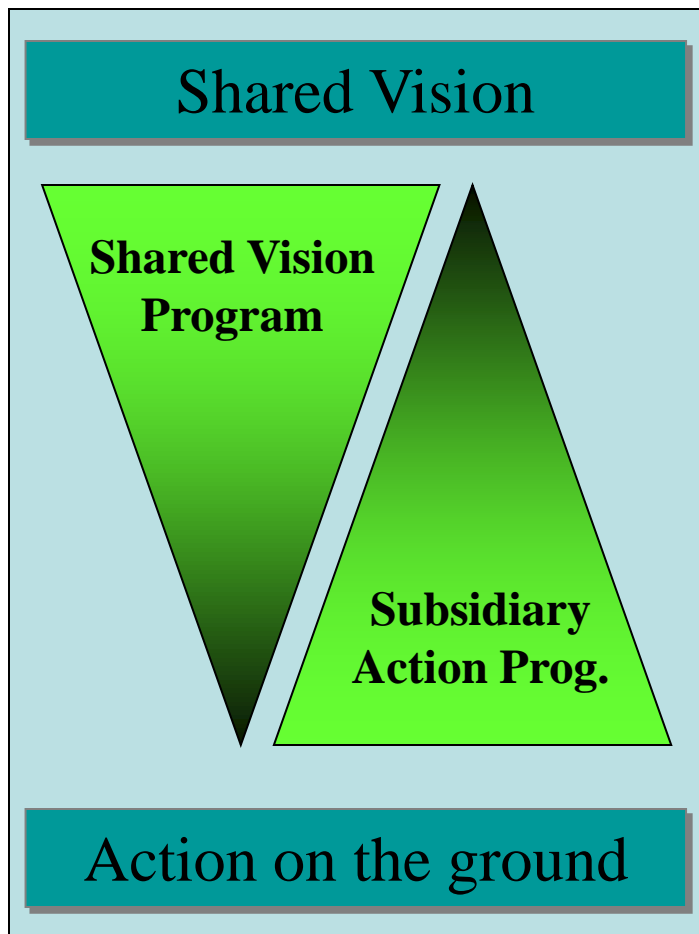
- Introduction to the NELSAP
- Characteristics of the NEL region
- NEL region major threats/cases of Mara, Kagera and SMM basins
- Transboundary Response to National Challenges (NELSAP Investment Projects including Water monitoring and DSS tool)
- Management tools (environmental and climate-adaptation guidelines)
- Key challenges

The Nile Basin and the NELSAP



The Nile Basin Initiative

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NBI created by council of Ministers in charge of water in 1999, in Dar-es-Salaam.

❑ **Shared Vision Program (SVP)**

- ❑ Technical Assistance type projects to create an enabling environment for cooperative investments, build trust and action on the ground, within a basin-wide framework.

• **Subsidiary Action Program (SAP)**

- Investment projects planned at the lowest appropriate level - within the basin-wide framework
- Aimed at poverty reduction, economic development & reversal of environmental degradation



What is NELSAP

NELSAP's role is to facilitate pre-investment planning (institutions and Projects) and resource mobilization. Future role of the currently expanded NELSAP is being explored through the IDS and other related studies that are ongoing (NELSAP Strategic Plan, Inter-country sub-basin agreements).

NELSAP's mission is to "...Contribute to the eradication of poverty, promote economic growth and Reverse environmental degradation in the NEL region."

NELSAP addresses development issues in the NEL Region in two key areas (i) Natural Resources Management and Development (ii) Power Development and Trade

What are the key characteristics of NEL Region?

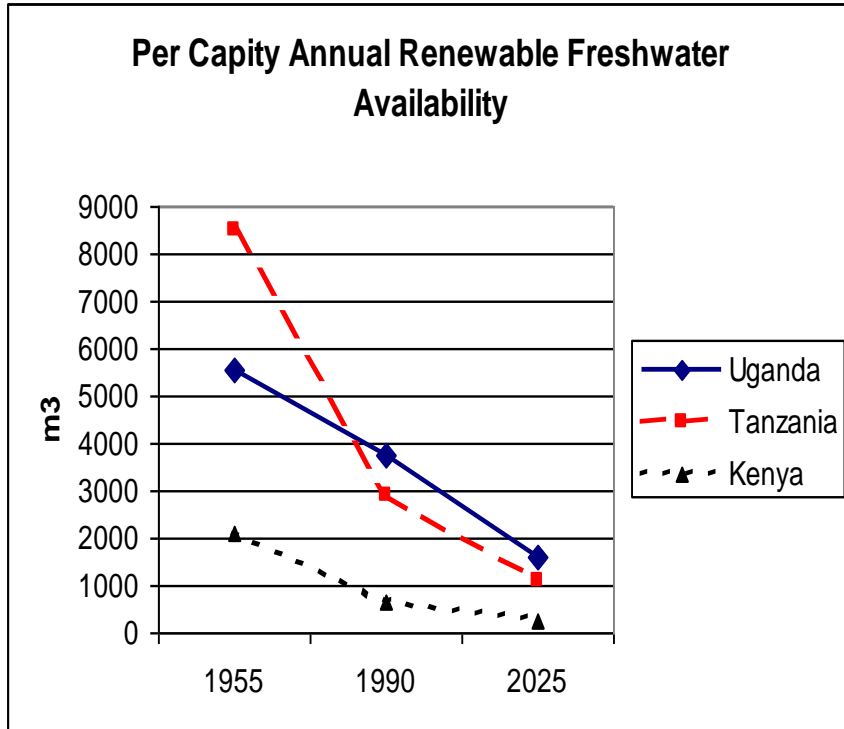
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- A rich hydrology of lakes and tributaries that forms a transboundary system draining to the Lake Victoria and Albert Nile and tributaries from South Sudan to form the White Nile.
- Major tributaries generated from rain mountain forests which are the last remaining in Africa = water towers (Mau escarpment, Virunga complex, Nyungwe/Kibira forest, Mont Elgon and Mont Ruhezori...)
- Include several lakes and wetlands of global importance (lake Victoria, Sudd...)
- Several protected areas of international importance (Masai-Mara & Serengeti, Virunga complex...)

