REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

REPORT OF STAKEHOLDER ENGAGEMENT AND PARTICIPATION IN CATCHMENT MANAGEMENT PLANNING

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AWOJA, MPOLOGOMA AND VICTORIA NILE CATCHMENTS

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IIRR would like to recognize the individual efforts and guidance provided by Commissioner-DWRM, Contract manager for this assignment, Team leader KWMZ and Technical Advisor Kyoga Water Management Zone (KWMZ) and BRLi team. Others include; Country Director-IIRR, Programs Director-IIRR, Water Resources Specialist-IIRR and all the Project officers and many others not mentioned here.

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Abbreviations

ACDO Assistant Community Development Officer
CAO Chief Administrative Officer

CBO Community Based Organization

CBWRM Catchment Based Water Resources Management

CDO Community Development Officer
CMP Catchment Management Plan
DCDO: District Community Development Officer

DNRO: District Natural Resource Officer

DWO: District water Officer

FAO Food and Agricultural Organization
FBO: Faith Based Organization

GDP Gross Domestic Product
GoU Government of Uganda
GPS Global Positioning System
GWA Gender and Water Alliance
IIRR International Institute of Rural Reconstruction
IWRM Integrated Water Resource Management
JWESSP Joint Water and Environment Sector Support Programme
KII Key Informant Interview
KWMZ Kyoga Water Management Zone
LoA: Letter of Agreement

LWSAP: Local Water Security Action Plan

MAAIF Ministry of Agriculture, Animal Industry and Fisheries
MWE Ministry of Water and Environment

NGO Non Governmental Organization
NWSC National Water and Sewerage Cooperation
ODK Open Data Kit
SAS Senior Assistant Secretary
SC Steering Committe
SSEA Strategic Social and Environment Assessment
UNDP United Nation Development Programme
WMZ Water Management Zone

Executive Summary

The Ministry of Water and Environment through the Directorate of Water Resources Management is implementing a series of water policy reforms which include adoption of Integrated Water Resources Management (IWRM) and operationalizing it through a Participatory catchment based approach to water resources management and investment planning in Kyoga Water Management Zone.

Kyoga Water Management Zone is composed of the following Catchments; Okok, Okere, Awoja, Lwere, Mpologoma, Lumbuye, Victoria Nile, Sezibwa, Kyoga, Akweng and Abalam.

The mapping was focused in the two catchments of Victoria Nile and Mpologoma which comprise of 22 districts. 9 districts in Victoria Nile including; Buikwe, Jinja, Kamuli, Kayunga, Buyende, Mayuge, Iganga, Luuka and Kaliro and 13 in Mpologoma including; Sironko, Bududa, Manafwa, Mbale, Butalejja, Budaka,Kibuku, Pallisa, Namutumba, Tororo, Buisa, Bugiri, Namayingo and Iganga. IIRR's role was to build capacity of stakeholders to engage in effective implementation of their Catchment Management Plans (CMP). The Stakeholder mapping exercise for Awoja catchment was conducted in 2015 by MWE.

The main objective of the project was to facilitate stakeholder engagement in catchment management planning in Mpologoma and Victoria Nile, Kyoga water management zone. The specific objectives were;

a. To identify, map and mobilise key stakeholders in the catchments who would be engaged during the development and implementation of CMPs.
b. To identify key issues/concerns from key stakeholders at the grassroot to be integrated in the CMP
c. To identify hot spots/intervention sites for piloting Integrated Water Resources Management projects in Mpologoma and Victoria Nile Catchments

The purpose of the consultancy was to support the establishment of Catchment Management Organisations (CMOs) with all their operational structures and also to build capacity of grass root stakeholders to actively engage in Catchment Based Water resources Management in Awoja, Mpologoma and Victoria Nile. The consultant was required to explain the rationale for employing IWRM, and seek the buy-in and active participation of stakeholders in planning and implementation of catchment management options.

The Consultancy fits in the wider framework of Catchment Based Integrated Water Resources Management through which water resources are being managed in Uganda.

BRL (another consultant) looked at the development of the CMP whereas IIRR complemented the process by engaging stakeholders at sub county/parish and sub catchment (grassroots) levels.

The process involved facilitating stakeholder identification, mapping, engagement and participation in catchment management planning for Mpologoma and Victoria-Nile using the Local Water Security Action Planning tool for Mapping of Stakeholders. Starts up activities were development of tools, sharing with MWE/DWRM for review and feedback. District Local Governments were engaged to sample sub counties where the engagements were to take place. Sub County leaders were approached and involved in data collection planning and exercise. Data collectors were trained and tools were pretested and adjusted according to the feedback obtained.

IIRR used a multi-phase consultation approach to undertake the assignment. The engagement adopted a cross sectional design and used varied methods that is, both quantitative and qualitative. This includes a series of meetings with DWRM, KWMZ staff and BRL to agree on the methodology and tools to be used. This was complemented with field visits at sub county, parish and sub-catchment level to identify key stakeholders, understanding their interests and concerns for integration into the CMP. The quantitative method was mainly used in the questionnaire, while the qualitative was used for key informant interviews, Focus Group Discussions (FGDs) and Village/Community engagement dialogues. Also, meetings and transect walks/ observation sessions employed the qualitative approach; complemented by stakeholder workshops where stakeholder interests were presented and validated

Sampling techniques such as purposive sampling were used to select Key Informants, simple random for selecting community members and cluster sampling for the sub counties, peri urban and urban towns (upstream, mid-stream and lower stream).

Data collection tools were developed and include Questionnaires, Focus group discussion guides, Community meeting guides, Key Informant Interview guides and Transect walk observation check lists.

The target group for the data collection exercise included sub county officials, community members, cultural leaders and government parastatal employees like National Water and Sewerage Cooperation, National Forestry Authority and Non-government organizations that are operating within the sub counties.

Twenty (22) districts were reached during the consultation; 13 Mpologoma and 9 Vistoria Nile. 30 rural based sub counties, 4 municipalities (Mpologoma) and 25 rural based sub counties and 5 municipal/rural growth centres in Victoria Nile.

The study population of the sub county officials in Mpologoma was 130 and sample size target for the questionnaire tool was 97 respondents; however, the assessment team managed to reach 120 respondents. In Victoria Nile, the population study of the sub county officials was 100 and sample size target for the questionnaire tool was 80 respondents; the assessment team managed to reach 73 respondents.

A total of 40 Key informants were identified and a target of 36 was planned for the study. 31 respondents were reached. A total of 45 community meetings were identified, however 36 out of 40 community meetings were conducted, which translated to a 90% response rate

Sample size for engaging stakeholders was determined using the Krejcie and Morgan Table, 1970. Qualitative data was analyzed in a thematic manner while quantitative data was analyzed using an Open data kit (ODK), digital data collection software, which automatically analyzed the information collected.

In general key finding from Mpologoma and Victoria Nile indicate that Community Based Organizations and Farmer Groups formed the biggest percentage of stakeholders in the catchments while academia which is a category that included universities and research institutions were the least.

Primary stakeholders included youth groups, women groups, farmer groups, water user committees, small processors and businesses, government/ private institutions and schools/ health centres.

Secondary stakeholders included local political leaders, sub county technical staff, CBOs/FBOs, cultural/ religious leaders and NGOs. The interests of all these stakeholders differ and were also identified. Stakeholders were ranked according to the level of influence and priority that they have in the catchments.

In general key finding from Mpologoma and Victoria Nile indicate limited participation of grass root stakeholders (Sub County, parish and village) in development interventions. Most of the stakeholder engagements on development interventions were reported to be done at district and regional level and did not cascade to sub or micro catchments.

Annex 1 of the report highlights the ranking of stakeholders' interest in IWRM and annex 2 of the report highlights the hotspots identified and key issues to be addressed by the CMP per catchment and district, up to 149 hotspots were mapped. The biggest challenges to IWRM cited and observed in all the catchments were pollution, siltation, unplanned diversion of river water e.g. River Manafwa for rice growing, deforestation, soil erosion, river bank degradation and wetland encroachment. Rural growth centres and municipalities had problems of solid waste management and waste water treatment as well as depletion of water sources.

Local leaders, CBOs and NGOs have a high influence on use and access to water resources than other stakeholders. Other stakeholders with a high influence include media and cultural religious institutions. These should be engaged by KWMZ during implementation of the CMP.

Institutions like schools and hospitals had a low influence catchment based IWRM but can be brought on board slowly

Polluters of water sources in all the catchments were cited as; steel milling industries, waragi (local gin) distillers, and tanneries and sugar manufacturing factories, farmers and populations in urban centres however the study did not quantify the levels of pollution. All the rivers e.g. Manafwa, Malaba, Lumbuye, Kiko, Nabigaga and the Nile were observed and cited as polluted.

Key recommendations include;

- BRL should integrate the concerns of the different stakeholders in the CMP. However the issues and concerns are different from one stakeholder to another. Balancing the interests of all the stakeholders is critical for their buy-in for sustainability. This can be achieved through continuous ***dialogue among*** all stakeholders so that practical solutions that are stakeholder owned are developed.
- During implementation of the CMPs, KWMZ and CMCs should ensure continous awareness on IWRM ***interventions.*** Such platforms as community barazas, radio talk shows, local drama shows, and mass sensitization campaigns including use of ICTs like mobile phones could be used to create more awareness on Catchment Based Water Resource management. Awareness and acess to IWRM information was reported as one of the challenges
- KWMZ and partners should raise more awareness on roles and responsibilities of both primary and secondary stakeholders during implementation of the CMP. Most of the stakeholders were not sure of their roles and responsibilities in integrated Water Management during the engagement process. This also affected their ability to make informed decisions on water resources management

- KWMZ to partners with local leaders and NGOs both Local and International that have interest and influence in IWRM in the initial project implementation and latter can bring on board other stakeholders. A list of the stakeholders and their power/influence is presented in annex 1; however this will require more collaboration and capacity building in IWRM

- The stakeholder mapping showed that agricultural production was low as a result of climate change. This has forced farmers into wetlands and increased encroachment on protected reserves to access fertile land. The consultant therefore recommends that in Mpologoma catchment rice farmers should be supported to form rice farmer cooperatives/ associations and find rice varieties that can be grown in the up land.
- In Victoria Nile catchment sugar cane out-growers need to be supported to improve sugarcane growing up-lands. Sustainable soil-water Management practices like; agro forestry, soil water conservation and integrated soil fertility management should be promoted in all districts**.**
- Although Cross boarder mapping was not part of this study, CMC members' capacity needs to be built in trans-boundary catchment based Water Resources management. Cross boarder dynamics are critical in Mpologoma catchment (Sio-malarki-Mt Elgon region of Uganda and Kenya) and thus crossboarder stakeholders should be mapped in future and their capacity built in IWRM.

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1. Introduction

The Ministry of Water and Environment through the Directorate of Water Resources Management is implementing a series of water policy reforms which include adoption of Integrated Water Resources Management (IWRM) and operationalizing it through a Participatory catchment based approach to water resources management and investment planning in Kyoga Water Management Zone.

The report presents highlights of facilitating stakeholder identification, mapping, engagement and participation in catchment management planning for Mpologoma and Victoria-Nile in Kyoga Water Management Zone.

This report serves as the second report submitted to MWE after the inception report by IIRR.

International Institute of Rural Reconstruction was contracted by the Ministry of Water and Environment to facilitate stakeholder engagement in catchment management planning in Mpologoma, Victoria Nile and Awoja catchments of Kyoga Water Management Zone under the Integrated Water Resources Management Framework. BRL which was engaged to develop the CMP and looked at the macro stakeholder engagement where as IIRR complimented the process by engaging stakeholders at micro sub catchment (grassroots).

The catchment covers 36 districts; Mpologoma formed by thirteen (13) districts: Sironko, Bududa, Manafwa, Mbale, Butalejja, Budaka,Kibuku, Pallisa, Namutumba, Tororo, Buisa, Bugiri, Namayingo and Iganga while Victoria Nile catchment comprises of nine (09) districts: Buikwe, Jinja, Kamuli, Kayunga, Buyende, Mayuge, Iganga, Luuka and Kaliro. Awoja comprises fourteen (14) districts; Sironko, Napak, Nakapiripirit, Kween, Bulamburi, Kapcwhora, Bukwo, Katakwi, Soroti, Bukedea, Kumi, Serere and Ngora.

The Consultancy fits in the wider framework of Catchment based Water Resources Management through which water resources are being managed in Uganda.

The mapping was focused in the two catchments of Victoria Nile and Mpologoma which comprised of 22 districts; (9 for Victoria Nile and 13 districts for Mpologoma catchment). In Awoja catchment stakeholder mapping was conducted by MWE in 2015 and in this consutancy, IIRR's role was to build capacity of stakeholders to engage in effective implementation of their CMP

International Institute of Rural Reconstruction carried out the mapping of stakeholders in Mpologoma and Victoria Nile catchments in order to identify key IWRM stakeholders at the grass root level (sub county, parish and village level) to be engaged in the CMP process capture their IWRM concerns and interests, including their potential role in CMP process. In addition, key IWRM issues/intervention areas/ hotspots were identified and will be critical in piloting IWRM interventions at the grass root.

IIRR used a multi-phased consultation approach to undertake the assignment. The engagement adopted a cross sectional design and used mixed methods that is, both quantitative and qualitative. This includes a

series of meetings with DWRM staff, KWMZ staff and BRL to agree on the methodology and tools to be used. This was complimented with field visits at sub county, parish and sub-catchment level to identify key stakeholders to be involved, understanding their interests and concerns for integration into the CMP. The quantitative method was mainly used in the questionnaire guide, while the qualitative method was used for key informant interviews, Focus Group Discussions (FGDs)/Village Community engagement/dialogue Meetings and during transects walks/ observation. This was also complimented with stakeholder workshops where stakeholder interests were presented and validated

Qualitative data was analyzed by compiling all the data collected. Keen interest was taken to report about the catchment stakeholders and categorization of stakeholders, interests of stakeholder/power influence and key issues/hotspots they consider important for IWRM. Geographical locations including hot spot locations in the particular sub counties, parishes and villages were also articulated in the analysis to give a general environmental situation in the Mpologoma and Victoria Nile catchments.

Quantitative data was analyzed using an ODK (Open Data Kit), digital data collection software, which automatically analyzed the information collected. Simple calculations were also used such as tallying the number of respondents reached and community meetings held and converting the number to obtain the percentage compared to what the study had planned for.
As part of the stakeholder engagement, the field findings were shared with catchment stakeholder; District Local Governments (political leaders and technical), Kyoga Water Management team, private sector, civil Society Organizations, academia, cultural institutions among others stakeholders for validation and input. Three workshops were organized for validation and input in Mbale Tororo and Jinja. This was intended to create ownership among the stakeholders

Table 1 below highlights the districts and sub counties that were visited

The selection of the sub counties was based on geographical interests of stakeholders, hotspot vulnerability, accessibility and stakeholder interests in the sub counties.

Table 1: List of Sub Counties Mapped in the 3 Catchments

Catchment	District	Sub County
Mpologoma	Mbale	Bukasakya
		Bubyangu
		Lwasso, Insustrial division
	Sironko	Bunyafa,
	Manafwa	Wesswa
		Bwabwala
	Bududa	Bushiyi
		Bukibokolo
	Butaleja	Himutu
		Naweyo
	Tororo	Osukuru
		Mella, Malaba Town Council
	Busia	Sikuda, Masafu, Dabani
	Namayingo	Banda, Buyinja
	Bugiri	Buwunga, Budaya, Bugiri

		Municipality
		Kapyanga
	Budaka	Lyama
		Kameruka
	Kibuku	Tirinyi
		Kadama
	Namutumba	Ivukula
		Magada, Town Council, Namutumba rural, Bulange
	Pallisa	Putiputi
		Kasodo
Victoria Nile	Jinja	Jinja municipality Mafubira, Bugenbe
	Buikwe	Najja
		Njeru Central Division
	Kayunga	Kangulumira
		Busana, Ntenjeru, Bukoloto
	Mayuge	Mayuge Town Council,
	Kamuli	Namasagali, Namwendwa,
		Bawoli,Kiyunga, Kasabira, Nawanyago, Kisozi
	Iganga	Central Division
		Bulamagi
	Kaliro	Budomero,Bulongo
		Namugogo, Kasoko
	Luuka	Bukanga, Bukooma, Bulongo,Namulondo, Waibuga,
	Buyende	Nkondo
		Kidera

1.2 Background

The Ministry of Water and Environment through the Directorate of Water Resources Management is implementing a series of water policy reforms which include adoption of Integrated Water Resources Management (IWRM) and operationalizing it through a Participatory catchment based approach to water resources management and investment planning

A framework for catchment based water resources management was developed in 2010 to guide establishment of Catchment Management Structures and preparation of catchment Management Plans, this framework is being promoted by the DWRM.

In line with this framework, four (4) Water Management Zones; (Kyoga, Albert,Victoria and upper Nile) have been demarcated and will be units through which water and related resources will be managed and developed considering that water does not follow administrative boundaries

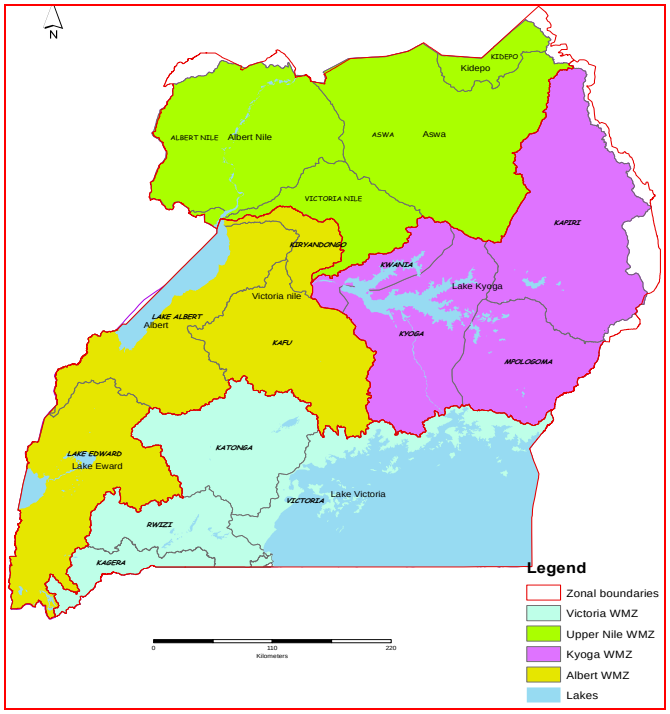

Figure 1: Water Management Zones of Uganda. Source: Water sector Reforms study Report

Mpologoma and Victoria Nile Catchment Management Plans in Kyoga Water Management Zone are being prepared in close consultation with the stakeholders to ensure the sustainable use and protection of the water resources and the conservation of the environment at catchment level for their social and economic needs and benefits at present and in the future. The CMP is further developed through piloting the Catchment-based Water Resources Planning Guidelines which were recently developed to guide the process.

1.3 Scope

1.3.1 Geographical

This exercise was conducted in 2 catchments of Kyoga Water Management Zone (KWMZ) namely Mpologoma and Victoria Nile which cover 22 districts. These districts are distributed as 13 in Mpologoma and 9 in Victoria Nile. A total of 36 sub counties were visited during the stakeholder engagement within the catchments. The map below indicates the districts and their distribution in the 2 catchments. Awoja Catchment was not considered for mapping under this assignment because mapping of its stakeholders was undertaken in 2015 by MWE

Figure 2: Geographical scope of the study area. Source BRL Stakeholder report 2017

Table 2: Distribution of districts distributions and their population in Victoria Nile catchment

District	Catchment	Population
Kayunga	Victoria Nile	343622
Kamuli	Victoria Nile-Lumbuye	612409
Buikwe	Victoria Nile-Lumbuye	205157
Jinja	Victoria Nile-Lumbuye	434065
Buyende	Victoria Nile-Lumbuye	326975
Luuka	Victoria Nile-Lumbuye	326320
Mayuge	Victoria Nile-Lumbuye and	241134

	Mpologoma	
Iganga	Victoria Nile-Lumbuye and Mpologoma	290406
Kaliro	Victoria Nile-Lumbuye and Mpologoma	220131

Source: BRL-CMP Report Victoria Nile 2016

Table 3: Distribution of districts and their population in Mpologoma catchment

District	Catchment	Population
Mayuge	Victoria Nile-Lumbuye and Mpologoma	78931
Iganga	Victoria Nile-Lumbuye and Mpologoma	476373
Kaliro	Victoria Nile-Lumbuye and Mpologoma	236927
Bugiri	Mpologoma	390076
Namutumba	Mpologoma	253260
Paliisa	Mpologoma	252784
Namayingo	Mpologoma	68238
Busia	Mpologoma	314253
Tororo	Mpologoma	526378
Butaleja	Mpologoma	245873
Kibuku	Mpologoma	202630
Budaka	Mpologoma	193584
Manafwa	Mpologoma	352864
Mbale	Mpologoma	492804
Bududa	Mpologoma	211683
Sironko	Mpologoma	75379

Source BRL-CMP report Mpologoma 2016

1.3.2 Description of the project areas

Kyoga Water Management Zone (KWMZ) - covers an area of 57,080km^2 in the North-Eastern, Eastern and some part of the central parts of the country containing a number of lakes (notably Kyoga, Bisina, Opeta and Kwania) and numerous wetland areas. The population is growing rapidly (growth rate: 2.5 - 6.2 % p.a.) with a corresponding increase in water demand and waste water discharge. (Aurecon. 2013e Awoja CMP 2015)
The Lake Kyoga system is situated downstream of Lake Victoria, from whence it receives the majority of its inflow. The remainder of the inflow originates from catchments situated in the northern and eastern portions of the WMZ, including the Awoja, Mpologoma and Victoria Nile catchment.

Figure 3: Map of Kyoga Water Management Zone Source MWE-DWRM report 2012

1.3.2.1 Description Mpologoma Catchment

The Mpologoma catchment covers some 7,862 km^2 of land area and 1,127 km^2 of water area. It's bordered on the south by a narrow strip of the Victoria WMZ which separates the catchments from Lake Victoria.
The catchment is characterized by the presence of Mount Elgon (4,321 metres above sea level), at the extreme northeast corner of the catchment, where the steepest slopes are found and a few extinct volcanoes and ridges along its southern and eastern rim at lower elevations along the border with Kenya. The altitude of the remainder of the catchments is between 1,150 m and 1,033 m, with the latter being the mean altitude of Lake Kyoga. Most wetlands in the catchments are located in this relatively flat area.

Catchments and Sub Catchments

Table 4: Delineation of Mpologoma sub-catchments in Uganda

Code	Name of the Sub catchment	Description of the sub catchment	Remarks
M-1	Namatala	Namatala river from its source to the confluence with Manafwa	
M-2	Upper Manafwa	Manafwa river (upstream).	reference point for Mbale town water supply, whose main intake is just downstream the gauging station 82212.
M-3	Middle Manafwa	River Kipirio and downstream part of Manafwa up to the confluence with Namatala	Doho rice scheme abstract water in the downstream Part of this sub-catchment. By delineating this catchment, we allow to test the impact of the water abstraction for irrigation on the water availability downstream (after the confluence with river Namatala).
M-4	Lower Manafwa	River Manafwa, from the confluence with Namatala to the confluence with Mpologoma	
M-5	Lwakhakha	River Lwakhakha/Malaba from its source to the confluence with Malakisi	They are transboundary, - Abstraction for Tororo/ Busia water supply (surface water) is located right downstream - We expect the hydrology the sub-catchments downstream to be different (unit runoff) - They face specific environmental challenges related to the context (Mont Elgon area)
M-6	Malakisi	River Malakisi from its sources to the confluence with Lwakhakha/Malaba	
M-7	Malaba	River Malaba from the confluence of	

		Malakisi and Lwakhakha up to the confluence with river Lumbaka/Kimbimba	
M-8	Kibimba	River Lumbaka/Kimbimba from its sources to the confluence with Malaba	Kimbimba rice scheme (one of the larger formal irrigation scheme in Mpologoma catchment) is located in this sub-catchment.
M-9	Upper Mpologoma	River Mpologoma from the confluence with river Lumbaka/Kimbimba to the confluence with river Manafwa	
M-10	Nawaigobwa	River Nawaigombwa from its source to the confluence with Malaba	
M-11	Middle Mpologoma	River Mpologoma from the confluence with river Manafwa to the confluence with river Naeombwa.	
M-12	Lemwa	River Lemwa up to the confluence with Mpologoma	
M-13	Lower Mpologoma	River Mpologoma	

Source BRL Report Mpologoma CMP-DWRM 2016

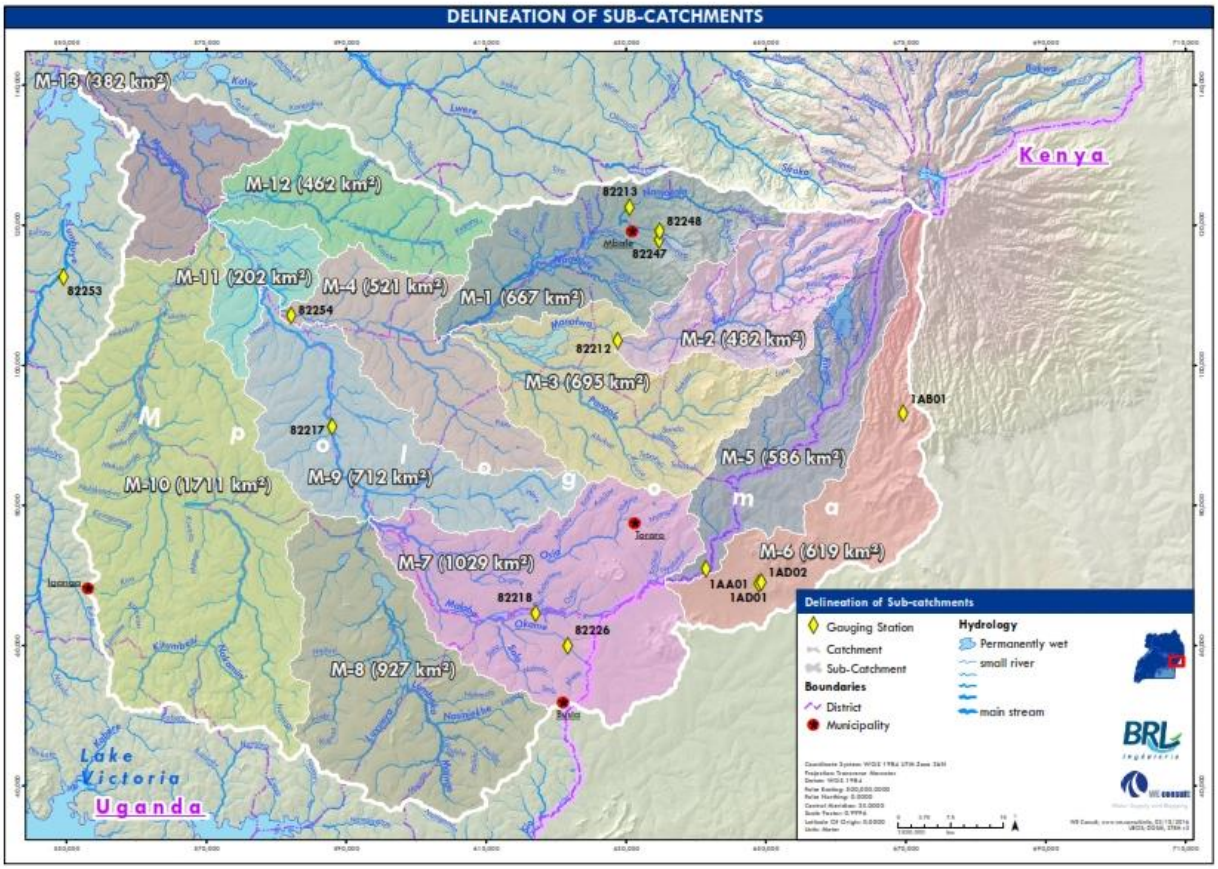

Figure 4: Map of Mpologoma delineating the sub catchments in Uganda. Source: BRL report 2016

1.3.2.2 Description of Victoria Nile Catchment

The Victoria Nile catchment covers some 3,456 km2 of land area and 126 km2 of water area while the smaller Lumbuye catchment comprises 1,478 km2 of land area and 42 km2of water areas. They are bordered on the south by a narrow strip of the Victoria WMZ which separates the catchments from Lake Victoria.

