

MUVUMBA CATCHMENT PROFILE

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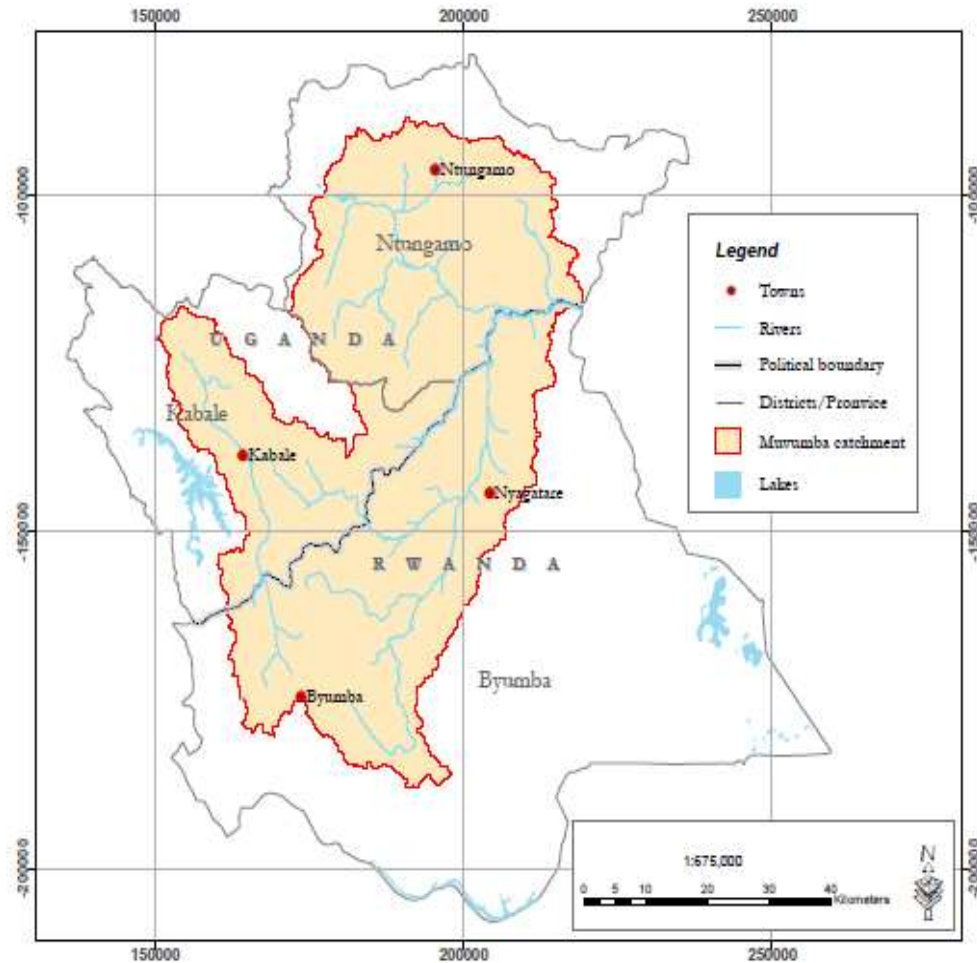


Muvumba Catchment and Districts



Catchment		District		Overlap between district & Catchment		
Name	Area (km ²)	Name	Area (km ²)	Area (km ²)	% catch.	% Distr.
Muvumba	1568	Nyagatare	1 920	940	60	49
		Gicumbi	830	455	29	54
		Gatsibo	1 582	152	9.7	9.6
		Total		1 547	98.7	

