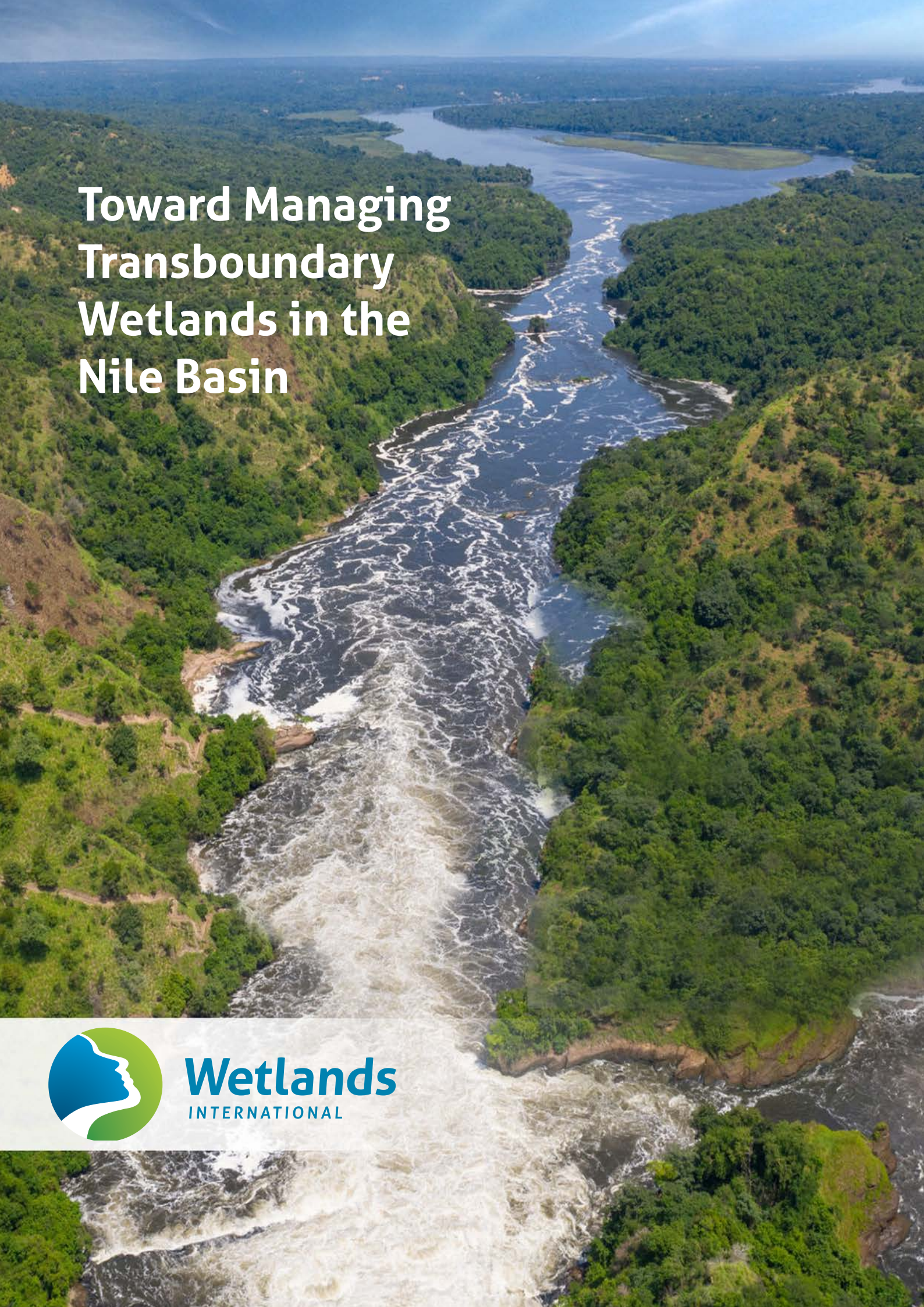
Toward Managing Transboundary Wetlands in the Nile Basin



Wetlands INTERNATIONAL

Introduction

A major global river basin spanning 11 countries and supporting millions of people, the Nile Basin abounds in diverse wetlands. These wetlands, some transboundary, provide a range of services to people, biodiversity and economies.