Catchment and Sub Catchments

Table 5: Delineation of Victoria Nile sub-catchment in Uganda

Code	Name of the Sub catchment	Description of the sub catchment	Remarks
VN1	Nile	Nile sub-catchment, from Lake Victoria to Lake Kyoga	This sub-catchment corresponds to the Nile River, from Lake Victoria to Lake Kyoga, apart from its two main tributaries. We propose not to divide this catchment into more pieces as inflow from the Kiko and Nabigaga Rivers will be negligible compared to the overall flow of

			the Nile, and won't have a significant impact on the overall water resource available from the Nile River
VN2	Kiko	Kiko sub-catchment (tributary of the Nile)	Kiko river is one of the main tributaries of the Nile between Lake Victoria and Lake Kyoga
VN 3	Nabigaga	Nabigaga sub-catchment (tributary of the Nile)	One of the main tributaries of the Nile between Lake Victoria and Lake Kyoga
VN 4	Upper Lumbuye	Upstream part of Lumbuye, from the sources to the gauging station 82253	The upper sub-catchment will correspond to a catchment where Lumbuye functions as a river, whereas the downstream part is where river Lumbuye reach a flood plain/wetland system **Lumbuye** L-2 (Ramsar site)
VN 5	Lower Lumbuye	Downstream part of Lumbuye catchment, from the gauging station to the outlet	

Source BRL Report Victoria Nile CMP-DWRM 2016

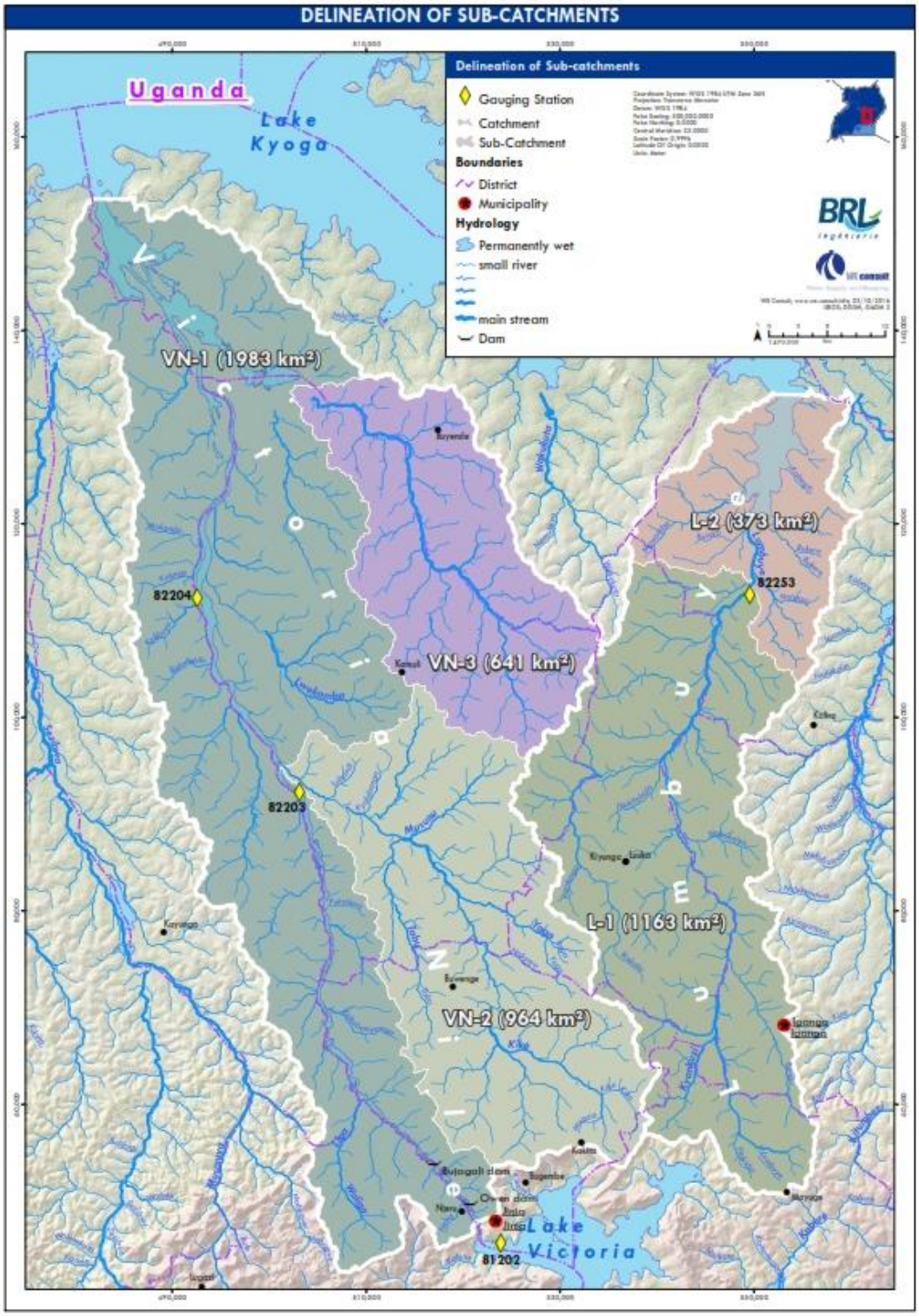

Figure 3: Map of Victoria Nile delineating the sub catchments in central Uganda. Source BRL report 2016

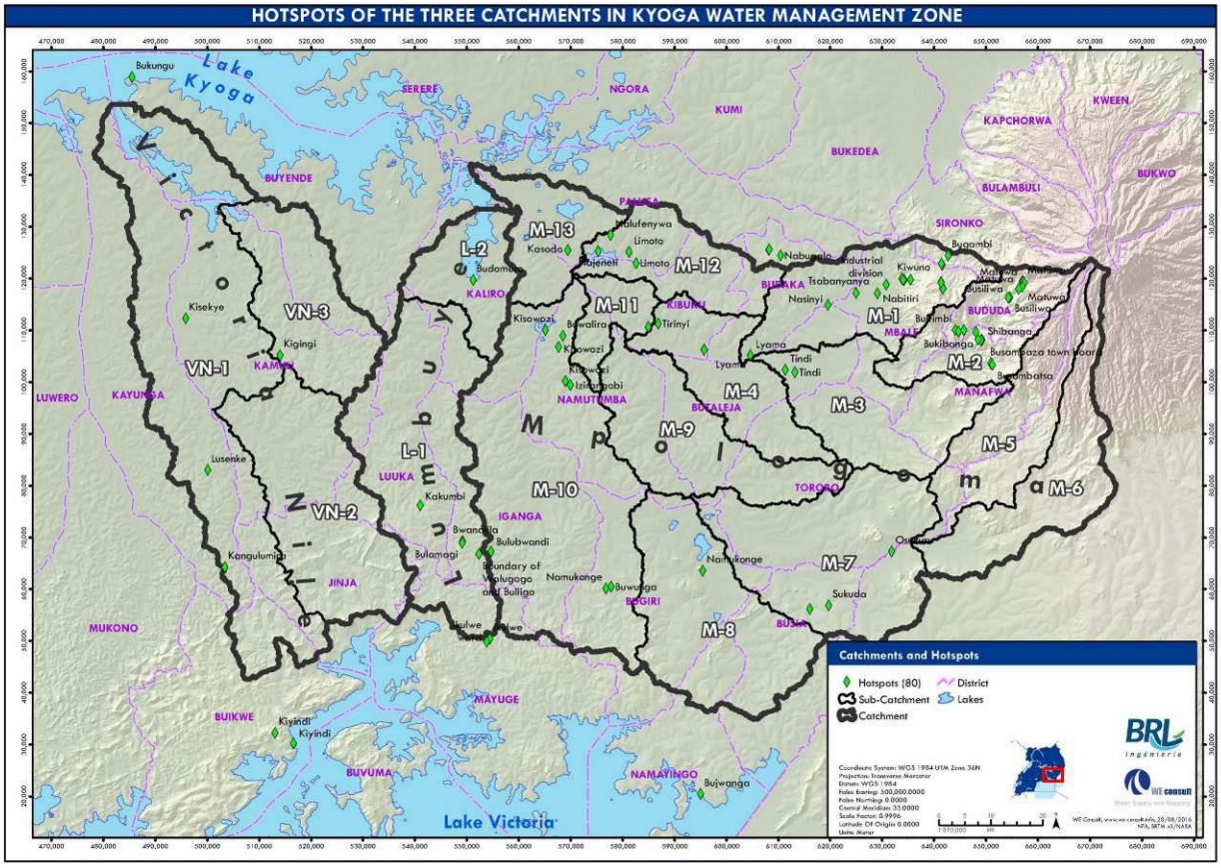

Figure 5: Map of Mpologoma and Victoria Nile indicating hotspots visited during the Stakeholder Mapping and Engagement

1.3.2.3 Major tribes and dialects

In Mpologma cachment up to 4 tribal groups exist; Masaba in the egon region; Bududa, Manafwa, Sironko, Mbale and the main dialect is lumasaba. Other tribes are Japadhola and Badama in the district of Butaleja, Busia, Bugiri and Namayingo. Other tribes are Bagwere in the districts of Paliisa, Kibuku and Budaka

In Victoria Nile there are 3 tribal groups; Basoga-Mayuge, Iganga, Jinja and Baganda in; Buikwe and Kayunga. Other tribes include kenye in Buyende and Kaliro and the dialect is Lukenyi

1.4 Objectives

1.4.1 Objectives of the consultancy

The purpose of the consultancy was to support the establishment of Catchment Management Organisations (CMOs) with all its operational structures and also to build capacity of grass root stakeholders to actively engage in Catchment Based Water resources Management in Awoja, Mpologoma and Victoria Nile. The contractual obligations of IIRR include:

i. Undertake Stakeholder identification to map out key catchment actors at the different levels and the appropriate means of effectively involving them in the planning, development and implementation of the catchment management plans.

ii. Assessments and Review existing data to identify information gaps for updates and integration in the planning, development and implementation of the catchment management plans

iii. Support establishment and strengthening of Catchment Management Organizations in the Kyoga Management zone including building on existing platforms, working groups and committees at the catchment levels

iv. Identify and promote stakeholder knowledge and skills to engage in planning and implementation of the catchment management and development interventions for ownership and sustained implementation of the plan.

v. Promote awareness among key stakeholders about key water resources conservation and management related issues within the catchments.

vi. Promote the catchment based IWRM Approach in landscape level planning and management in the Kyoga Water Management Zone

1.4.2 Specific Objectives

The main objective of the stakeholder mapping was to

i. To identify, map and mobilize stakeholders to participate in the development and implementation of the CMP in Mpologoma and Victoria Nile at grass root level

ii. To identify key issues/concerns from key stakeholders at the grassroot to be integrated in the CMP

iii. To identify hot spots/intervention sites for piloting IWRM in Mpologoma and Victoria Nile Catchments

CHAPTER TWO

METHODOLOGY/APPROACH

2.1 Introduction

This section presents an overview of the methods and techniques used by the consultant during the stakeholder mapping, identification and engagement in Catchment Management Planning at lower level (Sub county, parish and Sub catchment). Th section highlights the study design, sampling techniques and procedures, data collection methods and instruments used for data analysis, reliability and validity.

2.2 Study Design

IIRR used a multi-phased consultation approach to undertake the assignment; participatory, interdisplinary, interactive and consultative. The engagement adopted a cross sectional design and used mixed methods that is, both quantitative and qualitative. This includes a series of meetings with DWRM staff, KWMZ staff and BRL to agree on the methodology and tools to be used. This was complimented with field visits at sub county, parish and sub-catchment level to identify key stakeholders to be involved, understanding their interests and concerns for integration into the CMP. The quantitative method was mainly used in the questionnaire guide, while the qualitative method was used for key informant interviews, Focus Group Discussions (FGDs)/Village Community engagement/dialogue Meetings and during transects walks/ observation. This was also complimented with stakeholder workshops where stakeholder interests were presented and validated. The process also involved election of CMP members and training of CMC members in IWRM principles and field learning visits in Manafwa and river Malaba water systems.

Primary stakeholders were categorized as directly affected by IWRM activities at Sub county/micro catchment Level and these include, Women and youth Groups, Water User Committees, Farmer Groups, Fishermen, Small based businesses, Small based Processors/Small cottage industries/Cooperatives/Private sector, Government/private institutions; schools, health centers and Large-scale processors. Secondary Stakeholders were categorized as Intermediary operating at sub county/grass root level among which include; leadership at Sub county, Cultural and religious leaders, NGOs, CBO/FBO and local media channels.

2.3 Sampling

2.3.1 Selection of Sub counties and Parishes

The selection of sub counties and parishes was purposively guided by the location of stakeholders in the respective sub catchments. Given the disparities in economic development both urban and rural stakeholder operations were also considered in the mapping. The geographical locations were used to define the levels of stakeholder interests/activities in the sub counties/rural urban areas and kind of activities in the respective sub counties and parishes. The consultant obtained a list of stakeholders operating in the respective districts and their sub counties from the sub county CDOs; NGOS, Farmer Groups, Water user committees. For stakeholder operating in municipalities and urban growth centers the lists were obtained from municipal authorities

Only sub counties with stakeholder activities/operations were considered for the mapping. Sub counties/parishes with no/very limited stakeholder interest/area of operation were not visited because they have low stakeholder interests.

2.3.2 Simple Random Sampling for stakeholder Engagement

This was used to identify other community members in the catchments. This was because all the community members were carrying out activities that impact the catchment in one way or another.

2.3.3 Sample size determination for stakeholder Engagement

The study population of the sub county officials in Mpologoma was 130 and sample size target for the questionnaire tool was 97 respondents; however, the assessment team managed to reach 120 respondents. In Victoria Nile, the population study of the sub county officials was 100 and sample size target for the questionnaire tool was 80 respondents; though the assessment team managed to reach 73 respondents.

A total of 40 Key informants were identified and a target of 36 was planned for the study. However only 31 respondents were reached, which gave us a response rate of 86.11%. A total of 45 community meetings were identified, however 36 out of 40 community meetings were conducted, which translated to a 90% response rate

Sample size after the LWSAP meetings was determined using the Krejcie and Morgan Table 1970. The table, attached at the appendix is scientifically developed and tested as appropriate for determining sample size. The table can be downloaded at: www.kenpro.org/sample-size-determination-using-krejcie-and-morgan-table

Table 6: Krejcie and Morgan table for determing sample size

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

The study population was 384 respondents during the stakeholder mapping and engagement

2.3.4 Selection of hotspots

The selection of hotspots/ key degraded area/areas for intervention was guided by the stakeholders during the LWSAP meetings, FGDs and field consultations. 149 hotspots were visited during the mapping. The consultant was guided by the stakeholders to visit these hotspots, assessed the issues at the respective hotspots, took GPS coordinates and the reports for the respective hotspots were uploaded on “isurvey” a web based platform. This is a payment based platform

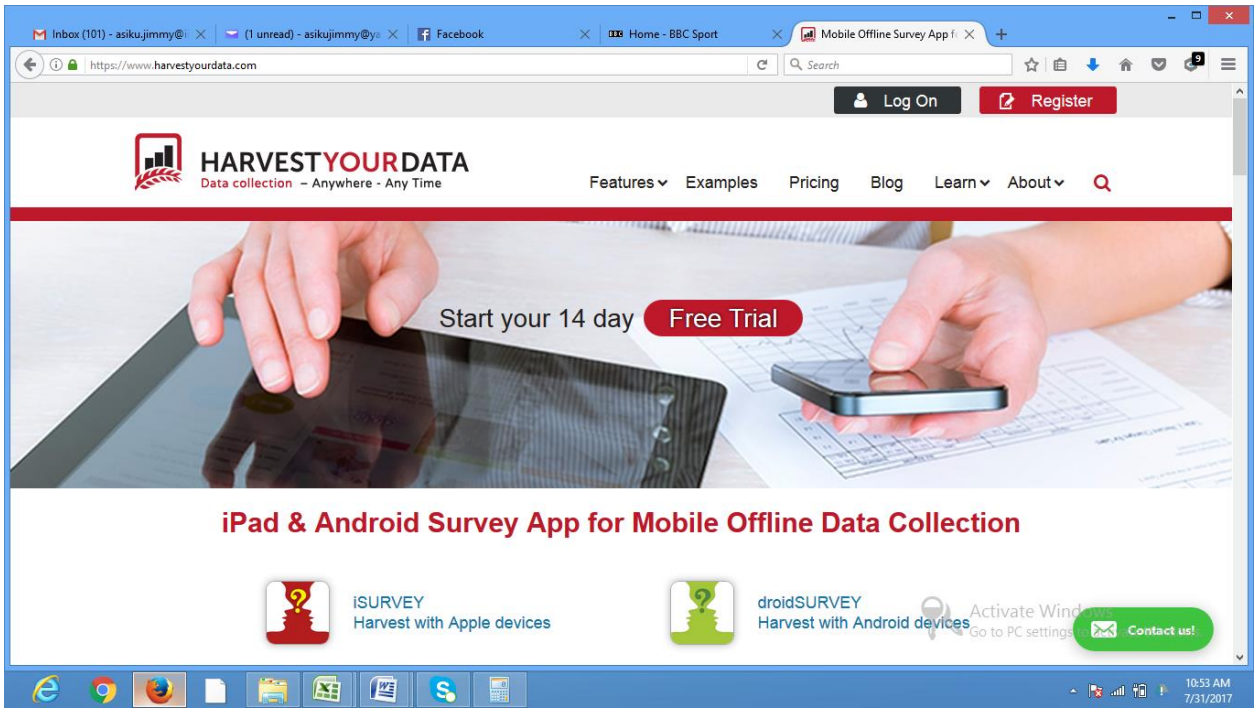

Figure 6: Figure isurvey platform for hotspot mapping

2.4 Data Collection Methods & Instruments

Self-administered Questionnaires

These were administered to stakeholders using the Open Data Kit (ODK) software. The software was installed in tablets to make administering easy and fast. The software used themes to categorize data in the analysis process to ease interpretation.
The questionnaire was comprised of mainly closed ended questions with options for respondents to choose from

Observation

Observation method was used to see the impact on the environment as well as taking photographs of the hot spots identified by the respondents during the field visits. **Observation Check list was** instrument was used during field visits for the data collection team to capture any other relevant information that could not have been obtained during community dialogue, Key Informant Interviews or self-administered questionnaires

Geographical Positioning Systems (GPS) Coordinates

Coordinates of the areas considered to be degraded that were pointed out during the various interviews with various stakeholders were taken using GPS. It was envisaged that these hotspots will form the basis of the initial intervention areas in the sampled sub counties.
GPS coordinates were also captured for each hot spot identified and all the information was uploaded on a web based Google map (*isurvey*).

Photo 1: IIRR staff during observation while taking coordinates of the hotspots using an inbuilt mobile based GPS

Photography

The team took photographs of activities that impact IWRM. These photographs are included in the report

Key Informant Interviews

These were carried out among key stakeholders that were identified in the catchments whose activities were deemed to impact the catchments either positively or negatively. They were purposively selected because they were more knowledgeable on the subject matter and to solicit for their expert opinion and views. These comprised of leaders and/or key staff from both government parastatals and other private companies in addition to NGOs operating within the Kyoga Water Management Zone. **Key Informant Interview Guide** Which contained open ended questions was used during discourse with key informants

Village Community Meetings/ Dialogue

They comprised of about 25 members including both men and women selected from people of various backgrounds such as farmers, traders, water user committee members, opinion leaders, youths, among others. Deliberate efforts were made to mobilize community members from the various parishes in the sub counties where stakeholders are engaged in different activities. A **Community Meeting Guide** was used for the engagement**.** These allowed for a wide range of data to be collected from a large group of stakeholders within a short time. This enabled collection of information which could not be collected using the questionnaire or Key Informant Interviews.

Photo 2: Community consultation in Budaka District Kameruka S/C

Photo 3: Stakeholder consultation in Bugiri community

2.4.1 Reliability and Validity

The instruments/ tools that were used in the data collection exercise were all reviewed and validated by the KWMZ. The data collection team was also trained, before pre-testing the tools in the field to ensure their reliability and validity.

2.4.2 Data Processing and Analysis Methods

Qualitative data Analysis

Qualitative data was analyzed by compiling all the data collected. Keen interest was taken to report about the catchment stakeholders and categorization of stakeholders, interests of stakeholder/power influence and key issues/hotspots they consider important for IWRM. Geographical locations including hot spot locations in the particular sub counties, parishes and villages were also articulated in the analysis to give a general environmental situation in the Mpologoma and Victoria Nile catchments.

Quantitative data Analysis

Quantitative data was analyzed using an ODK (Open Data Kit), digital data collection software, which automatically analyzed the information collected. Simple calculations were also used such as tallying the number of respondents reached and community meetings held and converting the number to obtain the percentage compared to what the study had planned for.

2.4.3 Ethical Issues

Throughout the data collection exercise, informed consent was sought from all the respondents and the information treated with confidentiality. All the various information that has been received from other sources including quotations has been acknowledged. Permission was also sought to record the proceedings of the meetings to facilitate reviews incase information gaps were identified.

2.4.4 Limitations

One of the limitations of the study is that the methodology was limited to only stakeholder mapping, identification and engagement using the participatory approaches. More advanced tools like modeling were not provided for.

The key findings from the field, discussions, recommendations drawn from the analysis of the data and conclusion are presented in chapters 3 and 4

2.5 Identification, Mapping and Engagment of stakeholders

2.5.1 Identification and Mapping of stakeholders

Stakeholder identification was undertaken in 22 districts using the methodology presented in the LWSAP manual; Local Water Security Action Planning for mapping of stakeholders in IWRM projects (Reed M 2016)

The methodology is composed of seven interrelated activities, covering stakeholder identification, public opinion assessment, local water security assessment, problem analysis and prioritization. The guidelines for use of the LWSAP for mapping of stakeholders in IWRM projects are put in annex 3 of the report

At the beginning of the process, initial planning teams organized initial meetings with sub county officials; (CDOs, water officers, chiefs) in order to identify Organizations, groups and individuals who are particularly influential and interested in developing IWRM plans. A list of stakeholders to be invited to the sub county stakeholder workshops was compiled as a result

Photo 3: Stakeholder consultation with Tirinyi S/C in Kibuku district

The main objective of the sub county stakeholder meetings was to provide participants with basic theoretical information on stakeholder mapping and development/review of stakeholder list

As a result of both meetings, stakeholder lists were developed for each sub county/sub catchment. These stakeholder lists were cross-checked (using a triangulation process) by prominent individuals (DCDO and CDOs) from each district/sub county. A few changes were made during this process, and the project team came up with draft stakeholder tables that served as a basis for recommendations to KWMZ

2.9.2 Stakeholder Analysis

Categorisation of stakeholders

In both catchments, stakeholders were categorized into 2 categories (primary and secondary)

Table 7: List of Stakeholder by category

Primary Stakeholders	Secondary Stakeholders
Women and youth Groups	Sub county leaders; LC 3, CDO, Sub county Chief
Water User Committees	Cultural leaders
Farmer Groups	NGOs
Fishermen	CBO/Faith Based Organizations
Small based businesses	Local media channels
Small based Processors/Small cottage industries/Cooperatives/Private sector	
Government/private institutions; schools, health centers	
Large-scale processors	

Primary stakeholders

Primary stakeholders were categorized as directly affected by IWRM activities at Sub county/micro catchment Level and these include; Women and Youth groups, Water User Committees, Farmer Groups, Fishermen, Small based businesses, Small based Processors/Small cottage industries/Cooperatives/Private sector, Government/private institutions; schools, health centers and Large-scale processors

Secondary Stakeholders

These were categorized as Intermediary Stakeholders operating at sub county level among which include

- Sub county leaders; LC 3, CDO, Sub county chief
- Cultural leaders
- NGOs
- CBO/FBO
- Local media channels

2.9.3 Identifying stakeholder categories

The consultant engaged the stakeholders to categorize the stakeholders according to their categories as indicated below:

- **.**Government departments, politicians and government agencies

- Private sector ndustry/producer representative bodies/associations, and trading partners
- Media
- Landowners and land managers (Farmer groups/cooperatives)
- Special-interest/lobby groups
- Faith Based Organizations
- NGos and community groups etc

Analysis of stakeholders

After generating the lists Stakeholders, they were ranked using the stakeholder ranking criteria below: 4: High Importance/High Influence (HH)-Key players (KP), 3: High Importance/Low Influence (HL)-Context setters, 2: Low importance/High Influence (LH)- Subjects and Low Importance/Low Influence (LL)-The Crowds. A list of the stakeholder and how they were ranked is indicated in annex 1 of the report.

Criteria for ranking stakeholders

Key players (KP) – Stakeholders with high level of interests and influence that should be involved in water management planning

• **Context setters** (CS)– Highly influential stakeholders, but with little interest. These stakeholders may represent a significant risk and should therefore be monitored and managed.

• **Subjects (S)** – Stakeholders with a high level of interest but little influence who, although supportive by definition, lack any capacity for impact, although they may become influential by forming alliances with other stakeholders.

• **The crowd (C) –** Stakeholders with little interest in or influence on the water management planning process. There is little need to consider these stakeholders in much detail or to engage with them.

Interest/ Influence matrix of Stakeholders

NB The scale of importance is 1-4 where one is the least and 4 is the highest

Not important (1) Less important (2), Important (3), Very important (4)

Table 8: Showing importance/ influence matrix of stakeholders

High Importance/High Influence	High Importance/Low Influence
A: Key players (KP) (score mark 4) Local Political Leaders Councilors and LC 3 Sub county Technical staff Large commercial processors Farmer cooperatives International NGOs Municipal Authorities Water user committees	**B: Context setters (CS) (score mark 3)** Faith based Organizations Small based processors Local NGOs CBOs Government/Private Institutions

Low Importance/High Influence	Low Importance/ Low Influence
C: Subjects (S) (score mark 2) Local media/journalists Cultural Institutions Youth Groups Women groups Farmer groups	**D: The Crowds (C) (score mark 1)** fishermen Individuals not organized in groups Small based business operators Schools/health centres Local waragi distillers

After classifying the stakeholders according to stakeholder analysis grid, we further refined the stakeholders according to the levels of their participation in different committees and processes:

a) coordinating committee
b) planning and development processes
c) implementation process
d) monitoring and evaluation processes
e) Those who would likely play a more limited role
f) Those who would wish simply to be kept well informed
g) Those who would not want to be involved

2.10 Engagement of stakeholders in the respective locations

After the identification and generation of potential stakeholders using the Local Water Security Action Planning tool, the consultant used a purposive sampling technique to engage the different stakeholders during the field visit and mapping of hotspots

The technique was used to sample respondents for the questionnaire and key informant interviews for purposes of reaching out to professionals, practitioners and those stakeholders that are more knowledgeable about the catchment and the main hotspots by virtue of their positions and responsibilities in the catchment. The target stakeholders were the sub county officials such as the Senior Assistant Secretaries (SAS), Sub County Community Development Officers, the Local Council three (03) chairpersons and extension workers for all the sub counties selected. Other target stakeholders included NGOs that are engaged in the IWRM activities, private sector, industries and government parastatals that fall under water and environment sector.

Photo 6: Community consultation in Bubyangu S/C in Mbale district

Five (5) key variable were used during the engagement of stakeholders

Access to IWRM information:

This ivolved stakeholders understanding of IWRM and how frequent the stakeholder has accessed information on IWRM

Decision making on water resource use:

This involved participation on water user groups and making decisions on water resources management in their community

The following ranking criteria was used to assess decision making on IWRM resources

1=the stakeholder cannot make decision regarding the use of resources (low) 2=the stakeholder is one of the several persons that can make a decision regarding the use of the resources (Medium)

3=the stakeholder can make decisions regarding the use of resources in his/her community (High)

Influence:

This involved power and influence: Since "power" is defined here as the combined measure of the amount of resources a stakeholder has and his or her capacity to mobilize them, the resource scores for each stakeholder was averaged, resulting in a power index between 3 and 1: 3 = high power, 2 = medium power, and 1 = little power.

Involvement in previous water management projects:

This involved stakeholder participation in implementing water resource management projects in the last 2-3 years in their communities

Interest in CbIWRM

This involved stakeholder willingness to participate in the CMP implementation and the likely potential roles in implementation

2.10.1 Criteria for engaging stakeholders in Mpologoma Catchment

The study population of the sub county officials in Mpologoma was 130 and sample size target for the questionnaire tool was 97 respondents; however, the assessment team managed to reach 120 respondents. A total of 40 Key informants were identified and a target of 36 was planned for the study. However only 31 respondents were reached, which gave us a response rate of 86.11%. A total of 45 community meetings were identified, however 36 out of 40 community meetings were conducted, which translated to a 90% response rate. The sampling frame with details of the study population is attached below:

Table 9: Table of sample size for Mpologoma catchment

#	Target respondents	Rationale	Approach/method/ Tool	Population (N)	Sample (S)	Sampling method
1	Sub-county leaders (SAS, CDO, LCIII, Extension staff—2) 5	• Implementers of development initiatives	• Questionnaire	26 sub counties multiplied by 5espondents =130	• 97	• Purposive
2	Catchment users -Industries Only big industries were considered Tororo Cement, Jambo Tannery, Mt. Elgon Millers Limited, Nakisenyi Ginnery, Busia Sugar & Allied Factory, African Textile Mill, Rafik factory (soap&cooking oil), Bugisu Cooperative Union, Mbale Soap Works, Mbale Tuff Foam, Mbale Safi Factory, Great Seas Factory, JENGA, Masaba Coop Union, Electro Max, Dong Song Sukulu Phosphate Factory, Sky beam, Simba Cement Factory	• Require water resources for their activities • A lot of impact - +	• KII • Questionnaire	• 15	• 14	• Purposive

	-Urban (municipalities—water user committees and business community) Mbale, Tororo, Bugiri, Busia,	• Water for domestic use	• FGD	• 4	• 4	• Purposive
	-Peri urban (town council—water user committee and farmers) Budaka, Kibuku, Manafwa, Bududa, Sironko, Pallisa, Namayingo Butaleja and Namutumba	• Water for domestic use and for livelihoods	• FGD guide	• 9	• 7	• Random sampling
	-Rural towns (farmers, distillers, pastoralist	• Water for livelihoods	• FGD guide	6 villages multiplied by 6 respondents=36	• 36	• Random sampling
3	Learning institutions (IUIU, School of Hygiene Mbale, UCU, UMU, MUK, St John Bosco core PTC, etc.	• Research in IWRM	• KII	• 10	• 6	• Purposive
4	Uganda Tourist Board (UTB) (Bujagali, source of the Nile, the Busoga tourist site, etc.)	• They use water for tourist activities	• KII	• 5	• 5	• Purposive
5	NWSC (Sironko Mbale, Tororo, Pallisa, Kibuku, and Bugiri)	• Water distribution	• KII	• 6	• 6	• Purposive
6	Development partners and NGOs (JICA, IUCN, URCS, UWA, Nature Uganda, World Vision, GOAL, IIRR etc	• Natural resource, environment and conservation partners	• KII	• 35	• 32	• Purposive

2.10.2 Criteria for engaging stakeholders inVictoria Nile

In Victoria Nile, the population study of the sub county officials was 100 and sample size target for the questionnaire tool was 80 respondents; though the assessment team managed to reach 73 respondents.

Table 10: Table of sample size for Victoria Nile Catchment

#	Target respondents	Rationale	Approach/method/Tool	Population (N)	Sample (S)	Sampling method
1	Sub-county leaders (SAS, CDO, LCIII, Extension staff—2)	• Implementers of development initiatives	• Questionnaire	20 sub counties multiplied by 5 respondents=100	• 80	• Purposive
2	Catchment users -Industries Only big industries were considered Nile breweries, Tembo steel milling company, Buikwe Lugazi Sugar, BIDCO, Metha Factory, Kaliro Sugar Works, Kakira Sugar Works, Mayuge sugar works, Kamuli sugar Limited, Jinja Steel rolling, Simba Cement Factory, Sky fat Tannery, Buwembe and distillers limited, Glass plant, leather industry, Rubber waste tyre recycling, Lead acid battery recycling, Mineral water processing project, Mpande Waragi distillers, London distillers, Uganda pulp and paper mills Ltd, Lolopipit distillers, Green resources, Busoga forest company, Busoga trust, East African seed (U) Ltd, KAWACOM	• Require water resources for their activities • A lot of impact - +	• KII • Questionnaire	• 15	• 14	• Purposive

	(U) Ltd, Rotary club of jinja, Davis & Shirtliff, Jinja branch, Bisoboka Youth Association etc					
	-Urban (municipalities—water user committees and business community) Jinja, Iganga, Kamuli, Njeru Municipal Council	• Water for domestic use	• FGD	• 5	• 5	• Purposive
	-Peri urban (town council—water user committee and farmers) Kaliro, Luuka, Buyende, Buikwe, Mayuge Town Council, Mbulamuti TC, bugembe TC, Kayunga TC	• Water for domestic use and for livelihoods	• FGD guide	• 5	• 5	• Random sampling
	-Rural towns (farmers, distillers, pastoralist	• Water for livelihoods	• FGD guide	5 villages per sub county multiplied by 6 respondents=30	• 28	• Random sampling
2	Uganda Electricity Distribution Company Bujagali, Owen falls dam and Isimba Dam	• Hydroelectric users that depend on the water level/speed	• KII	• 4	• 3	• Purposive
3	Learning institutions (Kampala University, Busitema University, NTC-Kaliro, NaFIRI, MUK,	• Research in IWRM	• KII	• 10	• 10	• Purposive
4	Uganda Tourist Board (UTB) (Bujagali, source of the Nile, the Busoga tourist site, etc.)	• They use water for tourist activities	• KII	• 5	• 5	• Purposive
5	NWSC (Iganga, Mayuge, Kamuli, Jinja and Kayunga)	• Water distribution	• KII	• 5	• 5	• Purposive
6	Development partners (Water mission Uganda, Plan international,	• Natural resource, environment and conservation partners	• KII	• 22	• 19	• Purposive

CHAPTER THREE

3.0 FINDINGS AND DISCUSSION

3.1 Introduction

This section presents findings on stakeholders at grass root level and key issues in Integrated Water Resources Management (IWRM).

3.2 Results from Stakeholder Analysis

Types of Stakeholders (Primary and Secondary)

Stakeholders in both catchments were categorized into Primary and secondary stakeholder. Up to 324 stakeholders were mapped in Mpologoma Catchment. In Victoria Nile 297 stakeholders were mapped. The lists of these stakeholders are indicated in annex 1 of the report

Table 11: Categories and types of stakeholders per catchment involved in the consultation

Stakeholders Category	Type	Mpologoma	Victoria Nile	Total
Women and youth groups	Primary	39	35	74
CBO/Farmer groups	Primary/secondary	61	109	170
Water User Associations	Primary	4	7	11
Fishermen	Primary	6	3	9
Small Based Processors	Primary	56	26	82
Large-Scale Processors	Primary	2	6	8
Government/Private Institutions; Schools, Health centers	Primary	53	28	81
Sub County Local Government	Secondary	54	54	108
NGOs	Secondary	35	22	57
FBOs	Secondary	4	3	7
Others		10	4	14

3.2.1 Stakeholder Category by Sector

Stakeholders were further categorized according to the sectors in which their activities inform the catchment management plan. The sectors include Agriculture (both rain feed and commercial), education, health, water and environment, trade and processing, tourism and wild life, and trade and processing. The sector with the highest number of stakeholders is Agriculture, while energy has the lowest number of stakeholders. We need to note that the leading contributors to catchment degradation is tree cutting for charcoal (bio-fuel, brick making) and

small-scale rain fed subsistence agriculture and thus involvement of these stakeholders is critical during the CMP process. In Mpologoma catchment most of the stakeholders in the agriculture sector are involved in paddy rice, vegetable and coffee growing. In Victoria Nile, the stakeholders are involved in sugarcane growing, coffee and rice farming.

Table 12: Stakeholders (institutions) involved and how they are categorized in the different sectors

Sector	Sub sector	Mpologoma	Victoria Nile	Total
Agriculture	Farmer groups depend on rain fed agriculture	20	15	35
	Agriculture Commercial	11	12	23
	Institutions/groups engaged in Fisheries	2	3	5
	Livestock institutions	1	1	2
Education	Universities	6	3	9
	Selected Primary and secondary	36	10	46
Health	Public Health	8	7	15
processing industries	Small based	12	13	25
	Large scale processors	4	6	10
Tourism industry	Hotels	15	9	24
	Wildlife/water rafting, mountain climbing, picnic sites, cultural sites	17	3	20
Water and Environment	Water and environment (urban municipalities and rural growth centres	14	13	27
	Water and environment (rural)	29	41	07
Energy	Bio-energy	-	-	
	Hydro	0	4	4
	Solar	0	0	1

3.2.2 Stakeholder Issues in Victoria Nile (summarized from FGDs)

3.2.2.1 Stakeholder Interests at grassroot level

During the stakeholder meetings, both primary and secondary stakeholders showed varying interests. Table 13 and 14 highlight the primary and secondary stakeholder issues in Victoria Nile Catchment. Most of the youth groups are concerned with creation of employment opportunities in the catchment. Currently the activities youth are engaged in are not sustainable and therefore the CMP should target at creating employment opportunities. The study also showed that access to water was the main issue reported by the women, while farmers' areas of interest are concentrated to access to market, low production, climate change and availability of good quality inputs as indicated below.