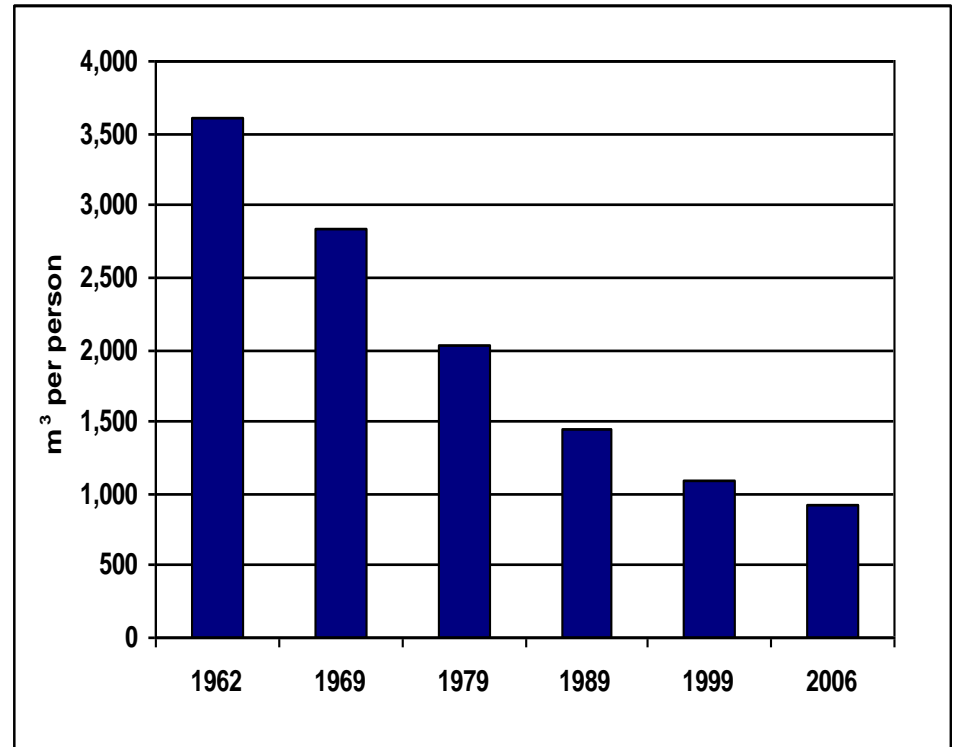


What are the threats in the NEL region? Increasing Water Stress

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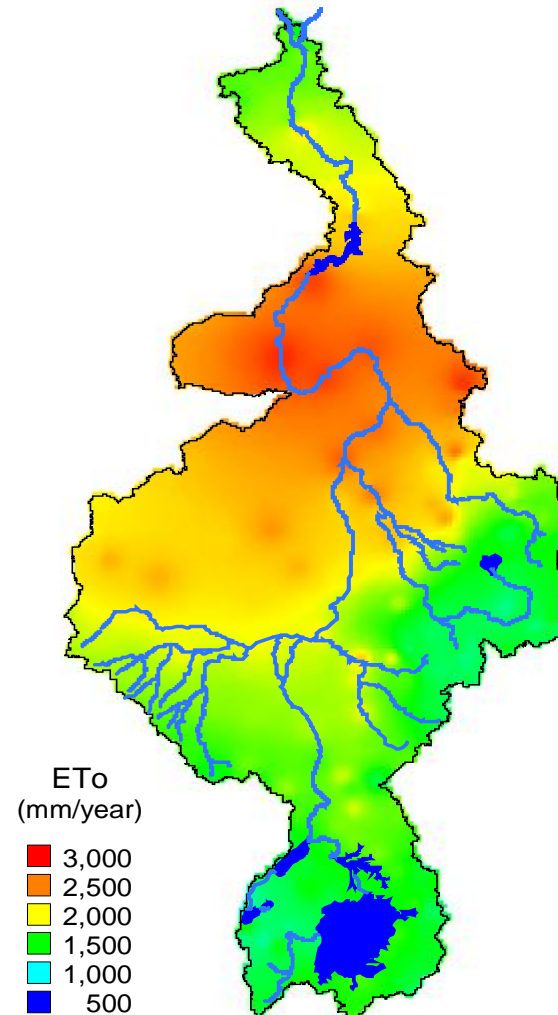
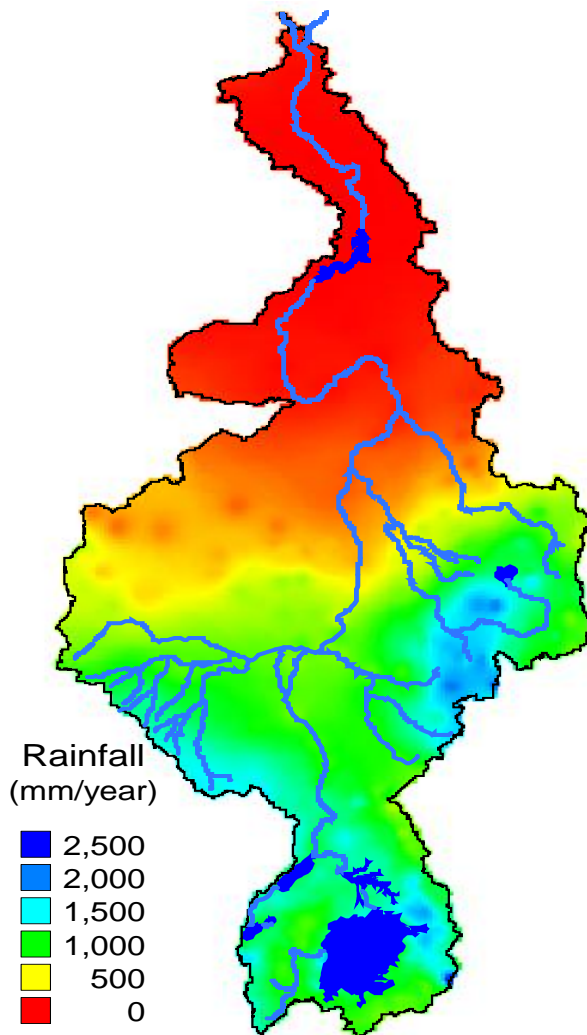
**Per Capita Annual Renewable
Freshwater Availability 1955-2025
Uganda, Kenya and Tanzania**