Wetlands can contribute immensely to national economies if managed effectively and equitably. Comprising only 4% of the Nile Basin, these vital ecosystems directly impact communities' livelihoods by providing food and water supply for agriculture, fishing and livestock grazing, and other products such as wood fuel and construction materials. They also help purify water, absorb carbon, and are home to thousands of birds, fish, insects, reptiles, plants and other biodiversity.

However, growing pressure from human encroachment, deforestation, overfishing, sand harvesting, poor agricultural practices, rising water salinity, vagaries of climate change and inadequate or poor implementation of governance instruments for cross-border natural resources threaten their sustainability, and thereby future of these vital ecosystems. The destruction of wetlands not only compromises their health and integrity, but also jeopardises water and food security, disaster risk reduction functions, biodiversity populations, peace and stability, economic development and growth, and regional economic integration.

Challenges facing transboundary wetlands in the Nile Basin are highly intense and therefore require close regional collaboration of the various states and other stakeholders for their sustainable utilisation and management. Such wetlands also enable the State Parties meet their multilateral environmental commitments including, but not limited to, the Ramsar Convention, Convention on Biological Diversity, Convention on the Conservation of Migratory Species of Wild Animals, Paris Agreement on Climate Change and other global frameworks such as Sustainable Development Goals.

To this end, various stakeholders have collaborated in undertaking landscape analyses, participatory wetlands assessments and development of Transboundary Wetland Management Plans (TWMP) that will simultaneously provide incentives to conserve selected transboundary wetlands by promoting sustainable livelihoods. This project scope covers three transboundary wetlands in the Nile Basin: Sio-Siteko in Kenya and Uganda; Sango Bay - Minziro in Uganda and Tanzania; and Semliki Delta in Uganda and the Democratic Republic of the Congo (DRC).

Funding Partners

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giz Deutsche Gesellschaft
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Implementing Partners

NILE BASIN INITIATIVE
INITIATIVE DU BASSIN DU NIL

Wetlands
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In collaboration with Acacia Water and Nature Uganda

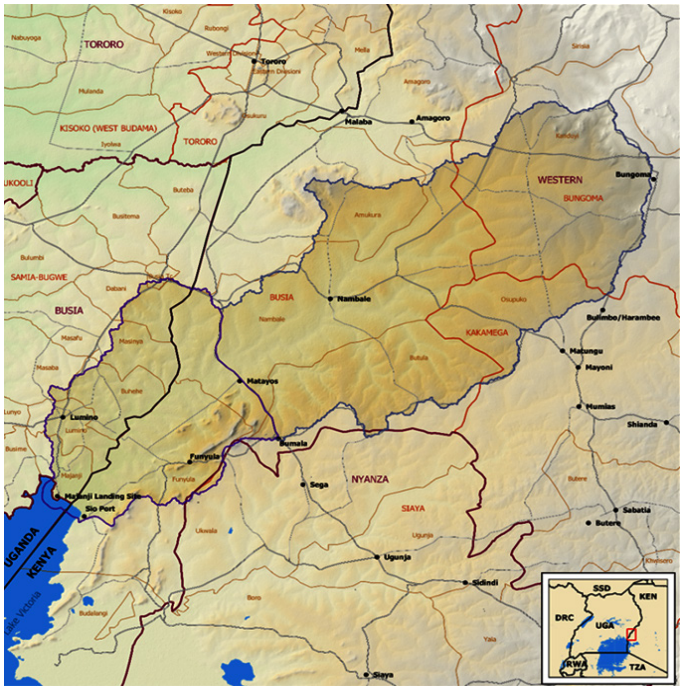
Sio-Siteko Transboundary Wetland Management Plan

Executing Parties: Government of Kenya, Government of Uganda, Devolved Authorities, local communities and civil society organisations in the two countries.

Geographical Site: Sub-basin located in northeast Lake Victoria encompassing the lower catchment of River Sio in Kenya and cutting across to Uganda with an estimated area of 415Km².

Administratively, the Wetland is located in six sub-counties namely: Buhehe, Busia TC, Dabani, Lumino, Majanji and Masinya which cover an area of 182Km² in Busia District, Uganda; and four sub-counties namely: Butula, Funyula, Matayos and Nambale with an area of 233Km² in Busia County, Kenya (NBI, 2020).