Table 13: Stakeholder Interests at grassroot level in Victoria Nile

Primary stakeholders	Lumbuye with examples where interest was most pronounced	Victoria Nile with examples where interest was most pronounced
I. Youth groups per catchment N=20	CMP to address interest in Employment/business opportunities Current occupations include; Casual labour on sugar cane farms in Kaliro and Luuka. Others engage in betting/gambling	CMP to address interest in Employment/business opportunities Current occupations are; Sand mining on banks of river Nile, brick making and charcoal production in Kamuli. Others are pre-occupied with betting/gambling
II. Women groups N=15	CMP to address concerns on access to clean water in Mayuge and declining quality of water in Luka district Bukanga S/C-Nabinoni village	CMP to address concerns on non-functional water sources especially boreholes and food security
III. Farmer groups N=109	CMP to address low prices on sugar cane, food insecurity Climate change	CMP to address low prices on sugar cane Low crop yields Coffee wilt Livestock diseases
IV. Water user committees N=7	CMP to address perception of water as a free good, failure to contribute/pay source protection costs and conflict among water user committee members	CMP to address Management issues, vandalism, perception of water as a free good, low technical capacities, water source conflicts
V. Small processors and businesses N=26	Solid waste management in Iganga	Interested in quality and quantity of water, Tariffs, rationing, frequent breakdowns, incorrect meter readings, unstable power
VI. Schools and Health centres N=28	Increased school dropouts due to sugar cane growing, poor sanitation and hygiene, reduction in water borne diseases	Hygiene & Sanitation Nkondo S/C – Buyende District, the health centre had lacked water for 2 months

The interests for secondary stakeholder in Victoria Nile also showed varying interests as shown in table 14 below from the findings, ***low financing*** was reported as the main concern among the secondary stakeholders. In addition, ***poor enforcement of policies***, ***lack of coordination structures*** and ***uncoordinated interventions*** are among the areas of concern reported by the stakeholders. A full list of concerns for secondary stakeholder in Victoria Nile is presented in table 14 below.

Table 14: Secondary stakeholder concerns at grass root in Victoria Nile

Secondary stakeholders		Lumbuye **with examples where interest was most pronounced**	Victoria Nile **with examples where interest was most pronounced**
VII.	Local Political leaders N=16	***Encroachment on wetlands for sugarcane*** growing in Luuka and Mayuge High dropout of students as a result of sugarcane growing	***Pollution*** from industries and local waragi distillers in Jinja and Buikwe food insecurity in Buyende and Kamuli
VIII.	Sub county Technical staff N=64	Encroachment on wetlands e.g. Walugogo Wetland- Iganga Central division Namalemba Forest reserve-Kaliro District	Encroachment on Nakabira Wetland in Buyende Limited water sources (shared with livestock)
IX.	CBOs/FBOs N=3	Political interference	Cuts across
X.	Cultural/Religious leaders N=3	No response	Encroachment on cultural sites (for Busoga) Charcoal production Ficus Natalensis trees in Kidera, Buyende were sacred but were being cut maliciously
XI.	NGOs N=22	CMP to address high poverty levels as a result of sugarcane growing	Duplication of activities Limited engagement of stakeholders Low production Incomplete works Limited funding
XII.	Municipal/town Councils N=4	Poor solid waste management Iganga main markets Tembo Industry	Poor solid waste management
XIII.	Local media / journalists	Political influence on how to report on environmental issues	Political influence on how to report on environmental issues

From the FGD discussions, different stakeholders have different issues/interests that the CMP should address. It is thus important to balance the interests of the different stakeholders

Results from Engagement of Primary stakeholders in Victoria Nile

This involved assessing stakeholder levels of interest/ influence in IWRM decision making, capacity to influence decision on water resources, experience in implementing previous projects on IWRM, awareness of degraded hotspots and access and utilization of IWRM information. The results from primary stakeholders during engagement are presented in figure 7 below:

Interest in IWRM Initiatives

Twelve (12) out of the 50 farmer groups have a high interest in IWRM to enable them address challenges of climate change. While 21 groups interest was rated medium because they lack information to motivate them adopt IWRM. Out of the 15 youth Groups only 3 were involved/had interest in IWRM initiatives.

Out of the 6 fishermen groups only two are interested in IWRM. 5 out of the 16 small based industries are interested in IWRM.

Involvement in IWRM initiatives

13 out of the 20 women groups have not been involved in IWRM initiatives. 12 out of 15 youth groups have only received support but have not been involved in conservation. Fisher men involvement in the catchment is also low. For small based industries in Mpologoma 16 out of 26 are less involved in IWRM.

Access to information

36 out of the 50 farmer groups have a low access to information while 8 out of the 15 youth groups have no access to information. 3 out of 6 large scale processors have been involved in IWRM discussions.

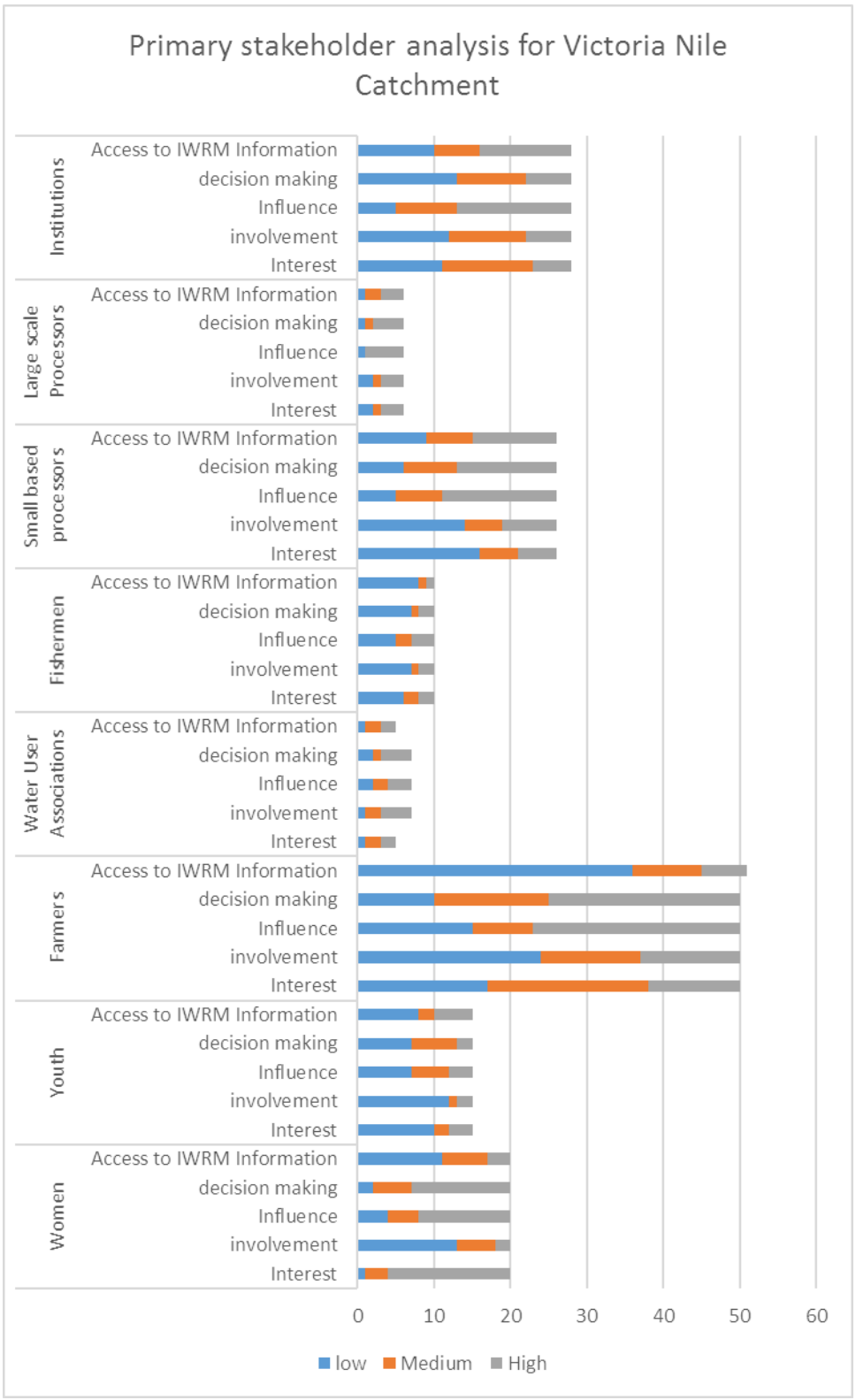

Figure 7: Results from Primary Stakeholder engagement in Victoria Nile Catchment

3.2.4 Results of Secondary Stakeholder engagement in IWRM in Victoria Nile

Twenty (20) out of 44 analysed stakeholders for local government were identified as having a high level of interest. The most numerous among these were representatives of local government, followed by NGO 11 out of 33 are interested and implementing IWRM activities. All the academic institutions are consulted and interested in IWRM. A low level of interest was attributed only to cultural institutions.

A summary of secondary stakeholder engagement findings are presented in figure 8 below. A list of stakeholders and a ranking of their interests in IWRM is presented in annex 1 of the report for Mpologoma and Victoria Nile

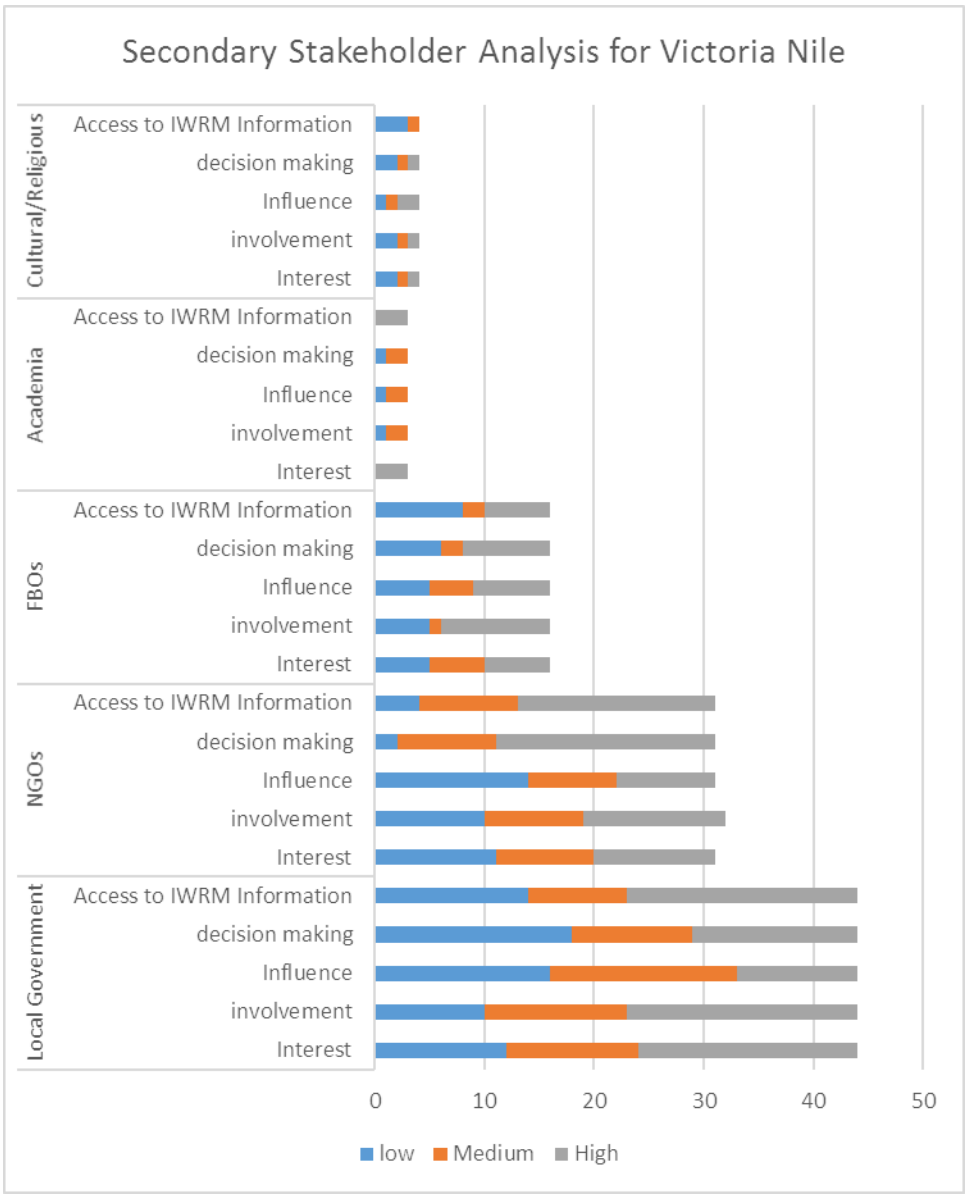

Figure 8: Secondary Stakeholder Analysis for Victoria Nile

During the mapping, it became clear that different stakeholders had different interests and varying degrees of power and influence. It is critical for MWE-DWRM and KWMZ team to create a platform for discussing, harmonizing and harnessing the interests, influence and expertise during the implementation of the CMP. Table 15 and 16 below outlines the; interests, influence and potential role of Primary and secondary stakeholders in the implementation of the CMP for Victoria Nile Catchment.

Table 15: Primary stakeholders, their interests, potential contributions to the IWRM development process and relative degree of influence in Victoria Nile

Stakeholder	Interest	Priority influence	Category (1 Primary 2 secondary)	Potential role in the Implementation of Victoria Nile CMP
Youth group N=20	Employment/business opportunities	HL	1	IWRM SC core members, Water source protection, Watershed Rehabilitation, vending and utility management
Women group N=15	Access to portable water, concerned with Declining quality and quantity, Water related diseases, Distance and time spent, domestic violence	HL	1	Water source protection, General Environmental management, Agricultural development
Farmer groups N=109	Interested in markets, low crop productivity, skills in farming as a business and extension services, land conflicts, pollution by local gin (Kangala)distillation	HL	1	IWRM SC, Watershed Protection, Water source protection, General Environmental management, Crop/Animal husbandry
Water user Committees N=7	Management issues, vandalism, perception of water as a free good, low technical capacities, water source conflicts	HH	1	IWRM SC core members, Water source protection, Watershed protection/Rehabilitation
Small Processors and Businesses N=26	Interested in quality and quantity of water, distances to water source and more sources of water	LL	1	IWRM SC core member, General Environmental Management, Recreational and tourism development
Government/ Private Institutions N=28 Schools/health Centres N=17	Hygiene & Sanitation, Declining quality and quantity, Water related diseases, Distance and time spent	LH	1	IWRM SC Core members, Raising awareness on IWRM, WASH

Table 16: Secondary stakeholders, their interests, potential contributions to the CMP development process, Impementation and relative degree of influence in Victoria Nile Catchment

Secondary Stakeholder	Interest	Priority influence	Category Primary 1 2 secondary	Potential role in the Implementation of Victoria Nile CMP
Local Political leaders N=16	Low financing for conservation Encroachment on major wetlands	HH	2	IWRM SC members, Coordination of IWRM plan Development
Sub county Technical staff N=64	Low financing for conservation Inadequate manpower Lack of coordination among natural resources department Illegal logging Frequent transfers	HH	2	IWRM SC members, Coordination of IWRM plan Development Water source protection, General Environmental management, Agricultural development, Water supply
CBOs/FBOs N=3	Limited funding Short term projects Political influence	LH	2	IWRM SC members, Poverty reduction and Social Development, Raising awareness on water conservation issues, Coordination of IWRM plan development, watershed protection, Water supply, Health sector development, safety and sanitation
Cultural/Religious leaders N=8	Encroachment on cultural sites Unsustainable harvesting of medicinal shrub species Charcoal production and bush burning	LH	2	Advisory role in IWRM

NGOs N=22	Low financing Uncoordinated interventions	HH	2	IWRM SC members, Poverty reduction and Social Development, Raising awareness on water conservation issues, Coordination of IWRM plan development, watershed protection, Water supply, Health sector development, safety and sanitation
Municipal/town Councils N=6	Technical capacity Declining quality and quantity contaminated shallow wells (Shaduffs) Rationing from service providers	HH	2	Water supply & Sewage control, solid waste management, Engineering standards related to infrastructure Development
Local media/journalists N=2	Political influence Corruption Lack of accountability	LH	2	Awareness and sensitisation

3.3 Results from Stakeholder Engagement in Mpologoma Catchment

3.3.1 Stakeholder Interests at grassroot level in Mpologoma Catchment

In Mpologoma youth are involved in brick making, quarrying, rice growing, gambling and water vending in rural growth centres. The consultation also revealed that access to water and increase in water borne diseases were the main issue reported by the women, while farmers' areas of interest are concentrated to access to market, low production, climate change and use of poor input. The issues for primary stakeholders in Mpologoma Catchment is presented in table 17 below

Table 17: Stakeholder Interests at grassroot level in Mpologoma Catchment

Primary stakeholders	Mpologoma with examples where interest was most pronounced
I. Youth groups **N=20**	CMP to address interest in Employment/business opportunities Current occupations undertaken by youth include; sand and gold mining in Tororo and Busia Sikuda s/c, Tiira and Tabong villages, water vending and brick making in rural growth centres, small scale vegetable growing in Elgon and stone quarrying. Others are involved in betting/gambling
II. Women groups **N=19**	CMP to address concerns on Access to portable water, , Water related diseases, Distance and time spent, delays in delivering water at home resulted into domestic violence, non-functional water sources especially boreholes Namayingo district-Banda S/C-Busiru Village
III. Farmer groups N=61	CMP to address low crop productivity, striga infestation in Namutumba and Pallisa, limited land for farming in Elgon Land slides limited access to extension services, land conflicts/fragmentation in wetlands, pollution by waragi distillation
IV. Water user committees N=4	CMP to address Management issues, vandalism, perception of water as a free good, low technical capacities, water source conflicts
V. Small processors and businesses	Interested in quality and quantity of water, Tarrifs, rationing, frequent breakdowns, incorrect meter readings, unstable power

N=56	
Schools and Health centres N=58	CMP to address Hygiene & Sanitation, Declining quality and quantity, Water related diseases, Distance and time spent fetching water

Secondary stakeholder interests in Mpologoma

Poor enforcement of policies, lack of coordination structures and uncoordinated interventions are among the areas of concern reported by secondary stakeholders as indicated in table 18. A full list of concerns is listed in table 18 below.

Table 18: Secondary stakeholder concerns at grass root in Mpologoma Catchment

Secondary stakeholders	Mpologoma **with examples where interest was most pronounced**
Local Political leaders N=26	CMP to address **encroachment on wetlands** for rice growing in Butaleja Limited funding for conservation
Sub county Technical staff N=94	Low financing for conservation Inadequate manpower Limited coordination among natural resources department Illegal logging Frequent transfers which affect coordination Political interference
CBOs/FBOs N=4	Limited capacities in IWRM Short term projects Political influence
Cultural/Religious leaders N=10	Encroachment on cultural sites (Tieng Adhola) Unsustainable harvesting of medicinal shrubs species in the Elgon Charcoal production and bush burning
NGOs N=35	Duplication of activities Limited engagement of stakeholders Low production Incomplete works Limited funding
Municipal/town Councils N=6	Poor solid waste management; Mbale Municipality, Malaba TC and Namatala slum Non-adherence to Environmental Impact Assessments (EIAs)

	Declining quality and quantity Pollution-uncontrolled effluent discharge High Water tariffs Air pollution unplanned settlements
Local media / journalists	Political influence on how to report on environmental issues

Primary Stakeholder engagement in Mpologoma Catchment

This involved assessing stakeholder levels of interest/ influence in IWRM decision making, capacity to influence decision on water resources, experience in implementing previous projects on IWRM, awareness of degraded hotspots and access and utilization of IWRM information. The results from primary stakeholders during engagement are presented in figure 9 below:

Interest in IWRM Initiatives in Mpologoma

14 out of the 61 farmer groups have a high interest in IWRM to enable them address challenges of climate change. While for 26 groups, their interest was rated medium because they lack information to motivate them adopt IWRM. Out of the 17 youth Groups, only 4 were involved/had interest in IWRM initiatives.

Out of the 8 fishermen groups, only 2 are interested in IWRM. 10 out of the 56 small based industries are interested in IWRM. 15 out of the 22 farmer groups are interested in IWRM

Involvement in IWRM initiatives

12out of the 22 women groups have not been involved in IWRM initiatives. 10 out of 17 youth groups are not involved in conservation. Fishermen' involvement in the catchment is also low. For large based industries in Mpologoma, 3 out of 5 have been involved in IWRM and are interested in IWRM

Access to information

36 out of the 61 farmer groups have a low access to information while 8 out of the 17 youth groups have no access to information. 13 out of 22 women groups do not have access to IWRM information while fishermen groups 6 out of 8 lack accesses to IIWRM information. 14 out of 56 small based industries have not attended any information dissemination on IWRM in Mpologoma and have now information. 3 out of 5 large scale processors have been involved in IWRM discussions.

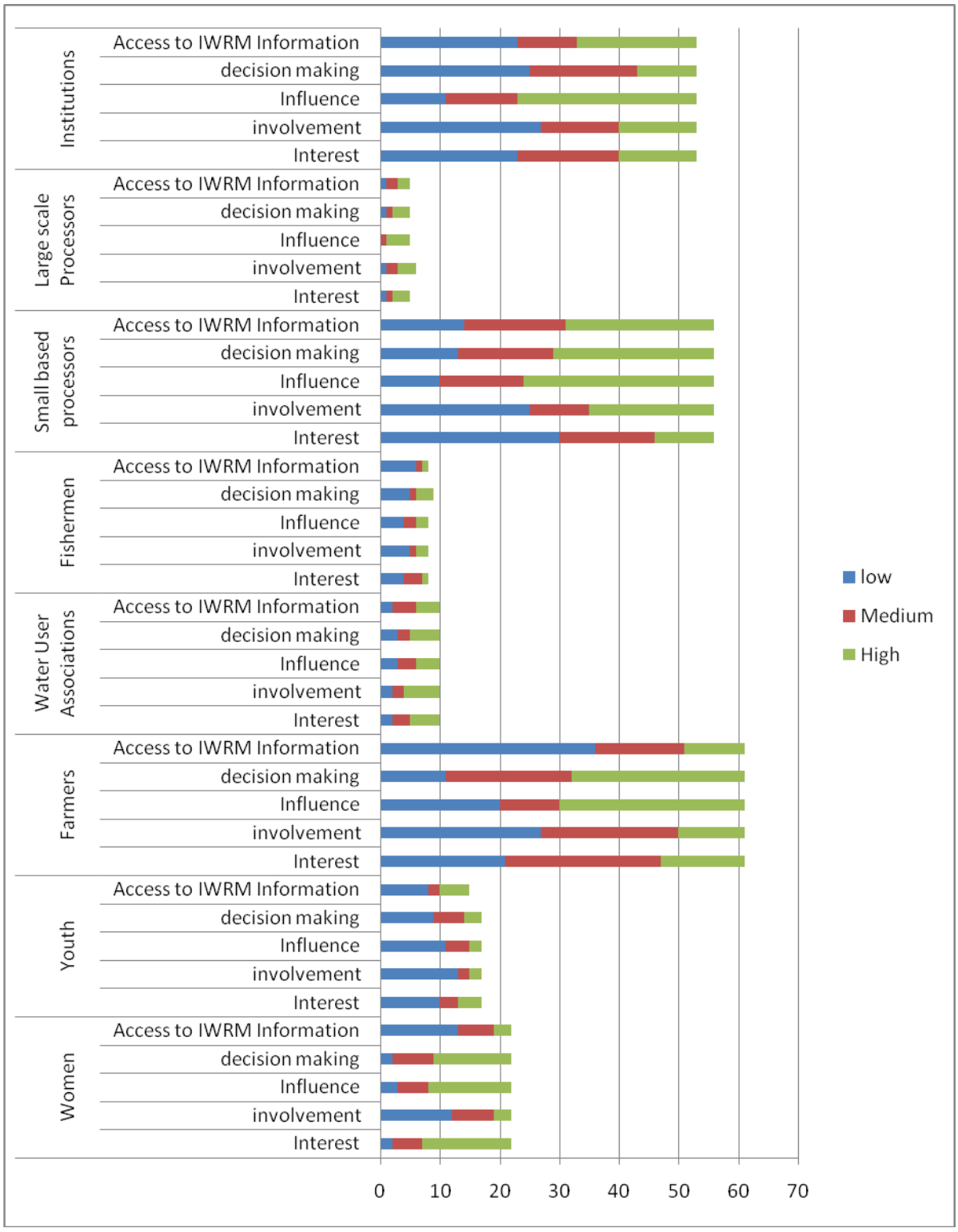

Figure 9: Primary Stakeholder Analysis for Mpologoma Catchment

Results from Secondary Stakeholder Engagement in Mpologoma Catchment

The results from secondary stakeholder engagement are presented in figure 10 below

Interest in IWRM

Thirty-two (32) out of 54 analyzed stakeholders for Local Government were identified as having a high level of interest regardless of their area of study/field. The most numerous among these were representatives of local government, followed by NGO 20 out of 54 are interested and implementing IWRM activities. 6 out of 16 FBOs are involved and interested in IWRM. 5 out of 7 academic institutions are consulted and interested in IWRM. 5 out of the 15 cultural leaders have a high interest in IWRM.

Stakeholder Involvement in IWRM in Mpologoma Catchment

25 out of the 54 Sub counties have been involved in IWRM planning while 25 out of 54 are also involved in IWRM. 10 out of the 15 CBOs are also involved in IWRM and 4 of the 7 academic institutions are involved in IWRM related research.

Influence of stakeholders in IWRM

11 out of the 54 sub counties have a high influence of IWRM and is part of their programs. 9 NGOs out of 54 have a high influence on IWRM in Mpologoma Catchment

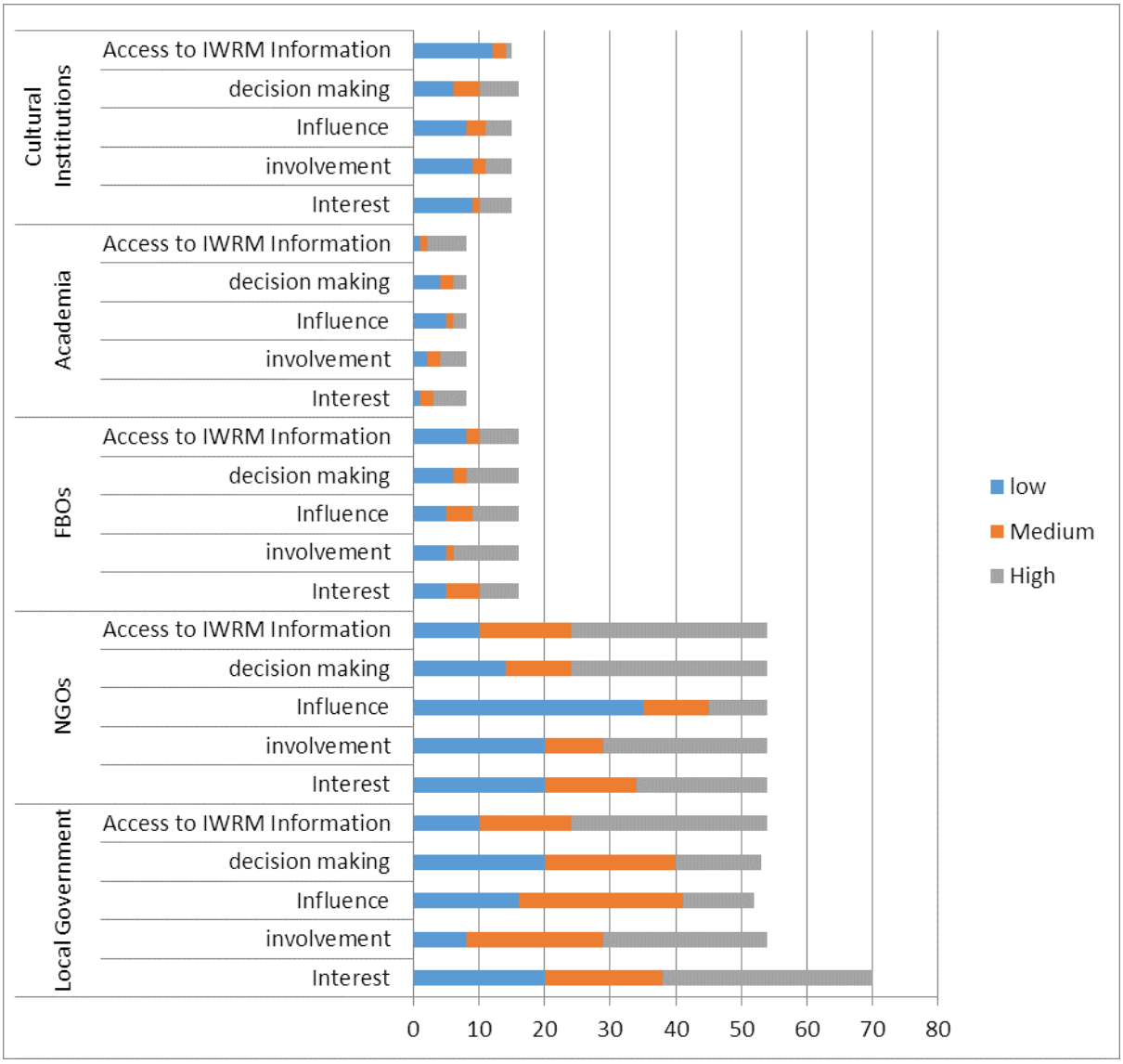

Figure 10: Secondary Stakeholder Interests in IWRM in Mpologoma

3.2.4 Potential role of stakeholders in IWRM in Mpologoma Catchment

During the mapping, it became clear that different stakeholders had different interests and varying degrees of power and influence. It is critical for MWE-DWRM and KWMZ team to create a platform for discussing, harmonizing and harnessing the interests, influence and expertise during the implementation of the CMP. Table 19 and 20 below outlines the; interests, influence and potential role of primary and secondary stakeholders in the implementation of the CMP for Mpologoma Catchment.