**Per capita Water availability
(LVNCA), Source CMS**

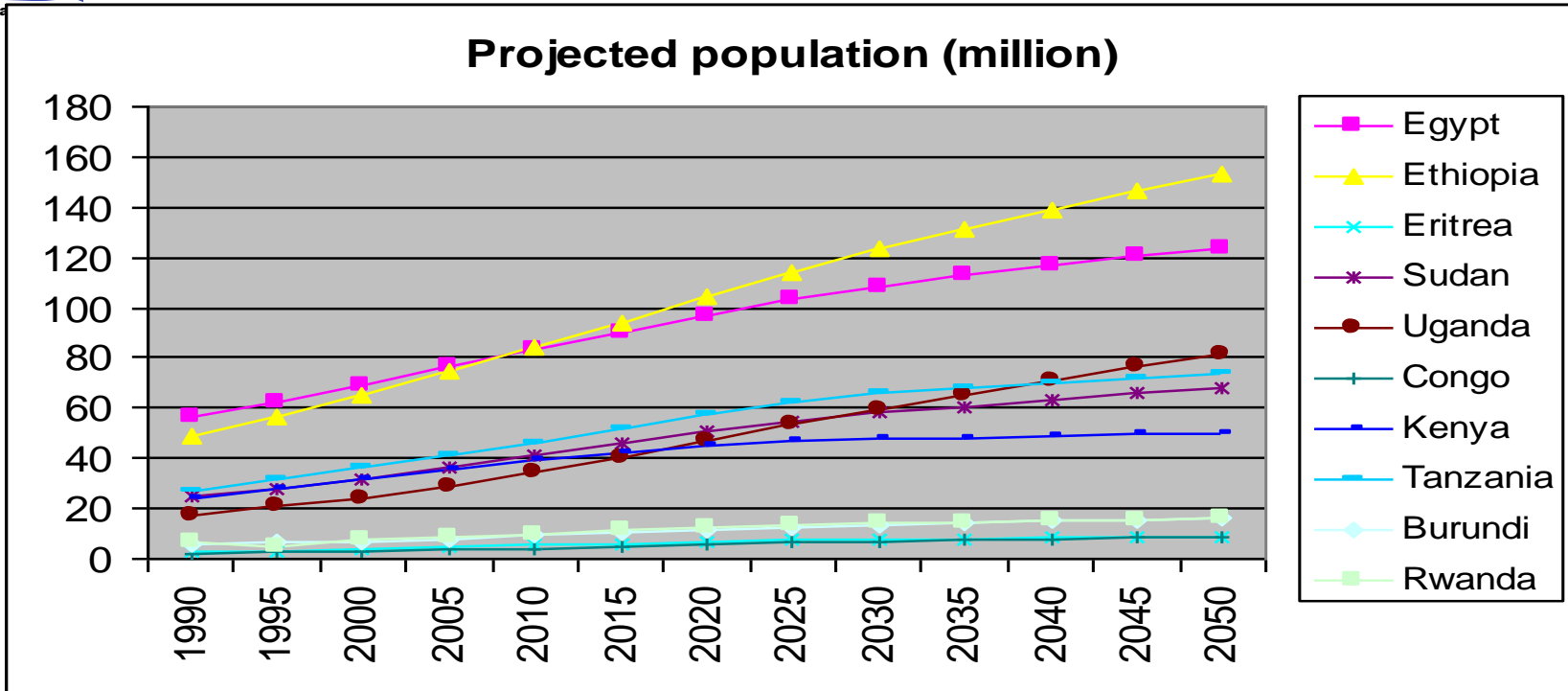
What are the threats in the NEL region? Water Development, Hostage to Hydrology

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What are the threats in the NEL region? Water Development, hostage to population Growth

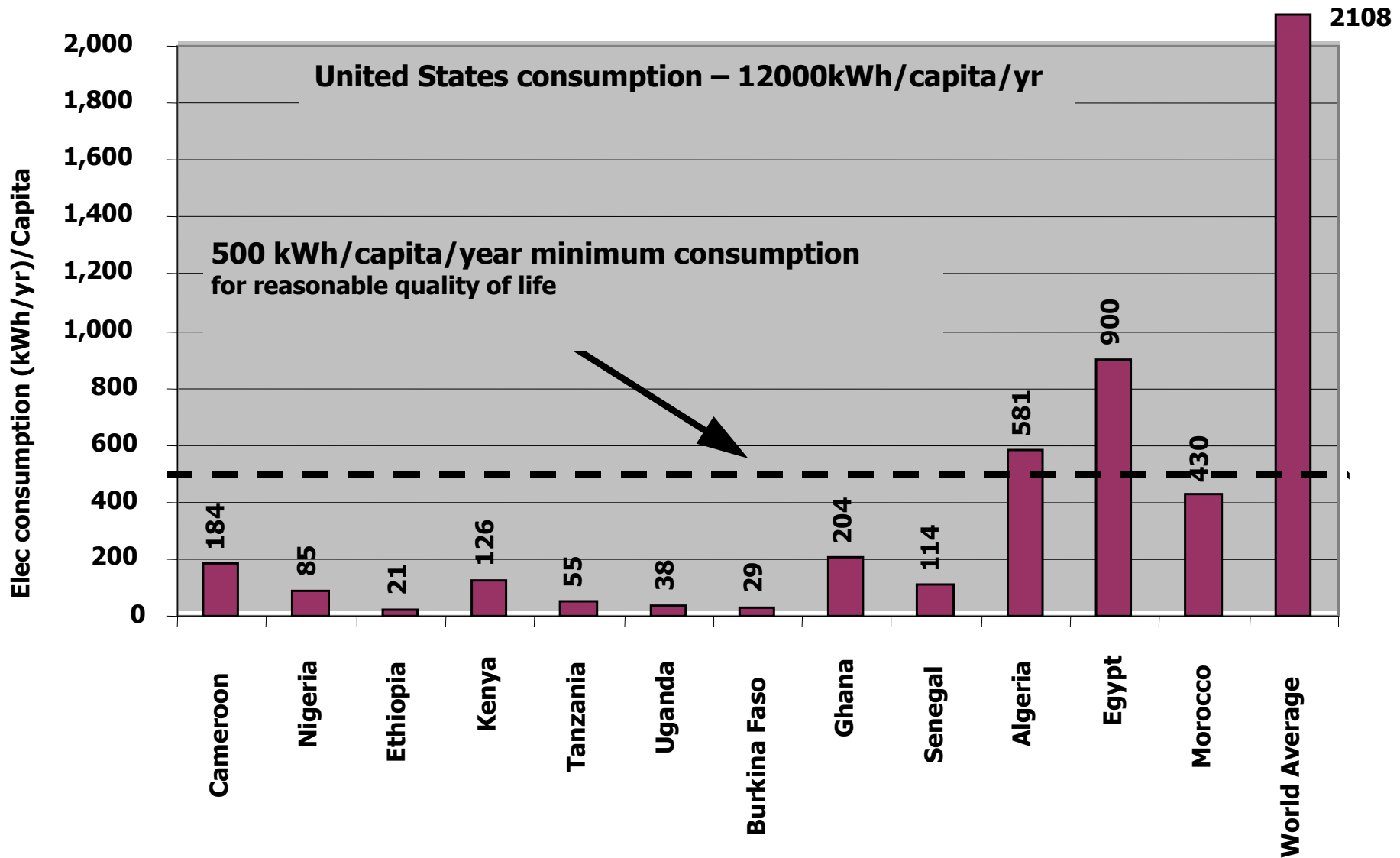
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- Growing population needs improved water resources management:
 - Safe water supply and sanitation,
 - Increasing food needs, Secure inputs for industrial processes
 - Use for hydropower and Maintenance of ecosystems

