

Promotion of sustainable water management in River Rwizi catchment: **Water stewardship approach**

Richard Musota

Team Leader, Victoria Water management Zone
Directorate of Water Resources management
Ministry of Water and Environment-Uganda

Overview

1. Introduction
2. Water Risks in the Rwizi Catchment
3. The project – interventions
4. Way forward

Who is in the Rwizi water stewardship under a PPP?

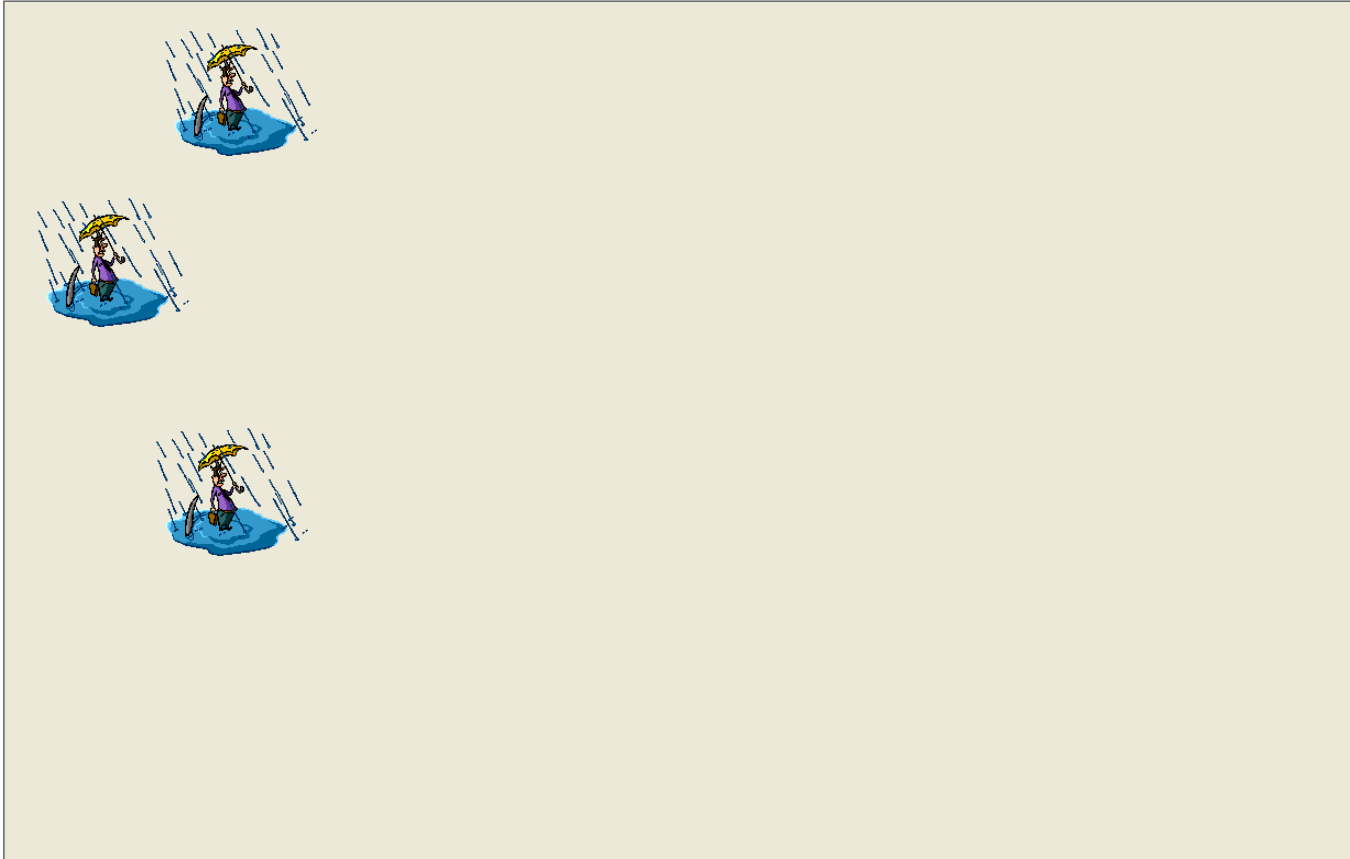


MINISTRY OF WATER
AND ENVIRONMENT



CATCHMENT STAKEHOLDERS

RWIZI CATCHMENT

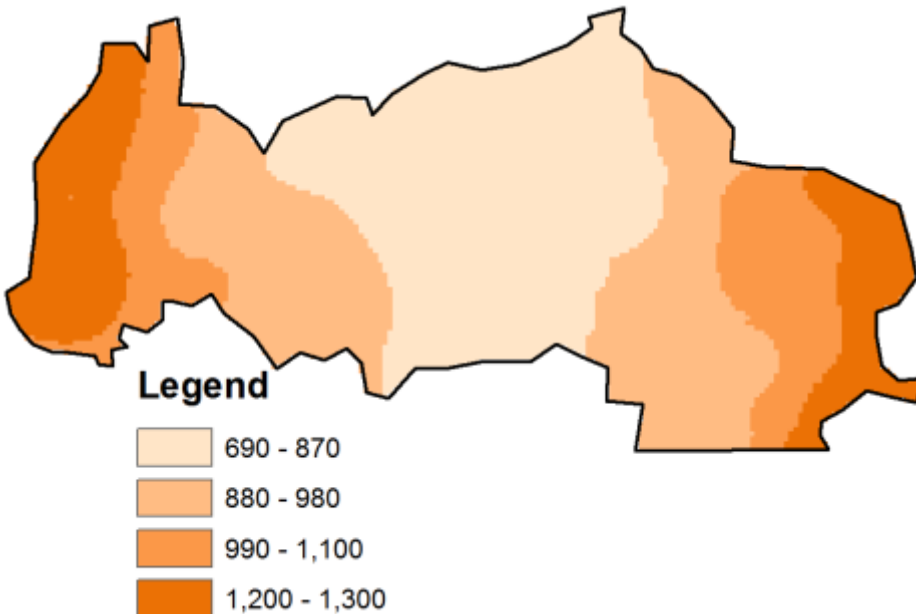


Catchment size is approx. 8200km²
Largely Shared between 8 district local governments