Table 19: Primary stakeholders, their interests, potential contributions to the IWRM development process and relative degree of influence in Mpologoma catchment

Stakeholder	Interest	Priority influence	Category 1 Primary 2 secondary	Potential role in the Implementation of Mpologoma CMP
Youth group N=20	Employment/business opportunities	HL	1	IWRM SC core members, Water source protection, Watershed Rehabilitation, vending and utility management
Women group N=19	Access to portable water, concerned with Declining quality and quantity, Water related diseases, Distance and time spent, domestic violence	HL	1	Water source protection, General Environmental management, Agricultural development
Farmer groups N=61	Interested in markets, low crop productivity, skills in farming as a business and extension services, land conflicts, pollution by local gin (Kangala)distillation	HL	1	IWRM SC, Watershed Protection, Water source protection, General Environmental management, Crop/Animal husbandry
Water user Committees N=4	Management issues, vandalism, perception of water as a free good, low technical capacities, water source conflicts	HH	1	IWRM SC core members, Water source protection, Watershed protection/Rehabilitation
Small Processors and Businesses N=56	Interested in quality and quantity of water, distances to water source and more sources of water	LL	1	IWRM SC core member, General Environmental Management, Recreational and tourism development
Government/ Private Institutions Schools/health Centres N=53	Hygiene & Sanitation, Declining quality and quantity, Water related diseases, Distance and time spent	LH	1	IWRM SC Core members, Raising awareness on IWRM, WASH

Table 20: Secondary stakeholders, their interests, potential contributions to the IWRM development process and relative degree of

Secondary Stakeholder	Interest	Priority influence	Category 1 primary 2 Secondary	Potential role in the Implementation of Mpologoma CMP
Local Political leaders N=26	Low financing for conservation Encroachment on major wetlands	HH	2	IWRM SC members, Coordination of IWRM plan Development
Sub county Technical staff N=94	Low financing for conservation Inadequate manpower Lack of coordination among natural resources department Illegal logging Frequent transfers	HH	2	IWRM SC members, Coordination of IWRM plan Development Water source protection, General Environmental management, Agricultural development, Water supply
CBOs/FBOs N=4	Limited funding Short term projects Political influence	LH	2	IWRM SC members, Poverty reduction and Social Development, Raising awareness on water conservation issues, Coordination of IWRM plan development, watershed protection, Water supply, Health sector development, safety and sanitation
Cultural/Religious leaders N=5	Encroachment on cultural sites Unsustainable harvesting of medicinal shrub species Charcoal production and bush burning	LH	2	Advisory role in IWRM

NGO N=35	Low financing Uncoordinated interventions	HH	2	IWRM SC members, Poverty reduction and Social Development, Raising awareness on water conservation issues, Coordination of IWRM plan development, watershed protection, Water supply, Health sector development, safety and sanitation
Municipal/town Councils N=6	Technical capacity Declining quality and quantity of water contaminated shallow wells (Shaduffs) Rationing from NWSC/service providers	HH	2	Water supply & Sewage control, solid waste management, Engineering standards related to infrastructure Development
Local media/journalists	Political influence Corruption Lack of accountability	LH	2	Awareness and senstisation

3.3 KEY IWRM ISSUES IDENTIFIED DURING THE STAKEHOLDER ENGAGEMENT

The map below indicates the hotspots that were mapped and visited during the study. The hotpots are proposed for IWRM interventions

A map indicating the hotspots visited

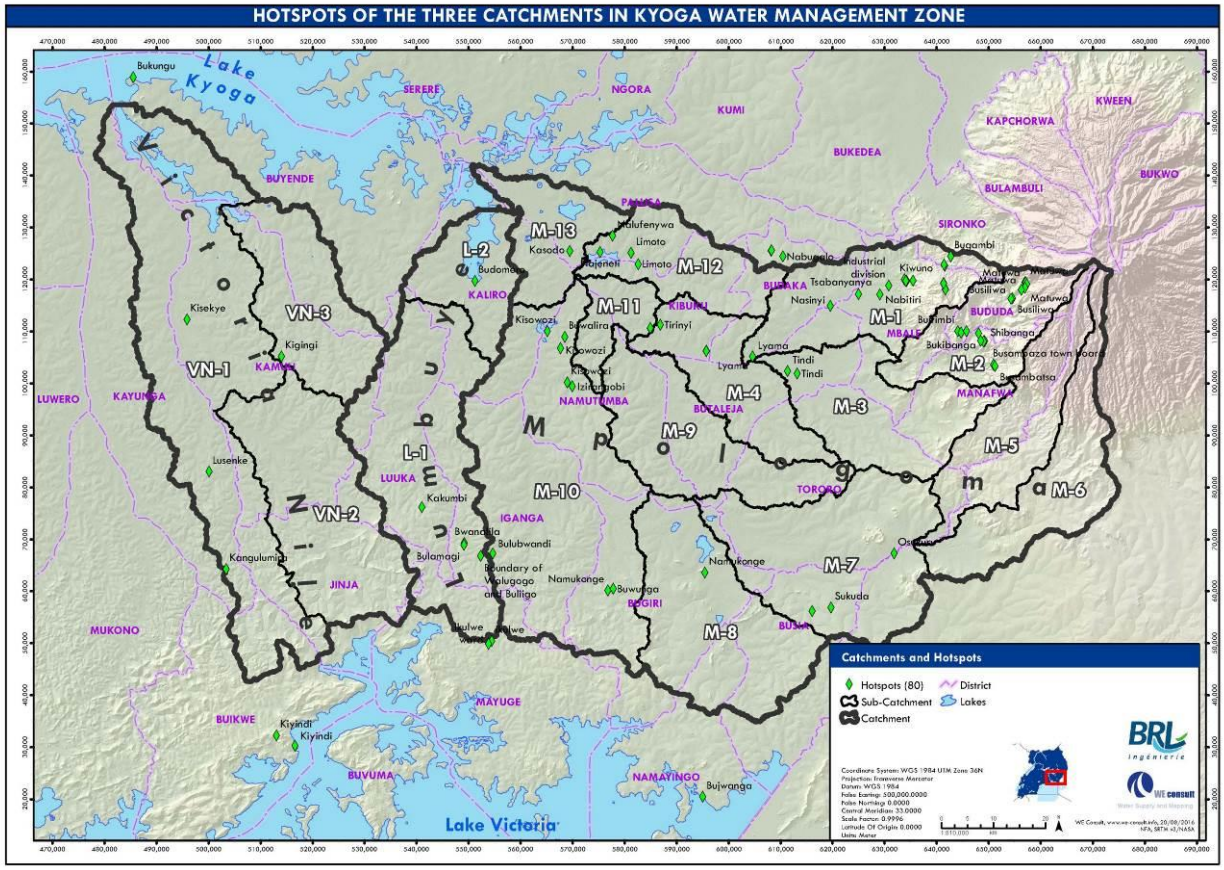

Figure 11: Map of Mpologoma and Victoria Nile indicating hotspots visited

3.4.1 ECONOMIC ACTIVITIES IN THE CATCHMENTS

These economic activities will be relevant during the development of livelihood aptions in the CMP

3.4.1.1 Mpologoma

During the study, it was evident that Mpologoma catchment is characterised by mountaneous landscape of Sironko, Mbale, Bududa and Manafwa districts whose main livelihood option is on growing bananas, beans, coffee and maize cultivated on the slopes of Mt. Elgon and along the river banks of Manafwa and Namatala. Livestock rearing is practiced on small scale (zero grazing and pegging of animals).

The plains of Tororo, Busia, Namayingo, Bugiri, Butaleja, Budaka, Kibuku, Pallisa and Namutumba districts rely on Maize, Cassava, Beans, Sweet potatoes, and millet. There is

increasing extensive landuse practice for rice growing which is becoming a cash crop and is causing encroachment on wetlands, swamps, and watershed systems.

In the urban areas (municipalities and rural growth centres), the main economic activities vary from large scale to medium and small scale processing for grains, skins and hides, waragi (*local gin*) processing among others. Other activities include petty trade, hotel industry (accomodation, restaurant) and water vending among others.

3.4.1.2 Victoria Nile

In **Victoria Nile,** the population earn a living through a variety of livelihood options such as crop farming; maize, sweet potatoes and sugar cane growing. Livestock rearing is practiced in Buyende.

In Jinja and Iganga agro-processing and fishing along the shores of river Nile, and lake Kyoga is a livelihoodsource for the populatins living there.

Charcoal production was noted as a practice in all districts. In Victoria Nile Charcoal burning kilns were seen all over the forested and shrubby areas.

Other activties include: sand mining along the river banks, making art and crafts items from various materials. Petty trade and formal employment in factories/ industries among others. One of the positive angagements observed was establsihment of tree nurseries and planting of trees.

It was also found out that the fishing communities living near water bodies such as lake Kyoga and river Nile are greatly affected by floating islands thus threatening their livelihoods

While conducting questionnaire interviews; commercial rice farming, subsistence farming, livestock production, and mining are largely practiced with 16.7%, 16.1%, 15.5%, and 12.1% respectively, charcoal and fish production 9.5% and 9.8% respectively

As stated in the SSEA report (BRLi, 2016), “the Mpologoma catchment includes fishery on lakes Kimira and Victoria in Bugiri, Pallisa and Kibuku districts; lakes Kawi and Nakuwa in Pallisa and Lake Nansoko in Namutumba and Kaliro districts. Lake Kyoga provides fish to Kayunga, Buyende and Kamuli districts.”

3.4.2 DEGRADATION OF THE CATCHMENT

A list of the mapped hotspots is attached in annex 2 of this report. It is critical that BRL and KWMZ prioritize these hotspots in the CMP. An online database of the hotspots has also been uploaded on i- survey

Mpologoma catchment was observed as facing severe environmental problems including soil erosion, deforestation, and loss of biodiversity. These problems were said to be resulting from subsistence and commercial farming that destroy ecosystem. The CMP should thus be aligned to address these challenges

During observation, it was evident that the dangers of farming along the hill sides make the soils loose and increase community vulnerability to landslide occurrences. Since the landscape on the Mpologoma Catchment has an array of tributaries to River Manafwa, the soils are washed from the hill slopes leading to increase in siltation downstream thus causing floods. Stakeholders are thus concerned that the CMP should adress problems of soil degredation through measures like SWC structures.

From the FGDs the Water user committee are concerned about the declining quality of water resources. The following IGAs were reported to pollute water resources; soap, oil, and greese washed from bicycles, motor cycles and vehicles which have cummulative effects on the ecological system. The populations use this water for washing, drinking, cooking, distilling waragi (*local gin*), and horticultural production. The pollutants enter every node of the food chain and cause diverse effects to both human and animal health.

In the upper parts of the Mt Elgon where the slopes are steep, issues such as soil erosion, deforestation, loss of biodiversity were highly pronounced. Problems such as declining soil fertility, pollution of land, fisheries were evident in lower parts of Mt Elgon and South Eastern of Mt Elgon.

Hill slopes in Bukibokolo S/C massively cultivated in Bududa District

Quarrying & motor-cycle washing along tributaries of R. Manafa in Bukibokolo S/C, Bududa District

Photo 7: Some photos captured during field visists in Bududa district, Bukibokolo s/c

Photo 8: Polluted water in Kibiniko wetland (Mbale)

In a nutshell, the challenges identified in the Victoria Nile catchment include; unsafe water, solid waste and untreated effluent discharge in Jinja and Iganga from industries. Commercial and subsistence farming along the buffer zones, deforestation, encroachment on wetlands, sand mining and charcoal production among others.

Farming and sand mining were observed as common practices in Victoria-Nile- catchment. This compromises the potential of the buffer zones and river ecosystems and increases soil erosion and sedimentation. In the CMP, this calls for the demarcation of buffer zones and showing the communities where the boundaries lie. Sand mining on buffer of the River Nile is rampart and uncontrolled. This is mainly practiced by the youth. It was recommended that the CMP for Victoria Nile should reinforce the enforcement of existing laws.

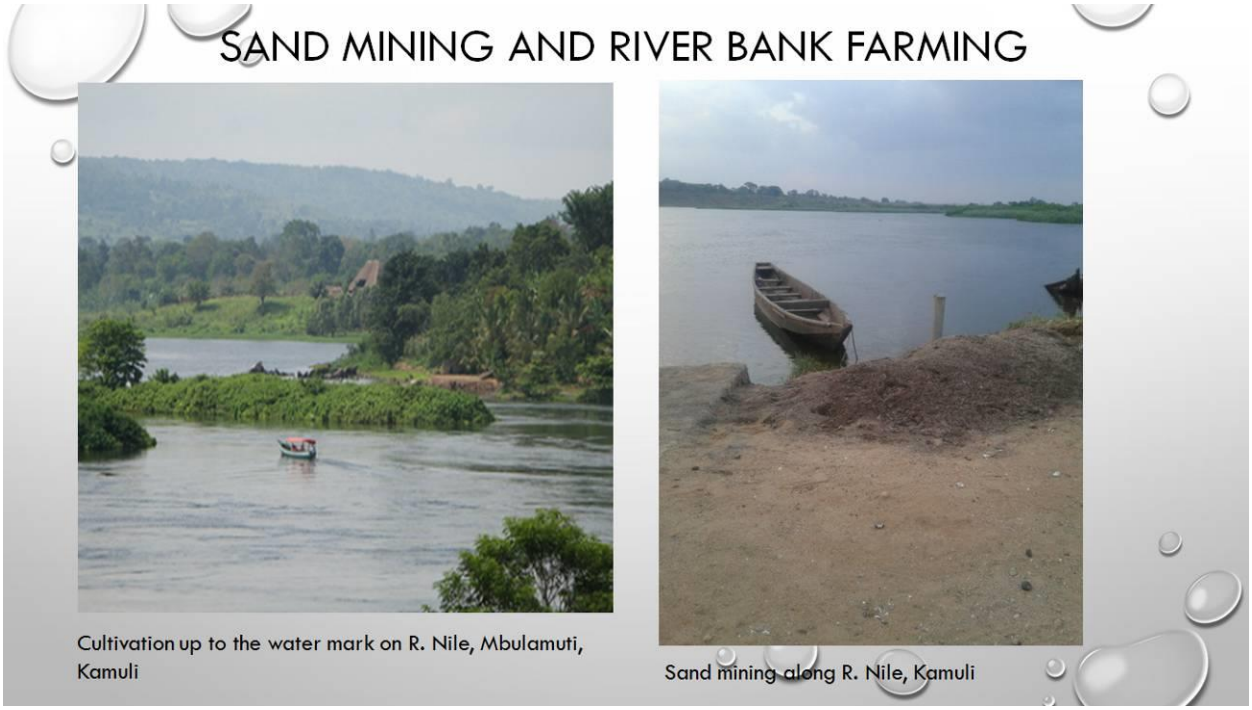

Photo10: Sand mining and farming on the buffer zone of the River Nile;

Sugar cane and rice growing have led to wetland encroachment thus affecting the ecosystem negatively. Small scale out growers of sugarcane often use more than three quarters of their land leaving little for crop farming which in turn leads to food and livelihood insecurity. The picture below shows rice and sugar cane gardens and commercial trucks transporting sugar cane.

Photo 11: Economic activites observed during field visists

Use of shallow wells

In most of the rural growth centres, shallow wells were reported to be polluted with cases in Busia municipality and Iganga municipality by district and sub county officials. The CMP should address by improvising improved water sources in these areas

Photo 12: Shallow well in Iganga Municipality is contaminated when users directly step in and fetch the water

Other issues such as soil erosion, declining soil fertility, loss of biodiversity, over-harvesting of forests, floating islands as affecting fishing have also been highly pronounced in the down streams of Victoria Nile- catchment.

The picture below shows a landing site that has been abandoned by fishermen because it was choked by water hyacinth and a floating island in Buyende. The livelihoods of the fishermen have been disrupted.

Photo 13: Landing Site choked Floating Island in Buyende

The picture below taken at Mafubira Sub County shows how brewers of waragi (*local gin*) discharge untreated effluents on an outlet and pollutes the environment

Photo 14: Lolopit distillers of waragi (local gin)

During observation sessions, it was evident that these economic activities have caused loss of vegetation and polluted water systems, which all have a bearing on the quality and quantity of water available for either domestic use or other production activities.

Table 21: Some of the Economic activities that contribute to catchment degradation

	Mpologoma	Victoria Nile	Lumbuye
Economic activities	%	%	%
Brick making	4	3	4
Charcoal production	9	10	8
Commercial farming	16	16	17
Poor Fishing	11	10	8
Livestock (over grazing)	13	13	13
Manufacturing (effluent discharge)	3	3	4
Mining	12	13	13

Agriculture products	3	3	4
Production	4	6	4
Subsistence farming	19	19	21
Timber illegal logging	2	3	4
Art & craft	1	0	0
Boda Boda	1	0	0

Table 21 indicates how individual economic activities contribute to catchment degradation, with commercial rice growing and production of sugar cane leading the trend.
It is critical for the CMP to address sustainable farming practices and good soil water management.
It was also evident that most of the economic activities are degrading the catchment resources like water, soil and biomass resources.

Most of the rivers like Manafwa, River Malaba, and River Nile are severely encroached on including their recharge zones (wetlands and small streams). The CMP should address sustainable practices and demarcation of buffer zones for these rivers.

Cultivation of rice in wetlands using the traditional irrigation system was found to be rampart especially on the fringes of wetlands and smallholder farmers. Rice growing is developing spontaneously without planning and with little or no technical assistance. The CMP should support the establishment of formal irrigation schemes and formation of rice farmer cooperatives/Associations.

Unplanned diversion of Manafwa river for rice irrigation was rampant in the deep low lands of Butaleja and Budaka. This negatively affects the ecosystems functions downstream. It important to support rice farmers form farming schemes and supported to design irrigation systems in the deep low lands of Mpologoma catchment to avert likely water use conflicts by the different users.

Photo 15: A section of river Manafwa in Butaleja diverted for rice irrigation

Photo 16: An un-planned diversion channel on river Manafwa for Rice irrigation in Butaleja

3. 4.3 USES OF WATER

In **Mpologoma** catchment stakeholders revealed the major uses of water as: drinking, washing, cooking, farming in wetlands and other such uses as livestock farming and irrigation. Fishing, sand mining, industrial abstraction, harvesting of papyrus and other materials for art and crafts were other uses mentioned. Communities also reported issues of water contamination from industrial discharge.

In **Victoria Nile-L**, water is used majorly for drinking, cooking, washing, industrial use irrigation and livestock keeping. This is attributed to the many industries River Nile, sugar growing companies and the cattle grazing in the district that are the cattle corridor such as Buyende. The communities in the catchment also use water for fishing, Waragi (*local gin*) distillation, farming, collection of art and craft materials such as papyrus from River Nile and Lake Kyoga. The communities in these catchments also mentioned sharing water with animals and fetching industrial polluted water from the rivers for domestic use.

During the engagements, stakeholders expressed concern on the quality and quantity of water and non-functionality of some water sources.
While conducting Key Informant Interviews, one member from the civil society said that community members often lack water in the dry season because springs, shallow wells, streams, boreholes among others dry up. The time taken to fetch water was noted to take between 30 to 60 minutes to walk to and return from a water source. This implies that the water level fluctuates (declines during dry season and rises during rainy season). The CMP should identify measures for ensuring water sources function through-out the year.

During community meetings and observations, it was evident that piped water is a source of water in urban and peri-urban towns provided by National Water and Sewerage Corporation (NWSC) and or private investors in both Mpologoma and Victoria Nile catchments. Community members said that piped water was available except during routine repairs and maintenance.

However, it was observed that the costs of treating water have more than doubled. In Jinja it was reported that the costs have increased from a monthly cost of 150,000,000 to 300,000,000 Uganda Shillings. This was cited as the same case in Tororo and Mbale. The increase in the costs is attributed to increased pollution and sedimentation in the rivers thus requiring additional equipment because of frequent break downs.

Photo 17: A poluted section of river Malaba in Tororo

Photo 18: NWSC- River Malaba in Tororo has to treat this polluted water

3.4.4 WETLAND ENCROACHMENT

During community meetings, farmers from **Mpologoma** mentioned that wetlands are used for commercial crops such as rice while those from **Victoria Nile** decried the growing sugar cane in wetlands. In Victoria Nile sugar processing institutions admitted abstracting water from wetlands and Rivers for cooling machines, however, some of them have constructed boreholes in order to pump (motorized) water. One of the staff members at the steel factory said: *"Because of siltation in wetlands and swamps, we decided to drill 5 motorized boreholes, in order to pump water for cooling the steel plant."*

During observation, it was evident that, the degree of use of water in wetlands and swamps was on the rise for rice and sugar cane growing. This means the fragile ecosystem is under threat, thus the need for appropriate measures to avert wetland destruction.

Law enforcement and monitoring on compliance to existing legal provisions is required for factories and industries. It is important to sensitize and build the capacity of farmers on good farming practices in order to foster sustainable utilization of wetlands. Alternative water source for farming other e.g. irrigation is necessary so as to reduce total reliance on rain fed agriculture.

3.4.5 CAUSES OF WATER POLLUTION

MPOLOGOMA

WATER QUALITY AND AVAILABILITY

From the stakeholder analysis, in Mpologoma a number of issues affecting the quality and quantity of water were discussed these include encroachment in the river buffer zone.

Photo 19: A family living along the River banks of R. Manafwa in Butaleja. Close to the water is the toilet

Activities that affect water quality were reported as follows; Construction of latrines near water sources contributed 8%, farming accounted for 74%, while other activities included solid waste dumping 58%, discharge of waste water 39%.

In municipalities and rural growth centers water was said to be contaminated by storm water during rainy season. The stakeholder engagement also found other sources of contamination: animals and their droppings and waragi distillers. The above-mentioned contaminants affect water sources such as shallow wells, springs, rivers, lakes, and streams. The study found some sections of Mpologoma catchment water contaminated by mining activities for example processing of gold with mercury in rivers was a common practice in the South-Eastern part of the catchment. Also, open defecation was mentioned as a practice in some sections of the catchment.

"Due to population explosion, land size has become small, and thus its use for many services has increased. On the small piece of land, we constructed 1 pit latrine about 10-15 meters away from our shallow well. When I and 3 other family members were diagnosed with dysentery, it was shocking to us that we had taken in fecal matter. The soils are loose and pit-latrines keep collapsing especially during rainy season. Our health assistant also said that fecal matter from the pit-latrine keep mixing with the water, through the soils. Sometimes during rainy season the pit latrine gets too full and fecal matter is washed by runoff over the shallow well. We then agreed as a community through the LCI meetings to construct our toilets 100+ meters away from any water source." **Community member in Himutu S/C, Butaleja District**

Table 22: Activities that affect water quality

Activities that affect water quality	Frequency of respondents	%
Sewage	11	4.3
Farming in the catchment and along the river banks	74	28.9
Discharge (waste water)	39	15.2
Solid waste dumping	58	22.7
Latrines	8	3.1
Business/others (specify)	66	25.8

VICTORIA NILE CATCHMENT

From the study stakeholders from Vitoria Nile reported that, industrial waste discharge, nutrient (use of fertilizers) and poorly constructed and located latrines contribute to high contamination of water sources. This is attributed to high number of processing factories in the catchment. Solid waste dumping and sewage were found to be some of the contaminants especially in urban and peri urban areas. Other contaminants included animal droppings and waragi (*local gin*) discharge.'

Phot 20: Waste water discharge in Jinja-Lolopit Distillers-Mafubira Sub County

In all the rural growth centre solid waste management was a big challenge and was often poorly disposed of. Well managed landfills do not exist; most of the dumping sites were poorly managed. In Iganga municipally some of the solid waste was dumped in people's gardens as an exchange for organic manure. Such uncontrolled dumping of waste poses a risk to the farmers. The picture below shows farmers think solid waste can be used as organic manure.

Photo 21: Solid waste dumping on a farmer's garden in Iganga to be used as organic manure

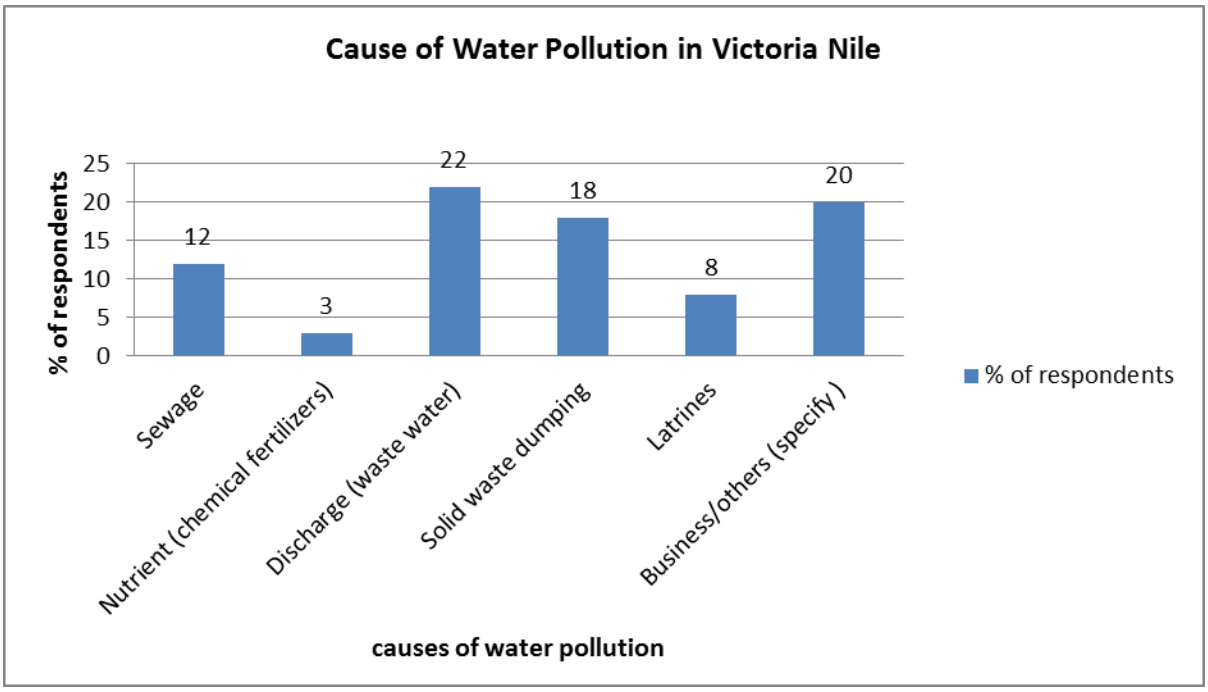

Figure 12: Causes of water pollution

VICTORIA NILE CATCHMENT

In the catchment, solid waste dumping 18% and waste water discharge 22% were the major contaminants of water while others 20% that included animal and their droppings, waragi discharge were also found to be contaminants of water. Other contaminants such as latrines, sewage and nutrients were found to be contaminating water but to a less extent. The community reported that borehole water was reported to be brown due to the metallic nature of the pipes.

During the key informant interview with water service providers and development partners, one member said private sector players including urban dwellers; sugar factories, steel, leather factories, millers of rice and maize among others, processing institutions were discharging wastes (waste waters and solid wastes) into the wetlands without treatment. These untreated effluents from these industries and factories have considerably affected the quality of groundwater through surface water infiltration. These activities render water not fit for human or even animal consumption. This increases water treatment costs; it affects aquatic life, and overall distorts the functioning of ecosystem. Also during application of the observation checklist, it was evident that in most urban towns, there is poor disposal of solid waste by town councils, investment institutions, community members, which has an implication on the water quality.

> *"One time, after a heavy down pour (rain) there was lots of floods, and peoples' crops got destroyed. I got dead fish on land and instead, I began harvesting them and brought home for cooking; some I sold in the market. The following day all my family members and I including those who bought fish had running stomachs. On visiting the hospital, we were diagnosed for food poisoning: that we ate food that had chemicals in it. During the LCI meeting, one member said there was sewage poured in Nalwekomba wetland and could have gotten its way to the fish ponds through run-off and killed fish. Today we prefer that sewage should be treated first before directing it into the wetland."* ***Community member, Namasagali S/C, Kamuli District.***

In general, the stakeholder engagement shows that, a large section of the respondents in community meetings, interviews with sub county officials and key informants still continue to use borehole water compared to other sources of water. However due to alarming rates of catchment degredation, some boreholes are drying up.

3.5. 6 ACCESS TO WATER

MPOLOGOMA CATCHMENT

In Mpologoma catchment especially in sub ctachments of Namatala, Upper Manafwa, Middle Manafwa, Lower Manafwa, the results showed that most family members walk at least 1km standing 50% to access water. In some cases, family members also at least walk 200-500 metres

standing 35% to access water. It was also found that the nearest distance walked to fetch water was 100 metres standing at 20% and average distance walked to fetch water was 2-3km at 20%. This was evidently in sub catchments of Malakisi, Malaba, Kibimba, Upper Mpologoma, Nawaigobwa, Middle Mpologoma, Lemwa and Lower Mpologom

Results obtained from the stakeholder engagement show that there is urgent need to protect all the water sources for example springs and shallow wells in order to improve their water quality.

The CMP should adress the need to sensitize communities up stream of rivers and streams so that pollution of water which affects people down stream is reduced.

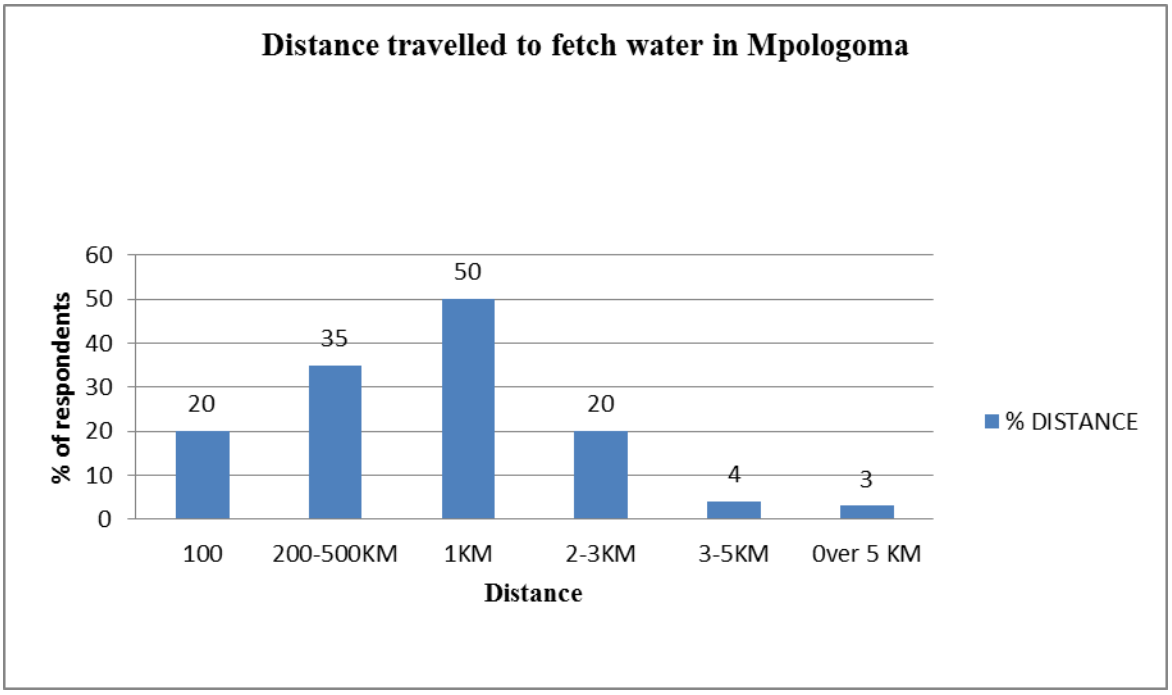

Figure 13: Distance travelled to fetch water in Mpologoma

DISTANCE TO WATER SOURCES-VICTORIA NILE CATCHMENT

Photo 22: Children fetching water from an open source

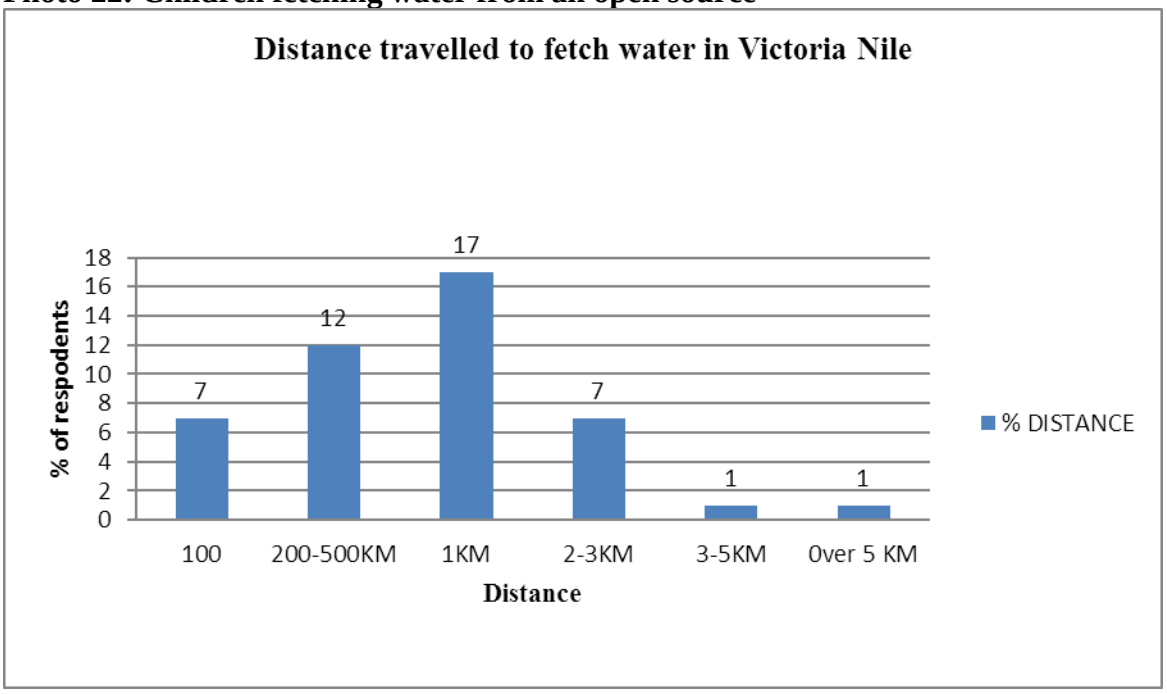

Figure 14: Distance travelled to fetech water in Victoria Nile

VICTORIA NILE

It was found that in Victoria Nile, most family members walk about 1km (17%) to access water. During the community meetings and administering the questionnaires to sub county officials, respondents mentioned that family members walk 200-500 meters (12%) to access water. It was further revealed that the nearest distance walked to fetch water was 100 meters (7%) and an average distance walked to fetch water was 2-3km (7%). From the analysis, distances such as 3-5km (1%) and 5km (1) are becoming negligible due to availability of water sources.

From the staholder engagementit, it is evident that access to water is not a challenge in both catchments there were isolated cases. However the concern was on the quality of water and increasing non functionality of some water sources such as boreholes and springs.

The CMP should come up with measures to reduce declining quality of water sources and protection of catchment sources to reduce pollution and lowering water table.

Wetlands play a vital role in regulating and purification of water, the CMP should adress restoration of critical wetland ecosystems in the catchment while ensuring sustainable use of wetland resources.

From the engagement, there was a wide-spread perception that water should be free. The CMP should introduce incentives to motivate water users in rural areas to contribute to water source protection fees.

The CMP should address the need to increase monitoring of environment compliance by many private sector players, as well as empowering the locals to plan and manage their own water systems.

Table 23: 23: Perception of respondents on quality of water sources per catchment

Sources of water	Mpologoma						Victoria Nile					
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
	Polluted and dirty		Fit for human consumption		Not sure		Polluted and dirty		Fit for human consumption		Not sure	
Protected springs	22	25.3	58	66.7	7	8.0	13	24.1	37	68.5	4	7.4
Non-protected springs	51	66.2	21	27.3	5	6.5	38	86.4	2	4.5	4	9.1
Open dams	11	78.6	1	7.1	2	14.3	7	77.8	0	0.0	2	22.2
Valley tanks	4	100.0	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0
Piped water	21	38.2	33	60.0	1	1.8	13	38.2	21	61.8	0	0.0
Boreholes	28	25.7	80	73.4	1	0.9	15	22.4	52	77.6	0	0.0
Roof catchment	46	64.8	20	28.2	5	7.0	30	65.2	13	28.3	3	6.5
Shallow wells	54	87.1	6	9.7	2	3.2	36	85.7	4	9.5	2	4.8
Rivers	61	91.0	5	7.5	1	1.5	39	92.9	3	7.1	0	0.0

Streams	56	93.3	3	5.0	1	1.7	37	94.9	2	5.1	0	0.0
Rock catchment	2	33.3	2	33.3	2	33.3	2	33.3	2	33.3	2	33.3
Others	13	68.4	6	31.6	0	0.0	7	63.6	4	36.4	0	0.0

Boreholes and protected springs are the most trusted sources of clean water in rural areas while piped water was the most trusted source in urban areas (municipalities and rural growth centres)

CHAPTER FOUR

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

4.1 Introduction

This chapter wraps up the stakeholder engagement and presents conclusions and recommendations drawn from the findings of the stakeholder engagement. The recommendations here with are very vital if the catchments are to be managed based on an IWRM approach. The recommendations if implemented will help solve the problems faced by communities and help them better manage the catchments in a sustainable manner.