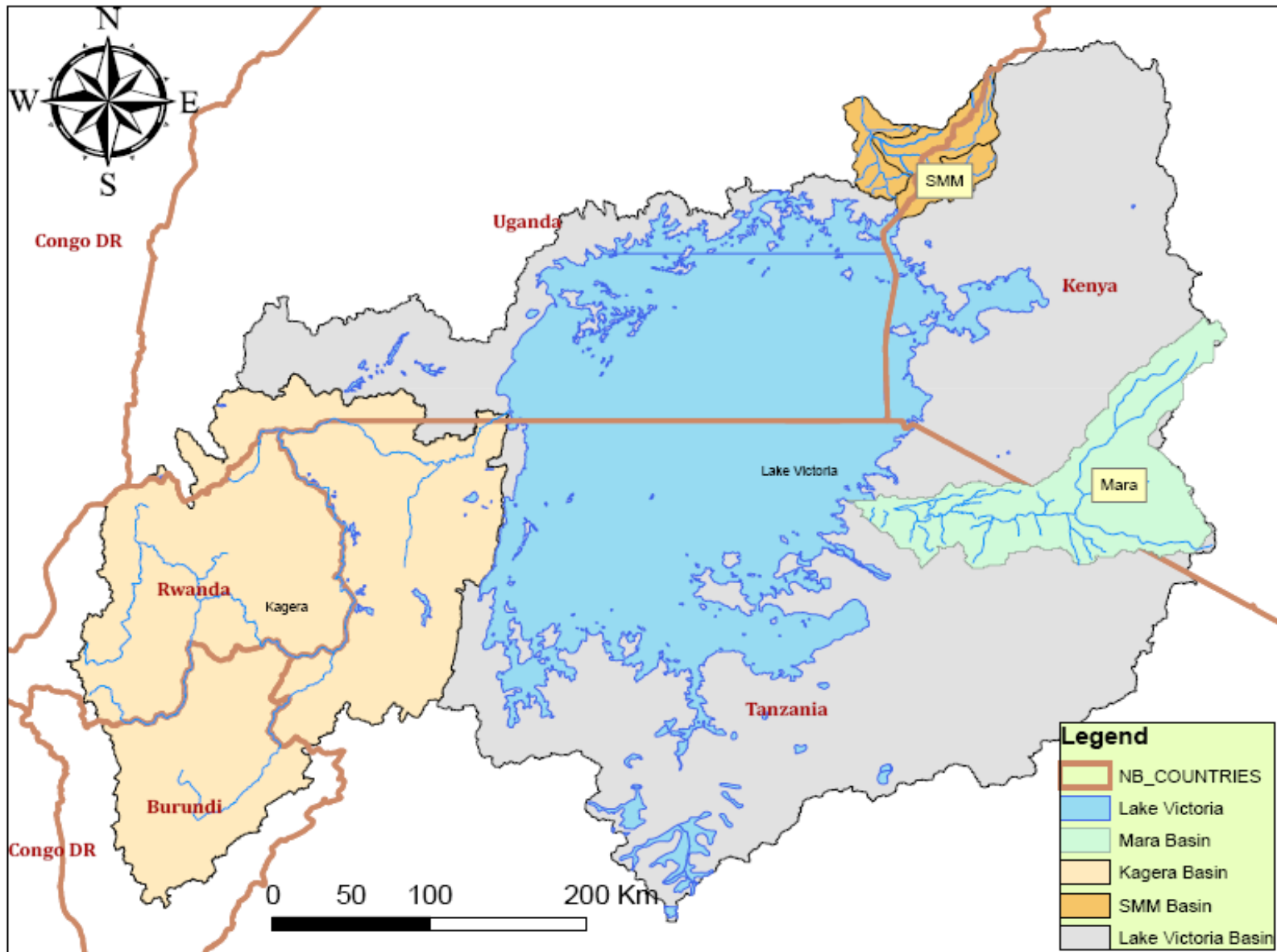
What are the threats in the NEL region?