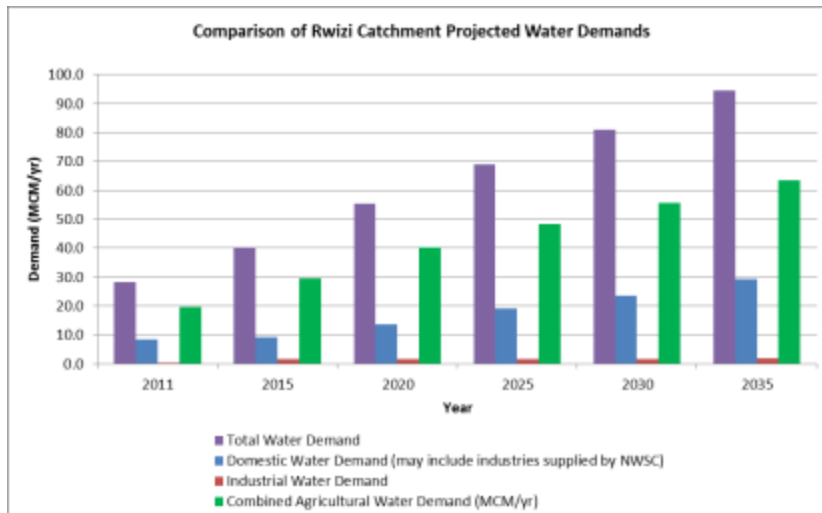
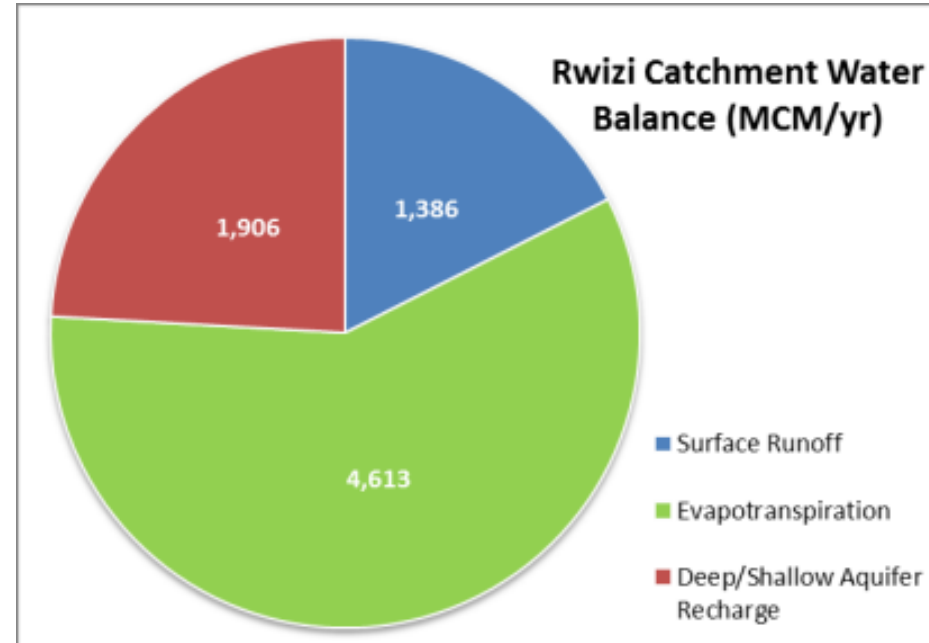


Rwizi Catchment Water Resources

Mean annual Rainfall (mm)