Location and administrative boundaries of the Sio-Siteko Wetland landscape (NBI, 2020)



Ecosystem Services to People and Nature

Habitat/Biodiversity maintenance

Home and breeding grounds for 520 bird species, 208 plant species

Wetland ecosystem services worth up to US$ 75 Million per year

Livelihoods

Supports 4 million people of which 273,000 live in the wetland landscape

Water Supply

Utilisation of water for industries and domestic use such as drinking, cooking and washing, livestock

Socio-cultural site with strong attachment of the community for circumcision and cleansing ceremonies, baptisms, recreation, and more

Water regulation

Key role in water storage and recharge, flood mitigation, waste water supply processing and sediment trapping

Capture fisheries and aquaculture

Some 37 fish species found within the wetland landscape

Wood energy, timber and fibre

Papyrus reeds used for wood fuel and trees for timber and poles for construction

Crop farming and Livestock grazing

Sources of fodder for livestock. Fertile soils support crop farming.

Local communities' lives are intimately connected to these wetland landscapes

Issues and Threats

Sio-Siteko Wetland faces challenges driven by a rapidly growing population, widespread poverty, weak governance systems and structures and inadequate awareness of the wetland ecosystem value by the local communities.

Threats include:

- Overexploitation of wetland resources such as papyrus, wood, fish, sand and grassland.
- Unsustainable land use practices that degrade riverbank leading to soil erosion and reduced flow in streams and rivers.
- Environmental degradation causing higher surface runoff rates and sedimentation in River Sio.
- Uncontrolled water abstraction.
- Falling groundwater levels and diversion of water courses leading to decreasing water availability.
- Wetland encroachment and deforestation leading to conversion and destruction.
- Water pollution causing poor water quality for both communities and biodiversity.
- Invasive species that compete with native species for food and space and which introduce disease.
- Fragmentation of natural vegetation and practices such as bush burning contributing to biodiversity loss and animal migration.

Objectives of Sio-Siteko Transboundary Wetland Management Plan:

Overall: To restore the wetland and ensure retention of ecosystem services for the benefit of people.

Strategic Objectives are:

- To promote conservation of the Sio-Siteko Wetland or Sio-Siteko Transboundary Wetland ecosystem and its catchment.
- To promote and support sustainable sources of livelihoods for the communities' dependent on the Sio-Siteko Wetland or Sio-Siteko Transboundary Wetland.
- To support the establishment and strengthening of governance structures for the management of the Sio-Siteko Wetland or Sio-Siteko Transboundary Wetland.

Implementation Action Plan

Multiple interventions for the implementation of the Sio-Siteko TWMP that address both livelihoods and conservation are classified under three thematic areas:

1. Ecosystem protection and restoration by enhancing wetland protection to improve water quality and quantity, integration of wetland wise-use into river basin development planning; promotion of conservation of woods and vegetation for socio-economic and ecological benefits, foster sustainable fishing and aquaculture to improve fish diversity and abundance and rehabilitation and restoration of 5% of degraded wetland biodiversity annually.
2. Livelihood improvement by promoting: paludiculture (farming in marshes or swamps) on 60 acres for ecological and socio-economic benefits; conservation of wetland resources and cultural heritage for ecotourism; adoption of sustainable agriculture; and value-addition of capture fisheries and aquaculture to improve the value chain.
3. Institutional strengthening by enhancing: transboundary coordination and cooperation of transboundary wetland institutions; and communication, education and public participation and awareness.

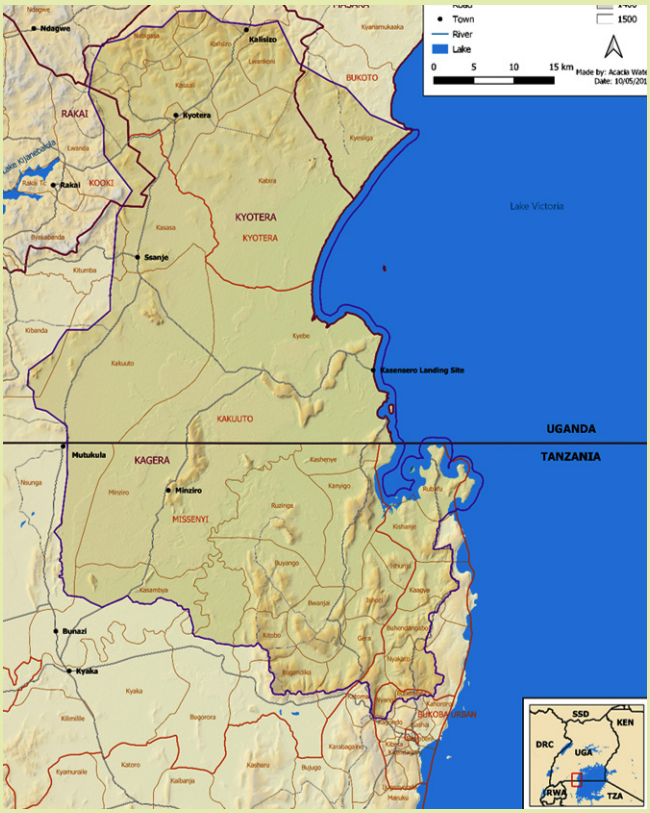
Sango Bay-Minziro Transboundary Wetland Management Plan

Executing Parties: Government of Tanzania, Government of Uganda, Devolved Authorities, local communities and civil society organisations in the two countries.

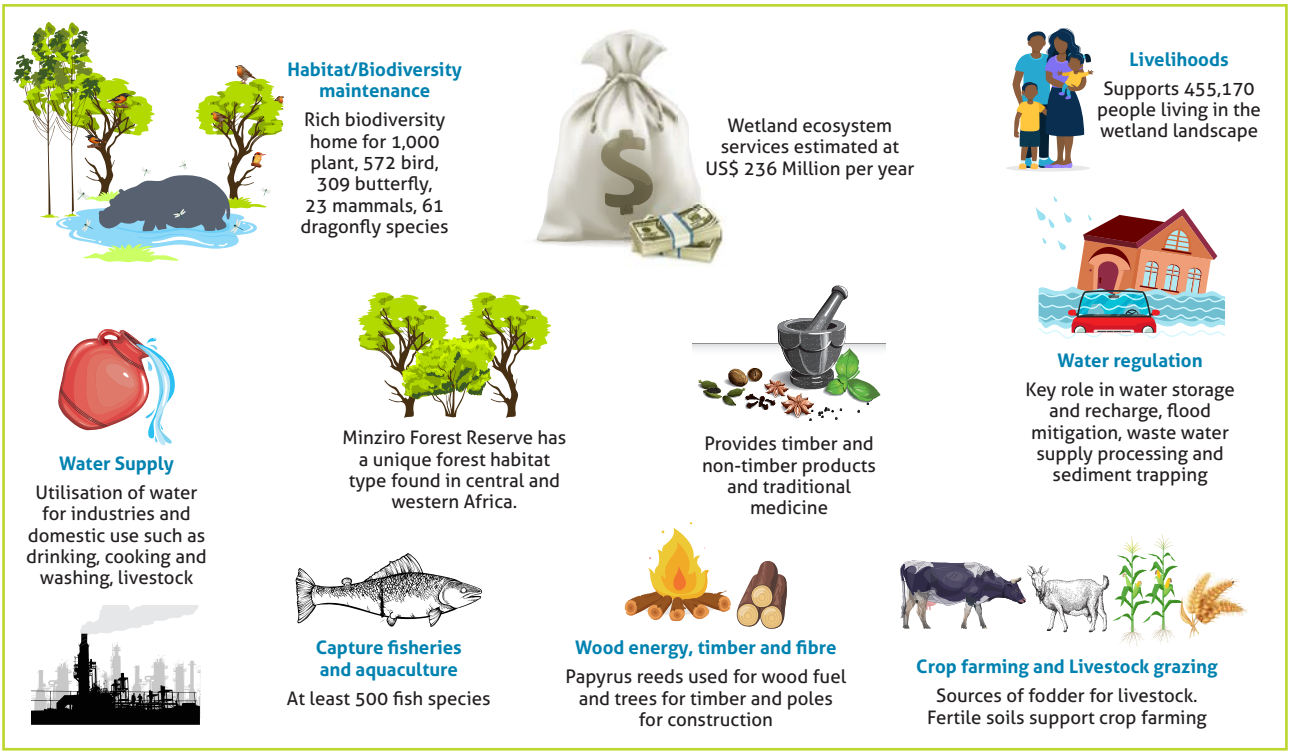
Geographical Site: Sub-basin located west of Lake Victoria and lies at the boundary between Uganda and Tanzania. The wetland estimated area is 3,000Km² (1,244 in Tanzania and 1,746 in Uganda).

Administratively, the wetland landscape is concentrated in the Kyotera and Kakuuto Counties in Kyotera District, Uganda. It is part of the Sango Bay Musambwa Island - Kagera Wetland System (SAMUKA) Ramsar site established in Uganda in 2006. In Tanzania, the bulk of the area lies within Missenyi District with smaller portions in Bukoba Rural and Bukoba Urban Districts where the south-western boundary encompasses the Minziro Nature Forest Reserve.

Location and administrative boundaries of the Sango Bay-Minziro Wetland landscape (NBI, 2020)



Ecosystem Services to People and Nature



Issues and Threats

Sango Bay-Minziro Wetland faces challenges driven by rapid population growth, widespread poverty, weak governance systems and structures, and infrastructural development plans.

Threats

- Rapid urbanisation causing deterioration of water quality and quantity.
- Poor land use planning.
- Unsustainable resource management practices such as poor agricultural practices and river bank degradation that increase erosion and thereby siltation in Lake Victoria.
- Overexploitation of wetland resources such as papyrus, wood and fish.
- Fragmentation of natural vegetation, practices such as bush burning and invasive species contributing to declining species populations.
- Overfishing, increased competition and use of illegal fishing methods reducing fish stock indiscriminately and loss of breeding sites.
- Resource use conflicts between herders and farmers.

Mapping out Nile basin wetlands

Vision for Sango Bay-Minziro

A sustainably managed Sango Bay-Minziro Transboundary Wetland providing equitable opportunities and benefits for posterity.

Inlet stream in Minziro Wetland

Objectives of Sango Bay-Minziro Transboundary Wetland Management Plan:

Overall: To restore the wetland and ensure retention of ecosystem services for the benefit of people.

Strategic Objectives are:

- To promote conservation of the Sango Bay-Minziro Wetland ecosystem or Sango Bay-Minziro Transboundary Wetland ecosystem and its catchment.
- To promote and support sustainable sources of livelihoods for the communities' dependent on the Sango Bay-Minziro Wetland ecosystem or Sango Bay-Minziro Transboundary Wetland.
- To support the establishment and strengthening of governance structures for the management of the Sango Bay-Minziro Wetland ecosystem or Sango Bay-Minziro Transboundary Wetland.

Implementation Action Plan

Multiple interventions for the implementation of the Sango Bay-Minziro TWMP that address both livelihoods and conservation are classified under three thematic areas:

1. Ecosystem protection and restoration by rehabilitating and restoring 5% of degraded biodiversity sites within the wetland landscape annually; integrating wetland wise-use into river basin development planning for improved water quantity and quality; promote sustainable land use practices for improved livelihoods and reduce degradation and fostering sustainable fishing practices for improved fish diversity and abundance.

2. Livelihood improvement by promoting: adoption of aquaculture and sustainable fishing practices for improved fish production; wise use and value addition to wetland plants for improved livelihoods of 20% of households in the wetland landscape annually; value-addition of agricultural produce and improve the value chain; and sustainable eco-tourism for improved livelihoods and nature conservation.