The Government of Uganda recognizes the importance of active stakeholder involvement in the planning, development and implementation of the Catchment Management Plans (CMPs). For this to be achieved, it is also recognized that the process requires more focused support to stakeholder identification, mobilization, capacity building and engagement.

The stakeholder involvement stems right from the lowest catchment level to the political and technical leadership to ensure that their roles are clearly defined and benefits identified and tapped into, making the process all encompassing.

4.2 Summary

The stakeholder engagement process revealed that there were many stakeholders whose livelihoods were hinged on the catchments and that the proper management of these catchments is a pre-requisite for sustaining their livelihoods.

It also emerged that activities of individuals, communities and institutions were negatively impacting the catchment. Moreover, some of the negative activities were hardly regulated because law enforcement was weak.

Leveraging potentials and skills of different stakeholders at all levels is required and was seen as not satisfactorily done. The election of the CMCs was a welcome development and is seen as a first step toward invigorating CMPs. The elected members and leaders sounded serious and committed to make a difference.

The MWE and the KWMZ were seen to take a pro-active role in rallying the different stakeholders to fulfill their mandate by ensuring coordination of interventions and leveraging of resources for desired impact.

Sensitization was mooted as very important and the Radio Talk shows that were conducted reached a number of listeners in the catchments. The planned radio talk shows and spots messages are seen as a vital mechanism for increasing awareness on IWRM.

4.3 Conclusion

Uganda's IWRM goal is guided by Vision 2040 of transforming the country into an industrialized middle-income nation by year 2040. The aim is to ensure a holistic approach for sustainable water and natural resources use.

The hotspots critical for IWRM and attainment of the vision 2040 in the catchments include, Mt Elgon region, Manafwa, Malaba, Lumbuye, Nabigaga, kyoga and Kiko river systems.

For municipalities and rural growth centres, population dynamics, pollution and solid waste management are critical during CMP Implementation.

It can be concluded that the private sector actors will play a big role in providing market for farmer produce, providing financing for IWRM. More sensitization should be done to bring on board multi-billion private actors like Nile breweries and Tororo cement.

Different stakeholders showed they had different skills that can be used in the CMP; however these did not seem to be harnessed. Successful implementation of the CMP calls for tapping of stakeholder skills and expertise. Key stakeholders for successful CMP implementation include district and sub county officials, International NGOs, large and small scale processors, cultural and religious institutions and private sector actors. A list of potential stakeholders is attached in annex 1 of this report

Following the feedback that youths lacked gainful income alternatives and were involved in activities like sand mining, gold mining, charcoal production, car washing on water bodies, brick making on wetlands, it can be concluded that youths may continue to degrade, pollute the catchments to their own detriment and that of the generations to and may not escape from poverty if redress is not done

High population growth was seen as increasing pressure on resources and was responsible for environmental degradation. CMO and all relevant stakeholders to adopt a more inter-linked approach that integrates population management in the implementation of the CMP. Well managed population dynamics would go a long way to aiding progress towards achieving environmental sustainability in the catchments.

Since women were noted to be the burden bearers in terms of providing family food and medical care, it is fair to conclude that IWRM activities impact women more negatively than it does to men. Addressing this state of affairs requires engagement of CMP and IWRM.

It is apparent that food and livelihood insecurity will continue to bed evil the communities since soils were said to increasingly become infertile and that climate change was exacerbating the situation and that wetlands might continue to be encroached on

During most of the discussions it emerged that communities perceived water as a free good. With this community attitude, it is apparent that their contribution and participation in water source protection and maintenance is far from satisfactory and requires continuous sensitization for positive change

An emerging lesson from this discussion was the need to take a long-term view of trends in environmental management. For instance, the far-reaching implications that the combined effects of land use change and climatic uncertainty are likely to have to the people and ecosystems. Implementation of appropriate policies, legal frameworks are necessary and need to be based on appropriate traditional knowledge and sound scientific evidence.

4.4 Recommendations

Key recommendations include; BRL should integrate the concerns of the different stakeholders in the CMP. However the issues and concerns are different from one stakeholder to another. Balancing the interests of all the stakeholders is critical for their buy-in for sustainability. This can be achieved through continuous ***dialogue among*** all stakeholders so that practical solutions that are stakeholder owned are developed.

During implementation of the CMPs, KWMZ and CMCs should ensure continous awareness on IWRM ***interventions.*** Such platforms as community barazas, radio talk shows, local drama shows, and mass sensitization campaigns including use of ICTs like mobile phones could be used to create more awareness on Catchment Based Water Resource management. Awareness and acess to IWRM information was reported as one of the challenges

KWMZ and partners should raise more awareness on roles and responsibilities of both primary and secondary stakeholders during implementation of the CMP. Most of the stakeholders were not sure of their roles and responsibilities in integrated Water Management during the engagement process. This also affected their ability to make informed decisions on water resources management

KWMZ to partners with local leaders and NGOs both Local and International that have interest and influence in IWRM in the initial project implementation and latter can bring on board other stakeholders. A list of the stakeholders and their power/influence is presented in annex 1; however this will require more collaboration and capacity building in IWRM

Although Cross boarder mapping was not part of this consultancy, **Cross boarder dynamics** are critical in Mpologoma catchment (Sio-malarki-Mt Elgon region Kenya and Uganda) and should be integrated in the CMP under development by BRL.

Based on the finding that youth are involved in practices like brick making, sand mining, car washing in rivers, tree cutting for charcoal production, consumption of unsafe alcohol (waragi, *local gin*) and betting in both the catchments due to limited employment opportunities, the stakeholders recommend that **the CMP being developed by BRL should address creation of employment opportunities for youth and women that that are related to climate-smart agri-businesses and off-farm Income Generating Activities**

Grass root stakeholders further recommend that all the District Local Governments in the catchments should enact and **implement environmental ordinances and by-laws to assure sustained use of natural resources**

Some of the grassroots communities seemed not well cognisant of IWRM issues, it is therefore imperative for IIRR and KWMZ to carry out **continuous sensitization using different platforms like radio spot messages, radio talk shows, meetings on environmental degradation in both catchments.**

Since the grassroots stakeholders noted that the burden of fetching water and care of the sick due to water related issues which was mostly borne by women, the consultant recommends **Gender-dimensions on water resources at household level should be discussed, gender sensitive solutions crafted and implemented in relation to access to water. This can br done during CMP implelementation by sub county CDOs.**

During community meetings members decried the increased break down, drying up, and mal-functionality of a number of water sources, community members that participated in the engagement recommend that water sources should be establishment following guidelines by MWE. **They emphasised that the CMCs and District Water Departments should supervise and ensure that the source protection guidelines are implemented**.

The stakeholder mapping showed that agricultural production was low as a result of climate change. This has forced farmers into wetlands and increased encroachment on protected reserves to access fertile land. The consultant therefore recommends that in **Mpologoma catchment rice farmers should be supported to form rice farmer cooperatives/ associations and find rice varieties that can be grown in the up land.**

In Victoria Nile catchment sugar cane out-growers need to be supported to improve sugarcane growing up-lands. **Sustainable soil-water Management practices like; agro forestry, soil water conservation and integrated soil fertility management should be promoted in all districts.**

From the mapping, the communities perceive water as a free good. In most cases the water user fees were not paid by stakeholders and in most cases, there were conflicts on payment and financial management. In both catchments sensitization and economic valuation of water resources need to be promoted by the CMCs, District Water Department and Water User

Committees. **The rationale for contribution of Water User fees needs to be explained to the population and accountability of funds should be done to stakeholders.**

In relation to Urban water supply and sanitation, poor solid waste management and uncontrolled effluent discharge in all the municipalities and rural growth centers was cited as a problem in Iganga, Mbale, Tororo, Njeru, Bugiri, Kamuli and Jinja municipalities, the CMC and leadership of these areas should closely work with municipal authorities, private sector, NWSC, DWRM and NGOs **to convert solid waste into other uses during implementation of the CMP. They should also upgrade and acquire landfills in the new municipalities.** They should also sensitize communities on the dangers of constructing on water distribution pipes because this damages the pipes causing leakage and pollution.

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ANNEXES

Annex 1: STAKEHOLDER RANKING BY CATEGORY

Catchment	NGOs	District	Area of operation	Category	Ranking	Sector
Mpologoma	IFDC	Namutumba	District wide	NGO	CS	Agriculture
	Busoga Trust		District wide	NGO	KP	Environment
	NSHAWA		Namutumba district	NGO	S	Education
	NAKWOLA		Namutumba District	NGO	S	Education
	Journal of males for youths		Ivukula	NGO	S	Ecosystem& watershed management conservation
	UWONet		Ivukula	NGO	S	Others
	Spring		Ivukula	NGO	S	Others
	Straight talk		Ivukula	NGO	KP	Environment
	Action aid		Ivukula	NGO	CS	Others
	SCORE	Sironko	Bunyafa	NGO	S	Environment
	World Vision		Buwanga	NGO	KP	Environment
	Straight talk	Bugiri	Bugiri Municipality	NGO	KP	Environment
	GOAL		Entire district	NGO	KP	Environment
	Water Mission	Namayingo	Banda	NGO	KP	Water supply and Waste Management
	GOAL			NGO	KP	Agriculture
	World Vision		Entire district	NGO	KP	Environment
	Busia Area Community Federation (Child Fund)	Busia	Entire district	NGO	C	Education
	Water School			NGO	S	Water supply & waste water management
	BRAC		Municipality	NGO	CS	Environment/ Finance
	Plan Int	Tororo	Mella	NGO	KP	Agriculture
	Uganda Red Cross Society	Mbale		NGO	KP	Ecosystems & watershed Mgt conservation

JICA		Bukasakya	NGO	KP	Irrigation and drainage
JICA	Butaleja	Mazimasa, Kachonga	NGO	KP	Agriculture
World Vision		Naweyo/Kachonga/Budumba and Busabi	NGO	KP	Agriculture
Nature Uganda		Naweyo	NGO	CS	Environment
IFDC		Naweyo/Mazimasa	NGO	CS	Irrigation/Recreation, Infrastructures, Agriculture
JICA	Budaka	Kamonkoli, Kakule and Budaka TC	NGO	KP	Agriculture
IFDC		Nasanga	NGO	CS	Agriculture
CF (Child Fund)		Lyaama/Iki	NGO	C	Agriculture
Action Aid		Buseta	NGO	C	Education
JICA		Kirika	NGO	KP	Agriculture
FOWODE (Forum for Women in Democracy	Kibuku	Kibuku Town council	NGO	CS	Others
WEDA (Wera Development Agency)		Tirinyi	NGO	KP	Water supply & waste water management
JICA		Kadama	NGO	KP	Environment
EAP		Kadama	NGO	S	Environment
URCS		All Sub Counties	NGO	KP	Environment
IUCN			NGO	KP	Environment
NBI			NGO	CS	Infrastructure Development/ environment
Little big Africa	Manafwa	Buwabwala	NGO	CS	Water supply & waste water management
ACET (AIDS Care Education & Training)		Buwabwala	NGO	C	Others

	AWUPWAE (Association of Uganda Professional Women in Agriculture & Environment		Buwabwala	NGO	KP	Environment
	JICA			NGO	KP	Agriculture
	URCS		All Sub Counties	NGO	KP	Environment
	IUCN	Bududa	Bushiyi	NGO	KP	Agriculture
	IIRR		Bushiyi	NGO	KP	Ecosystem & Water shed Mgt/Flood control
	Salvation Army		Bukibukoli	NGO	KP	Health/Finance
	SCORE		Bukibukoli	NGO	KP	Health/Finance
	Eco trust		Bukibukoli	NGO	CS	Environment
	LWR			NGO	KP	Agriculture
	ARDI	Pallisa	Bumwoni	NGO	CS	energy saving/community empowerment
	Action Aid		Gogonyo	NGO	C	Education
Victoria Nile	Seed for success	Buyende	Bugaya	NGO	S	Education
	IGBO		Bugaya	NGO	S	Water supply & waste water management
	UDS, Uganda development services		Bugaya, Kagulu	NGO	S	Water supply & waste water management
	Community vision		Nkondo	NGO	S	Water supply & waste water management
	Water mission Uganda		Buyende	NGO	KP	Water supply & waste water management
	Uganda development and health associates		Kidera, Kagulu	NGO	C	Others
	Plan international		Bugaya, Nkondo	NGO	KP	Water supply & waste water

					management
BRAC		Buyende	NGO	CS	Education
SHADE International		Nkondo	NGO	C	Education
Busoga volunteers for community development		Bugaya, Nkondo	NGO	S	Water supply & waste water management
Rural Livelihood Safe Male Circumcision (RULSI)		Nkondo	NGO	C	Environment
Star EC			NGO	C	Health sector
Red cross-Buyende			NGO	KP	Health sector
Turn to tea programme	Buikwe	Wakisi	NGO	C	Education and Environment
Arms of Love Uganda		Njeru	NGO	C	Others
Save the Community and Vulnerable person		Njeru	NGO	S	Agriculture
On award farmers' association		Nkokonjeru	NGO	C	Agriculture
Son Light Learning Centre		Njeru	NGO	C	Education
AIDS Orphan Education Trust		Njeru	NGO	C	Others
Twezembe Centre Integrated Development Programme		Njeru	NGO	C	Health
On ward Uganda Farmers Association		Nkokonjeru	NGO	C	Agriculture
Share an Opportunity Uganda		Najembe	NGO	C	Education
Mabira Forest Integrated Community		Najembe	NGO	CS	Ecosystem& watershed management conservation

	Organization for development and Co-operation (ODECO)		Nyenga	NGO	C	Others
	World Vision Uganda		Ngogwe	NGO	KP	Education
	Africa Social Development Initiative		Najja	NGO	S	Health
	Green resources, Busoga forest company	Jinja		NGO	KP	Environment
	Red cross-Jinja			NGO	KP	Ecosystem and watershed mgt

YOUTH AND WOMEN GROUPS

Catchment	Stakeholder	District	Sub county	Category	Ranking	Sector
Mpologoma	Nambewo farmers group	Butaleja		Y&W GP	S	Rainfed subsistence
	KIFANGO (Kitsi Famers NGO)			Y&W GP	S	Agriculture
	Youth Ending Hunger			Y&W GP	S	Energy
	Doho Muhula Rice growers		Mazimasa, Kachonga	Y&W GP	S	Agriculture
	Sitobo FAL Group		Entire district	Y&W GP	S	Education
	Butahli farmer group	Manafwa	Buwabwala	Y&W GP	S	Rainfed subsistence
	Kitantalo Youth Farmer Group	Kibuku	Tirinyi	Y&W GP	S	Rainfed subsistence
	TWEYO Agro forestry Association	Budaka	Buseta	Y&W GP	S	Agriculture
	Midiri Farmers Association		Buseta	Y&W GP	S	Agriculture
	KibinikoWater User Committee	Mbale	Bukasakya	Y&W GP	S	Water supply & waste water manage

					ment
Old Mella A Women Group	Tororo	Mella	Y&W GP	S	Agriculture
Mella Water and Environment Management Group		Mella	Y&W GP	S	Water supply and Waste Management
Mella Youth Devt Ass		Mella	Y&W GP	S	Agriculture
Apoko youth and devt initiative		Mella	Y&W GP	S	Agriculture
Amoni Parents of Children with Disability Group		Mella	Y&W GP	S	Education
Alakara women's group		Mella	Y&W GP	S	Finance
Youth East Medical Centre	Busia	Municipality	Y&W GP	S	Environment
Bukasa farmers group	Namutumba	Magada	Y&W GP	S	rainfed farming, subsistence
Base Kamajja Women's group		Magada	Y&W GP	S	rainfed farming, subsistence
Twegemekoyo farmers group		Magada	Y&W GP	S	rainfed farming, subsistence
Balibonelawo farmers' group		Magada	Y&W GP	S	rainfed farming, subsistence
Balibonera kwife savings group		Magada	Y&W GP	S	Others
Bagadda boda group		Magada	Y&W GP	C	Others
Papayo rice growers association	Pallisa	Puti puti	Y&W GP	S	Rainfed farming,

						commercial
Victoria Nile	Kantenga Water user committee	Luuka	Bukanga	Y&W GP	S	Water supply & waste water management
	Buwologoma farmers' group		Bukanga	Y&W GP	S	rainfed farming, subsistence
	Gwase vegetable growers	Buyende	Gwase bugaya	Y&W GP	S	Agriculture
	Bisoboka Youth Association	Buikwe	Njeru	Y&W GP	S	Agriculture
	Alinyikira Silc group	Buikwe	Wakisi	Y&W GP	S	Environment
	Kikoko twezimbe development group		Wakisi	Y&W GP	S	Agriculture
	Njeru Owen road market stage		Njeru	Y&W GP	S	Private developers
	Seruti tweweyo womens group		Buikwe	Y&W GP	S	Others
	Ssunga bukande Magazi development Association		Nyenga	Y&W GP	S	Others
	Bukoya Youth Association		Njeru	Y&W GP	S	Environment
	Sanyuka Wemen at Risk		Njeru	Y&W GP	S	Environment
	Buyaka Twezimbe Mixed group		Njeru	Y&W GP	S	Agriculture
	United busoga sacco	Jinja	Bugembe	Y&W GP	S	Others

CBOs

Catchment	Stakeholder	District	Sub county	Category	Rank	Sector
Mpologoma	Elgon Education Foundation	Manafwa	Entire district	CBO	C	Education
	Bubulo Teacher SACCO	Manafwa	Entire district	CBO	C	Finance
	Manafwa Dairy Farmers Association	Manafwa	Entire district	CBO	S	Agriculture
	Makubili farmer group	Manafwa	Buwabwala	CBO	S	Rainfed subsistence
	SAWEMA (Saala Wetland Management Association)	Kibuku	Kibuku Town council	CBO	S	Environment
	PATA (Pallisa Agri-business Training Association)	Kibuku	Kadama	CBO	S	Education
	Bugobela Maternal Newborn Saving & Credit Association	Kibuku	Tirinyi	CBO	C	Others
	Safe Neighborhood	Budaka	Lyaama	CBO	S	Agriculture
	Business Rural Devt Association	Busia		CBO	S	Agriculture
	EASS	Busia	Municipality	CBO	S	Private sector
	AMDA	Sironko		CBO	S	Agriculture
	Busili Environment Focus	Pallisa		CBO	S	Environment
Victoria Nile	Sugarcane growers' association	Luuka	Town Council	CBO	CS	Rainfed farming, commercial
	Rural livelihood support initiative	Buyende	Buyende TC	CBO	S	Agriculture
	Help community concerns Uganda	Buyende	Bugaya	CBO	C	Others
	Development for social health initiative	Buyende	Ikanda	CBO	C	Others
	Basoga ensette development association	Buyende	Kidera	CBO	CS	Agriculture
	Buyende district nursery	Buye	Buyende	CBO	KP	Agriculture

	operators	nde			
	Nkondo Kidera Development Union (NKDU)	Buyende	Nkondo	CBO	KP environment
	Community Vision	Buyende	Nkondo	CBO	S environment
	Kalagala Offset Sustainable Mgt	Kayunga	Kangulumira	CBO	S Environment
	Kabaseke Production and Marketing	Buikwe	Nyenga	CBO	S Private developers
	Njeru traders and Properties owners association	Buikwe	Njeru	CBO	CS Private developers
	Girl Empowerment Coalition Uganda	Buikwe	Nyenga	CBO	C Education
	St. Clare catholic association	Buikwe	Nyenga	CBO	C Agriculture
	Nyenga Children's HOME	Buikwe	Nyenga	CBO	C Others
	Kidron Children's Home	Buikwe	Wakisi	CBO	C 0thers
	Nyenga Community Project	Buikwe	Nyenga	CBO	S Others
	Bicycle Sponsorship project and work shop	Buikwe	Njeru	CBO	C Education
	Child to Youth	Buikwe	Najja	CBO	C Education

GOVERNMENT INSTITUTIONS

Catchment	Stakeholder	District	Sub county	Category	Rank Sector
Mpologoma	Limoto Primary School	Pallisa	Puti puti	Government Institutions	C Education
	National Forestry Authority		Puti puti	Government Parastatals	CS Environment
	NAADS (National Agricultural Advisory Services)		Bunyafa	Government	CS Rainfed subsistence
	Bukoli College Sec Sch		Bugiri Muncipality	Government Institution	C Education

Bugiri Main Hospital		Bugiri Muncipality	Government Institution	C	Health
NWSC		Bugiri Municipality	Government Institution	KP	Water supply & waste water management
	Namayingo				
Masafu- Misinya water user group		masafu/misinya	Government Institution	KP	Water supply & waste water management
NWSC		Municipality	Government Institution	KP	Water supply & waste water management
Busia Municipal Abattoir		Municipality	Government Institution	CS	environment
Musafu Hospital		Musafu	government institution	C	Health
Busia Municipality	Busia	Municipality	Government Institution	KP	Water supply and Waste Management
NWSC-Municipality		Municipality	Government	KP	Water supply & waste water management
NWSC- Malaba		Malaba	Government Institution	KP	Water supply and Waste Management
Tororo Primary sch		Tororo Municipality	Government Institution	C	Education
Uganda Railway Gauge	Tororo	Tororo Municipality	Government Instituti	C	infrastructure Developmen

			on		t
Morokatipe Prisons		Mella	Government Institution	C	Others
Tororo Girls Sec Sch		Tororo Municipality	Government Institution	C	Education
St. Peters College sec sch		Tororo Municipality	Government Institution	C	Education
Tororo abattoirs		Tororo Municipality	Government Institution	C	water supply and Waste Management
Malaba Abattoirs		Malaba	Government Institution	C	Water supply and Waste Management
Tororo Prison		Osukuru	Government Institution	C	Others
	Mbale				
Mbale L. G		Mbale municipality	Government Institution	KP	Health, Educ, Envnt, agric and many others
Mbale SS		Mbale municipality	Government Institution	C	Education
Nyondo Sec Sch		Mbale municipality	Government Institution	C	Education
Nyondo PTC		Mbale municipality	Government Institution	C	Private business
Mbale High		Mbale municipality	Government Institution	C	Private business

Mt. Elgon Hotel		Mbale municipality	Government Institution	C	Others
NFA-Mbale		Bubyangu	Government	KP	Environment
UWA-Mbale		Bubyangu	Government	KP	Tourism
Mt. Elgon Tech Sch		Mbale municipality	Government Institution	C	Education
LGMSD (Local government Management & Service Delivery)		Bukasakya	Local government	C	Environment
NWSC		Municipality	Government Institution	KP	Water supply and Waste Management
NAADS (National Agricultural Advisory Services)		Himutu	Government	CS	Rainfed subsistence
SGR Project	Butaleja	Budumba, Busolwe	Government	C	Agriculture
FIEFOC		Mazimasa, Himutu	Government	KP	environment
NAADS (National Agricultural Advisory Services)/OWC		District wide	Government	CS	Rainfed subsistence
NAADS (National Agricultural Advisory Services)/OWC	Budaka	District wide	Government		Rain Fed Farming
Budaka LG		District wide	Government	CS	All sectors
NAADS (National Agricultural Advisory Services)	Kibuku	Tirinyi	Government	CS	Rainfed subsistence
Kibuku LG		Kibuku TC	Government	KP	All sectors
NFA-Kibuku		Tirinyi	Government Institution	KP	Ecosystem & Water shed Mgt/Flood

					control
NEMA		Tirinyi	Government Institution	KP	Environment
NFA-Kibuku		Tirinyi	Government Institution	KP	Ecosystem & Water shed Mgt/Flood control
Magale Health Centre IV	Manafwa	Manafwa Town Council	Government Institution	C	Health
Bugobera Centre IV		Manafwa Town Council	Government Institution	C	Health
Bugobera High Sec Sch		Manafwa Town Council	Government Institution	C	Education
Bubulo Sec Sch		Manafwa Town Council	Government Institution	C	Education
Bukoto Sec Sch		Manafwa Town Council	Government Institution	C	Education
Bumbo High Sec Sch		Manafwa Town Council	Government Institution	C	Education
Bulo Girls Sec Sch		Manafwa Town Council	Government Institution	C	Education
NWSC		Manafwa Town Council	Government Institution	KP	Water supply & waste water management
SLM		Nalondo	Govt	-	Agriculture
UWA			Govern	KP	Ecosystem&

				ment Institution		watershed management conservation
	Manafwa L. G		Entire district	Government Institution	KP	Health, Educ, Envnt, agric and many others
		Bududa				
	Bududa Local Government		All Sub Counties	Government Institution	KP	All sectors
	UWA		Bushiyi	Government Institution	KP	Tourism/Recreation
Victoria Nile	Busitema University Water supply	Kamuli			KP	
	Kamuli L. G		Kamuli Municipality	government institution	KP	Envnt, Health, Educ, Irrig
	Buyende Local Govt	Buyende		Government Institution	KP	Others
	Kayunga L. G	Kayunga	Kayunga Municipality	Government Institution	KP	Envt, health, educ, irriga, infras
	Operation Wealth Creation	Buikwe	Najja	Government Institution	CS	Environment /Agriculture
	Buikwe L. G		Buikwe Municipality	Government Institution	KP	Envt, health, educ, irriga, infras
	L. Victoria fisheries	Jinja	Municipality	NGO	-	Agriculture
	Jinja health centre 3			Institution	C	Others
	Jinja municipality		Municipality	Institution	KP	Others
	Senior command and staff college		Kimaka	Institution	C	Others
	Jinja airfield		Kimaka		C	Others

	NWSC, bugembe branch		Bugembe	Institution	KP	Water supply & waste water management
	NWSC			Government Parastatals	KP	water supply and waste manage
	Jinja L. G		Jinja Municipality	government institution	KP	Environment, Health, Education, Irrigation

FBOs

Catchment	Stakeholder	District	Sub county	Category	Ranking	Sector
Mpologoma	KIFANGO	Manafwa	Wesswa	FBO	S	Agriculture
	Brywood-Village Mosque	Mbale	Bubyangu	FBO	C	Water supply & waste water management
	Hope for Kids	Busia		FBO	S	Water supply & waste water management
	True Vine	Busia		FBO	S	Water supply & waste water management
Victoria Nile	CARITAS Uganda	Buikwe		FBO	KP	Environment
	Christ the king Heath Support for the Needy	Buikwe	Nyenga	FBO	C	Health
	Church of Uganda	Buikwe	Najja	FBO	KP	Environment

PRIVATE SECTOR

Catchment	Stakeholder	District	Sub county	Category	Rank	Sector

Mpologoma	Tirinyi-Kibuku urban water supply	Kibuku		Private developer	CS	Water supply & waste water management
	Ikumbania		Kadama	Cultural leader	CS	Others
	Nyanza Fish farmers association	Budaka	District wide	private sectors	S	Fisheries
	Budaka District Fruit Farmers Association		District wide	private sectors	S	environment
	African Textile Mill	Mbale	Mbale municipality	Private developer	C	Private business
	Sun Rise Hotel		Mbale municipality	private developer	C	Others
	Double Star Hotel		Mbale municipality	private developer	C	Others
	Mbale Resort		Mbale municipality	private developer	C	
	Rafik factory (soap &cooking oil)		Mbale municipality	Private developer	CS	Private business
	Bugisu Cooperative Union			Private developer	CS	Private business
	Wash and Will		Mbale municipality	Private developer	C	Private business
	Pretoria		Mbale municipality	Private developer	C	Private business
	Umukuka Culture		Mbale municipality	Private	CS	Others
	Child care project		Mbale municipality	Private developer	C	Private business
	UMI		Mbale municipality	Private developer	C	Education
	Khaukha Cave Tourism Site		Mbale municipality	private developer	C	environment
	Mototo Cultural Site		Bungokho	private developer	C	environment
	Muwambe cultural site for skulls		Muwambe	private developer	C	environment
	Bilindwa wood cultural site		Bilindwa	private developer	C	environment
	Kyagalanyi Coffee Cooperation		Mbale municipality	private developer	CS	Agriculture
	Masaba Coop Union		Mbale municipality	private developer	CS	Agriculture

Mbale Farmers Association		Mbale municipality	private developer	CS	Agricultu re
Mt. Elgon Millers Limited		Industrial division	Private developer	C	Private business
Grand View Hotel	Tororo	Malaba	private developer	C	Private business
Exotic Inn		Tororo Municipality	private sectors	C	Private sector
Prime Hotel		Tororo Municipality	private sectors	C	Private sector
Sofi TEL Hotel		Tororo Municipality	private sectors	C	Private sector
Rock Classic Hotel		Tororo Municipality	private sectors	C	Private sector
Link Way Hotel		Tororo Municipality	private sectors	C	Private sector
Asinge Sec Sch		Tororo Municipality	private sectors	C	Education
Manjansi Sec Sh		Tororo Municipality	private sectors	C	Education
Great Aubrey SS		Tororo Municipality	private sectors	C	Education
Special Plan Primary sch		Tororo Municipality	private sectors	C	Education
Mella Primary sch		Mella	private sectors	C	Education
Kisoko primary sch		Tororo Municipality	private sectors	C	Education
Kisoko High SS		Tororo Municipality	private sectors	C	Education
Electro Max		Osukuru	private developer	C	Energy
Fertilizer factory		Osukuru	private developer	CS	Agricultu re
Nagongera Girls primary sch		Tororo Municipality	private sectors	C	Education
Sky beam		Osukuru	private developer	C	Infrastruc ture Develop ment
Simba Cement Factory		Malaba	private developer	CS	Private business
Seba Foods		Osukuru	private developer	CS	Private business
Nakisenyi Ginery		rubonge	private sectors	CS	Private business

Eastern Rice Ltd		Magola	private developer	CS	Private business
Rock high SS		Tororo Municipality	private sectors	C	Education
Busia Sugar & Allied Factory	Busia	Budeyo	Privat Developer	CS	Private sector
Busia Safari Hotel		Municipality	private developer	C	Private sector
West Bagwe Central Picnic Site			private developer	C	Private sector
kagulu multiple services		Masafu	private developer	C	Private sector
Busia Dealers Multipurpose Coop Society LTD		Municipality	Private developer	C	Private sector
Ms International Medical Centre		Municipality	private developer	S	Health
Pearl Hotel		Municipality	Others	C	private developer
Salaama Integrated Fish Farm ltd			Private developer	S	Fisheries
Tibesobola Women Farmers Group			Private Developer	S	Agriculture
Kifuyu Natural Honey Association			private sectors	S	Agriculture
Kibimba Rice Scheme	Bugiri	Kapyangu	private developer	CS	Private sector
Executive Hospital		Bugiri Muncipality	private developer	C	Others
Gilgal Guest House		Bugiri Muncipality	private developer	C	Others
Trial Inn		Bugiri Muncipality	private developer	C	Others
Usoga Culture Envnt & Tourism Sabalangira/Sabataka Kibukuka Wakoli		Wakoli	private developer	C	Others
Buyinja Development SACCO LTD		Bugiri Muncipality	private developer	C	Others
Real Guest House		Bugiri Muncipality	private developer	C	Private sector
Busoga University		Bugiri Muncipality	private developer	KP	Education

	Indocha Primary Sch		Bugiri Muncipality	private developer	C	Education
	Alstkan Primary Sch		Bugiri Muncipality	private developer	C	Education
	Naluwerere Primary Sch		Bugiri Muncipality	Privat Developer	C	Others
	St. Stephen Sec Sch		Bugiri Muncipality	private sectors	C	Education
	Mpande Waragi distillers	Namutumba	Ivukula	Private developers	CS	Private business
	M.KOPA		Entire district	private sectors	C	Energy
	Namutumba Water and Sewerage Authority		Namutumba Town Council	private sectors	MP	water supply & waste water management
	kagulu multiple services		Namutumba Town Council	private sectors	KP	Water supply & waste water management
	Urban Water Authority	Palisa	Puti puti	Private developers	KP	Water supply & waste water management
	Doko Nasenyi Wetland Management Initiative		Kabwangasi	Private developers	KP	Agriculture
	Pallisa Urban Water Authority		Puti puti	Private developers	KP	Water supply & waste water management
Victoria Nile	Tembo Milling	Iganga	Bulamagi,	Private developers	CS	Private sector
	Individuals			Private developer	C	Rain feed

			s		
Sub County Leaders			Technical leaders	KP	others
Rice farmers		Bulamagi	Private developers	S	rainfed farming, subsistence
Small business owners		Municipality	Private developers	C	Private business
Tembo steel milling company		Bulamagi	Private developers	CS	Private business
Iganga Abattoir		Municipality	Private developers	CS	Private sector
Bukoyo SS		Bulamagi	Private developers	C	Tourism & recreation
Tree nursery owners		Budomero	Private developers	S	Environment
Kaliro Sugar Works	Kaliro		Private developers	CS	Private sector
Luuka Sugarcane out growers' association		Bukanga	Private developers	CS	Rainfed farming, commercial
BIDCO		Jinja Municipality	private developers	CS	Private sector
sky fat Tannery		Jinja Municipality	Private developers	CS	Private sector
Bugembe and distillers limited	Jinja	Jinja Municipality	Private developers	CS	Private sector
Glass plant swt leather industry		Jinja Municipality	Private developers	C	Private sector
Lavit Nature PARK		Jinja Municipality	Private developers	C	Private sector