The transboundary character of Muvumba catchment



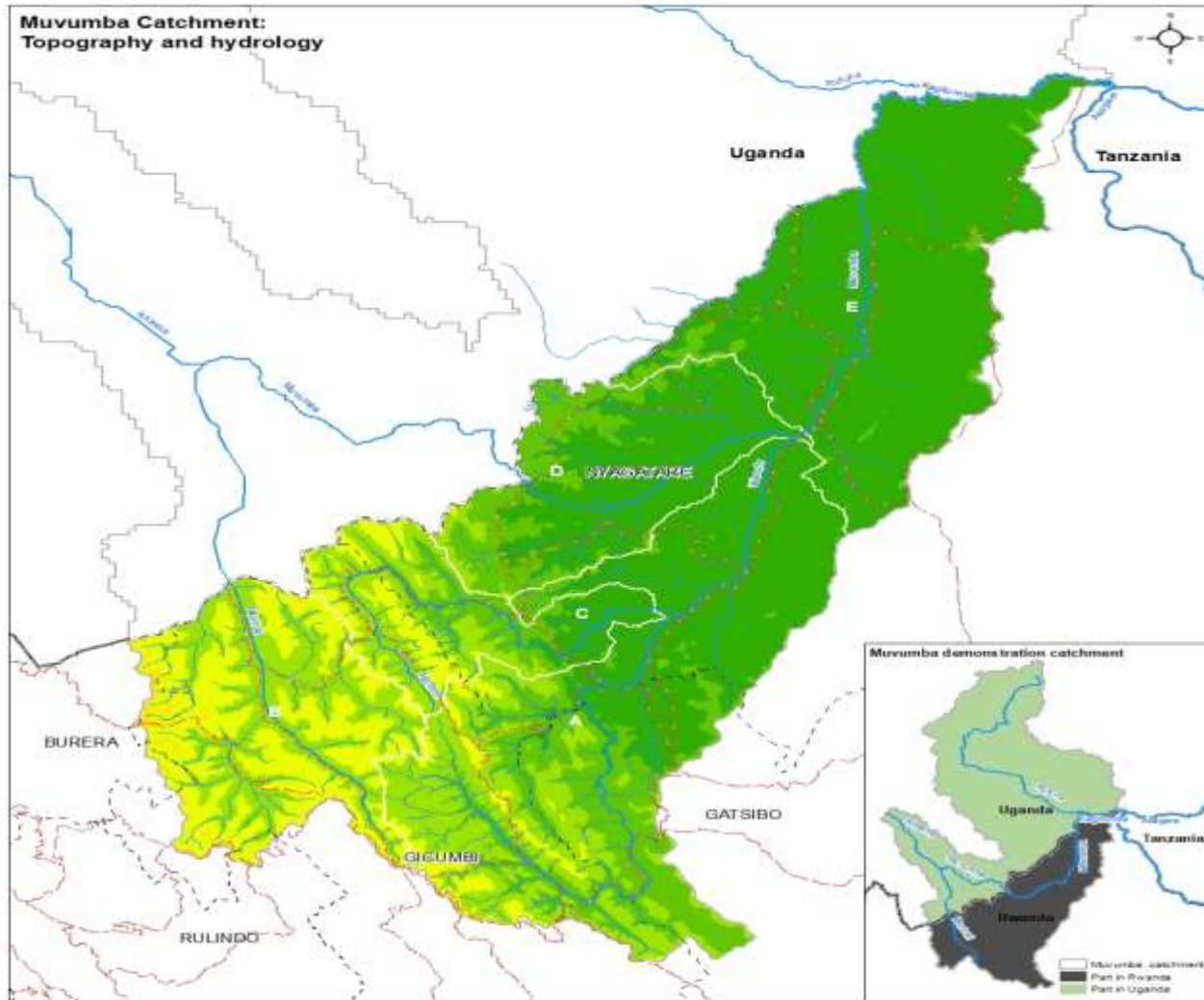
- Muv Cath. Area: 3714 sq.
- Rwanda part: 1568 sq. (42%)
- Uganda part: 2146 sq. (58%)



**cooperation with
Uganda**



**Muvumba Catchment:
Topography and hydrology**



Legend

- Catchment boundary
- District boundary
- River
- Road (National and District)

Sub-catchment name

- A: Warufu
- B: Mulindi
- C: Ngoma
- D: Muvumba upstream
- E: Muvumba downstream

Elevation (m)

