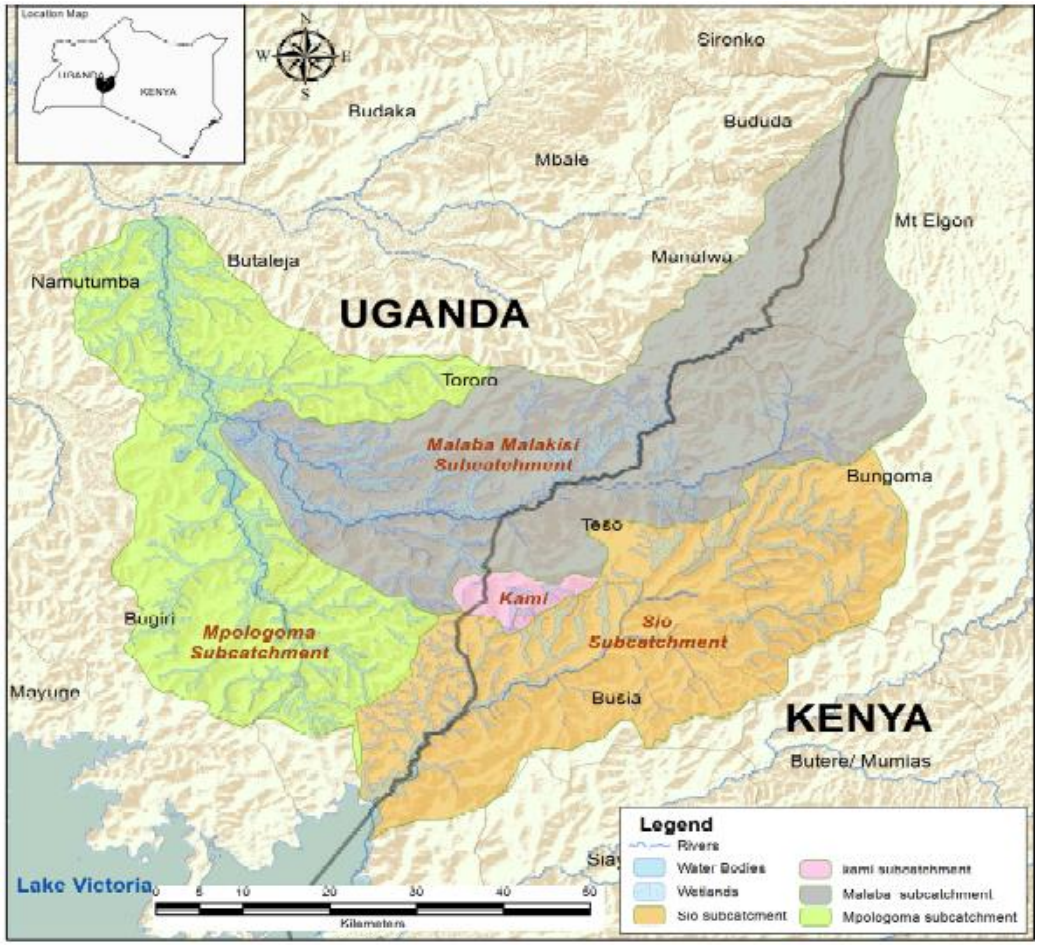
Transboundary Water Infrastructure Projects in the IGAD Region

FRED MWANGO
REGIONAL WATER EXPERT
IGAD SECRETARIAT
DATE: 14TH MAY, 2020

Sio-Malaba-Malakisi basin

- The term “Sio-Malaba-Malakisi basin” does not describe a single hydrological basin but rather is an management label to refer to two adjacent sub-basins shared by Kenya and Uganda that display common geo-physical and socio-economic characteristics. Both the Sio sub-basin and the Malaba-Malakisi sub-basin are part of the Nile basin. The combined catchment area of the two sub-basins is 5,352 square kilometres (km2). The Sio sub-basin has a catchment area of about 1,450 km2. The Sio River originates near Bungoma town in Kenya, flows along the common Kenya-Uganda border, and discharges into Lake Victoria. The Malaba-Malakisi catchment has an area of about 3,780 km2. The Lwakhakha and Malakisi Rivers both originate in Mt. Elgon and join to form the Malaba River, which later joins the Mpologoma river.

Figure 1. Sio-Malaba-Malakisi catchment area



(Source: WREM, 2008)

Prioritized Projects

- The prioritization of projects took place during the Second SMM Basin Stakeholder Workshop organised in Mbale (Uganda) on 6-9 May 2018. The Benefit Opportunity Assessment Tool (BOAT) and associated framework was used to facilitate a participatory qualitative assessments of the 12 short-listed projects. Through scenario development, the basin stakeholders jointly analysed whether a particular water management related project, or set of projects, had a positive, neutral or negative impact on a range of stakeholder groups, and how benefits to stakeholders could be enhanced (and trade-offs managed) by combining projects into clusters. Table 1 presents the short list of 12 projects, of which six are projects identified by NELSAP.

