

NILE EQUATORIAL SUBSIDIARY ACTION PROGRAM (NELSAP)

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Nile Basin Initiative

Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

Burundi
DRC
Egypt
Kenya
Rwanda
Sudan
Tanzania
Uganda



Kagera MP:
Rusomo HEP,
navigation, national
parks, irrigation,
watershed mgmt....

NATURAL RESOURCES MANAGEMENT PROJECTS

**6. Regional Trade and Agriculture Production Project
NEL COUNTRIES**

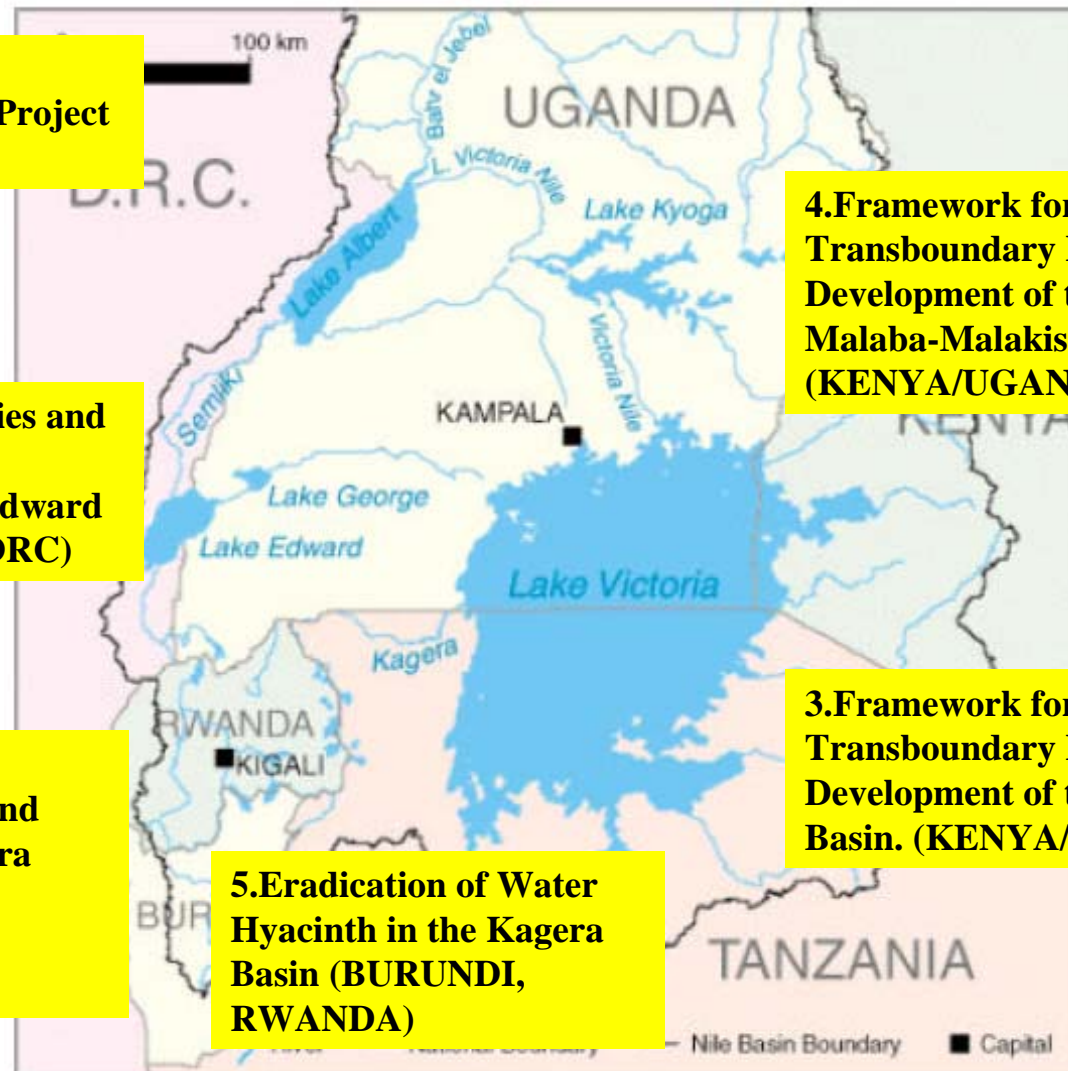
**1. Framework for Fisheries and Lake Management Plan
Preparation for Lakes Edward and Albert (UGANDA/DRC)**