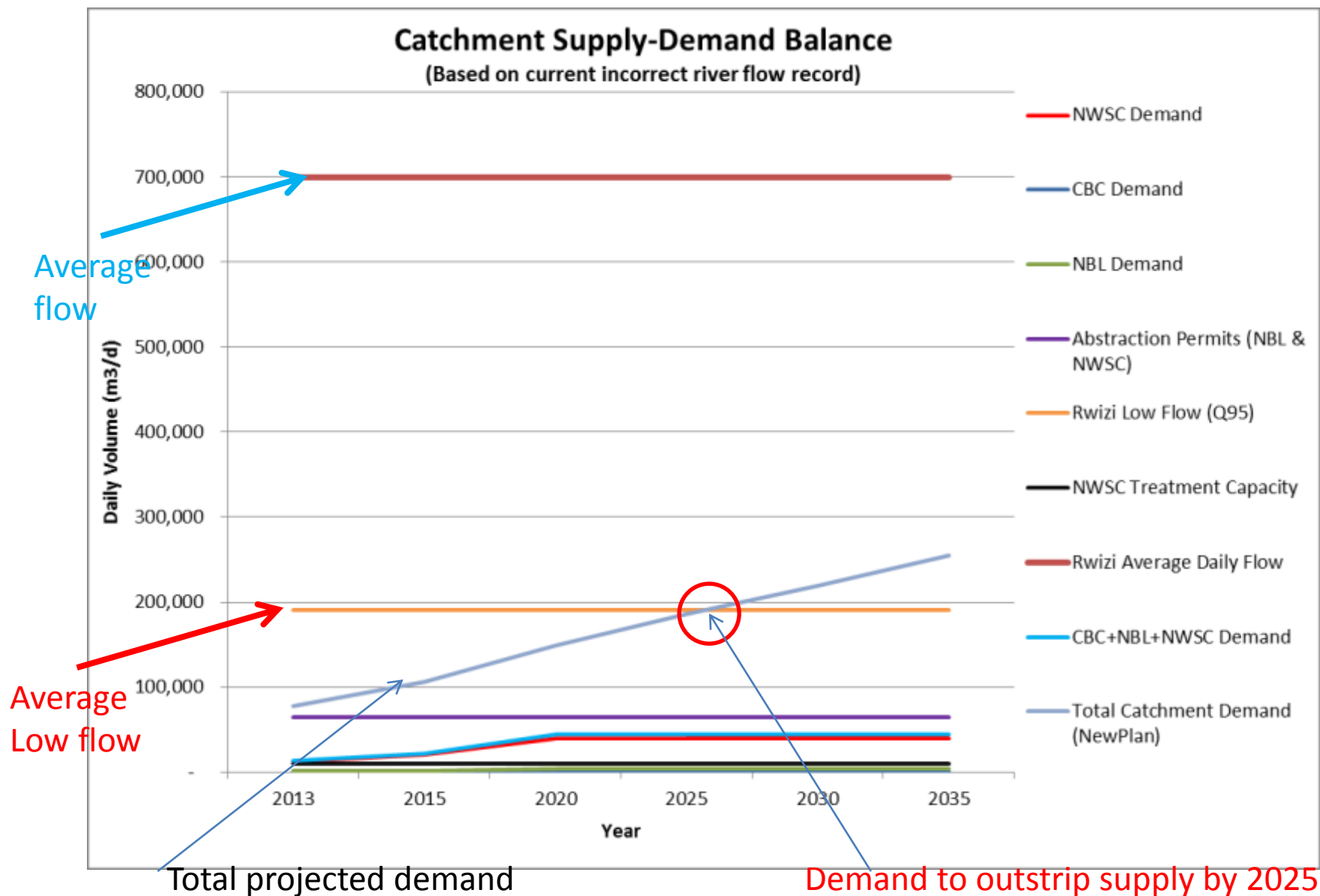


Water Balance



- Catchment water resources supply indicates that surface water flow alone (17.5% of water balance) is able to meet 15times the projected water demand of 2035

Is there a Water Risk???





REPUBLIC OF UGANDA
Ministry of Water and Environment

Where is the risk?

Upper catchment characterized by steep slopes and heavily degraded wetlands



Wetland turned to garden





REPUBLIC OF UGANDA
Ministry of Water and Environment

Middle catchment is characterized by high water demand and heavy pollution



Waste disposal



Lower catchment characterized by Tourism and Ramsar sites



Which water risks are addressed?

- Risk of seasonally insufficient water supply for:
 - the population in Mbarara Town, the local communities and water dependent businesses, e.g. a Coca-Cola and Nile Breweries bottling plants
- Risk of flooding and risk of poor water quality

Causes

- Heavy degradation of the catchment and specifically wetlands
- Inadequate water governance mechanisms and unsustainable use of water and related resources
- Inadequate enforcement of regulations for use of water and other natural resources



Crop cultivation on hill slopes and encroachment on wetlands



Abattoir waste directed to the River Rwizi

How is the partnership addressing the challenges?

- Comprehensive Water Risk and Sustainability Assessment (incl. strong business perspective)
- Restoration of 160ha of degraded catchments and wetlands
- Introduction of catchment management systems involving communities for sustainable use of natural resources including provision of alternative sources of income
- Training of stakeholders especially farmers about good agricultural practices (water focus)
- Improvement of local small scale water infrastructure
- Strengthening of catchment management structures and promoting integrated water resources planning



Brick Laying at the R. Rwizi Banks



Farmland established in Nyakambu wetland

Results

>220 farmers
trained on sustainable
wetland resource use.

30 radio spots
increased awareness on
catchment restoration.

>1500
people benefit
from community
environment
conversation
fund.

Transect walks increased
40 leaders' awareness
of degradation's adverse
impacts.

Awareness-raising on
wetland restoration

reached over **250**
farmers.