Gomba fishing		Jinja Municipality	Private developers	C	Fisheries
Mineral water processing project		Jinja Municipality	Private developers	C	Private business
London distillers		Kimaka	Private business	C	Private developers
Uganda pulp and paper mills Ltd		Kimaka	Private business	C	Private developers
Davis & Shirtliff, Jinja branch		Jinja Municipality	Private business	C	Water supply & waste water management
Uganda hotel and tourism training institute		Jinja Municipality	Institution	CS	Tourism
Lottery club of jinja					Water supply & waste water management
Lolopipit distillers		Makeke	Private business	CS	Private developers
Victoria Mining	Kayunga	Kangulumira	private sectors	CS	Environment
Buikwe Lugazi Sugar		Private developer	Private business	CS	
Metha Factory	Buikwe	Lugazi Municipality	Private business	CS	Irrigation/ Recreation, Infrastructures, Agriculture

ACADEMIA

Catchment	Stakeholder	District	Sub county	Category	Ranking	Sector
Mpologoma	Uganda Christian University	Mbale	Mbale municipality	Academia	KP	Education
	Uganda Martyrs University		Mbale municipality	Academia	KP	Education
	Uganda Management Institute		Mbale municipality	Academia	CS	Education
	Uganda Islamic University in Uganda		Industrial division	Academia	KP	Education
	Uganda Christian University		Industrial division	Academia	KP	Education
	National Livestock Resource Research Institute (NALIRRI)	Tororo	Mella	Academia	CS	Education
	Busitema University	Busia	Sikuda	Academia	KP	Education
	NAFORRI	Manafwa	Namabya/Butta	Academia	KP	Education
Victoria Nile	NaFIRI	Jinja	Jinja municipality	Academia	KP	Education
	MUBS	Jinja	Jinja municipality	Institution	CS	Education

CULTURE AND TOURISM

Catchment	Stakeholder	District	Sub county	Category	Ranking	Sector
Mpologoma	Nabolosi Tourist Site for bull fighting	Manafwa	Nabolosi	Culture and Tourism	CS	Ecosystem & Water
	Terajamungu Scenery Site	Manafwa	Bukoho	Culture and Tourism	CS	Ecosystem & Waterl
	Ikumbania	Kibuku	Kadama	Culture and Tourism	CS	Others
	Kangulu Tourism Site	Mbale	Mbale municipality	Culture and Tourism	CS	environment
	Khaukha Cave Tourism Site	Mbale	Mbale municipality	Culture and Tourism	CS	environment
	Mototo Cultural Site	Mbale	Bungokho	Culture and	CS	environment

				Tourism		
	Muwambe cultural site for skulls	Mbale	Muwambe	Culture and Tourism	CS	environment
	Bilindwa wood cultural site	Mbale	Bilindwa	Culture and Tourism	CS	environment
	Tororo Rock Tourist Site	Tororo	Tororo Municipality	Culture and Tourism	CS	Others
	Osukuru Hill Tourist Site	Tororo	Osukuru	Culture and Tourism	CS	Others
	Mulanda Rock site	Tororo	Mulanda	Culture and Tourism	CS	Others
	Nagongera Rock Site	Tororo	Nagogenra	Culture and Tourism	CS	Others
	Emorimori culture Leader	Tororo	Entire district	Culture and Tourism	CS	Others
	Tieng Adhola culture	Tororo	Entire district	Culture and Tourism	CS	Others
	Bukoli Chiefdom	Bugiri	Bukoli	Culture and Tourism	CS	Private sector
	Kisingi & Nkono culture site			Culture and Tourism	CS	Private sector
	Kikalu Tourist Site			Culture and Tourism	CS	Private sector

Annex 2: HOTSPOTS PER DISTRICT

MPOLOGOMA CATCHMENT

Mpologoma catchment comprises of 13 districts namely; Mbale, Bududa, Sironko, Manafwa, Butaleja, Bugiri, Namutumba, Budaka, Kibuku, Pallisa, Tororo, Buisa and Namayingo. The key issues in these districts include river bank degradation, landslides, siltation of rivers as a result of poor farming practices, wetland degradation as result rice growing, deforestation as a result of brick making and wood fuel, poor sloid waste disposal in municipalities, urban centre and rural growth canters, environmental degradation as result of mining activities, poor farming activities, soil erosion, water scarcity due to breakdown of water facilities, sand mining along river banks, poor sanitation, waragi residue discharge in to river systems and conflicts over wetland boarders.

The issues with their proposed interventions are described in the table below per district.

MBALE DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Bubyangu	Bunadudu	Deforestation along hill slopes that has led to landslides and siltation of nearby stream	Increased demand for wood products like timber, charcoal. High population growth which has increased the demand of land for settlement, farming, etc. • Deforestation in search of firewood to burn bricks and for domestic food.	Tree planting of the indigenous trees. Awareness creation on the importance of trees. Enforcement of existing laws on tree cutting.
Bubyangu		Landslide area in November 2013, on the slopes of Wanale mountain.	Increased rate of deforestation	Reforestation, improve monitoring and early warning systems. Awareness creation on disaster preparedness
Bubyangu		Siltation of stream downhill due to soil erosion	. • Poor farming practices such as over cultivation	Train farmers on the use of soil and water conservation measures like construction of contour bunds, water retention trenches, mulching, etc. Reforestation. • Promote the planting of Napier grass to control soil erosion. • Promotion of extension services and teach farmers of proper farming methods on limited land.

Bubyangu	Bukaga A	Siltation of Malenda stream. Water supply tank is surrounded by unclean environment.	Poor farming methods which result in soil erosion to a greater extent and to some extent deforestation	Train farmers on the use of soil and water conservation measures like construction of contour bunds, water retention trenches, mulching, etc. Reforestion • Promote the planting of Napier grass to control soil erosion.
Lwasso		Kaserenya seasonal swamp, high encroachment on the wetland	Need for more land for cultivation. Increased requirement of water for production especially in the dry season.	Promote cultivation of improved crop varieties that are drought tolerant. Awareness creation on environment regulations and their enforcement. • Creation and enforcement of the strict bi laws to govern and regulate the usage of wetlands and river banks. • Awareness creation on the importance of buffer zones along river systems
Lwasso	Kibagala	Lubumba river, both subsistence crop farming and commercial farming such as sugar cane and rice growing are taking place and the color of the water is grayish	• Planting crops along rivers banks during the dry season	• Creation and enforcement of the strict bi laws to govern and regulate the usage of wetlands and river banks. • Awareness creation on the importance of buffer zones along river systems
Lwasso	Kibagala	Brick making is rampant	Increased demand for construction materials. • Poverty	License practitioners to regulate their number. Provide alternative livelihood options to the people (practitioners).
Bukasakya	Nabitiri	Pollution of water sources (land) from discharge of effluent from extensive waragi distillation in the area	Lack of a proper and well-established system for treatment and disposal of waragi residue in the area. • Waragi distilling were by the distillers discharge wastes/residues into the catchment	Put in place a proper mechanism for treatment of waragi residue for its disposal for example a designated place like a dam should be constructed for the waragi distillers where they should dispose of the residue (kangala). Strengthen enforcement of issuing of permits to the distillers to regulate entry into the

				business as well as adhering to the set environment management actions. Regular monitoring to ensure compliance to relevant environment management actions by the distillers. More awareness creation campaigns on environment conservation and management.
Bukasakya	Kibiniko	Encroachment on the Namatala wetland for large scale rice growing and other crops like maize. Serious flooding during the rainy season. Waste water from the waragi distillers collects here and pollutes the water. Nakibiso river also brings in solid waste from Mbale town into the wetland polluting it more. Sewage from Doko cell village also drains in the wetland with nile cabbage weed seeds.	Need for more land and water for cultivation. Siltation of the wetland. • Poor solid waste disposal and management.	Awareness creation on environment regulations and their enforcement. Promote the use of good farming methods. Afforestation. Put in place mechanisms of solid waste disposal for instance sorting the wastes before disposal. • Shop keepers should burn wastes generated from their shops • Government should stop the manufacturing of polyethene bags that do not meet standards • Sensitize people on the importance of leaving a buffer zone from the Namatala swamp • Land owners/community members should be stopped from cultivating along Namatala river
Lwasso	Namulama	Soil erosion by running water, coffee farming and banana farming on the gently sloping landscape. Few tree species observed particularly fruit trees.	Inadequate soil and water conservation measures in place in addition to poor farming methods. • Over cultivation of land due to limited land because of over population	• Promote the planting of Napier grass to control soil erosion. • Promote tree planting to increase the tree population in the sub county • People should be educated on how to conserve the environment. • Community sensitization drives to train community members on better farming methods on limited land

Industrial division	St. Andrew	Some non point pollution from garage works, oil and grease spills with some evidence of poor solid waste management in the surrounding area. No apparent waste management measures in place.	Oil and grease spills which can end up contaminating water sources especially through surface run off in the rainy season. Absence of a proper and organised solid waste management mechanism in place leading to poor solid waste disposal	• Shop keepers should burn wastes generated from their shops • Government should stop the manufacturing of polyethene bags
Bukasakya	Kibiniko	Kibiniko village, kibiniko wetland. Abstraction of water from river Namatala for irrigation. Water polluted by municipal sewage and waragi residue /molasses pollution. Water conflict exists between rice farmers and waragi distillers' due to pollution that makes land unproductive. Wetland was demarcated. Wetland over floods in rainy season destroying crops. wetland is part of the Namatala wetland system.	Unemployment of women in Kibiniko, traditional belief of waragi brewing by the women, weak implementation of environmental laws and regulations, political influence.	Transform wetland into rice scheme. Strengthen conflict resolution measures in the Kibiniko village. Introduce strict rules and regulations to restrict the dumping of molasses in to river system. Ensure proper municipal sewage management in Mbale municipality.
	Musoto	Nashibito stream in musoto village is heavily polluted with bi products of waragi, the water smells and is clotted with bottles of water,	Unemployment of women in Kibiniko, traditional belief of waragi brewing by the women, weak implementation of environmental laws and regulations, political influence.	Encourage better solid waste management in Mbale municipality. Regulate the disposal of waragi bi products. Use of molasses by the community for waragi needs to be burnt.

BUDUDA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Bukibokolo		Bare soils on steep slopes almost on every hill slopes	Poor farming methods. • Deforestation in search of firewood to burn bricks and for domestic fruits.	• Tree planting of the indigenous trees. • Creation of demonstration sites for learning purpose.
Bukibokolo		A lot of marram digging with stone quarrying, sand mining and brick laying.	Increased demand for construction materials. Poverty	• Promote other livelihood options that are environmentally friendly. License the practitioners.
Bukibokolo	Sukha	Stone mining for murram, which is done on a steep slope.	Increased demand for construction materials. Poverty	Promote other livelihood options that are environmentally friendly.
Bukibokolo	Shireya	A lot of mining including sand on river Lizzi, stone quarrying. The water is also being used for washing cars, motorcycles, bathing which contaminates it. A lot of siltation from mining places and nearby farming.	Increased demand for construction materials. Bad mining practices. • Silting of the water sources due to contamination during the rainy season from runoff.	Tree planting, sensitization of the community. Provide alternative livelihood options. • Grass planting to protect the water sources
Bukibokolo	Shireya	Serious mining of stones and sand very close to the river Liisi bank. Bridge floods during heavy rains.	Increased demand for construction materials, siltation of the river	• Promote other livelihood options that are environmentally friendly. • Grass planting to protect the water sources
Bushiyi	Nashanane	River Manafwa, serious siltation, river bank breaking	Bad farming practices especially close to the river and animal grazing to a small extent. Soil erosion to a greater extent and mining to a small extent.	• Grass planting to protect the water source. • Awareness creation on the importance of buffer zones along river systems • Restoration of the river banks through tree planting and sensitization
Bushiyi	Nashanane	A large landslide and soil erosion to a small extent.	Farming and human settlement on steep hill slopes.	Tree planting with indigenous trees and massive mass education on environmental management.

Bushiyi	Tsebiliti	A lot of farming on buffer zones of Mt Elgon national park. Tshebiliti, Namabutsye, and Wanili streams are facilitating a lot siltation. Soil erosion in the nearby gardens. Five landslides on four different nearby hills with bare slopes (without trees). Few eucalyptus species are visible in individual gardens, 250 community members are staying in the buffer zone under collaborative management agreement with UWA but the MoU has expired and is yet to be renewed.	Poor farming practices. • Deforestation in search of firewood to burn bricks and for domestic fruits.	• Tree planting of the indigenous trees• Creation of demonstration sites for learning purpose • Hedge rows. To reduce erosion on the hills
Bushiyi	Tsebiliti	Tshebilit stream is highly silted with gravel	• Silting of the water sources due to contamination during the rainy season	• Grass planting to protect the wells
Bushiyi		Namabuntye stream faces severe siltation with eucalyptus tree being planted along bank and the river bank breaks	• Silting of the water sources due to contamination during the rainy season	• Grass planting to protect the wells
Bushiyi	Shifungu	Namamuka river, high rate of siltation with farming along the bank and some trees too.	Soil erosion from farming	• Grass planting to protect the wells
Bushiyi	Wamanga la	A very big land slide occurred on Kushenyi hill. Gulleys on sides of garden with few tree species on the slopes and coffee and cassava cultivation on the slopes too	Replacement of natural vegetation (tree cover) with crop farming. Soil erosion resulting into gulleys	Afforestation with indigenous trees

SIRONKO DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Bunyafa	Tandiga	No tree species visible	Trees cleared to avail land for cultivation	Reforestation especially with indigenous trees

Bunyafa	Kibbo	Indigenous trees have been cut to a large extent and are mostly replaced with eucalyptus (grown for timber and fuel). There is reported serious soil erosion and low food productivity in the area. Murrum mining is also done.	Increased demand for wood products such as timber resulting into tree cutting. Deforestation contributes to soil erosion which leads to decrease in soil fertility and subsequent low food productivity.	• Sensitization of people on environmental management and planting of trees. • Encourage tree planting in gardens to reduce soil erosion. • Road engineers should put some "score checks" along roads to trap soil while allowing water to flow as well as reduce the speed of running water
Bunyafa	Bugibedi	Serious deforestation has been done and the soil productivity has also greatly reduced.	Increased demand for land to plant food crops like bananas. Low soil productivity is caused mainly by soil erosion.	• Sensitization of people on environmental management and planting of trees
Bunyafa	Bugibedi	Farming especially horticulture very close to the river bank (river mezimeru). The water is polluted by sediment making it brown in color.	Increased demand for land for cultivation and need for water for crop production. Limited awareness of people about regulations on river bank encroachment together with weak enforcement of these regulations. • Soil erosion and siltation of rivers	• Road engineers should put some "score checks" along roads to trap soil while allowing water to flow as well as reduce the speed of running water

MANAFWA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Wesswa	Bunam uwenje central	Water taps for gravity flow scheme are broken resulting into non-	Limited maintenance of the infrastructure is done	• The gravity water flow scheme should be repaired

	B	functionality. Community member practice individual tree planting along mountain slopes and river banks especially eucalyptus species		
Wesswa		Serious siltation of Mabobwe stream, a lot farming on river bank, small tree planting is done.	Farming close to the river bank, soil erodes into the river thus silting it.• Silting of the water sources due to contamination during the rainy season	• Grass planting to protect the wells.
Wesswa	Bunam uwenge east A	On Nabuboolo hill, a lot of deforestation, high level of cultivation triggering mudslides with no intervention from the community members.	Increased demand for wood products and land for cultivation. Deforestation exacerbates occurrence of mudslides. • Overpopulation with limited land	• Initiate to compensate the people then resettle them Within the District and turn the area in to a forest by planting indigenous trees
Wesswa		Sinje stream has minimum siltation with gully erosion and some considerable farming on the river bank. However, the community has tried to plant some trees along the bank. Sand mining is also done but not too much.	Farming close to the river bank while practicing poor farming methods. • Overpopulation with limited land hence over cultivation and cropping which leads to soil erosion	• Initiate to compensate the people then resettle them Within the District and turn the area in to a forest by planting indigenous trees. And this is possible because, • Within the Districts, there are people who own a larger piece of land and they are not putting in to use but they need to be paid in oder to give it out, yet the ones in need cannot afford, efforts should be put to pay them and resettle the people in the most affected area Formulation and implementation of strict bylaws to deter people from encroaching • Food aid should be given such that people rest their land. • Provided with fertilizers to help boost production.

Wesswa	Shirobo	Farming close to the river bank of food crops like maize, bananas which has led to soil erosion and sediment being washed into the river. Sand mining is also done at the river bank however some grass has been planted in some parts and trees along the river bank.	Poor farming methods which accelerate the rate of soil erosion and siltation of rivers. • Poor land management/poor farming methods are practiced by the community members that makes the land prone to soil erosion	• Creation of demonstration sites for learning purpose • Hedge rows to reduce erosion on the hills. • Awareness creation on the land management saver.
Buwabwala	Nakhele	On Nakhele river a lot of tree cutting and siltation of the river. Nakhele stream has changed color to brown due to siltation	Need for timber and land for farming. Siltation results from soil erosion brought about by tree cutting bad farming which exclude adequate soil and water conservation methods. • Silting of the water sources due to contamination during the rainy season	• Grass planting to protect the wells.
Buwabwala	Makhawa	Very big gullies seen. Extreme soil erosion has destroyed infrastructure like roads and a well that were in place. No interventions seen in place.	Absence of soil and water conservation measures in place. Soil erosion is exacerbated by the mountainous nature of the terrain.	Promote soil and water conservation measures. Tree planting of indigenous trees.

PALIISA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Kasodo	Nakitende	Water pollution, a lot of papyrus is harvested and dried from the area. Rampant rice growing in the wetland, high scale encroachment and reclamation of the wetland, no stakeholder engagement in decision making, no initiatives intended towards remediation of degradation in the area.	Pollution caused by cows using the same water as people and they step in it. Need for land for farming and access to water for crop farming force people to encroach on wetland. Land scarcity, the land is not enough for	• Creation of jobs for the youths to avoid them from encroaching the wetland and the forest for charcoal burning as an alternative source of livelihood

			the people.	
Kasodo	Nakibuya	Nakibuya landing site on lake Nakibuya, there is over fishing that has led to depletion of fish, only young fish is caught after a long struggle. The water is dirty, and shared by animals and people, the level of encroachment for rice growing is high. Beach Management units have no measures,	Pressure to meet the increasing demand for fish leads to over fishing. Need for land for farming and access to water for crop farming force people to encroach on wetland. • Poor fishing methods and overfishing	• Sensitization of farmers on proper farming and fishing method

Kasodo		There is intense soil erosion, soil or murram extracting is very high to an extent that deep and dangerous holes have been created which have changed the landscape greatly as well as caused death to some soil extractors when they enter the holes and the holding top soil collapses on them. Also, there are a lot of polythene bags commonly called 'buveeras' littered in the place that are brought by the extractors of the soil, also the crop yield is very poor due to the highly compacted soil, that is exhausted. There are no measures in place to try and reduce the degradation of the land. Also, the soil is extracted for brick laying by the local people. There is no stakeholder engagement as no one seems to be concerned about the damage caused.	Land scarcity High demand of charcoal and bricks. Poverty among the people. High population. Poor farming methods	Sensitization of farmers on proper farming methods. Encouraging tree planting. Promote other livelihood options that are environmentally friendly
Puti puti	Limoto	Encroachment for rice growing on the swamp. Over fishing. Highly degraded with alot of algal growth and water hyacinth, there is some stakeholder engagement, cultivation has been stopped as seen by the grass regrowth, there is a bridge constructed to channel water through and reduce flooding of the catchment.	• Poor fishing methods and overfishing. • Land scarcity	• Encourage farmers to plant upland rice to solve the issue of encroachment. Sensitization of farmers on proper farming and fishing method. Issuing restoration orders

Puti-puti		Limoto wetland A (Papayo), sugar cane plantation, sweet potatoes, livestock grazing, fishing, rice growing. Degradation on both sides of the road Pallisa-Tirinyi road.	Poor fishing methods and overfishing. Poor farming methods	Encouraging and training people to start fishing Ponds. Sensitization of farmers on proper farming and fishing method.

NAMUTUMBA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Magada	Nabisaka	Nawaibete swamp. Intensive rice growing has reduced the level and amount of water. Farmers have constructed ridges to reduce soil erosion and water speed. There is livestock zero grazing at the edge of rice farms. A lot of chemical spraying is done to improve the health of the rice and prevent it from pests and weeds.	• Land scarcity that forces people to move into the wetlands. • Rice is more profitable than other crops grown yet it requires a lot of water which is readily available in the wetlands. Rice infestation with pests and diseases causing farmers to apply many insecticides and herbicides.	• Provide technical advice on weed control. • Installation of modern irrigation schemes to reduce on water wastage by the poor methods used to get irrigation water. • Enforce laws on tree cutting. • Concentrate on mulching to preserve soil moisture. •Promote integrated pest and weed management measures. • Formation of channels to direct water movement.

Ivukula	Kimenyulo	Nawaibete wetland, no stakeholder engagement as every rice farmer is on their own, the wetland has been encroached on highly and turned into a wide area of rice growing, and the water is very dirty and polluted. The soil is so cracked due to dryness. Some trenches have been constructed to carry water through and also the water has been diverted into rice farms. A lot of soil erosion is taking place in the area. The water has lot of slugs, snails and frogs yet it is drank directly by the people. In the rainy season the whole road gets flooded with runoff and also soil erosion is very rampant.	Land scarcity that forces people to move into the wetlands. • Rice is more profitable than other crops grown yet it requires a lot of water which is readily available in the wetlands. Inappropriate farming methods.	• Stop monocropping and promote crop rotations and intercropping. • Creation of demonstration farms in the area to train farmers in modern sustainable farming methods.
Ivukula	Mpande	There is intense clearing of vegetation and cutting down of trees for charcoal production and getting land for sugarcane production, the threat is that sugar cane drain a lot of water and makes the soil unproductive, most farmers give in their land because of the huge amount of money given as compensation and end up remaining with small piece of land that cannot produce food for the family hence famine. There are no measures in place to address the problems and no stakeholder engagement.	Poor farming methods like monocropping and continuous cropping. • Poverty • Trees are cut for firewood due to lack of alternative sources of energy • To provide land for farming • For construction of houses (using the poles). • To get timber for sale	• NAADs can help through provision of fruit tree seedlings for reforestation • Allocate some money on the district budget to sub counties for re afforestation• Creation of demonstration farms in the area to train farmers in modern sustainable farming methods. Formation of channels to direct water movement. • sensitization of the people on the benefits of the trees • practicing re afforestation and re-afforestation • establishment of woodlots

Ivukula	Namwenda	Ntakwe lake, there is poor solid waste management, a lot of rice and cabbage planting in the wetland, the water is hard to navigate due to the coverage by water weeds on the water. The boats are very old and dirty there is water abstraction into the rice and cabbage gardens. There is high rate of defecation into the water. No stakeholder involvement as each individual does work on their own. No measures of combating degradation are in place,	Land scarcity that forces people to move into the wetlands. • Rice is more profitable than other crops grown yet it requires a lot of water which is readily available in the wetlands	Installation of modern irrigation schemes to reduce on water wastage by the poor methods used to get irrigation water. • Sensitisation on water and sanitation.
Ivukula	Kirwanire	Local brewing leading to high air pollution, there are no measures of managing the waste as it's just directed in the gardens. The methods of distillation are also very dangerous in that there is a possibility of fire explosion which could led to death for example, last year three people died as a result of explosion. Increased felling down of trees to get firewood is also evident, there is no efficient energy use, and they still use three stones which uses alot of firewood hence increased deforestation. Iodine soap is also used to improve the taste of the waragi, the iodine is very strong and most people booze minus eating food which causes health problems. Government issues licences, but they people do not apply for them making it difficult to regulate the business, whoever has the capability can enter the business.	Poverty. Lack of a proper and well-established system for treatment and disposal of waragi residue in the area.	Put in place a proper mechanism for treatment of waragi residue for its disposal. Strengthen enforcement of issuing of permits to the distillers to regulate entry into the business as well as adhering to the set environment management actions. Regular monitoring to ensure compliance to relevant environment management actions by the distillers. More awareness creation campaigns on environment conservation and management. Reforestation
Namutumba council	Central ward	No proper solid waste management measures in place. Waste is burnt upon accumulation. sometimes place gets filled with rubbish	Weak implementation of bye laws/ordinances, low revenue base, inadequate awareness, lack of	Construction of land fill in the town council, strengthen implementation of bye laws/ordinances, increase awareness on environmental sanitation, waste disposal

			waste disposal facilities.	skits and place them in market areas
Namutumba Rural	Namuwondo	Namuwondo wetland encroached for rice growing, a rice scheme would an ideal option as proposed by the farmers Mpologoma wetland Namuwondo village. Serious flooding in rainy season. Sensitization of public on sustainable utilization of the wetland	Un employment, market opportunities for rice, weak implementation of environmental laws, population pressure	Establish the wetland in to organized rice scheme, Provide alternative sources of employment, encourage wetland demarcation, plant trees along the wetland boarders, encourage tree nursery in the wetland peripherals for live hood enhancement. encourage construction of water flow systems in the wetland to avoid flooding
Bulange	Nawantukulu	Nawantukulu wetland is encroached for continuous rice growing. Rice farming is on individual basis. Livestock grazing also done in the wetland.	Population pressure that has caused land scarcity, food insecurity due to land fragmentation, weak implementation of laws and regulations,	A mini dam for livestock, community sensitization on wetland management, organize the rice farmers in groups in order for the farmers to benefit from government projects

KIBUKU DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Kadama	Nandere	Mpologoma river, flooding and a lot of agriculture at the bank of the river. Little bush burning, little cattle grazing at the river bank. No intervention has been seen in this area.	• Open grazing and herding, Poor farming methods. Siltation of the river causing flooding.	Education and sensitisation of farmers on good farming practices. Promote zero grazing.
Kadama	Nandere	Nandere swamp, encroachment for rice and maize growing. Evidence of some siltation in the swamp with water hyacinth weed. Swamp floods excessively in rainy season. Some fish species like nsonzi are now rare in the swamp. It was also	Need for land forces people to resort to wetland for farming. Poor fishing methods	• Land owners/community members should be stopped from cultivating in the swamp. Promote proper fishing methods. Provide modern irrigation scheme.

		seen that young fish are caught in the swamp.		
Tirinyi	Tirinyi 3	Serious sand mining, charcoal burning to less extent on the site, ponds of water on the site, crop farming to a large extent and animals farming to a less extent. Rice growing in the sand pits, few tree species around the place.	• There is much deforestation in search of fire wood for brick laying, Charcoal burning. • Poor farming methods	• Promote tree planting to increase the tree population in the sub county • People should be educated on how to conserve the environment • Employee extension workers to help in awareness creation and education of the community members on good farming methods
Tirinyi	Tirinyi 1	Solid waste has accumulated in the market. It is both biodegradable and non-biodegradable waste mixed together. However, the traders mobilize themselves to burn the waste occasionally.	Inadequate waste disposal mechanisms in place	Encourage sorting of waste before disposal and better management
Tirinyi	Tirinyi 2	Poor unsorted solid waste management, VIP latrine about to collapse, business centre for the community, burning of rubbish is the only way of management, at least there is a site for dumping though in poor state provided by town board, chicken and goats are acting as scavengers to manage the rubbish.	Inadequate waste disposal mechanisms in place	Encourage sorting of waste before disposal and better management

BUDAKA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Kameruka	Dalatawu	Water takes too long to come out and at times it is milky with white crystals though it is protected with a trough for animals to drink from. Some few individual tree planting is taking place and farming of food crop is high in this area.	• The metals used for constructing the bore hole and well spring have rusted	• The water should be purified by repairing the borehole mechanism by devising a means of putting a sieve • Rehabilitate the existing well spring and put a sieve mechanism that can remove the particles which are found in water
Kameruka	Dalatawu	Kyope protected spring, flow of water is moderate but their cases of worms reported by the community members, farming and washing by community members at source is visible	• Sharing the same point of water with the animals. Water scarcity in the area especially during dry season	• More protected wells and bore hole should be constructed • Provide more Harvesting water tanks to add on the existing one • New boreholes need to be constructed as well as erecting more water points such as taps • Repair damaged water points such as well springs
Kameruka	Nabugalo	Soil erosion is evidenced by shallow gullies exposing some rocks. Some sheet erosion is also seen. Some crops/vegetation is seen like cotton. Little has been done to manage the erosion.	• Poor farming methods that has increased incidences of soil erosion	• Extension workers are provided to educate people on good farming methods.
Lyama	Nakiseny i	Deep serious gulley, farming, water color is brown. Bare river Namatala bank, scattered trees along the bank.	• Poor farming methods that has increased incidences of soil erosion	• Extension workers are provided to educate people on good farming methods.
Lyama	Nakiseny i	Stream bank is destroyed by animal trampling, catching of young fish from the swamp. Extensive rice growing is also evident in the swamp. The swamp is silted. Hardly any grass is planted on the stream but generally no proper management of wetland exists.	• Poor farming methods that has increased incidences of soil erosion. • There is awareness that cultivating rice in wetlands is bad but they have no alternative options for income apart from the rice cultivation. Provide modern irrigation scheme.	• Extension workers are provided to educate people on good farming and fishing methods. • Sensitization of community members on other sources of income.

BUTALEJA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Naweyo	Nasinyi A	A lot of rice farming, no water channels in scheme, animal grazing in scheme, water channel to divert water from river Namatala is visible, bare river bank, brown water colour.	• Poor farming methods	Education and sensitisation of farmers on good farming practices. • Provide farmers with a machine factory to process the rice husks into something better like sealing board, curry powder animal feed, chicken feeds, fertilizers, etc.
Himutu	Mahindu	Heavy siltation that has narrowed and altered the river Manafwa course. The river bank is also degraded with some silt being deposited. The river is heavily silted. Human settlements and banana crop fields are close to the river bank. Very little management exists with only some scanty vegetation along the river bank.	• Poor farming methods which have accelerated soil erosion	Education and sensitisation of farmers on good farming practices. Promote soil and water conservation measures
Himutu	Doho	Increased siltation in the river, practices of diverting the flow of river to rice by stones by an individual, some case of flooding along Manafwa river bank. The river bank is bare with no tree species, rice farming along bank, water bank is being broken due to large volume of water	• Poor farming methods which have accelerated soil erosion. Prolonged dry season which has badly affected the rice and forced farmers to divert the river to irrigate their rice fields.	Education and sensitization of farmers on good farming practices. Train farmers on good irrigation techniques. A forestation.

TORORO DISTRIT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Osukuru	Abwanget	Cases of farming in the swamps on river Malaba. River Malaba bank breaking due to flooding, shrubs on the banks of the river. The area is flat, small cases of mining, and encroachment on the river bank has started.	• Growing of paddy rice in swamps. • Erosion on R. Malaba during rainy seasons and running water from the hills. • Flooding due to the blocked road drainages. • Deforestation • Lack of environmental laws	Construction of bridges along R. Malaba to ease access for water ways. Gazzeting of river bank areas in order to reduce river bank cultivation Construction of dams to curb flooding Provision of seedlings to support farmers on household basis to engage in massive tree planting. Active environmental laws should be put to work. Massive sensitisation on environmental laws.
Mella	Amoni	River namatunga in kagula village is silted with soil from agriculture activities that pours with river malaba, the river floods when it rains	Crop farming close along the river banks, poor farming practices such as mono cropping, deforestation, mining activities such as murram and rock quarrying also contribute to this,	Conservation activities are ideal such soil and water conservation, tree planting, bye laws, community sensitization on natural resources management
Mella	Amoni	Siltation of river malaba due to farming, mining in the river due to siltation, deforestation along the river bank,	Farming along the river bank, deforestation along the river bank, inadequate awareness for community members,	Tree nursery in the place due to availability of water, community sensitization on natural resource management, soil and water conservation measures, energy saving technologies are ideal, power generating plant.
Malaba	Malaba ward	Malaba east b. poor solid waste management in the town. Town council takes a long time to remove garbage. No public toilets in the market and taxi park. People defecate in polythene bags	Weak by laws, inadequate awareness, limited funding for solid water management and provision sanitation	Construction of public toilet in the town council, construction of modern land fill for waste management, Community sensitization on waste management,

		'buvera' and throw them anywhere.		
Malaba	Malaba ward	Malaba river in the mid-stream river in malaba east B, experience direct discharge from the factory, farming to the banks of the river, few tree species along the bank, solid waste in the river from malaba town	Poor solid waste management, inadequate awareness on solid waste management, inadequate implementation of environmental policies and laws,	Strengthen implementation of environmental laws and policies, community sensitization on solid waste management and natural resources management, soil and water conservations, tree planting along river Malaba, tree nursery, cross boarder policies.