2. Framework for Transboundary IWRM and Development of the Kagera Basin. (BURUNDI, RWANDA, UGANDA, TANZANIA)

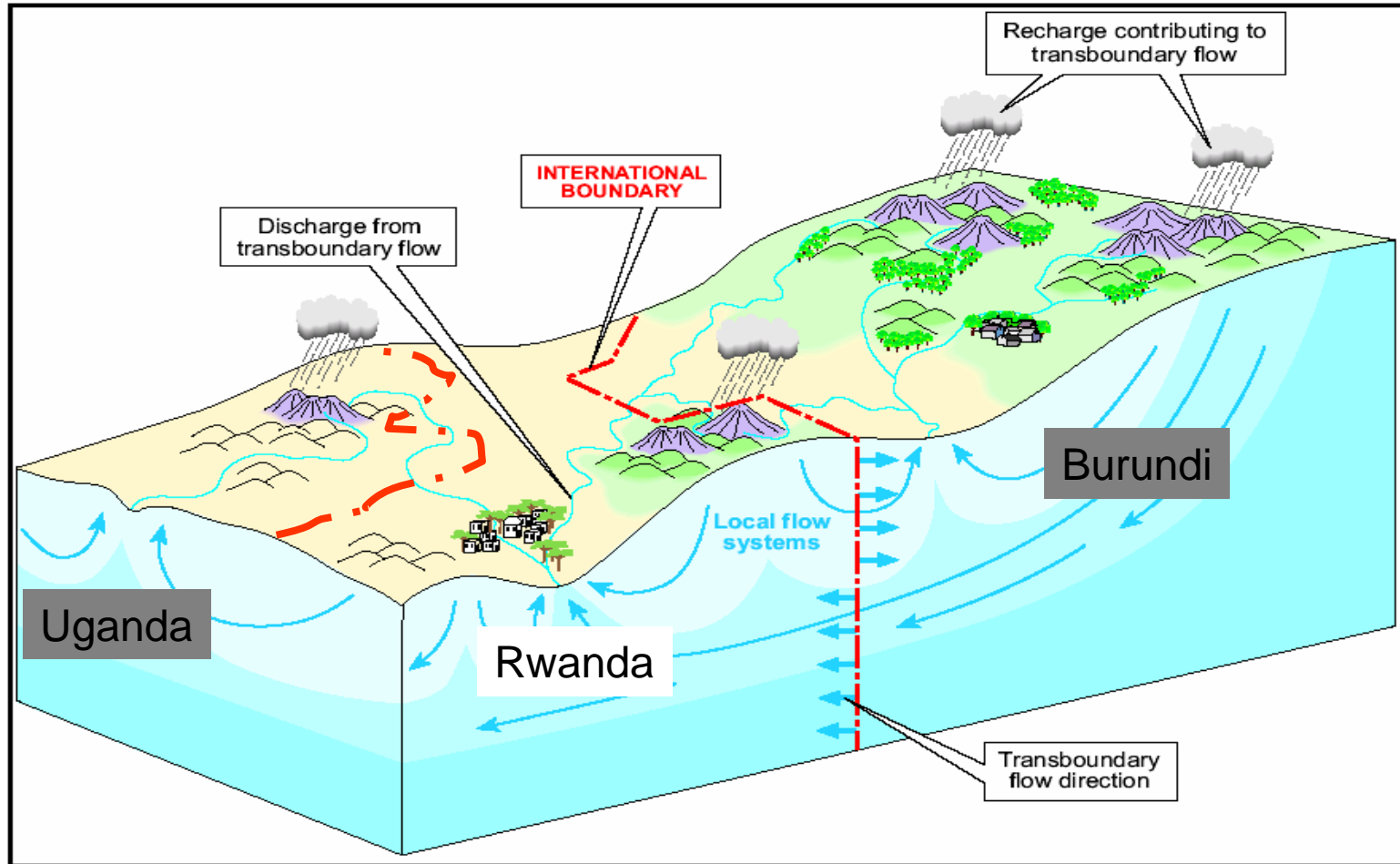
5. Eradication of Water Hyacinth in the Kagera Basin (BURUNDI, RWANDA)

4. Framework for Transboundary IWRM and Development of the Sio-Malaba-Malakisi Catchments. (KENYA/UGANDA)

3. Framework for Transboundary IWRM and Development of the Mara Basin. (KENYA/UGANDA)



Rationale for the NELSAP Sub Basin Projects



Rationale for the Sub basin Projects

- *Pressures and competition for water requires improved management.* Public pressure caused by, lack of safe and affordable drinking water and basic sanitation, pressure from national economic sectors like energy and agriculture due to lack of water for development, transboundary conflicts on water provide incentives for NEL Countries to initiate processes leading to improved management of water resources in the Sub basins
- *NEL Countries experience serious water resources issues.* In some NEL countries water scarcity and deteriorating water quality will soon become critical factors limiting national economic development, expansion of food production and/or provision of basic health and hygiene services to the population.