Infrastructure gap: Access to electricity

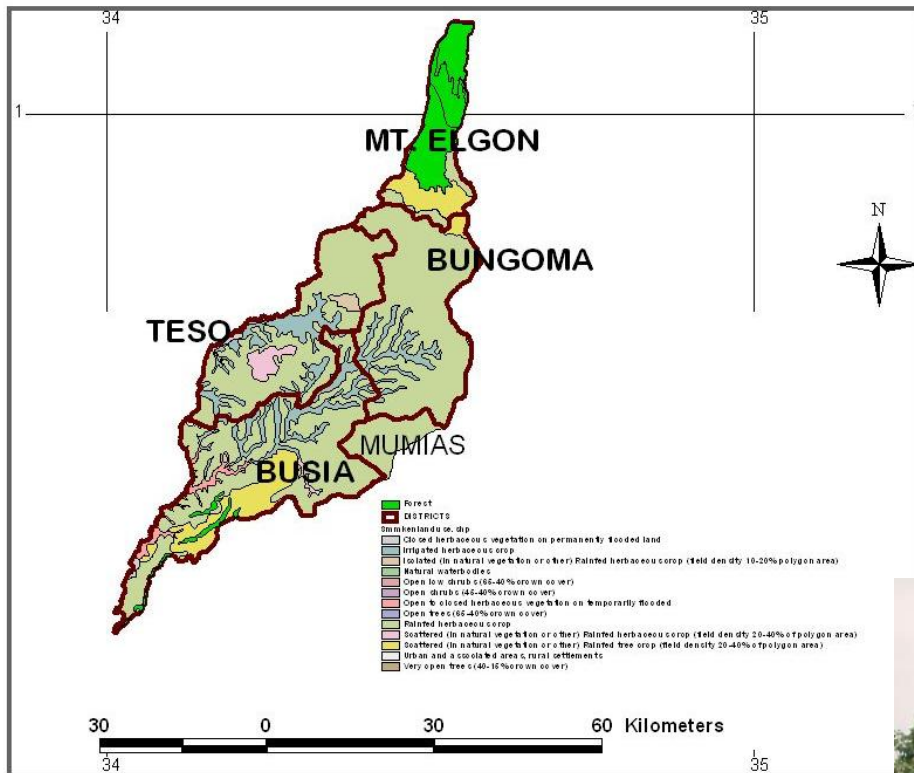


What are the threats in the NEL region? Destruction of environment: RBM Projects

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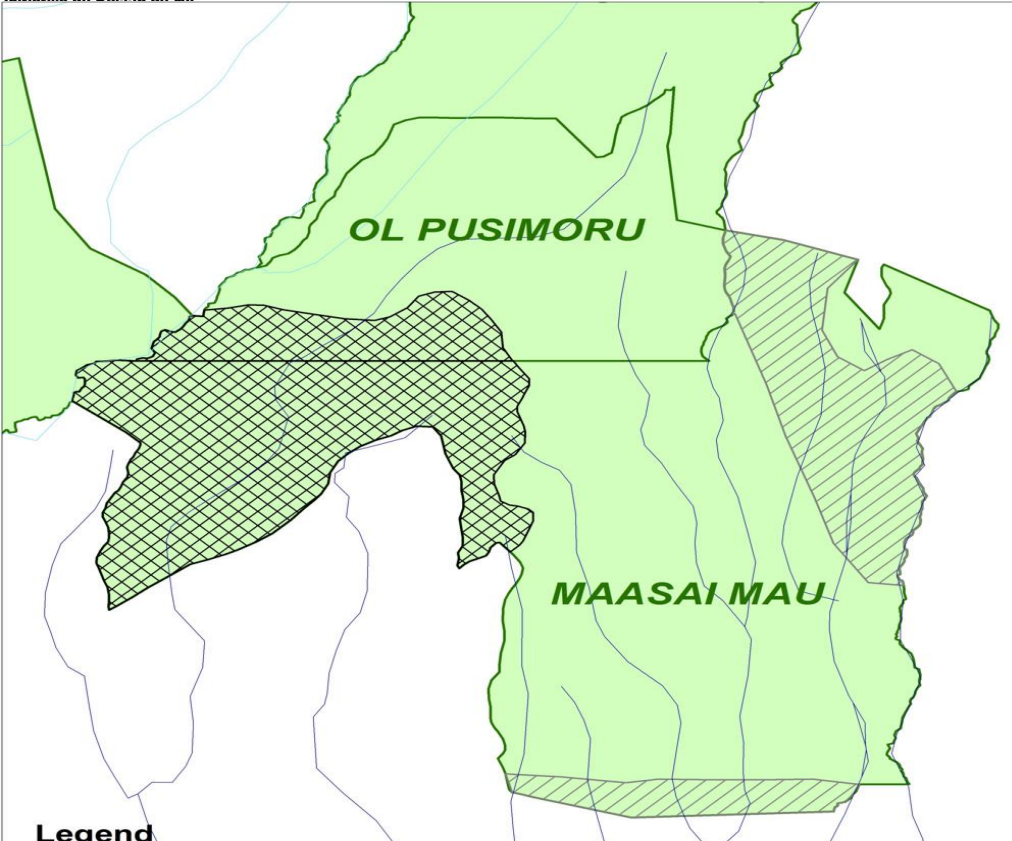