BUSIA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Sukuda	Hadadira	Nokola river was once being used for washing gold by the miners, they would also wash from the river. Apparently the river is facing high rate of erosion and pollution from both people and animals. Water is used for washing, drinking agriculture and other domestic uses. Sharing of this water source with animals makes it hazardous to the people.	• Bad farming practices.	Water source protection is needed, e.g. tree planting, improved farming etc. Treatment of the water. Separate water sources for different uses.

Sukuda		Hadadira river and its nearby areas that were affected by mining. According to the residents the whole place bordering the river was covered by trees, crops like sugar cane , maize but due to the chemicals that were applied to process gold e.g. mercury, the whole soils around were affected, crops dried, only silt can be observed, trees dried up leaving the whole land bare. The company was called Bless metal and gold company The soil can't support agriculture and it needs to be put right since the company is no longer existent.	• Poor chemical waste disposal.	Conduct a site clean up to (environment remediation)
Sukuda	Tiira	Serious gold mining, heaps of soil, uncovered pits, few tree species, some agriculture.	Deforestation. Gold mining. Poverty.	Refilling of the gold mines after mining Sensitization on the chemicals used by miners that mercury which is used to purify the gold adversely affects the quality of water, soil and human health. Provision of tree seedlings for reforestation
Masafu		Lubuka wetland in Bukobe village is encroached on for rice farming, no proper water ways that interferes with normal water flow, yam growing is also one of the common crops grown in the wetland, and the wetland is about 400 acres and could be proposed for formal scheme or reclamation from rice farming. Other crop farming is being practiced such maize. the vegetation in wetland has been cleared for rice farming	Un employment for the youths, poor farming practices, un gazzeted wetlands, land fragmentation, population pressure	Gazette the Lubuka wetland to be conserved, community sensitization environmental management, encourage soil and water conservation practices for increased resilience to climate change,

Dabani		River solo in bukikya A Namawubi is experiencing pollution from tannery industry of Jambo and the smell from the water is stinking, the tannery industry needs to construct a treatment plant before disposal, the river bank is also encroached on with farming of sugar cane and other crops such as maize, onions	Weak implementation of environmental laws, non-compliance of the industry to environmental laws	Jampo industry should construct a treatment plant for its end products. Planting trees along Jambo river. Community sensitization on IWRM practices such as the use of solo river, farming along the river, livestock rearing along the river Strict laws on dumping the industrial wastes in to the river solo.

NAMAYINGO DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Banda		Busiro beach, Lake Victoria shore, massive human settlement, community entirely fetches water from lake, fishing activities, crop growing to some extent at the shore, trade for the fish, water is black in color, too much encroachment on the shore of the lake, few tree species can be observed	Over population, inadequate community knowledge on solid waste management, land fragmentation leading to cutting of trees at the shores of the lake	• Training on environmental management • Enforcement of the law on water source protection • Limit construction near the water sources e.g. lake • Tree planting should be emphasized

Buyinja	kifuyo A	One borehole exists which serves 4 villages in the area. The place gets really overcrowded to the extent that jerry cans are lined up even outside the fence. The woman in charge of keeping the place says conflicts arise among people who come to fetch water especially in the dry season when there is less is water. She says there's need for another borehole to be put in place to reduce overcrowding. There is an ongoing project by MWE to upgrade the source to a mini solar production well that will serve the neighboring town with piped water.	Population pressure, inadequate lower local government fund allocation for water sector, lack of community willingness to manage the available water sources,	Construction of two-point source (boreholes and springs) in each village to reduce the distance walked to fetch water, community sensitization on natural resource management, soil and water conservation practices, community sensitization in managing the gold mining sites, strengthen the functionality of water user groups.

BUGIRI DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
kapyanga		Another point on Kibimba water source where people collect water for domestic use and at the same time share it with the animals. According to the current look of the water source, it is blocked by Tilda rice factory, and people are left with little and contaminated water. The water is also contaminated with chemicals which end up killing animals, poultry etc. According to the residents, the water points on kibimba source highly flood when the water is released in wet season and this affect people's crops, lives and properties. It's also known that people are arrested when found fetching water from this source which initially	Spreading of chemicals by Tilda Rice company into the environment. Blocking and Diversion of the water by Tilda Rice Company	Stop Tilda from refusing people to fetch water Tilda should stop contaminating the water through chemicals being spread Put a blockage on the water so that when the water is released flooding is controlled and people's property are not destroyed. Bylaws on Tilda rice firm stop blocking and diverting the water so that the villagers can also benefit

		belonged to the people and at the end of it all people are left to suffer.		
Kapyanga	Buwofu	Namaku water, this source supplies drinking water for domestic use and it is highly polluted with human waste.	• Multiple sharing of water sources with animals which drop their wastes in the water hence contamination. • Silting and sometimes with fecal matter all draining into the water	• Construction of latrines to improve on sanitation. • Gazzetting water uses for specifically animals to differentiate water access points from those being used by the people. • Sensitization on water usage and water source protection. • Protect the wells by planting vegetation surrounding them. • Treatment of water using chlorine and water guard
Buwunga	Magola	Kitumbeze wetland, serious encroachment on the wetland with rice farming. River flow tempered with, crop production along the buffer zones, eucalyptus trees planting is scattered along buffer zone.	Rice production in wetlands	Restoring of swamps and embarking on upland rice growing. Policy bylaws on environmental management" there should be enforcement limiting farming in wetlands. Restoring of swamps by reclaiming them from the farmers who are misusing and damaging them.
Budaya	Budde	Heavy mining in Budde village in Bugiri, mining industry is ideal option	Un employment, population pressure, land fragmentations	Mining industry for the communities, organize the miners in to groups for better marketing, environmental management practices, promote management of mining sites, encourage close mining methods
Bugiri municipality	Nkusi	Nkusi village. Poor solid waste management. Garbage is spread all over the place and the place seems to be a collection centre but rubbish is scattered. Rubbish is picked by the municipal occasionally and taken to another dumping site in Nkusi. This is garbage from homesteads and the municipality.	Poor solid waste management and inadequate knowledge on solid waste management	Waste skits for collecting municipal wastes, construction of landfills, rules and regulations for managing solid waste

VICTORIA NILE CATCHMENT

JINJA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Mafubira	Kaitabwala	Kaitabwala swamp, Kaitabwala village, the water is polluted with local brew effluents. The whole area of the river is smelling waragi. Deforestation is at a high rate in the area, soil erosion downstream is very high and there are no measures in place to control it. There is a high rate of open defecation in the stream.	Inadequate awareness on sanitation, weak implementation of environmental laws, poor farming practices.	Strengthen the compliance with industrial discharge of wastes in to river systems, plant trees along the river bank, promote soil and water conservation practices, promote environmental health and sanitation
Mafubira	Makeke village,	Lolopipit distillers in Mafubira sub county makeke village, there is a lot of air and water pollution, the effluent is directed in the river, high usage of fuel hence deforestation, risk of accidents is also possible in terms of explosion, high congestion is also evident, this hot spot is found in Victoria Nile	Inadequate awareness on environmental management, poverty, population pressure, weak implementation of laws and regulations	Strengthen the implementation of environmental laws, family planning, awareness on environmental management, DRR plans for the community, promote compliance in terms of discharge of industrial effluents
Mafubira	Wanyama rd. and the cemetery	Nile aluminum factory being constructed in the wetland in Mpumude between Wanyama rd. and the cemetery. Swamp reclamation has been done in order to firm the land for construction of this factory and it is sitting on about an acre of the wetland. There is also a rate of deforestation in this area. An EIA should be conducted for this factory to prevent adverse effects on the wetland and the entire neighboring area. Soil erosion is very evident in this area. There is uncontrolled farming of food crops like sweet potatoes in the wetland.	Weak implementation of environmental laws, poverty, un employment, population pressure, land fragmentation	Gazette the wetland for conservation, encourage tree planting, EIA for the project, soil and water conservation practices, community sensitization on environmental management
Bugembe	Bugembe	Bugembe town council, poor waste management hence causing the nearby	poor solid waste disposal, weak	Construct a land fill, carry out sensitization

	town council	communities to be at a risk of disease.	implementation of environmental laws, population pressure, rural-urban migration	on both sanitation and environmental health

BUIKWE DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Najja	Lukalu	Lulalu borehole abandoned borehole due to poor water quality, though its protected and farming is also taking place around it	• Nature of the site which originally has poor quality water	• Proper discovery of sites / areas with good water levels and at the same time good quality
Najja	Kiyindi landing site	Lake Victoria shores, communities dumping their solid waste in the lake. Silver fishing the most common economic activity. Serious human settlement at the shore of the Lake Victoria, milling machines at the shore for silver fish and motor bike repairing also evident at shore.	Trade in way that people dispose polythene bags thus affecting the whole catchment	Allocation of waste collection points for rubbish and polythene bags. Ban polythene bags
Njeru Central division	Njala egobye	GM Sugar limited, oil processing company, complaints of air pollution from this company as a lot of fumes are let out by the company into the atmosphere and the sugarcane husks that are blown from the company into communities are very dangerous to the health of the people. It has been closed on several occasions over non-compliance with the waste management, pollution regulations, but it is still running.	Non-compliance by the industries, weak implementation of the policies governing environment.	Strengthen environmental compliance policies, sensitization community environmental management, encourage EIAs before projects take off.

Njeru Central division	Njala egobye	Njala egobwe in Victoria nile Njeru Central division, there is un planned dumping of waste from the central division. people also stay around the dumping site; some people try to separate polythenes but they don't have protective gears like gloves and gumboots	Insufficient fund allocation for waste management, inadequate awareness on waste management, insufficient waste collecting gadgets.	Land fill for waste management, massive awareness for market vendors and traders in regards to waste management, regulation should be put in place to manage waste, waste collecting skits can also be put in every corner of market for waste collection.

KAYUNGA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Kangulumira	Kangulumira	Kangulimira spring, solid waste dumping, encroachment on nearby wetland, brick making is also highly happening. High soil erosion around the spring eucalyptus planting is taking place.	• There is much deforestation due to charcoal burning and in search of fire wood for brick laying and domestic use. • Poor disposal of polythene materials (kavera) including pampers. • Poor farming methods that has increased incidences of soil erosion. Over cultivation on the swamp, stream and river banks.	• Promote tree planting to increase the tree population in the sub county • People should be educated on how to conserve the environment. • Law enforcers be sensitized too, because instead of enforcing the law they are the ones who are protecting the culprits at extremes they even have armed escorts in uniform.• Extension workers are provided to educate people on good farming methods.• Manufacturing of polythene should be stopped • The laws governing the proper disposal of the wastes be implemented. • Sensitization of community members on other sources of income, maintenance of

				environment and advantages of cultivating while securing the buffer zone • Better farming methods on limited land be introduced
Busaana	Lusenke	Community members are mining stones. No environment initiative in place.	• Poor mining Methods	• Sensitization of community members on other sources of income, • Come with policies and regulations and guidelines governing the mining and implement.
Busaana Ntengeru Bukoloto	Kyengera_ kayonj Kantenga Nsotoka	Wetland at the border of Kyengera_ Kayonjo villages. Rice cultivation in the wetland. Poor farming methods used in farming. Improper use of fertilizers is a common practice in this area. Kantenga swamp in bukoloto needs demarcation of the swamp. Encroachment on the swamp. Awareness creation on sustainable use of the swamp. Nsotoka swamp. Rice growing has taken over the whole swamp. it is carried out in an unsustainable manner. Restoration of the swamp is required. Improved seeds and formation of rice farming groups and necessary.	Unemployment, non-compliance with environmental laws, population pressure, land fragmentation.	Rice schemes, promote climate smart technologies, demarcation of the wetlands, awareness creation sustainable use of wetlands, strengthen environmental laws in regards to natural resource management

Busaana	Busaana	Busaana, coffee wilt disease is very common. Poor post-harvest handling of coffee. Poor yields from coffee are some of the challenges in this area. Water scarcity is also a big challenge in this area	Poor farming practices, climate change,	Improved seeds are required so as to improve yields, encourage climate smart agriculture, promote soil and water conservation activities among the famers, construct more water sources in the areas.

BUYENDE DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Nkondo		Lake Kyoga, Kasongwire landing site, there is high water hyacinth, siltation, over fishing, poor fishing methods, grazing along the lake Kyoga that has caused water pollution, un planned settlements, farming along the lake shores. No measures in place.	• Lack of enough land for raring animals. Poverty. • Lack of alternative sources of income. • People are very ignorant about the laws governing wetlands and the environment in general.	• Buffering of shore by planting tree to prevent siltation. Promote zero grazing. Observe the water zones.
Kidera		Bukungu landing site, there is poor solid waste management as garbage is heaped on the shores of lake Kyoga. Also, this is a very busy area with a lot of activity like washing clothes whereby the water is poured right back into the lake. Fishing is the main economic activity though the fishermen are complaining about the new water weed they have named Nankabirwa which is taking over the entire lake making it impassable for boats. This is a big hindrance for fishing, navigation, water collection for domestic use though this water is very dirty, it is preferred to piped water by the locals and goes for a higher price of 300/- per 20 litre jerrycan as compared to 100/- per jerrycan of piped water because people fear the chemicals in the piped water and feel it is not safe. Both	No proper waste disposal mechanisms are in place.	Sensitisation of people on water sanitation and hygiene like construction of pit latrines.

		people and animals use this water. Also, there is a beach management unit that is not functional but only comes out to tax the fishermen. There is a lot of defecation into the lake water.		
Buyende	Nabigaga	Nabigaga wetland, under threat of encroachment, overfishing, measures, demarcation of Nabigaga wetland, creating awareness in sustainable use, promotion of rice scheme, this wetland separates Kamuli and Buyende, and it's found in Victoria Nile catchment	Unemployment, population pressure, poverty, weak implementation of environmental laws	Demarcation of the Nabigaga wetland for conservation, rice scheme in the wetland is also another option, plant trees along the boundary of the wetlands
nkondo	Imeri	Imeri dam, recently rehabilitee by the ministry of agriculture. It is used by both animals and people. However, there is a high rate of deforestation for charcoal burning around this parish. Reforestation is needed around this dam. The animal watering points around the dam should be rehabilitated.	Population pressure, poverty,	Tree planting, increase water accessibility by constructing boreholes, spring water, rain harvesting tanks, desilt the dam to accommodate more water
Nkondo	Ndulwa	Ndulwa parish, Food insecurity threat, poor yield due to lack of improved seeds, prolonged drought, invasive weeds (strigar weed), soil erosion, and poor farming methods, proposed measure are training farmers on proper farming methods and use of fertilizer, use of improved seeds, micro irrigation, better preservation methods	Poor farming practices, land fragmentation, poor seeds in the market	Use of improved seeds soil and water conservation methods, modern farming practices, eliminate striger weed, mi I irrigation for the farmers
Nkondo	kiwaaba landing site	Kiwaaba landing site, on Lake Kyoga. There is water scarcity, the water is very salty and people cannot even take it. The people need a water treatment plant because the water is abundant but inaccessible because of the giant salvinia weed. This would be a good site for fish ponds if the water weed is removed.	Discharge of industrial wastes in to river that provides nutrient for the weeds, use of fertilizer for farming in	Create buffer zones for the lake shores, community sensitization of environmental management, promote fisheries through fish ponds, promote

	Kasuku Butibitibito village	Fishing is now impeded by the weed. Drinking water is a very big challenge as the water is very salty. Navigation is now very difficult because of the Nankabirwa weed. Kasuku landing site, invasive water weed, cultivation on the river banks, proposed measures, implementation of biological control methods to control the weeds Butibitibito village, none functional borehole, water is hard and salty.	the nearby communities, ineffective implementation of available environmental policies	environmental friendly means of managing the water weed, construct water treatment plant to provide water for the nearby communities, construction of boreholes and springs, strengthen beach management units with governing policies.

KAMULI DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Namasagali	Kisekye zone B	There is a high rate of deforestation, all kinds of vegetation are burnt into charcoal to earn a living. Trees felled are collected until they accumulate and are enough to make as many sacks of charcoal as there is vegetation in the area then burnt and another virgin is sought that still has some trees/ vegetation. One of the charcoal burners says that this practice is very common because there are no alternative sources of income and yet they have families to support. Bush burning, the rate of soil erosion in this area is also very high as seen from the pedestals that have been exhumed from underground by continuous washing away of the top soil. There is also rampant land grabbing in the area therefore people are very conscious of any one they see on their land but also, they are very aware that the activities they are carrying out are very dangerous for the environment. There is only one borehole serving the whole village though the water is clean enough.	• Poor low enforcement. Poverty. • Deforestation. Over population. Brick laying	• Supply tree seedlings for the community to plant. • Strengthening the implementation of policies and regulation regarding the wetland and forest • Planting of grass and trees to stabilize the soil along the river banks • Soil and water conservation technologies such as digging of retention ditches to control soil erosion. • Bye-laws regarding environmental conservation strengthened and implemented • Sensitization of people on environment conservation options such as efficient energy use • Promote change agents in the communities who will be the trainers of others in regards to

				environment conservation and management • Form environmental committees to conserve the environment. • Providing piped water.
Namwendwa Kiyunga Kasabira Nawanyago	Bulogo village Musunu Kiko Turbu	Bulogo village, Namwendwa wetland. There is a high rate of deforestation, poor farming practices are being used. The wetland has been encroached on for rice and cabbage growing. Soil erosion is also very evident. Musunu swamp which pours in kiko wetland. Improved seeds are required in this area as the rice yields are very low yet a lot of effort is put into rice growing by the people. Also, sensitization on proper farming methods is needed. Deforestation is high in that even fruit trees are cut down for charcoal burning. Kiko wetland bordering Nawanyago a d kasabira, encroachment by rice farming, proposed interventions are demarcation of the wetland, provision of improved seeds, sensitization of farmers, implementation of regulation of wetlands Turbu wetland. It also pours into Kiko wetland. It has been heavily encroached on for rice growing. Demarcation of this wetland is required. The methods used for clearing the land are unsustainable. Trees have been cut out of the wetland for charcoal burning.	Population pressure, poverty, unemployment, inadequate awareness, poor farming practices	Rice schemes in the wetlands, degazetting of wetland for conservation, soil and water conservation activities, strengthen the implementation of environmental laws, farmer sensitization on good farming practice and natural resource management, promotion of improved seeds to be planted by farmers, plant trees along the boundary of the wetlands, establish tree nursery, promote energy saving technologies
Kisozi	Namatovu	Namatovu village, quarrying and mining is massive and its needs some urgent interventions	Unemployment, poverty, population pressure, weak regulations.	Awareness in proper quarrying methods, issuing of permits.
		Isimba dam on River Nile at the border of Kamuli and Kayunga. Sand mining is very rampant and the methods used to collect the sand from the river are very dangerous as the people go into the water on boats and then dive into the water with baskets collect the sand from below and pour it on their boats.	Weak implementation of regulation, weak monitoring, population pressure,	Increase the implementation of environmental regulations, promote climate smart technologies, promote water and soil

		Cultivation on the river banks is very common. River bank stabilization is recommended. Shrinkage of the river has taken place as informed by the locals in the area.	poverty, unemployment.	conservation, create buffer zones for the River Nile, plant trees along the river banks, establish tree nurseries for communities for planting

LUMBUYE CATCHEMENT

IGANGA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Central division		Walugogo/ Buliigo wetland, a lot of buveeras littered all over the area, the area is very sloppy and receives all the water and sewage from the town. There are open wells that are prone to contamination; the shallow wells water are very contaminated because each person places their jerrycans directly in the water and women use their legs to push jerricans into the well so as to fetch enough water. The well has no cover so even poisoning (malicious) can be done to the users through this well. The drainage channels are too narrow and there is alot of running water that passes through this area in the rainy season (as informed by the area councilor), there are a lot of mosquitoes in the area from the water. A lot of wetland encroachment by the locals but the LC says that they have land titles for the land. A lot of trees have been planted in the area mainly eucalyptus.	• No proper waste disposal mechanisms are in place • Lack of water protection for the shallow wells. • Poor methods used to draw water from the wells like stepping on the Jerrycans inserted in the water	• Sensitization on how boundary demarcation is done for wetlands and what they base on. • Cleaning the water sources. • Compensation for the evicted communities. • Dialogue between the government and the local people as they know where the boundaries are meant to pass for the wetland. • Increase in municipal budgets to cater for the maintenance of water sources. Provision of solid waste management mechanism

Iganga central division		Bulubwandi stream. There is high encroachment, people cultivate up to the river bank, and they cultivate sugarcane maize, bananas, cassava. People have built up to the river and the nearby swamps, bodabadas also wash their motorcycles from the river, a lot of waste dumping is also done in this river, green algae and polythene bags are observed in the water. This stream is also found near formula motel hotel and they also don't have clear waste management system. There were no measures seen in place.	• Relaxation in policy implementation • Over population and land scarcity, that leads to land fragmentation, and encroachment of the wetland. High demand for sugar cane has led to encroachment of the wetland • Poverty • Poor waste management and lack of pollution control • Lack of other cheap packaging materials and regulation on the dumping of polythene bags.	• Boundary opening of wetlands so that these land disputes can be solved. • Sensitization on how boundary demarcation is done for wetlands and what they base on. • Cleaning the water sources. • Construction of latrines far away from the water sources • Compensation for the evicted communities. • Dialogue between the government and the local people as they know where the boundaries are meant to pass for the wetland. • Government should subsidise water prices for the people. • Increase in municipal budgets to cater for the maintenance of water sources.• sensitization of people on wetland regulation • strengthening implementation of policies and regulations • passing restoration orders for walugogo wetland
Bulamagi		Bwanalila abattoir constructed by the district of Iganga, no water source in the area as the nearest water source is a borehole which is about 100m away. This place was cleared of all trees, though there is some potato cultivation still taking place. There is no proper solid waste disposal as the place is littered with buvera, maize kobs, and papers. There is animal dung littered all over. There are no measures in place to ensure that the environment is not degraded.	• High demand for charcoal and firewood • land clearing for farming and settlement. Poor waste management	• sensitization of the people on the benefits of the trees • practicing re afforestation and re-afforestation • establishment of woodlots Put in place mechanisms for solid waste disposal and management
Bulamagi	Kasolo	Tembo steel mills, there is poor solid waste management as buveras and other rubbish is littered around the fence of the	• Failure to implement EIA recommendations • Relaxation in policy implementation	• Monitoring and evaluation of projects and industries should be done • Regulation and laws be

		industry. This industry emits dangerous fumes into the atmosphere and they do not have a chimney (as informed by the LC). The drainage channels of waste water are too narrow to carry all the waste discharged from the industry. Also, there is no proper place where all the waste collects from the channels as it just goes into nearby garden of maize. This industry does not cooperate with the district officials when they are called upon to do cooperate socio responsibility of buying tree seedlings for neighboring communities to plant trees that can absorb the fumes and reduce the impact (as informed by the LC). There are also a number of cut trees on the industry premises. The industry is owned by Indians.	• In adequate monitoring and evaluation	strengthened in Tembo milling still on pollution control • Implementation of EIA recommendations (Environment Management Plan). Reforestation

KALIRO DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Budomero	Nbwenda	Siltation at the site is evident, water abstraction is common in the morning and evening time facilitated by boat riders and fishermen. During wet season the water level rises and during January period, the shores of lake Nakuwa dry and water level reduces. Fishing is the main economic activity and have more than 50 boats and rice growing and livestock grazing is on small scale and evident.	• Siltation of streams results from water runoff which is induced by human activities such as swamp reclamation for farming that has loosened the soil structure. The eroded soil deposited into the swamps and streams lowering its capacity to contain the water hence	• Tree planting. Provision of water harvesting tanks to increase the supply of water. Construction of Dams to provide water and help in fish farming as an alternative livelihood option.• Digging of drainage channels to control floods

			bursting and causing floods. • Human activities such as deforestation, swamp reclamation, and charcoal burning are the cause of dry spells. • Lack of enough water source to serve the communities	
Bulongo	Border of luuka and kaliro	River Lumbuye; The river banks should be demarcated clearly. Motorcycle washing is common in this river. The water is much polluted. A road is being constructed in this wetland but also channels need to be put in place to avoid flooding of the road. Unplanned rice growing is also taking place. The river banks need to be demarcated clearly and also proper farming methods sensitization of the farmers. Soil erosion is also very common now that there is road construction but otherwise the water is still of good quality.	Poor farming practices, land fragmentations, population pressure, inadequate implementation of the environmental laws	Create buffer zones for the river Lumbuye, plant trees along the river bank, increase the implementation of policies governing natural resources management, promote water and soil conservation practices, promote climate smart technologies, promote rice schemes in the wetlands, promote EIA for projects taking place in the wetlands
Kasoko	Byayuya	Kaliro sugar factory, poor disposal of waste by surrounding community, pollution by the industries, measures for waste treatment, proper disposal of waste, monitoring of factory to monitor compliance by industry, sensitization of surrounding communities on proper farming methods, Sugar factory stakeholder to participate in CMP	Inadequate land for construction of industries, poor waste management, non-compliance by the industries, poor monitoring by the authority, inadequate community awareness on solid waste management	

Namugongo	Border of Bukubankola and bugonza	Swamp at the border of Bukubankola and Bugonza. It has been encroached on by rice growing. Improved seeds and fertilizers are needed as the yields are very poor. Soil fertility is very low and alarming and people say that is the reason they are opting for cultivation in the wetlands. Trees have been cut from this area.	Poverty, land fragmentation, population pressure, political influence.	Degazetting the wetland for conservation, create buffer zones for the wetlands, encourage tree planting, encourage soil and water conservation practices, formalize the rice growing in to schemes,

MAYUGE DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Mayuge town council	Bujingo	There is a high rate of soil erosion in the area, a car washing bay is in the vicinity of the water source so all the dirt washed from the cars easily finds its way into the water source, there are tree nurseries near the water source and also water abstraction from the water source into a ditch with a lot of algal bloom at the top. This water is channeled into the rice farm that is nearing the ditch. There is cloth washing taking place from the water source so the water used for washing easily finds its way back into the water source. This spring was protected but needs renovation as per now, water is not only fetched from the pipes but also from the stagnated water around the pipes. Children play in the water that they later fill into jerricans and take home for domestic use by the parents. The jerrycans are washed in the same water that is collected. There is a pine woodlot in the area but also there is some deforestation taking place.	• Water abstraction is done to meet water requirements for farming (rice, & sugar cane) construction of schools and industries. People swim and leave their dirt in the water hence making it dirty. • Running water carries dirt and pours it into the water source most especially for swamps and wells.	• Construction of more protected springs and boreholes to provide clean water. • Protecting water sources by fencing, planting trees and grass around the water sources

Mayuge	Tsetse zone	Lumbuye wetland, high encroachment of wetland for sugarcane growing and construction of school (Mayuge girls). There is also marram extraction at extreme side of the school. These activities have led to flooding of Tsetse zone whenever it rains heavily. There is continuing filling of the wetland to expand on the construction of the school, road construction is also taking place. However, the school has tried to plant trees and dig water channels to control on floods.	• Land scarcity, this has pushed people to the wetland. • Lack of sensitization on environmental conservation and management. The cost of acquiring a wetland is low compared to the upland which has made most institutions and industries to go in for the wetland.	• Sensitizations the communities on environment management and conservation • Digging of drainage channels to control floods • Relocation of the Muslim supreme council from the wetland to the upland. • Strengthening implementation of the laws regarding the wetland • supplying and planting of trees.

LUUKA DISTRICT

Sub county	Village	Problem description	Cause of problem	Proposed measures and interventions
Waibuga	Namadope	Most of the wetland has been planted with sugarcane. There is a high rate of water abstraction especially on the side of the catchment that has rice. There is a track carrying lots of sugarcane to the factory from the plantations. The wetland is highly endangered as the water levels are liable to shrinkage. Water is fetched from here for domestic use and also cattle is drinking from the same water source. The water is dirty. People have their cattle tethered in the wetland. There is a UGACOF office in the wetland vicinity. Water is fetched for domestic use. There is brick making in the wetland as well as food crop farming of potatoes, maize. There is a dam constructed to reduce flooding but also there has been sand mining around the dam but also UGACOF taps water from	Demand for construction materials. Land scarcity, this has pushed people to the wetland. Water abstraction for farming.	Afforestation. Strengthening implementation of the laws regarding the wetland. Sensitizations the communities on environment management and conservation

		the dam. People are very cautious when they see a vehicle stop probably because they know that what they are doing is wrong.		
Bukanga Bukooma Namulada	Kiloba Kamirantumbu Namulanda	Kiloba swamp, There is need for boundary demarcation. Lumbuye passes through this area. It is highly encroached on by farmers. During the rainy season, the whole area gets flooded with water and crossing from Iganga to Luuka becomes a challenge. if the dam in Namadope is worked on, it could supply water to this whole area to reduce water scarcity in this area. Kamirantumbu swamp. The road has been cut off by water, there is need to construct a bridge. there is intensive rice farming yet poor seeds are used so the yields are poor. A scheme can be formed in order to prevent degradation of this swamp and improve yields. Bush burning is also very rampant for clearing land for agriculture. Deforestation is apparent as land is cleared for agriculture. Soil erosion is also high. Namulanda wetland, encroachment of wetland by farming activities such as sugarcane, and maize, Wetland demarcation, and sensitisation of farmers, provision of improved seeds, and the catchment is found in lumbuye catchment.	Poverty, population pressure, political will, unemployment, lack of enough land, environmental degradation and inadequate awareness on environmental management	Create buffer zones for the wetlands, establish rice schemes in the wetlands or gazette the wetlands for conservation, create water ways in the wetlands, encourage climate smart agriculture, encourage soil and water conservation technologies, DDR plans,

Bulongo Bukoma	Nakisenyi Kameratumbu	Nakisenyi multipurpose dam, intensive siltation of the dam, the dam is full of water hyphens, there is encroachment of wetland by farmers, measures rehabilitation and conservation of the dam, training of rice growing on proper farming methods and the use of fertilizers to increase production. This is found in nakisenyi village lumbeye catchment Kameratumbu dam; Non-functionality of the dam, the dam is full of water hyphens, there is alot of siltation the dam is also inaccessible because of too much water, measures rehabilitation of the dome, demarcation of the wetland, construction of the road that pass through kameratumbu swamp to ease accessibility, this is found in lumbeye catchment	Poverty, population pressure, political will, unemployment, lack of enough land, environmental degradation and inadequate awareness on environmental management	Encourage soil and water conservation practices, sensitize communities on modern farming technologies, desilt the dams, demarcate the wetlands for conservation

Annex 3: GUIDELINES FOR USE OF THE LOCAL WATER SECURITY ACTION PLANNING TOOL

The methodology consists of six main steps that are summarized below.

Step 1. Initial planning team identifies two to four cross-cutting stakeholders in each cluster (district/sub County). These stakeholders should be familiar with the widest possible range of organizations that might have a stake in the issue (e.g. an NGO with an interest in water availability linked to health, livelihoods and environment across the catchment/district/ municipality, rather than one that works specifically with women or young people in a small number of villages).

Step 2. The planning team clearly establishes the focus of the project or issue in which organizations may have a stake. The planning team must be as specific as possible, so that cross-cutting stakeholders can clearly identify who has a stake in the project and who does not.

Step 3. The planning team invites cross-cutting stakeholders to a meeting/workshop. Only two to four stakeholders plus the project team should be present at the meeting/ workshop, as the aim is not to represent all stakeholders (this is not possible as they have yet to be systematically identified).

Workshop/Meeting protocol is as follows:

At the beginning of the meeting/ workshop, the planning team should choose a well-known stakeholder organization and run through the stakeholder analysis for this organization. The following attributes should be assessed: interest in water management, involvement in water management, influence, knowledge, and access to high-quality water related information. The planning team should explain that interest and influence can be both positive and negative (e.g. a group's interests might be negatively affected and they may have sufficient influence to block as well as to facilitate a project).

The planning team should then ask participants to identify organizations, groups or individuals that are particularly interested and/or influential

Focusing on one stakeholder at a time, the group discussed the nature of their interest and the reasons for their influence, and should capture the discussion as well as possible in the matrix. (Participants can be asked to record points on post-it notes where necessary, to avoid taking too long.)

Participants can add rows for less interested and influential stakeholders as they go. Participants should be reminded to try to identify groups that might typically be marginalized or disadvantaged, but that still have a strong interest.

Participants can add their own comments using post-it notes where they disagree or do not understand.

The planning team then facilitate a discussion of the key points about stakeholders that people feel should be talked about as a group. It is important to focus on points where there is particular

disagreement or confusion and to resolve these issues where possible (accepting the differing views where it is not possible to overcome differences).

The planning team then identified key individuals with whom to cross-check findings after the workshop. Up to five individuals from particularly influential Organizations should be selected.