MBARARA

NILE

NWSC

CBC

RIVER RWIZI

LAKE MBURO

Long term potential

- Stabilised flow of River Rwizi
- Increased water safety for communities and industries
- Rwizi catchments restored and sustainably used
- Catchment Management Plan developed and implemented



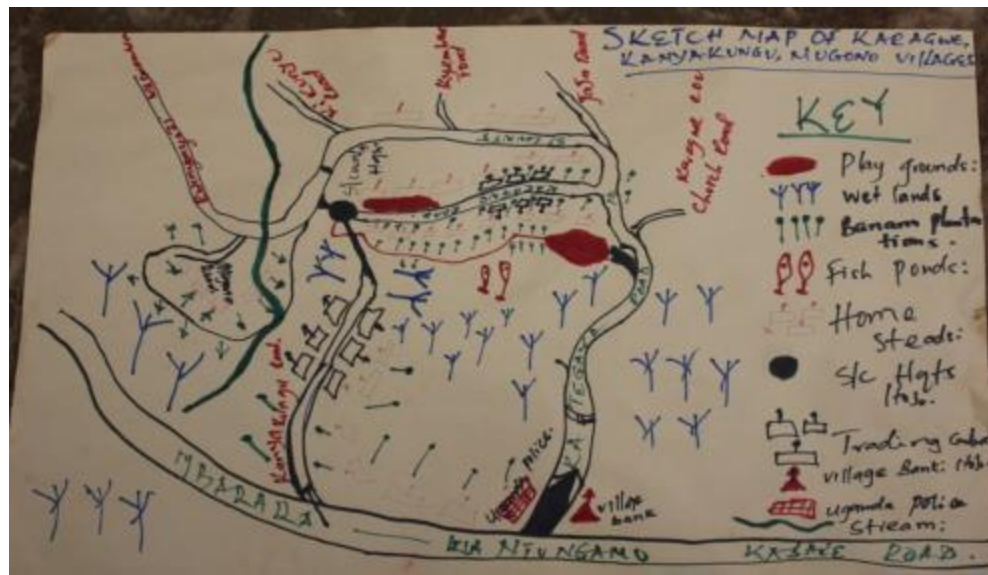
Intact wetland in Rwizi Catchment



Terracing on the hill slopes in Rwizi Catchment



Facilitated participatory mapping





Practical sessions



Learning visits





Livelihood analysis



Drafted participatory action plans

BUKIRO-ACTION PLAN					MILESTONES (NON-ALIGNED)		
ACTION/ISSUE	WHERE	HOW	WHO	INPUTS	YR1	YR2	YR3
Sustainable food production	At homesteads Own land Food security Fertile land	Modern farming Inputs Use of fertilizers Manure Planting food and security	Household units Land owners Agrot. officers Disruptures	Funds Seeds (improved) Agricultural services Labour Security Food storage	Improved seeds Organic manure Modern farming of food	Modern farming Food storage	Modern farming Food storage
Sustainable water availability (quantity & quality)	In wetlands Dams Household Household	Tree planting Household Wetland reclamation	As Above	Extension services Funds Tools & equipment	Wetland extension Tree planting	Wetland extension Tree planting	Wetland extension Tree planting
Labour availability of improved Compounds Food reserves	Own land Hills (low) Compounds Food reserves	Tree planting Fertilizers Technologies	As Above	Seedlings Extension services Funds Material & equipment	Tree planting Seedlings to compound		
Control of soil erosion/ Exhaustion	Homesteads Catchment Hills	Soil & water conservation Structures Tree planting Cover crops Mulch techniques	As Above	Funds Tools & equipment	Rehabilitation activity		
Restoration of degraded areas Sectors	Wetland Resources	Block of canal channels Removal of natural structures	As Above	Funds Tools & equipment	Rehabilitation activity		
Sustainable forestry reserves	As above	As Above	As Above	As above	As above		
Enhance water for livelihood	As above	As Above	As Above	As above	As above		

Implementation of plans



Regeneration process



[illegible]

The way forward

- Status now: finalisation of the project
- Partners and communities appreciate results and impact
- Designing upscaling concepts
- Looking for opportunities for continued cooperation

THANK YOU