- 1,250 - 1,500
- 1,500 - 1,750
- 1,750 - 2,000
- 2,000 - 2,250
- 2,250 - 2,500



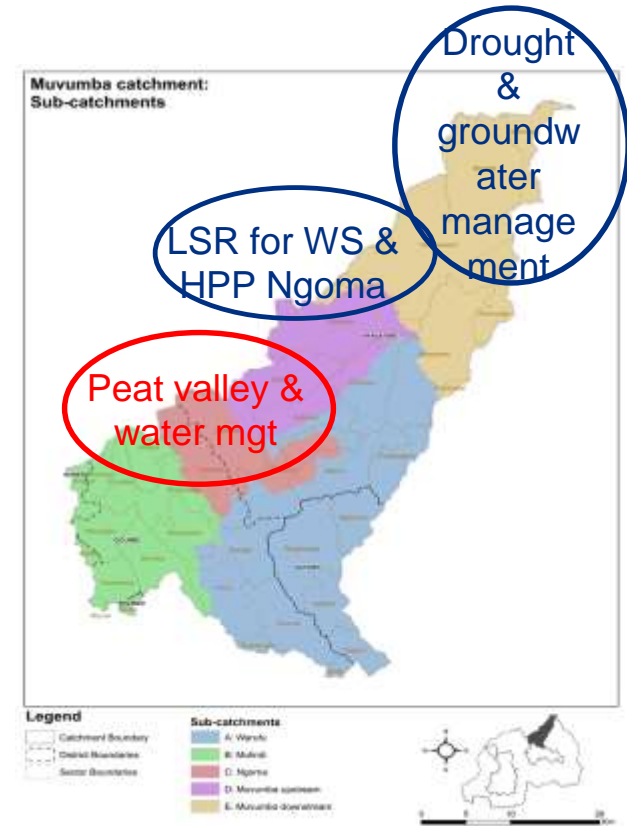
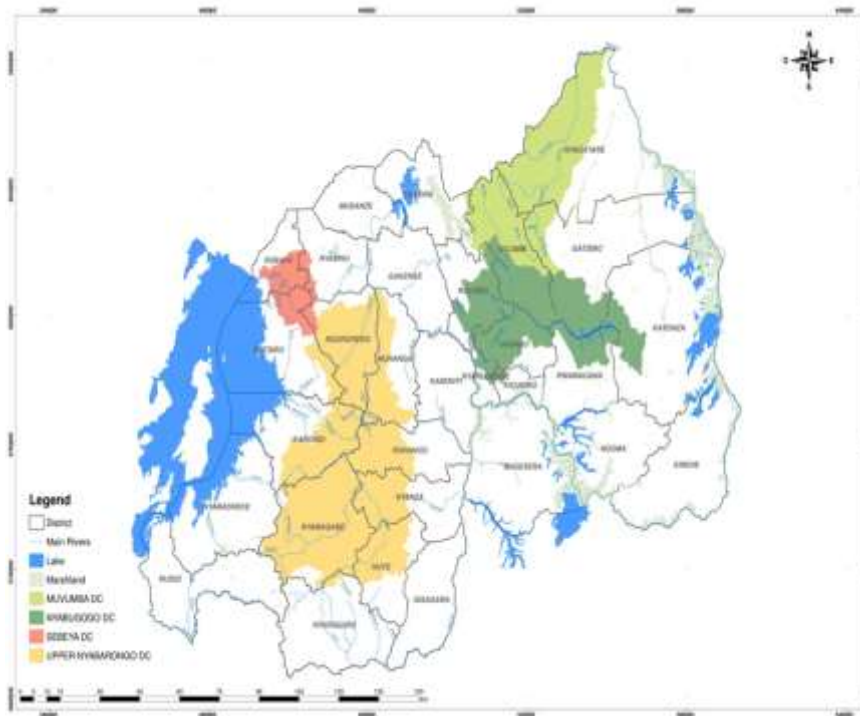
Main Issues and Opportunities

Issues	Opportunities
Soil erosion	Irrigation development
Recurrent droughts	Livestock development
Deforestation	High potential of water storage
Lack of water storage	Tea plantation development
Pollution from agriculture	Agriculture mechanization
Unprotected river banks	
Conflicts over water use (agriculture&livestock)	
No coordination with Uganda part	

IWRM Packages in Muvumba catchment

No	Package	Sub Catchment	Districts
1	Support improvements in sustainable water and landscape management (floods and sediments mitigation) through developing the tea and forestry value chains in Mulindi	Mulindi	Gicumbi
2	Improving water supply & Hydro Power generation through Land Scape Rehabilitation in Ngoma sub-catchment	Ngoma	Gicumbi & Nyagatare
3	Drought management to improve access to water for supporting livestock and irrigation development	Upper & Lower Muvumba	Nyagatare

Location of IWRM packages



1. Mulindi Sub-Catchment IWRM package

Title: Support improvements in sustainable water and landscape management (floods and sediments mitigation) through developing the tea and forestry value chains in Mulindi.