Rationale for the Sub basin Projects

- *Risk management, floods and droughts.* Economic losses from floods, droughts and climate variability are experienced at a very large scale. El Niño floods (1997–98) caused an estimated economic loss exceeding 1.7 billion USD in Kenya
- *Soil degradation and loss of productive land.* The way water is managed in co-ordination with land management has significant effects on agricultural production.
- *Water degradation, health and loss of productivity .* Managing water resources wisely to prevent pollution of sources of domestic water is one of the most important preconditions for improvement.

Natural Resources Management General

*Need to Carry out **transboundary catchment multi-sector study** to identify development potential to support identification of & monitoring of NELSAP projects*

Mara Project-Research Needs

- **1) Impact of Climatic Change and variability on river basin development strategies.** This could include generation of information on climatic scenarios for instance using various generations of general circulation models
- **2) Promotion of sustainable utilization and management of Masurua and Enapuyapi swamps.** These two swamps are respectively located at the mouth and at the source of Mara River. The wetlands often become the focal area for grazing and burning to create more land for cultivation during dry spells. The communities living around the swamps need to be actively involved in the management of the swamp for it to provide its natural functions.
- **3) Water Quality Modelling.** Evaluation of water quality with regards to sewage disposal into the river from hospitals, urban centres and lodges. More pollutants are suspected to be discharged into the river from gold processing industries and from artisanal processing of gold in the Tanzanian part of the basin.
- **4) Assessment of wetland species efficacy and sustainability in the bio-filtration of water in Masurua swamp.** The vast masurua swamp is noted to perform effective filtration of sediments, but with the extent of degradation of the swamp, its functionality and the sustainability into the future is uncertain. Further, its effectiveness in the removal of heavy metals, phosphates and nitrates needs to be determined.

Mara Project-Research Needs

- **5) Promotion of participatory management of indigenous fishing along Mara River.** The locals are reported to prefer the indigenous fish over the exotic ones in the lake.
- **6) Enhancement of navigability of the Mara river and its tourism attraction.** The navigability of Mara River is still poor especially around Masurua swamp. Once this is enhanced, it will act as one of the tourism attraction activities.
- **7) Promotion of sustainable papyrus utilization in the Masusrua swamp.** Papyrus plant is used for making a variety of hand crafts that fetch good income to those who trade in them. Measures should be put in place to promote its sustainable utilisation and management noting that the swamp is currently facing the problem of invasion for cultivation and grazing.
- **8) Sediment Transport Modelling** for the entire Mara River basin.
- **9) Development of methods of buffer storage** for improved basin water shed management

LEAF Project

- Development of a Water balance Model for the catchments including Lakes George, Edward, Albert and River Semliki
- Evaluation of impacts of climatic change and variability on the Lakes Management plan which is under preparation.
- Improved methods of water shed management scenarios.
Development of adaptive methods for change within the system
- Water quality modeling around lakes Edward, George, River Semliki and lake Albert, focusing on pollutant transport.
- Research on causes, impact and mitigation strategies for post-harvest loss in the fish products around the Lakes.
- Research on value analysis and value addition of the fish and other aquatic products on Lakes Edward and Albert
- Impact and mitigation strategies for water-borne diseases on the fishing communities around Lakes Edward and Albert
- Cost-Benefit Analysis of the boat propulsion mechanisms being used on Lake Albert with a view to introduction of sails

Sio-Malaba-Malakisi Basins

1. Water quality modeling with focus on Sediment Transport. Sediment transport models could be built for the catchments
2. Impact of Climatic Change and variability on the river basin management strategies under development. Inclusion of other drivers for change and quantification of impacts in terms of environmental, social and economic issues
3. Wetlands and biodiversity delineation
4. Assessment of hydropower/irrigation potential in the Sio-Malaba-Malakisi Catchments
5. Develop mitigation measures to overcome the challenges facing the wetlands in the basin e.g. reclaiming them, protection for natural regeneration
6. Development of methods of buffer storage for improved catchments water shed management

Kagera Basin Project

1. Sediment transport modeling
2. Development of methods for buffer storage as mechanisms for improved water shed management
3. Generation of scenarios for climatic variability and change with respect to river basin management and development strategies
4. Wetlands and biodiversity delineation