Sio-Malaba-Malakisi river basin

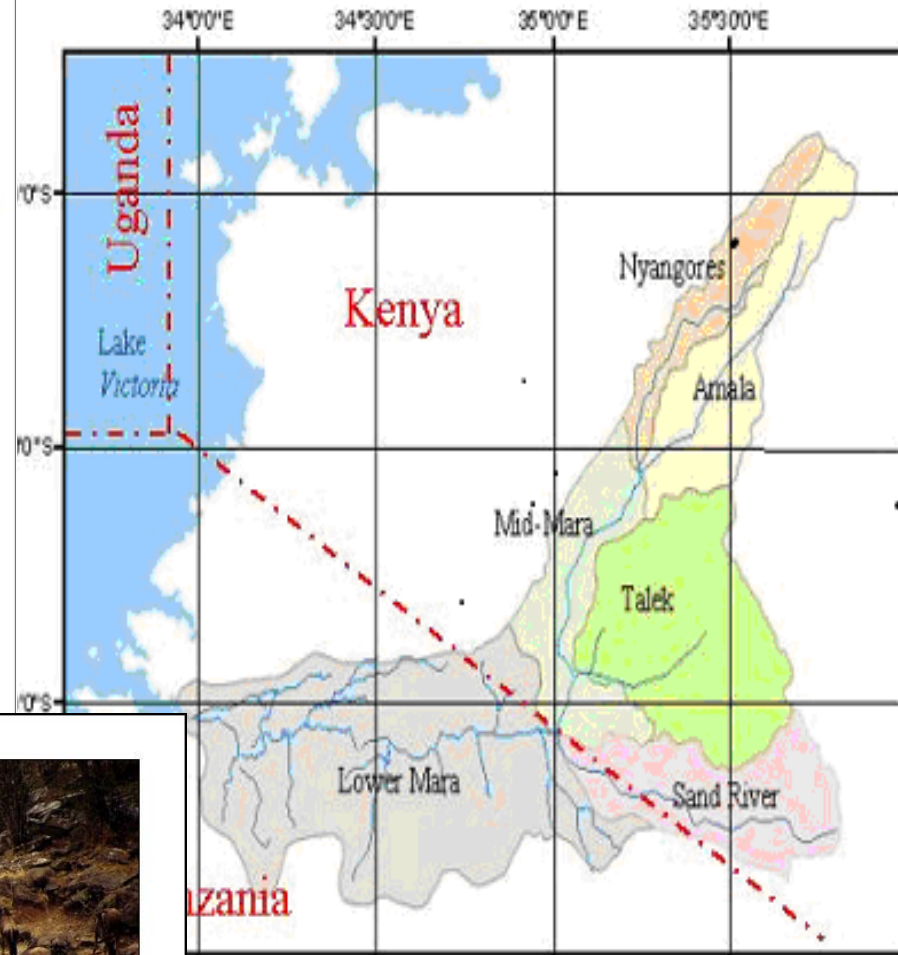


Mara river basin

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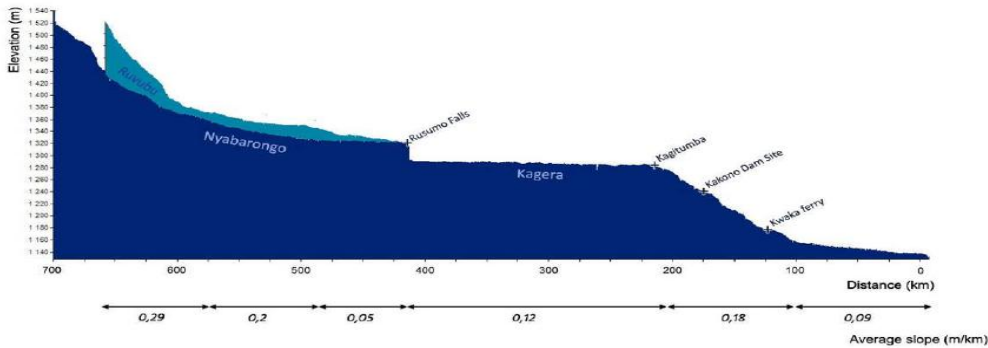
Over the last 15 years, the 400,000 ha Mau Forests Complex has lost over 107,000 hectares



Kagera river basin

Kagera River Basin Longitudinal Profile

Nile Basin Initiative
Nile Equatorial Lakes Subsidiary Action Programme
Kagera Transboundary Integrated Water Resources Management Project



Source: USGS SRTM - 2002 - NVE - CGIS-NUR



Kagera River Basin Population Density (Projection 2025)

Nile Basin Initiative
Nile Equatorial Lakes Subsidiary Action Programme
Kagera Transboundary Integrated Water Resources Management Project

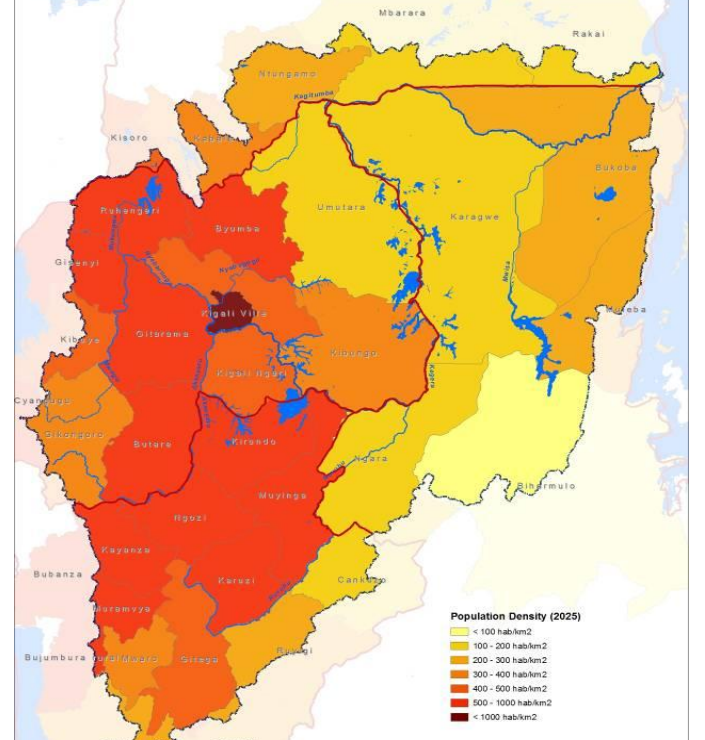


Figure 2.7 – Kagera River Profile

What is the Value added by the NELSAP?

- **NELSAP broadens cooperation by:**

- providing a vehicle for consensus, consultation, cooperation in Nile development projects
- strengthening economic growth and reduction of poverty by identifying and preparing investment projects for the development of shared water resources
- Facilitating multi country agreements for investment financing and for future management through the national agencies
- promoting 'beyond the river' cooperation (ag. trade, Power trade)
- expanding existing regional frameworks

- **Cooperation enhances regional integration through**

- regional and sub regional cooperation programs on regional water infrastructure;
- trade and investment cooperation and integration;
- monetary and financial cooperation and integration; and
- Cooperation in regional public goods

How are Projects Prepared and Implemented?

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Track 1 & 2 inter-country

Cooperative NELSAP Projects

RPSC
(Multi-country Government
representation)
For each project

Regional Project
Management Unit
(PMU)
For each project

Regional and/or
National Institutions
Public/private

Track 3 in-country

Consultative Nile Projects

Cooperative Nile Projects

Government

Multi-sectoral
project
management
mechanisms

National
Institutions
Public/private

RPSC
(Multi-country
Government
Representation)

Regional
PMU

Regional
and/or
National
Institutions
Public/private

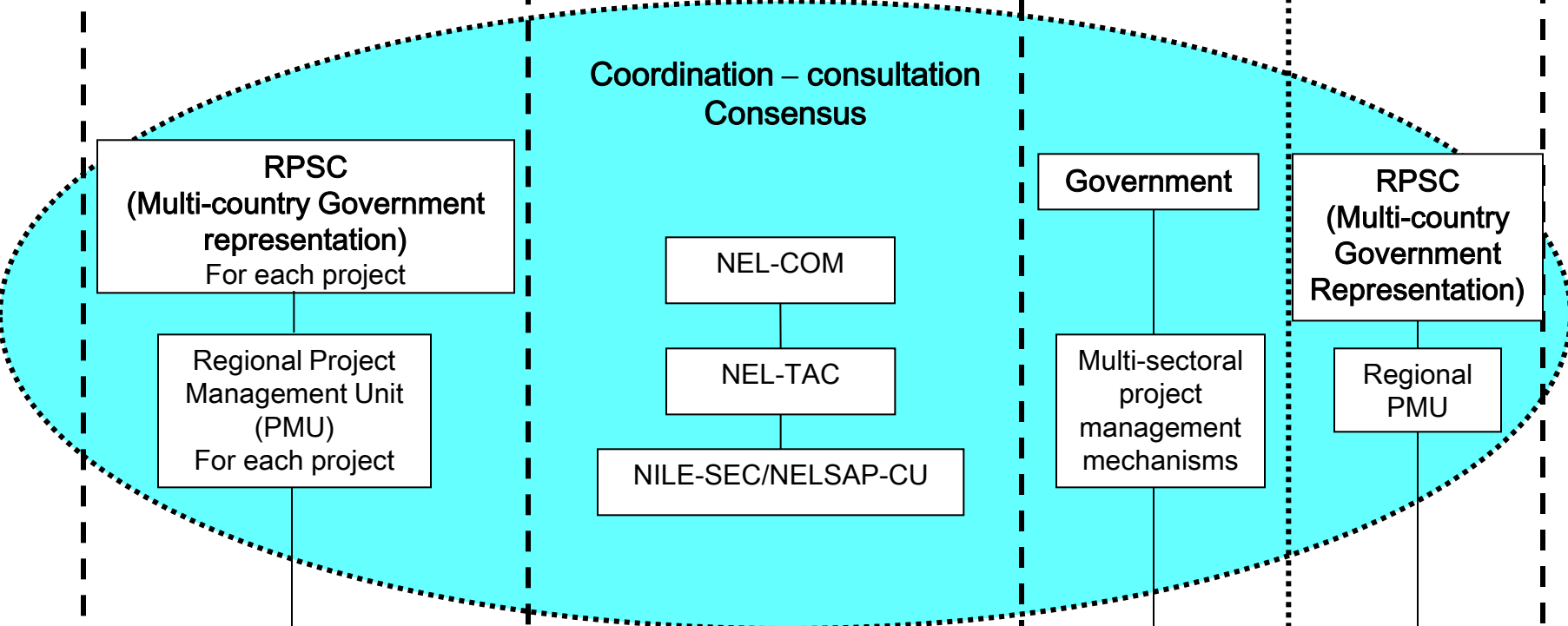
Coordination – consultation Consensus

NEL-COM

NEL-TAC

NILE-SEC/NELSAP-CU

Implementation of Nile investment projects at country level



NELSAP Track 1 Projects

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Environment & Natural Resources Management & Development

- **3 River Basin Management Projects (Mara, Kagera, Sio-Malaba-Malakisi)** sustainable framework for the joint management and development of the water resources
- **Fisheries & Catchment Management Project for Lake Albert and Lake Edward**
- **Regional Agriculture project:** Opportunities for cooperation in the Nile Basin through private investment, public-private partnerships and enhanced trade, in the field of high value crops and produce, and will identify steps to increase food security through increased investment, income generation and pro-poor growth.

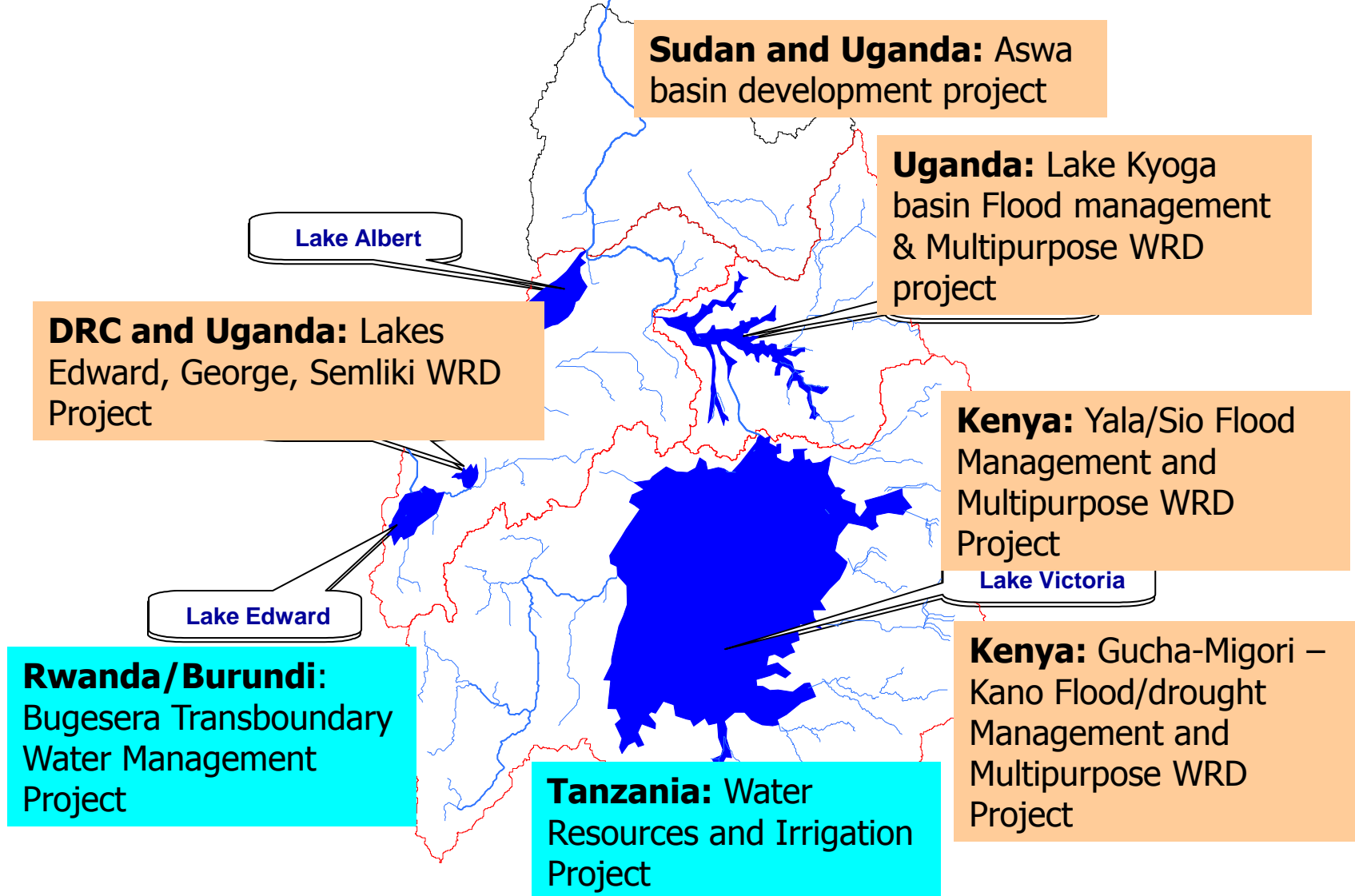
Power Trade & Development

- **Power Master Plan of NEL countries** through SSEA of Power Options completed in 2007
- **Rusumo Falls HEP & Multi-purpose Development project:** Production of about 90 MW to be shared between three countries and develop related project area.
- **Four Transmission interconnection projects: Ken-Uga; DRC-Bur-Rwa; Bur-Rwa; Uga-Rwa :** Objective to strengthen existing and new interconnections between the NEL countries. Project funded by 80% by AfDB 350 M USD

NEL-WRD Sub program, Tracks II and III

Scaling Up Projects Portfolio

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River Basin Projects

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Objectives: establish a sustainable framework for the joint management and development, prepare investment plans based on the resources endowments in the basins and strengthen national capacities for sustainable water resources management.