Rationale:

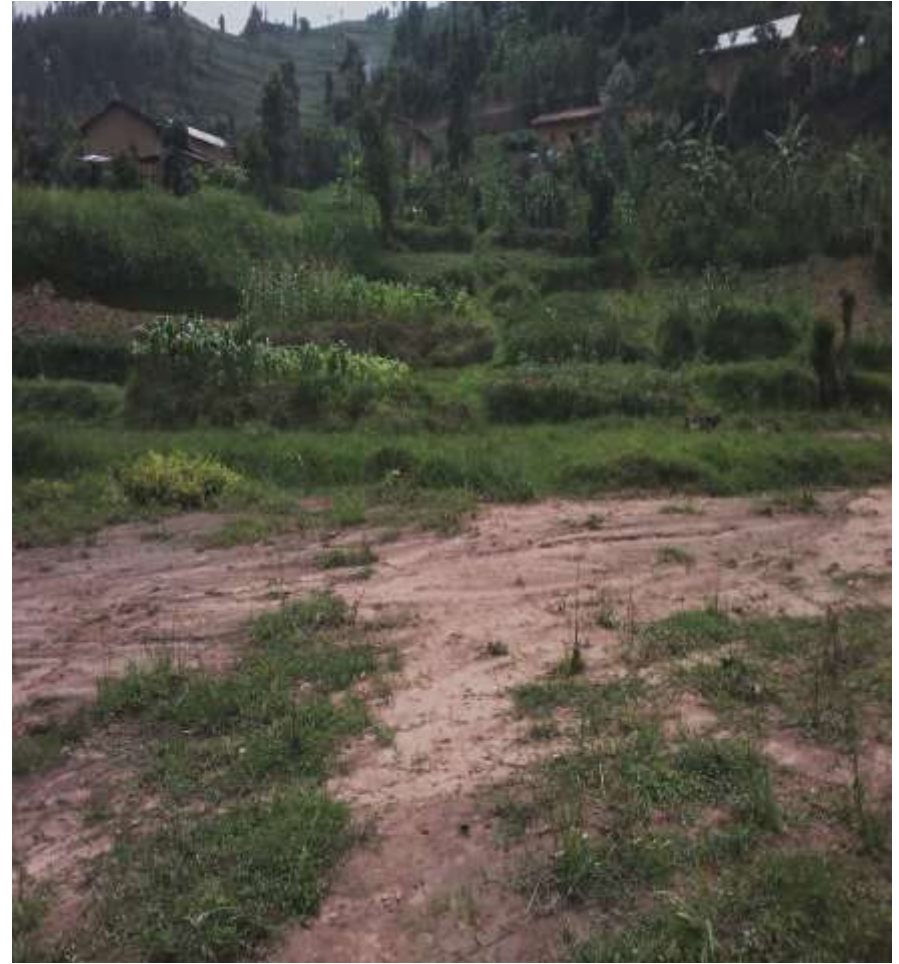
- **Key socio-economic drivers:** Mulindi co-op tea plantations & tea factory
- **Key issues:** flash floods in wet season, drought in dry season (→green tea production) and insufficient access to fire wood (→black tea production).



Drainage channel banks need to be stabilized (landslide due to peat soil)



Tea plots damaged by the floods



Gullies need to be stabilized



2. Ngoma Sub-Catchment/IWRM package

Title: Improving water supply & Hydro Power generation through Land Scape Rehabilitation in Ngoma sub-catchment

Rationale:

- **Key socio-economic drivers/infrastructure:** Micro-hydropower-HPP (upstream in Gicumbi) and WASAC intake-WTP (downstream in Nyagatare).
- **Key issues:** In the dry season, the flow in the Ngoma river is drastically reduced: HPP has to stop 7hours/day and the WTP is working at half of its capacity due to water shortage. During rainy season, sediment transport hinders the normal operation of the HPP and the WTP.

Rushaki Hydropower Dam



WASAC intake (Cyondo)



WASAC Water Treatment Plant



Ngoma river banks degradation



3. Upper & Lower Muvumba Sub-Catchments/IWRM package

Title: Drought management to improve access to water to support livestock and agriculture value chains

Rationale:

Key socio-economic drivers: Livestock development and its products (milk, meat & hide/leather) value chain, agriculture/irrigation development

Key issues: Recurrent and prolonged droughts leading to water scarcity → conflicts between different users (e.g. livestock and irrigation).



Valley dams in Nyagatare need rehabilitation



Degraded valley dam (Compaction standards not meet)





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