Table 1: Short list of 12 projects selected

Project	Estimated cost (preliminary)	Number of beneficiaries	Country	Rating
Malaba Irrigation	USD 2.2 million	32,800	Both	5.0
Eastern SMM Water Security and Development (six sub-catchment management plans – SCMPs)	USD 5.2 million	363,500	Kenya	4.6
Sio Sango Multipurpose Water Resources Development	USD 37 million + EIA/ESIA USD 4.5 million	28,398	Kenya	4.4
Toloso SCMP (NELSAP)	USD 9 million	300,000	Kenya	4.4
Lwakhakha Hotspots	USD 0.8 million	121,000	Uganda	4.2
Angololo Multipurpose Water Resources Development (NELSAP)	USD 44 million	12,000	Both	4.0
Sio-Siteko Community-Based Wetlands Management Sio (NELSAP)	USD 8 million	5,000	Both	4.0
Food Security	USD 22.7 million		Kenya	4.0
Solid Waste Management Plans for Lwakhakha and Bungoma (NELSAP)	USD 9.2 million		Both	3.8
Nyabanja Irrigation Development and Watershed Management (NELSAP)	USD 24 million	12,000	Uganda	3.6
Bulusambu Multipurpose Water Resources Development	USD 82 million	7,456	Uganda	3.4
Stormwater Drainage Master Plans (NELSAP)	USD 3.2 million		Both	3.4

1. Lwakhakha hotspots

- Lwakhakha hotspots is a multi-dimensional proposed project in Uganda with positive impacts on Kenya (water quality improvements, flood risk mitigation). The project aims to achieve the following: catchment management and river bank protection, infrastructure development for domestic and productive (irrigation) water supply, storm water drainage, pollution control, and promotion of sanitation and hygiene practices and livelihood component.
- *Location: Uganda*
- *Estimated cost: USD 0.8 million*
- *Status: Ready for Implementation*

2. Solid waste management plans for Lwakhakha and Bungoma

- This project will serve both Kenya and Uganda (with more population directly affected in Kenya). The project will improve the collection, storage, transportation and disposal of solid waste. It will provide municipal waste management infrastructure and build institutional capacity for duty bearers and by so doing reducing pollution on land and water. The project is aligned with priorities in SDGs, Kenya Vision 2030, and catchment management plans/strategies in both countries.
- *Location: Kenya and Uganda*
- *Estimated cost: USD 9.2 million*
- *Status: Feasibility done*

3. Eastern SMM Water Security and Development

- This project combines six small sub-catchment management plans (SCMPs). It will address soil conservation, catchment protection, river bank restoration, and sanitation with positive impact across the border. The project will also focus on information and monitoring, infrastructure development and service delivery, institutional development of water resource user associations (WRUAs), livelihood enhancements, water regulations, and wetlands management. For clustering purposes, the project has been subdivided: Cluster 1 includes the Chebombai and Malakisi SCMPs (89,000 beneficiaries), Cluster 3 includes the Matalema SCMP (5,000 beneficiaries), and Cluster 4 includes the Sio SCMP.
- *Location: Kenya*
- *Estimated cost: USD 5.2 million (for six combined SCMPs)*
- *Status: Pre-feasibility stage*

4. Angololo Multipurpose Water Resources Development

- The Angololo Dam is multi-purpose dam and irrigation development with a command area of 2,500 hectares. The dam height is 22 meters and the dam capacity of 13 million cubic meters. The project will support irrigation, hydropower, livestock watering, domestic water supplies, and fisheries. The project would benefit 12,000 people from both Kenya and Uganda.
- *Location: Kenya and Uganda*
- *Estimated cost: USD 44 million*
- *Status: Pre-feasibility stage*
-

5. Malaba Irrigation

- This project straddles both sides of the order, with 300 hectares in Kenya and 100 hectares in Uganda to cater for lowest river levels. It can be scaled up fivefold with increased storage at source and greater water use efficiency. It entails a construction of an infrastructure system comprising a weir to provide water for the 400 hectares. The project will ilmprove the food security situation, access to market and off-season food availability to boost farmer incomes. It provides an incentive for environmental conservation through ensuring continued flow and benefit sharing. It will also strengthen farmer collaboration across the border (through establishment of joint committees to manage the irrigation system) as they will be required to observe and monitor irrigation schedules.
- *Location: Kenya and Uganda*
- *Estimated cost: USD 2.2 million Kenya and Uganda*
- *Status: Identification stage*

6. Toloso Sub-Catchment Management Plan

- This project will promote actions on the management of the headwaters in Kenya with a beneficial impact on the Ugandan side as a result of increased flow (quantity) as well as quality. The project aims to develop an infrastructure (although not yet fully defined by type and scale) for the provision of safe drinking water, thereby reducing water-related diseases and promoting economic growth. The project will also require collaboration between Bungoma and Busia counties within Kenya, creating opportunity for benefit sharing between counties through, for example, agreeing on a water allocation plan and enforcement of permit regulation instead of competition over the shared waters.
- *Location: Kenya*
- *Estimated cost: USD 9 million*
- *Status: Pre-feasibility stage*

7. Sio-Sango Multipurpose Water Resources Development

- This project comprises three key components: (i) dam infrastructure, (ii), irrigation infrastructure, (iii) watershed management. Other ancillary components include: livestock water supply, domestic water supply, and hydropower generation. It has a command area of 1,700 hectares. The dam capacity is 3.92 million cubic metres, and the dam height of 24 metres.
- *Location: Kenya*
- *Estimated cost: USD 41.5 million (including EIA/EISA)*
- *Status: Ready for implementation*

8. Sio- Siteko Community-Based Wetlands Management

- This project will improve the integrity of the wetlands so that it continues to provide its services both in terms of ecosystem and socio-economics. It will address wetlands management and riverbank restoration covering an area of about 270 km^2 in Uganda and 35 km^2 in Kenya.
- *Location:* Kenya and Uganda
- *Estimated cost: USD 8 million*
- *Status: Ready for implementation*

- Thank You for your attention.