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ADVANCING A **NEXUS APPROACH**
TO THE SUSTAINABLE MANAGEMENT
OF **WATER, SOIL AND WASTE**



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MANAGING WATER, SOIL AND WASTE: THE CASE OF RWIZI CATCHMENT IN UGANDA

By

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INTRODUCTION

- *Uganda is endowed with many water bodies:*
 - *Lake Victoria,*
 - *Lake Kioga,*
 - *Lake George,*
 - *Lake Edward and*
 - *River Nile*
- *But population pressure, leading to encroachment on the shorelines, river banks and wetlands that has resulted in:*
 - *Removal of tree and vegetation cover*
 - *Direct release of effluents in water bodies*
 - *Storm water and siltation and*
- *Caused interference with the natural function of wetland such as water purification threatens the quality of water as well as sustainability of the resource.*





- *The Government of Uganda has tried to define ways of addressing the water, soil and waste nexus to address the above by:*
- *Establishment of institutional, policy and legislative frameworks through which issues of water, soil and waste nexus can be negotiated. The Institutions are:*
 - *The Ministry of Water and Environment established in recognition that water resource safety goes hand in hand with a health environment that is free from degradation*
 - *NEMA (A watchdog under the Ministry on all Environment issues*
 - *NFA in Charge of Forestry and Forestry cover*
 - *NWSC: to deal with supply of clean water and management of waste*



- *Policies in place Include:*
 - *Water policy and client's Charter*
 - *Environmental management policy,*
 - *wetland protection policy,*
 - *climate change policy, a*
 - *agricultural policy,*
 - *public health and other related policies.*



- The Laws Include:
 - The Water Act
 - National Management Environment Act
 - The Tree planting Act
 - There is a whole compendium of environment laws and regulations that have a relationship to management of Waste and Water. There are also other laws related to agriculture.



- *However, implementation is still done through sectors as some of the activities fall in different ministries such as Agriculture, Health, Works and Transport and Ministry of Energy and Mineral Development*
- *All these have an impact on the management of water soil and waste resources.*
- *It has therefore been necessary for the Government Uganda to adopted an integrated approach to water and environmental resources management following a catchment or a watershed.*
- *This aims at bringing stakeholders to coordinate their efforts and work together to address water, soil and waste management issues in an integrated manner.*



Benefits of Integrated Management Approaches

- *The Integrated approach has been ongoing now for about 6 years and efforts to upscale it to the whole country are continuing*
- *It is intended that key stakeholders such as:*
 - *Central and local level government agencies,*
 - *Civil society,*
 - *private sector and*
 - *affected communities*
- *To avail an opportunity to manage water, soil and waste in an integrated manner*
- *and allow for protection of vital ecosystems for the present and future generations.*



- *This approach ensures coordinated planning, development and management of environment and other related natural resources.*
- *It provides opportunities to stakeholders to be at the centre stage of identification of problems affecting them, proposing solutions to these problems and implementing the identified measures.*
- One example where this approach has been employed River Rwizi catchment in south western Uganda



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Benefits of Integrated Management Approaches

A CASE STUDY OF RIVER RWIZI CATCHMENT



Background to R.Rwizi catchment

- R.Rwizi catchment is located in SW Uganda,
- It traverses districts 10 districts
(Bushenyi, Ntungamo, Mbarara, Isingiro, Kirihera, Buhweju,
, Lyantonde , Sheema, Rakai, Rakai).
- Recharges inland water bodies in Rwizi-Nakivale wetland system.
- Originates in Buhweju hills in former Buhweju District.
- Serves 2 Ramsar sites of L . Mburo/Nakivale wetland system and Sango Bay Wetland Forests.



Which water risks are being addressed in Rwizi catchment?

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



Crop cultivation on hill slopes and encroachment on wetlands



Causes of the risks

- Heavy degradation of the catchment caused by poor agricultural practices, urbanization, deforestation, overgrazing and specifically wetlands degradation.



Abattoir waste directed to R.Rwizi



- Water quality is also affected by storm water and run-off
- Inadequate water governance mechanisms
- and unsustainable use of water and related resources
- Inadequate enforcement of regulations for use of water and other natural resources
- Unregulated exploitation of ecosystem goods



- *Multiple institutions have to participate in order to make the action complete,*
- *Hence attitude and thinking that are usually sector oriented and need to change*
- *A lot of effort, resources and time is needed to bring key stakeholders together to achieve coordinated planning, development and management.*



How are the challenges being addressed?

- Comprehensive Water Risk and Sustainability assessment is undertaken (incl. strong business perspective)
- Restoration 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
- 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



Benefits of implementing water, soil and waste nexus approach

- Stabilisation of the flow of River Rwizi
- Increased water safety for communities and industries
- Rwizi catchments restored and sustainably used
- A catchment Management Plan developed. This

Program is being spearheaded by national and local level stakeholders (government, private sector, civil society, local communities etc)



**Terracing on the hill slopes in Rwizi
Catchment**



- Hotspot areas for immediate intervention in the country have been identified. For instance:
 - *there are 70 surface water quantity monitoring stations, 30 groundwater quantity monitoring stations and 103 water quality monitoring stations.*
- *These stations fall in three categories namely:*
 - ***basic** (national) level monitoring network/stations aimed at monitoring the changes in water quantity and quality due to climatic and human impacts;*
 - ***specific** monitoring network/stations that are set up in various regions to monitor in detail the water quantity and quality changes due to specific problems; and*
 - ***project related** network/stations which are set up for a specific project to assess a specific problem after which the stations are closed.*



Conclusion

- *The 6 years experience of water resources monitoring has enabled the country to optimise the set up and operations of the monitoring network and ensure that they are based on key issues of great importance in the country.*
- *Specific monitoring protocols and routines have been established and the monitoring results are being used to take decisions regarding the development and management of water and related resources.*
- *In conclusion I wish to stress the need to sustain the pressure for recognition and maintenance of a water, soil and waste nexus to prevent a situation where by the world water resource quality is compromised by discharge of waste and effluents that may end up in the water.*
- I THANK YOU.