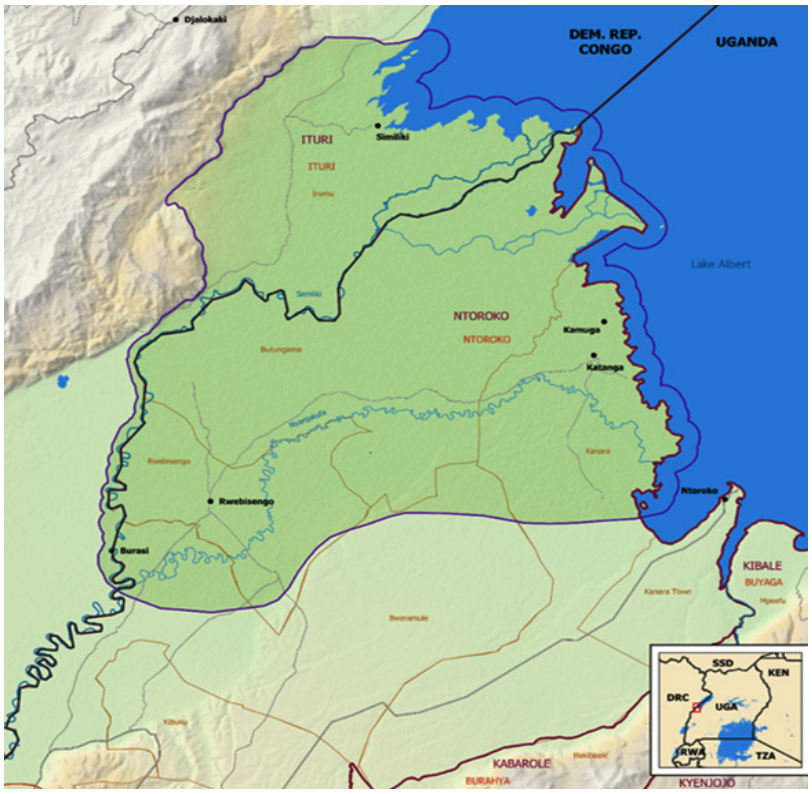
3. Institutional strengthening by enhancing: transboundary coordination and cooperation of transboundary wetland institutions; and communication, education and public participation and awareness.

Semliki Delta Transboundary Wetland Management Plan

Executing Parties: Government of Uganda, Government of Democratic Republic of the Congo, Devolved Authorities, local communities and civil society organisations in the two countries.

Geographical Site: Sub-basin is located on the southern shore of Lake Albert and encompasses the delta-shaped river mouth of River Semliki that crosses into the Democratic Republic of the Congo (DRC) and Uganda. Also referred to as Semuliki or Semiliki, it covers about 830Km². Administratively, the Wetland lies across the boundary of the Ituri Province, Irumu Territory in DRC and the Western Region, and in Ntoroko and Bundibugyo Districts of Uganda.

Location and administrative boundaries of the Semliki Delta Wetland landscape (NBI, 2020)



Nile crocodile

Ecosystem Services to People and Nature

Habitat/Biodiversity maintenance

Rich biodiversity habitat with 325 bird species, 253 butterfly species, 28 amphibian species

Wetland ecosystem services worth up to US$ 28 Million per year

Livelihoods

Support 48,000 people living in the weland landscape

Water Supply

Utilisation of water for industries and domestic use such as drinking, cooking and washing, livestock

Home to Queen Elizabeth and Murchison Falls National Parks in Uganda, and several forest reserves

Carbon Storage

Peatland stores contain an estimated 0.05-0.1 billion tonnes of carbon

Three Ramsar sites are on the Ugandan side, namely; Lake George, Murchison Falls-Albert Delta Wetlands System and Ruwenzori Mountains

Capture fisheries and aquaculture

Over 700 fish species found within the wetland landscape

Wood energy, timber and fibre

Papyrus reeds used for wood fuel and trees for timber and poles for construction

Crop farming and Livestock grazing

Sources of fodder for livestock. Fertile soils support crop farming.

Issues and Threats

Semliki Delta faces challenges driven by a rapidly growing population, weak law enforcement of existing policies and legislation, lack of wetland-specific law, a high Multi-Dimensional Poverty Index (UNDP 2019), weak institutional capacity, presence of armed groups on the DRC side and inadequate awareness of the wetland ecosystem value by the local communities.

Threats include:

- Unsustainable land use practices that degrade riverbank, lakeshore and wetland leading to soil erosion and consequently high siltation of rivers and Lake Albert.
- Wetland encroachment leading to conversion and destruction.
- Overexploitation of natural resources such as papyrus, wild animals and wood.
- Environmental degradation.
- Lack of demarcation.
- Unclear and shifting wetland boundary.
- Declining fish stock due to overfishing and destruction of fish breeding areas.
- Adverse climate change impacts on the glaciers in the Ruwenzori Mountains leading to increased snowmelt.

Small holding farming is the main form of livelihood

Vision for Semliki

- A sustainably conserved Semliki Wetland for enhanced biodiversity and community livelihoods.

Objectives of Semliki Delta Transboundary Wetland Management Plan:

Overall: To restore and protect the Semliki Delta and Wetland resources and functions through participatory approaches.