Step 4. The planning team interviews key individuals to check that no important stakeholders have been missed. Depending on the sensitivity of the material collected, the planning team may only want to share the list of stakeholder Organizations and their interests (rather than their level of interest or anything else). In the case of some individuals, it may be possible to check all columns in the matrix, but it is important to be aware that some Organizations may be upset that workshop participants perceive them as having a low level of interest and/or influence. If the list of stakeholders from the workshop is sent in advance, these interviews should take no longer than 30 minutes each and can be done by telephone.

Step 5. Depending on how much the analysis changes after the workshop, the planning team may want to check the amended version with workshop participants and make a final version

Step 6. The planning team writes up the results. Some of the columns can easily be converted into graphs where there are numerical data or categories involved. The planning team should consider carefully whether all qualitative data should be made publicly available in a form that is linked to specific named Organizations and individuals, especially where this concerns conflicts between Organizations. For a publicly available version of the report, types of conflict may be summarised and the nature of stakes and types of influence may also be summarised for different types of stakeholder, accompanied by graphs of numerical data/categories. Farming Organizations, for example, are most likely to be interested in certain aspects and have most influence over certain policy areas. The full stakeholder analysis matrix should be retained for use by the project team

Annex 4: LIST OF STAKEHOLDERS REACHED

S/N	DISTRICT/ INSTITUTION	NAME	DESIGNATION	CONTACT	DATE
1.	Butaleja Doho Rice Scheme	Lyrus Nagolo	Officer	0705862551	23.7.2016
2.	Butaleja Doho Rice Scheme	Malwa Sam	Officer	0706997601/0785794012	
3.	Mbale National Forest Authority	Chepkurui Scovia	In charge Mbale Branch	0782578691	25.7. 2016
4.	Mbale National Water and Sewerage Cooperation	Erick Nyanga	Senior Technical Officer	0772564540/075111301	25.7. 2016
5.	Tororo National Life Stalk Resource Research Institute (NALIRRO)	Kirya Herbert	Officer	0782507124	26.7. 2016
6.	Tororo Cement	Isanga Robert	Environment Officer	0772929574/0758645393	26.7. 2016
7.	Busia N.W.S.C	Akwii Sarah	Manager	0752426661	27.7. 2016
8.	Tororo N.W.S.C	Etendnal Fredrick	Officer	0774572098	26.7. 2016
9.	Busia Salaama Integrated Fish Farm ltd	Emoit Anthony	Officer	0772306228	27.7. 2016
10.	Mbale Bugisu Cooperative Union	Babra Wasagali	Officer	0782644454	26.7.2016
11.	Mbale IUIU Mbale	Kimuli Faizo Hamuza	Estates Manager	0782971163	26.7.2016
12.	Mbale Uganda Red Cross Society	James Ajoba	Project Water and Sanitation Engineer	0777 316196	26.7.2016
13.	Mbale Uganda Christian University	Julius Mafabi	Head of Facilities	0782 759582	26.7.2016
14.	Mt. Elgon Millers Limited	Andrew Katunku	Accountant	0700 470796	26.7.2016
15.	Buikwe Lugazi Sugar		Environment officer		29.7.2016
16.	Iganga N.W.S.C	Paul Isagara	Manager	0751115522	25 .7.2016
17.	Iganga Tembo Steel	Nicholas Elizah	HRM	0703860777	25.7.2016
18.	Iganga Tembo	Alex	Environmental	0771695675	25.7.2016

	Steel	Akuguzibwe	and safety specialist		
19.	Kamuli National Water	Stephen Walakira	Branch Manager	0772885098/0702885098	27.7.2016
20.	Kamuli sugar Limited	Parimal Patel	Director	0776714545	28.7.2016
21.	Jinja National Water	James Tumwesigye	Area Manager	0751115966	28.72016
22.	Jinja Uganda Red Cross	Nayenga Uthuman	Focal Point	0701772233	28.7.2016
23.	Jinja BIDCO				28.7.2016
24.	Jinja SWT Leather Industries			0772711033	28.7.2016
25.	Jinja	Dr. Wanda Fred M	Limnologist	0755795355	

S/NO	DISTRICT SUB COUNTY	NAME	DESIGNATION	CONTACT	DATE
1.		Wabwire David	DEO	0776923985	
2.	Budaka	Kijali Kamwada	DEO	0774961051	22.7.2016
3.	Budaka	Nawato Dan	Forest Ranger	0774871826	22.7 .2016
4.	Budaka Kameruka		Sub County Chief	0774013874	22.7.2016

5.	Budaka Kameruka	Gonswa I	C/P LC111	0782348091	22.7.2016
6.	Budaka Kameruka	Miso Safatia		0771817127	22.7.2016
7.	Budaka Kameruka	Wenene Salamax		0785705053	22.7.2016
8.	Budaka Lyama		S/C CDO	0772440417	22.7.2016
9.	Budaka Lyama	Mununa w.	P/Chief	0772230200	22.7.2016
10.	Budaka Lyama	Nachomo Teruga	Sub county chief	0787686737	22.7.2016
11.	Budaka Lyama	Nagendi	Councillor	0783376004	22.7.2016
12.	Budaka Lyama	Nkewe	A/A	0753042278	22.7.2016
13.	Bududa	Namono Marion	DEO	0785280279	13.7.2016
14.	Bududa Bukibokolo	Wambette A	Accountant	0781922948	13.7.2016
15.	Bududa Bushiyi	Kusolo Paulo	S/C Chief	0782489243	13.7.2016
16.	Bududa Bushiyi	Kusolo Sam	C/Conservation Trainer	13.7.2016	13.7.2016
17.	Bududa Bushiyi	Walimbwa	C/P LC3	0772438821/0756693500	13.7.2016
18.	Bugiri	Hussein Lwanga	DEO	0772472714/0701473714	28.7.2016
19.	Bugiri	Odongo John		0753996618	28.7.2016
20.	Bugiri Buwunga	Sawenja mike	Parish chief	0701338776	28.7.2016
21.	Bugiri Buwanga	Batwala Zone		0703871474	28. 7.2016
22.	Bugiri Kapyanga	Asumani		0701662901	28. 7.2016
23.	Bugiri Kapyanga	Meddi Kisubi		0701111492	28. 7.2016
24.	Buikwe	Solomon Musoke	DNRO	0772460327	29.7.2016
25.	Buikwe Najja	Kimera Badru	P/C	0784569501	29.7.2016
26.	Bukanga Luuka	Chakasi Fred	S.H.A	0772425479	25. 7. 2016
27.	Bukanga Luuka	Kama M	Parish Chief	0752454848	25. 7. 2016
28.	Bukanga Luuka	Kiiza Lydia	Parish Chief	0701336961	25. 7. 2016
29.	Bukanga Luuka	Mananda Ivan	CDO	0784065013/0758843004	25. 7. 2016
30.	Busia	Apetai Geofrey	Parish chief	0774824984	27.7.2016
31.	Busia	Erienyu Johnson	DEO	0772890721	27.7.2016
32.	Busia	Sikuda	S/C		27.7.2016
33.	Busia Sikuda	Amoit Caroline	CDO	0773388338	27.7.2016
34.	Butaleja	Lumala	DNRO	0782608259/0704	23.7.2016
35.	Butaleja	Mwima Kuzaifa		0777998675	23.7. 2016
36.	Butaleja Himutu	Higenyi Feb	C/man LC111	0782848354	23.7.2016
37.	Butaleja Himutu	Higenyi Wilfred	P/C	0779633178	23.7.2016
38.	Butaleja Himutu	Justine M	A/Councilor	0784799037	23.7.2016
39.	Butaleja Himutu	Mutiwa M	S/ Production	0704870508	23.7.2016
40.	Butaleja Himuntu	Faizal Hamzah	A/ENV. ENG	0701971163/0782971163	23.7.2016
41.	Butaleja Naweyo	Baluka Agatha	Councilor	0700568909	23.7.2016
42.	Butaleja Naweyo	Boola Juma miya	C/M LC111	0782285561/0702616097	23.7.2016

43.	Butaleja Naweyo	Hifunde Jamada	P/C	0779067527	23.7.2016
44.	Butaleja Naweyo	Kumini damasca	Councilor	0788339545	23.7.2016
45.	Butaleja Naweyo	Weyawo M	CDO	0782555171	23.7.2016
46.	Buyende	John Paul	DNRs	0773929735,075 741155 (Mobilization and FGD)	28.7.2016
47.	Buyende	Wambi Richard	CAO	0782958020, 0752958020	28.7.2016
48.	Buyende				28.7.2016
49.	Iganga	Mugabi Andrew	CDO	0774140174	21.7.2016
50.	Iganga	Balaba Edward	Municipal Environment officer	0758007457	21.7.2016
51.	Iganga	Samanya Abdul	District Environment officer	0706409799	21.7.2016
52.	Iganga	Egulwa Emmanuel	ACDO	0702484974	21.7.2016
53.	Iganga	Mutesi Hannah	Parish chief	0701840938	21.7.2016
54.	Iganga Bulamogi	Kibeedi Alaisa	For CDO	0702169989	21.7.2016
55.	Iganga Bulamogi	Mirembe Prossy	secretary	0774435271	21.7.2016
56.	Iganga Municipal	Kaka Husein	ACDO	0702127273	21.7.2016
57.	Iganga Municipal	Naigaga Khasifah	Environment Focal Person	0784011105	21.7.2016
58.	Iganga municiple	Balaba Edward	Envt officer	0772449475	21.7.2016
59.	Ivukula	Wamala Godfrey Abel	P/Chief	0775362884	21.7.2016
60.	Jinja	Wanda Fred.M	Limnologist	0755795355	29.7.2016
61.	Kaliro	Diogo Paul	A/DHRO	0782936589	22. 7. 2016
62.	Kaliro	Jigo Paul	Natural resources officer	0703650389	22.7.2016
63.	Kaliro	Kaziba Moses	CAO	0772517398	22.7.2016
64.	Kaliro	Susan Jolaga	parish Chief	0778193617	
65.	Kaliro	Paul Diogo	District environment officer	0703650389	22.7.2016
66.	Kaliro	Kaziba Moses	CAO	0772517398	22.7.2016
67.	Kaliro	Ivundya Milton	Parish chief		22.7.2016
68.	Kaliro Namugongo	Katerega Edward	Subcounty chief		22.7.2016
69.	Kamuli	Bakashi Samuel	Senior Evt Officer	0775056454 (Mobilization & FGD)	26.7.2016
70.	Kamuli	Isaabirye Robert	DNRs	0755056454 (FGD)	26.7.2016
71.	Kamuli	Jalwiny Silimani	Deputy CAO	0704866877 0772613634	26.7.2016
72.	Kamuli	Kawuzi Samson	LC3	0776831993	26.7.2016

73.	Kamuli	Naika Vincent	Animal production officer	0784483232	26.7.2016
74.	Kamuli	Mutiibwa Charles	Speaker Namasagali subcounty	0787306862	26.7.2016
75.	Kamuli Balawozi	Mawerere Grace	SAS	0771896540	26.7.2016
76.	Kamuli Balawozi	Naka Vicent	APO	0784483232	26.7.2016
77.	Kamuli Kagumba	Isabirye Soosii	ACDO	0779560641	26.7.2016
78.	Kamului Namasagali	Mugweri Benard	LC3	0773995042	26.7.2016
79.	Kayunga	Basalisa Edgar	DEO	0777425372	1.8.2016
80.	Kayunga Kangulumira	Khauka Alfred		0774983191	1. 8. 2016
81.	Kibuuku	Fred Ngobi Aggrey		0701409591	21.7.2016
82.	Kibuuku	Kungula Joseph		0782361542	21.7.2016
83.	Kibuuku	Nanzala Emily Dinah	CDO	0781556739/0757466022	21.7.2016
84.	Kibuuku	Nawoya Bruno	Town Clerk	0775654618/0755654618	21.7.2016
85.	Kibuuku	Okurut David	DNRO	0700473716/0782805933	21.7.2016
86.	Kibuuku kadama	Baluku m	Sub county chief	0772191211	21.7.2016
87.	Kibuuku kadama	Hamba Christine	Health assistant	0789248394	21.7.2016
88.	Kibuuku kadama	Masiga m	Sub County chairperson	0782809123	21.7.2016
89.	Kibuuku kadama	Mosses	CDO	0774282868	21.7.2016
90.	Kibuuku kadama	Mweru Ahmanda	Parish Chief	0782008061	21.7.2016
91.	Kibuuku Tirinyi	Egesa M N	Ass. Vet. officer	0753434809	21.7.2016
92.	Kibuuku Tirinyi	Kasenyi John	S/C/C	0774152797	21.7.2016
93.	Kibuuku Tirinyi	Sajja John	CDO	0777434185	21.7.2016
94.	Kibuuku Tirinyi	Wampola y	Sub County chair person	0782/0752196600	21.7.2016
95.	Luuka	Musenero Bernard	DEO	0771674292	25.7.2016
96.	Luuka	Kyakasi Fred	CDO	0772425479	25.7.2016
97.	Luuka Buwologoma	-	Parish Chief	0752454848	25.7.2016
98.	Maanafwa	Patric mawai	CDO	0784864459	15. 7.2016
99.	Maanafwa Bubwala	Gladys apalat kabusi	Councilor	0787681379	15. 7.2016
100	Manafwa	Sarah Bisikwa	DNRO	0779665033	15.7.2016
101	Manafwa Buwabwala	Khauka Martin	Parish councilor	0788053066	15. 7.2016
102	Manafwa Bwambala	Mr Mawa Fred	S/C Chief	0782515294	15. 7.2016
103	Manafwa Wesswa	Mayeku John		0782892068	15. 7.2016
104	Manafwa Wesswa	Wanambwa Fred		0772997718	15. 7.2016
105	Mayuge	Lubanga Musa	DNRO	0701356318	25.7.2016
106	Mayuge	Alamu Thomas	DEO	0752851765	25.7.2016

107	Mayuge	Odoi Patrick	CDO	0787616124	25.7.2016
108	Mayuge Municipal	Kyeyago Ahmed	Town agent	0701113572	25.7.2016
109	Mayuge town council	Mulabi Proven Wilson	Mayor	0772881970, 0700200475	25.7.2016
110	Mayuge town council	Mutalya Ivan	Physical planner	0774971674,0750677251 (Mobilization and FGD)	25.7.2016
111	Mbale	Baluku Jonathan	DVC/PERSON	0775448942	12.7.2016
112	Mbale	Musamali Micheal	DNRO	0773904582	12.7.2016
113	Mbale	Mwaye James	DGL	0775278031	12.6.2016
114	Mbale	Nakayenze Ann	DNRO	0772555387/0701	12.7.2016
115	Mbale	Semakula		0774547918	12.7.2016
116	Mbale	Wanzala Authorny		0782397238	12.7.2016
117	Mbale Bukasakya	Nambafu Nathan			12.7.2016
118	Mbale Lwaso	Abdul Nabu Zembe			12.7.2016
119	Mbale Lwaso	Jovia Nabukwasi		0701593791	12.7.2016
120	Mbale Lwaso	Swalida Nagwere		0785332122	12.7.2016
121	Mbale Bubyangu	Jagg Deogratious	Parish chief	0779065706	12.7.2016
122	Mbale Bubyangu	Simon Mutambo	Environment focal person		12.7.2016
123	Mbale Lwasso	Annet Namwase	SAS	0782261204	12.7.2016
124	Mbale Lwasso	Kassim Wabonga	CDO	0774388332	12.7.2016
125	Mbale Lwasso	Songo Yakub	Health assistant	0788301696	12.7.2016
126	Namayingo	Muganza Emmanuel	DNRO	0702864698	27.7.2016
127	Namayingo	Nandudu Betty	CDO	0704598792	27.7.2016
128	Namayingo Banda	Masiga Richard	S/C chief	0756255811	27.7.2016
129	Namayingo Banda	Ouma Okello	Parish chief	0756255811	27.7.2016
130	Namutumba	Kikonge George	DNRO	0775059511	15.7.2016
131	Namutumba Ivukula	Balimumitial	SAS	0774142526	15.7.2016
132	Namutumba Ivukula	Batambuze	LC111 C/P	0773866946	15.7.2016
133	Namutumba Ivukula	Luvunya Elly	CDO	0773476843	15.7.2016
134	Namutumba Ivukula	Mutundi Godfrey	SAS	0705587424	15.7.2016
135	Namutumba Luuka	Mununuzi	P/Chief	0775522737	15.7.2016
136	Namutumba Magada	Mugulya Nabirye	V.H.T	0781814060	15.7.2016
137	Namutumba Magada	Mutundi G	V.C.P	0705587424	15.7.2016
138	Pallisa Kasodo	Senda D	SAS	0772674809	13.6.2016
139	Pallisa Kasodo	Wakumwa Yanusi		0772827745	13.6.2016
140	Pallisa Kasodo	Abuka Valentine	Chairperson LC3	0772557016	13.6.2016
141	Pallisa Putiputi	Galiar M	DEO	0772554612	13.6.2016
142	Pallisa Putiputi	Kagenya W	CDO	0782083400	13.6.2016
143	Pallisa Putiputi	MaseniA Mary	SEC P.G.M	0783993958	13.6.2016
144	Pallisa Putiputi	Mujanga John	LC111 C/P	0756802767	13.6.2016
145	Pallisa Putiputi	Ntende S	HA	0772999304	13.6.2016

146	Pallisa Putiputi	Pozi Jazimiru	SAS	0700184684	13.6.2016
147	Pallisa Putiputi	Semuka S	NRO	0782844391	13.6.2016
148	Sironko	Nbukwasi Teddy	DEO	0774106034	14.7.2016
149	Sironko	Rashid	DNRO	0772435518/0702	24.7.2016
150	Sironko Bunyafa	Namukwasi teddy	DEO	0774106034	24.7.2016
151	Sironko Bunyafa	Wasige martin	CDO/ P/C	0782038612	24.7.2016
152	Sironko Bunyafa	Wogamala peter	Opinion leader	0771897450	24.7.2016
153	Tororo	Anguti Silas	DNRO	0772644744	26.7.2016
154	Tororo	Mr Japian Hutlony	S/C Mella sub county	0702728586/0779374059	26.7.2016
155	Tororo	Mr kitong Romans	S/C chief Osukun	0703555432/0771059818	26.7.2016
156	Tororo district Mella	Onyango John	Parish chief	0773533982	26.7.2016
157	Tororo Osukuru	Alowo Vicky Emily	CDO	0700689827	26.7.2016

Annex 6: DATA COLLECTION TOOLS

a) Guiding questions for stakeholder mapping

- Who are the main stakeholders that would need to be involved in development and implementation of an IWRM plan
- Who has a mandate that is directly related to issues that are likely to be addressed in the IWRM plan?
- Who might be affected by the IWRM plan?
- What are their interests and positions?
- Who has information and expertise that might be helpful?
- Who has been/is involved in similar initiatives or planning?
- Who has expressed interest in being involved in similar initiatives/efforts before?
- Who else might be interested in preparing the IWRM plan?
- Are there stakeholders who might want to be fully involved, but for some reason can't be involved to the extent that they would like to be? What are those reasons?

b) Focus Group Guide—Village Community Meetings

District:_____Sub
/County_____Parish_____Village
Date_____

WATER SOURCES AND WATER DYNAMICS

What type of water sources do you have in your locality? How many are they (for each)?
From your experience do you believe they are functional enough to serve the purpose for which they are intended? Are they functional throughout the year? If not, what are the problems?
What is water being used for in your locality?
Do you separate/differentiate a water source for drinking water from those for other activities such as watering livestock, washing, etc.?
What is the average distance that one can cover to access water from the nearby source?
Have you had of complains/issues regarding the water quality?
What are the main causes of poor water quality in your community?
What would you suggest as some of the key measures or initiatives to maintaining good quality of water?

ECONOMIC ACTIVITIES IN THE CATCHMENT

What economic activities do you practice in your locality?
What economic activities do you practice in the in your locality?
Which of the economic activities contributes to deterioration and degradation of the watershed catchment in your locality?

WATERSHED CATCHMENT CHALLENGES/PROBLEMS

What are the issues/challenges/problems in your area that affect the catchment?
What are the causes to the issues/challenges/problems that affect the catchment?
To what extent have they impacted negatively on the catchment?
Are there sections of the catchment that in your locality can be on high alert of deterioration and degradation to be considered a hotspot?
Where are they located (village, parish, and sub-county)?
What measures and or initiatives do you suggest could be implemented in those respective areas to mitigate and manage the issues/challenges/problems above?

STAKEHOLDERS IN THE CATCHMENT

Who are the stakeholders that access, utilize, and manage and degrade ☹ the watershed catchment in your district?
How do these stakeholders use the catchment?
Using the stakeholder analysis matrix (discuss during FGDs)—*see it attached*.

- 3W (who, what and where) matrix
- Their roles and responsibilities in regards to water management and development
- Use the power and influence tool

Does a water resources governance structure exist in your locality? If yes,
What are they called? What are their roles/responsibilities? What is its composition? What have been their achievements (results and impacts) in your location?

The Ministry of Water and Environment contracted IIRR and BRL to support the development of catchment management plans in……..catchment, what concerns do you want to be addressed?

GUIDE FOR KEY INFORMANT INTERVIEWS

District:_____Sub
County_____Parish_____Village
Date_____

WATER SOURCES AND WATER DYNAMICS

What type of water sources do you have in your Sub-county and how many are they for each?
From your assessment do you believe they are functional enough to serve the purpose for which they are intended? Are they functional throughout the year?
What is water being used by the different stakeholders in your sub-county?
Do you separate/differentiate a water source for drinking water from those for other activities such as watering livestock, washing, etc.?
What is the average distance that one can cover to access water from the nearby source?
Have you had of complains/issues regarding the water quality?
What are the main causes of poor water quality in your community?
What would you suggest as some of the key measures or initiatives to maintaining good quality of water?
Does the district have a well-established water resources governance system? What is it?

ECONOMIC ACTIVITIES IN THE CATCHMENT

What economic activities do you practice in your locality?
What economic activities are practiced in the catchments in your district/locality? Which of the economic activities contributes to deterioration and degradation of the watershed catchment in your district?

WATERSHED CATCHMENT CHALLENGES/PROBLEMS

What are the issues/challenges/problems in your area that affect the catchment? What are the causes to the issues/challenges/problems that affect the catchment? To what extent have they impacted negatively on the catchment?
Are there sections of the catchment that in your locality can be on high alert of deterioration and degradation to be considered a hotspot? Where are they located (village, parish, and sub-county)? What measures and or initiatives do you suggest could be implemented in those respective areas to mitigate and manage the issues/challenges/problems above?

STAKEHOLDERS IN THE CATCHMENT

Who are the stakeholders that access, utilize, and manage and degrade the watershed catchment in your district? How do they use the catchment? Have you, or any colleague in the department and or sub-county participated in the implementation of any IWRM practices?
Stakeholder engagement is very important at your level and requires extensive capacity to undertake some of the IWRM practices. How would describe your capacity in (refer to and read from the table):

OBSERVATION CHECKLIST (CATEGORIZE HOTSPOTS)

During the observation exercise, IIRR will be interested to understand the intensity and extent to which some of the issues are taking place in the catchment. The observer will be required to note of the name of the place on a note book, including other issues that will be observed. She/he will be required to take coordinates and pictures of places.

District:_____Sub County_____Parish_____Date_____

Using the key below tick as appropriate on the evidence 0= Not evident 1=less evident 2=Evident, = Very evident

Capacity parameters.	**0**	**1**	**2**	**3**	**Comments (Name of catchment including name for village, intensity, stakeholder engaged, any measure/initiative,**
Solid waste management					
Pollution (point source and non-point source)					
Municipal water management					
Existing water sources (functionality)					
Water abstraction					
Siltation					
Soil erosion (gullies)					
Mining					
Deforestation					
Bush/wild fires					

c) Questionniare for Sub-County Officials

Title of respondent:……
District: _____Sub County_____Parish_____Village
Date_____

SECTION A: BACKGROUND INFORMATION ***(Tick as appropriate)***

1. Age
(i) 20-----29 (ii) 30----39 (iii) 40----49 (iv) 50----59 (v) 60<u>≤</u>

2. Gender
(i) Male (ii) Female

3. Highest Level of Education
(i) Diploma (ii) Bachelors (iii) Master (iv) Others (If so Specify)_____

4. How long have you served in this District/sub county?
(i) 1---5 years (ii) 6-----10 years (iii) 11---15 years (iv) 16---20 years (v) 21-----25 years

SECTION B: WATER SOURCES ***(Tick as appropriate)***

What are the **types** of water sources in your community?

code	**type of water source**	**how many**	**Functioning/non-functioning?**	**Comment (location, etc.)**
1	Protected springs			
2	Non protected springs			
3	Open dams/			
4	valley tank			
5	Piped water (coverage of parishes/town councils)			
6	Boreholes			
7	roof catchment			
8	Rock catchment			
9	Shallow wells			
	Rivers			
	Streams			
10	Other (specify)			

What is the **average distance** that one has to walk to access water from the nearby source? Please tick the appropriate box

<u>**1**=100Metres</u>	<u>**2**=200-500 Metres</u>	<u>**3**=1 Kilometers</u>	<u>**4**-2-3 kilometers</u>	<u>**5**=3-5 kilometers,</u>	<u>**6**= over 5 kilometers</u>

Water usage: What arethe main uses of waterin your community?

1. Drinking	2. Cooking	3. Washing	4. Farming (crops)	5. Business (name?)	6. Irrigation	7. Livestock watering	8. Other (specify)

Quality and quantity of water: what are the main causes of water pollution in your/this community are?

9. Sewage	10. Nutrients (Chemical fertilizers)	11. discharge (waste water)	12. Solid waste damping	13. Latrines	14. Business (name?)	15. Other (specify)

Water Quality

Please write down the code that describes the type (quality) of water produced by the Water sources in your community

1=polluted and dirty, **2**= fit for human consumption, **3**= shared with animals, **4**=Not sure

Water source	**Quality**	**Comments**
Protected springs		
Non protected springs		
Open dams		
Valley tanks		
Piped water (coverage of parishes/town councils)		
Boreholes		
roof catchment		
Shallow wells		
Rivers		
Streams		
Rock catchment		
Others (specify)		

Availability of water

Please write down the right code to indicate whether the water source in your community provides sufficient or insufficient water

1=Enough, **2**=Sufficient, **3**=Not Sufficient, **4**=Not Sure

Water Source	**Quantity**	**Comment (mention why? And any measure to maintain and or manage?)**
Protected springs		
Non protected springs		
Open dams		
Valley tanks		

Piped water (coverage of parishes/town councils)		
Boreholes		
roof catchment		
Shallow wells		
Rivers		
Streams		
Rock catchment		
Other (specify)		

SECTION C: ECONOMIC ACTIVITIES *(Tick as appropriate)*

Please tick from the table below the type of economic activities practiced in the catchments in your community

1. Crop farming	2. Livestock farming	3. Fishing	4. Mining	5. Manufacturing/industrialization	6. charcoal production

(

Other (Specify)……

Hot spots

Please tick the economic activities that contribute to degrading the environment in community. Please write down the areas mostly affected: (Sub county/parish/village) in column 2 on the table below

code	**Economic activity**	**areas mostly affected (Sub county/parish/village)**	**Comment**
1	Food crop farming		
2	Charcoal burning		
3	Brick making		
4	livestock farming		
5	Abstraction for industrialization		
6	Art and crafts		
7	Mining		
8	processing/value addition-specify		
9	Fishing		
10	Commercial farming		
11	Others (specify)		

Economic activities contributing to catchment deterioration and degradation: Using the scale below, indicate by ticking how the economic activities above contribute to deterioration and degradation of the watershed catchment in your district

Strongly agree	Agree	Not sure	Disagree	Strongly disagree
5	4	3	2	1
Economic activities				

		5	4	3	2	1
1	Food crop farming					
2	Livestock farming					
3	Fishing					
4	Mining					
5	Industrialization					
6	Charcoal burning					
7	Commercial farming					
8	Processing/value addition (specify)					
9	Art and crafts					
10	Brick making					
11	Others (Specify)……					

Any other comment:

_____

_____

_____

_____

SECTION D: WATERSHED CATCHMENT CHALLENGES/PROBLEMS *(Tick as appropriate)*

Please indicate by ticking the watershed catchment problem(s) in your area :

1. Poor solid waste management	2. Pollution	3. Siltation	4. Soil erosion	5. Mining	6. Deforestation	7. Water abstraction

Other (Specify)……

<u>The extent of negative impact to the catchment by challenges/problems:</u> Using the scale below, indicate by ticking the extent to which these problems impact negatively the catchment in your sub county

To a larger extent	To some extent	Not sure	Less extent			Not extent
5	4	3	2			1
problem(s)						
		5	4	3	2	1
1	Poor solid waste management					
2	Pollution					
3	Siltation					
4	Soil erosion					
5	Mining					
6	Deforestation					
7	Water abstraction					
8	Others (Specify)……					

Any comment:

_____

_____

_____

_____

SECTION E: MEASURES AND INITIATIVES*(Tick as appropriate)*

Do you have an Environment action plan?

1. Yes	2. No

Who are the stakeholders implementing the Environment actionplan? Please list them on the first column by category on the table below

Name of stakeholder	Category	location where the stakeholder is implementing the conservation plan
	National level	
	District	
	Municipal/Town Council	
	Sub county	
	FBO	
	Water user /farmer groups	
	NGO	
	private sector	
	Institutions (public)	
	Institutions (private)	
	Individuals	

Implementation of the Environment Action Plan

The Environment action plan is:

1. Fully implemented	**2. Partially implemented**	**3. Not implemented**	**4. Not sure**

Any comment?----------

What are the measures you have initiated as a sub county/district to address the human activities degrading the catchment?

Code	Human activity	measure taken	responsible person/stakeholder
1	uncontrolled tree cutting		
2	illegal water abstraction		
3	(Subsistence farming) poor farming practices		
4	Commercial Farming		
5	open grazing/livestock		
6	Mining		

7	Manufacturing/Industrial use		
8	Recreation/Tourism		
9	Urbanization		

The measures and initiatives that will address challenges/problems of the watershed catchment in my area include: please tick those appropriate

Code	Initiative	Comment
1	Awareness creation on the importance of the catchment	
2	Practicing good farming methods	
3	Implementing environment conservation options	
4	Encouraging implementation of climate smart technologies outside the catchment	
5	Development and implementation of bylaws/regulation	
6	Gazzetting biodiversity rich ecosystems	
7	Implementation of environment impact assessment recommendations	

Other
(specify)_____
_____
_____
_____

(viii)

SECTION F: STAKEHOLDERS *(Tick as appropriate)*

The stakeholders that access, utilize, and manage and degrade the watershed catchment in my area include:

) (,)

Code	Stakeholder	Comment
1	Community members (subsistence farmers)	
2	Semi-commercial farmers (produce for local markets)	
3	Commercial farmers (produce for local, regional and international markets)	
4	Community political leaders (LCI, LCII, LCIII, opinion leaders, etc.)	
5	Technical leaders (sub-county, and	

	district)	
6	Administrative officers (SAS, CDOs, ACAO, DCAO, CAO	
7	Business community (water abstractors, miners	
8	Recreation/Tourism/Hotel Operators	
9	Waste water dischargers	
10	Government regulatory (bodies) institutions (NARO, NEMA	
11	Government profit making institutions (NWSC, UEDC, etc.) (Government Parastatal)	
12	Institutions of Learning (secondary, colleges, universities	
13	District Local Chairperson V	
14	Members of Parliament/ Policy and law makers	
15	Non-governmental organizations	
16	Traditional leaders	
17	Religious leaders	
18	Service sector (prison, police, etc.)	

Other specify:

_____

The Importance (power, authority and influence) of stakeholders: Using the scale below, indicate by ticking the importance of the stakeholders of the watershed catchment in your district

Very important	Important	Not sure	Less important	Not Important
5	4	3	2	1

Stakeholders						
		5	4	3	2	1
1	Community members (subsistence farmers)					
2	Semi-commercial farmers (produce for local markets)					
3	Commercial farmers (produce for local, regional and international markets)					
4	Community political leaders (LCI, LCII, LCIII, opinion leaders, etc.)					
5	Technical leaders (sub-county, county and district)					
6	Administrative officers (SAS, CDOs, ACAO, DCAO, CAO, etc.)					
7	Business community (water abstractors, miners, etc.)					

8	Recreation/Tourism/ Hotel operators					
9	Manufacturing Industries/factories (waste water dischargers)					
10	Government regulatory (bodies) institutions (NARO, NEMA, etc.)					
11	Government profit making institutions (NWSC, UEDC, etc.)					
12	Learning institutions (secondary, colleges, universities)					
13	District Local Chairperson V					
14	Policy and law makers (members of parliament)					
15	Non-governmental organizations					
16	Traditional leaders					
17	Religious leaders					
18	Service sector (prison, police, etc.)					

Other (Specify)……

The Ministry of Water and Environment contracted IIRR and BRL to support the development of catchment management plans in……. catchment, what concerns do you want to be addressed under the following categories

code	**area of concern**	**Comment**
1	stakeholder participation	
2	water supply and sanitation	
3	conservation of catchment areas	
4	Subsistence farming	
5	Commercial farming	
6	mining	
7	deforestation/charcoal burning/wood fuel	
8	Encroachment on wetlands and river banks	
9	Urbanization	
10	Fishing	

Any comment: