

Project Update: October 2021

1. Introduction

This tool was developed through co-management teams assessing a range of ecological goods and services, social and cultural values, and economics as well as drivers of impacts on overlap habitats use, and management strategies. This tool has been developed based on the data recorded from the first Booster and second grant for boosting the overlapping habitats in the downstream of River Katonga catchment was used to design the Community Environmental Monitoring tool (CEMT). The tool based on the benefits from the overlapping habitat areas, flow of benefits to the stakeholders, and value of the benefits. The CEMT is a simple mechanism for monitoring overlapping habitats (wetlands, water (rivers, and lakes), forests, and inhabited areas) in the downstream of River Katonga catchment in Mpigi district that required coordinated management to overcome the human threats.



File photo: Ggolo community environmental committees

1.1 Brief Background of Mpigi

District is located in the central region of Uganda approximately 35 km from Kampala by road. The district is one of the oldest districts under the decentralised system created in

1980. The district has a total population of 286,600 (UBOS 2020)¹ with an annual growth rate of 2.4 % which is considerably high. The largest portion of the population is below 18 (144,871 people).

The district is largely rural, with 77.1% of the riparian communities engaged in agriculture. Sand and stone mining are done in Kammengo, Kituntu and Nkozi Sub Counties which are largely the catchment of River Katonga.

1.2 River Katonga Catchment

The project location is a confluence of Lake Victoria and River Katonga dominated by riverine vegetation along the only longest and biggest river covered with a unique wetland in Uganda. It flows from west to east draining into Lake Victoria. River Katonga width is estimated between 200m - 2km in some areas. It passes through a gentle undulating land interrupted by flat-topped hills which are remnants of the ancient African peneplain in central Uganda. There are protected areas gazetted as Victoria catchments and their wetlands as Ramsar sites that overlap with forests and the lake respectively. They form overlapping habitats which harbor some Key Biodiversity Areas (KBAs) and provide critical ecosystem for threatened and endangered flora and fauna species. The project area specifically is located in the zone that has two annual rainy seasons, mainly in April-May and September-November with some climatic variations. The yearly precipitation ranges from 900 – 1500 mm with temperatures between 22-28°C. The critical focus of this tool is to monitor the areas downstream of River Katonga catchment where it drains into Lake Victoria. This area acts as a channel connecting Lake Victoria and Lake George. The geomorphological setup uplifted events between two lakes that cause the swampy region towards Lake Wamala, augmented by several tributaries along river course. The principal mouth of River Katonga enters Lake Victoria in Ggolo in Mpigi district. The river is being studied for redefinition to be the source of River Nile due to the high volume of water drained into Lake Victoria as opposed to what has been known. The catchment is generally flat, allowing satellite wetlands to predominate which cover an area of approximately 2,478 km². The project monitoring cover area is in a region that can be described as a rangeland with medium altitude moist evergreen forest/savannah overlapping into wetland mosaic

1.3 The Objectives of the Tool

- To increase community understanding of the species of high conservation in the catchment of River Katonga through citizen science and training,
- To establish critical habitat monitoring areas around the overlapping habitats based on the fauna and flora species,
- To integrate community based monitored data with other existing data such as Ministry Departments and Agencies (MDAs) environmental plans and reports, for effective and interactive stake holder participation and implementation.

Lastly, strengthening grievance redress mechanism among the stakeholders within the overlapping habitat.

¹¹ Uganda Bureau of Statistic (UBOS), 2020

1.4 Conservation Concern

The River Katonga riparian communities depend on water for fishing, forest as source of energy, wetland for farming and sand mining. Species known in the area and already enlisted by IUCN i.e., floral and faunal scale based on habitat sensitivity, population size, and home-range among others. Plant species exploitation in forests and development of plantations has led to extensive illegal harvesting and hunting in the target ecosystems. The tool will be able to identify the hotspots in the overlapping habitats and consequently benefit both flora and fauna species in terms of co-management of data developed from the tool. Some of the trees already categorised are key in forming KBAs along the River Katonga catchment and need enhanced conservation thrust.

1.5 Benefits of the CEMT

The tool presents multiple benefits to the stakeholder in terms of conservation value, ecosystem services such as clean water given the fact that 42.1% of the riparian community do not access safe and clean water (UBOS:2020). The data generated from the use of the tool will increase the community understanding of the species of high conservation in the catchment of River Katonga. The tool will safeguard the Key Biodiversity Areas which are important in attracting tourism in the area and thus contributing to local economy through royalties. The monitoring tool shall protect the breeding areas for fish as well as increasing the fish abundances in the downstream area in Kiwanga landing areas.



Left: Kiwanga landing site. Right: Kitto.



Left: Forest in Ggolo 1. Right: Wetland hotspot.

File photos: Overlapping habitats

2. Community data collection and monitoring tool.

Value Monitoring aspects	Value Indicators	General approach	Reporting mechanism & hierarchy
Overlap 1: Wetland buffer zone	<ul style="list-style-type: none"> - Activities carried out within 50m buffer area - Impacts on biodiversity: species diversity and abundance -Introduction of exotic floral i.e., woodlots of eucalyptus, pines, tick etc. 	<ul style="list-style-type: none"> -Continuous engagement /meeting of the community environmental committee (CEC) with formalized property rights on land the value and impact of the activities -Establishment of buffer zone and boundary markers and use of formalization -Lobbying and advocating for land use change back to restoration process 	Vertical and horizontal institutions Regulators: Ministries, Departments and Agencies (MDAs)
Agriculture: Cultivation & livestock	<ul style="list-style-type: none"> -Crop diversity and surface coverage size within the buffer zone -Vegetation clearance -Choice of vegetation -Use of agri-chemicals 	<ul style="list-style-type: none"> -CEC meeting -CEC inspection of the area and data collection using the developed tool 	District Natural Resource officer, and Sub County Chief, LC III
Commercial Tree planting	<ul style="list-style-type: none"> -Tree plantations within the overlap -Degradation of forests, wetland & freshwater (lake rivers and streams) vegetation -Buffer encroachment 	<ul style="list-style-type: none"> -CEC inspection of the area and data collection using the developed tool Plantation of indigenous trees Engagements 	District Natural Resource officer, District Forest Officer, and Sub County Chief
Overlap 2: Forest degradation	<ul style="list-style-type: none"> -Loss of natural vegetation cover replaced by exotic -Hot culture activities -Trucks carrying logs -Charcoal burning 	<ul style="list-style-type: none"> -Use of neighborhood informants -Use of smart gadgets e.g., phones to record and snapshot pictures and videos -CEC information sharing platform 	MDAs
Poor mining practices	<ul style="list-style-type: none"> -Trucks felling sand -Heaps of sand within the buffer 	<ul style="list-style-type: none"> -CEC inspection -Engagement -Establishing the ownership 	MDAS

Value Monitoring aspects	Value Indicators	General approach	Reporting mechanism & hierarchy
Rampant burning of wetland	-Burnt wetland habitat -Lost green vegetation	-Use of local informants, environmental networks	District Natural Resource Uganda Police
Overlap of 3: Species conservation concern	-Species threats known to the communities for breeding, foraging and roosting habitat, such as: Shoebill (<i>Balaeniceps rex</i>) VU C2a(ii) ver 3.1, -Grey Crowned-crane (<i>Balearica regulorum</i>), EN -Nahan's francolin (<i>Francolinus nahani</i>) VU, B2ab (ii, iii, v) ver 3.1 -Blue swallow (<i>Hirundo atrocaerulea</i>) VU, C2a(i) ver 3.1 -Papyrus Gonolek (<i>Laniarius mufumbiri</i>) NT ver 3.1 -Papyrus yellow Warbler (<i>Calamonastides gracilirostris</i>) A2c+3c+4c ver 3.1	-Training in citizens science approaches through local site-based members	MDAs
Local economic activities	-Selling young fish -Charcoal burning -Art and craft made from wetland vegetation -Sell of Herbal medicines within the communities -Construction works within the buffer	-CEC investigation of the source of these local economic activities -Engagement with the communities	Sub County Chief
Land titles	-Land transactions -Illegal activities licensed	-CEC inspection and verification of the land tile -Land title search for authenticity	District lands office, & District Natural Resource officer
Wetland boundary	-Encroached boundary -Illegal activities within the wetland buffer	-CEC, MDA engagement	District land officer and District Natural Resource officer.