The Strategic Objectives are:

- To promote ecological restoration of the Semliki Delta Wetland for enhanced wetland integrity.
- To promote and support adoption of sustainable sources of livelihoods for the communities dependent on the Semliki Delta Wetland landscape.
- To support the establishment and strengthening of governance structures for the management of the Semliki Delta Wetland landscape.

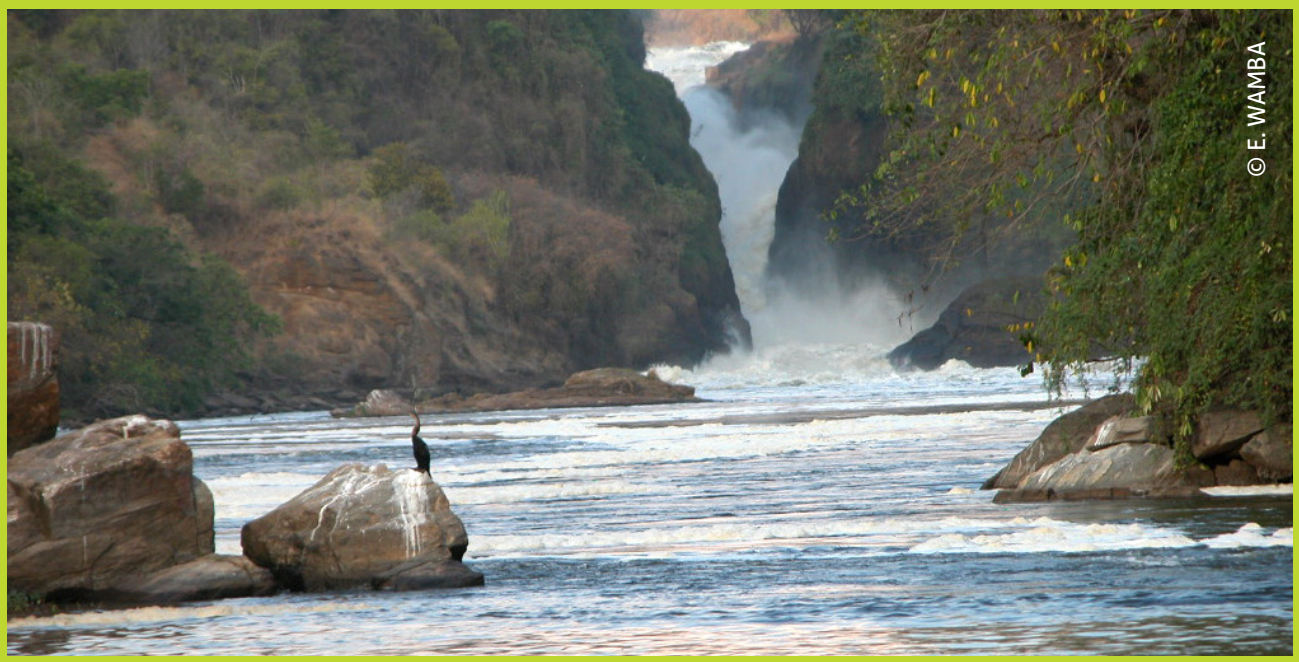
Implementation Action Plan

Multiple interventions for the implementation of the Semliki Delta TWMP that address both livelihoods and conservation are classified under three thematic areas:

1. Ecosystem protection and restoration by enhancing wetland protection to improve water quality and quantity; integrating of wetland wise-use into river basin development planning; promoting sustainable land use practices for improved livelihoods and reduced degradation; increasing Semliki Delta fisheries resource base (diversity and abundance) by 10% annually through adoption of sustainable fishing practices; and rehabilitating and restoring 5% of degraded wetland biodiversity annually.

2. Livelihood improvement by promoting: conservation of birds and wild animals within the wetland landscape for ecotourism development and socio-economic benefits; adoption of sustainable agricultural practices including climate smart agriculture and paludiculture (farming in marshes or swamps) for improved livelihoods and food security; and adoption of sustainable capture fisheries and aquaculture to improve the fisheries resource base and incomes.

3. Institutional strengthening by enhancing: transboundary coordination and cooperation of transboundary wetland institutions; communication, education and public participation and awareness.



Murchison Falls

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