1. Developing Transboundary Cooperative Framework

2. Investment Studies

- 3 feasibility studies for integrated watershed management projects ongoing
 - Feasibility studies for 8 small dams for multipurpose use in the three basins have started.
- independent ESIA for the multipurpose small dams under procurement



River Basin Projects

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3. **Improvement in water resources information systems**

28 strategic hydrological stations under installation

Training program on water monitoring and management organized for countries.

The 3 RBM Projects with operational database connected to the Nile-DSS. All the data collected by projects have to follow the Mike Basin system.

4. **Projects on natural resources management and conservation** (Mau Forest restoration, Sio-Siteko wetlands management)

5. **Climate change adaptation:** downscale model and develop guidelines for water infrastructure proofing

Immediate Requirement for Investment US\$ 450million



NELSAP Project on Kagera river

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- 3 major projects in the Kagera sub-basin:
 - Rusumo Falls Hydropower Plant: Barrage on Kagera river and water reservoir of 97 M m³. 90 Mw to be shared within three countries. Multipurpose dimension to address the sub-catchment management issue. 450 M USD
 - Kagera Tabu-Gakomere (Mwogo river) small multipurpose dam of 8.1 M m³: irrigation, water supply purpose.
 - Bugesera IWRM (GIRET Project). Wetland conservation and fishery development.

Key Challenges

- Conflicts in the region affecting effective participation of countries and timely implementation of projects
- legal recognition: Need for the CFA to be signed
- Broadening participation at the country level - through projects and multiplier effect, and other activities including partnership for watershed management
- Increase country contribution and financial sustainability of the institution
- Linkages SAPs/other national and regional initiatives and programs.
- Sustained long term donor support



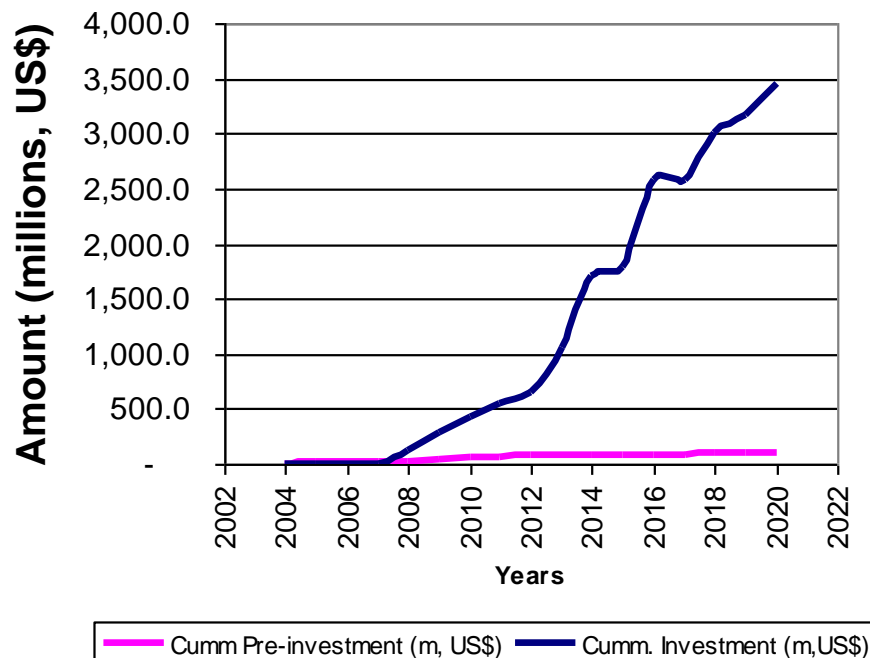
Key Challenges

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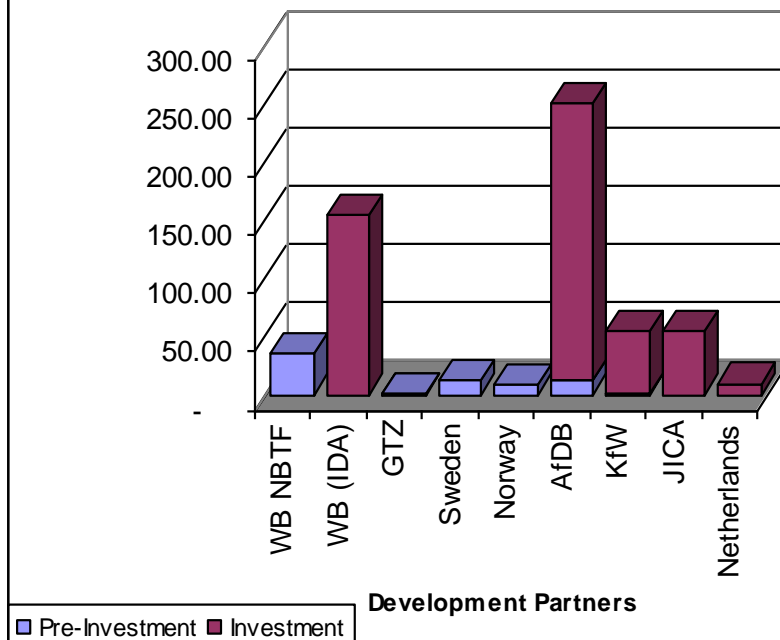
- Resource mobilisation: several investments with feasibility studies under completion, need for investments at larger scale
- availability of reliable data insufficient => can not help governments in appropriate decision making
- Institutional arrangements at country level for improving data collection and management: government to invest in water and related resources monitoring and effectively share data.
- Insufficient data related to environmental and social in the DSS model

Financing and Sustainability Issues

NEL Investment Perspective



Resource Mobilisation to date, Partner Contribution (m, US\$)



- Pre-Investment Mobilised to date: US\$ 70 million
- Investment mobilised for implementation: US\$ 512 million
- Ratio of Pre-investment: investment to date is approx 1: 7



Thank you for your attention

