

# Payments for Ecosystem Services in the congo basin Catchments/Landscapes- *Opportunity to increase landscape productivity*

*Invest in Nature based Solutions to safeguard your nature-based assets and a resilient supply chain*

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## The problem

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Degradation and poor land-management in the congo basin catchments imposes costs including:

1. Damage to infrastructure freshwater uncontrolled run-off during heavy rains.
2. High sediment loads impairing water quality
3. Increased risk of landslides and associated risk to human life.
4. Reduced landscape water storage, groundwater recharge and base flow.
5. High biodiversity loss of freshwater species in streams and rivers in the catchment, and a negative impact on habitats and freshwater species in the congo basin;

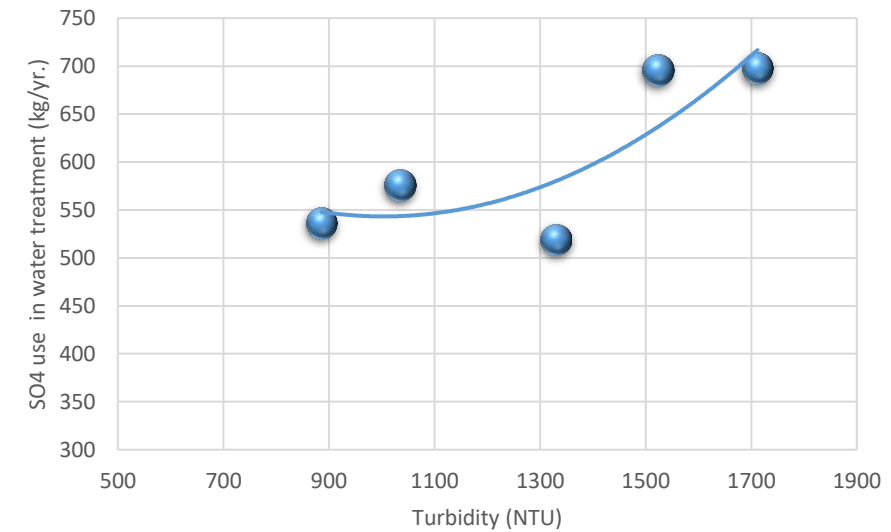


# The problem

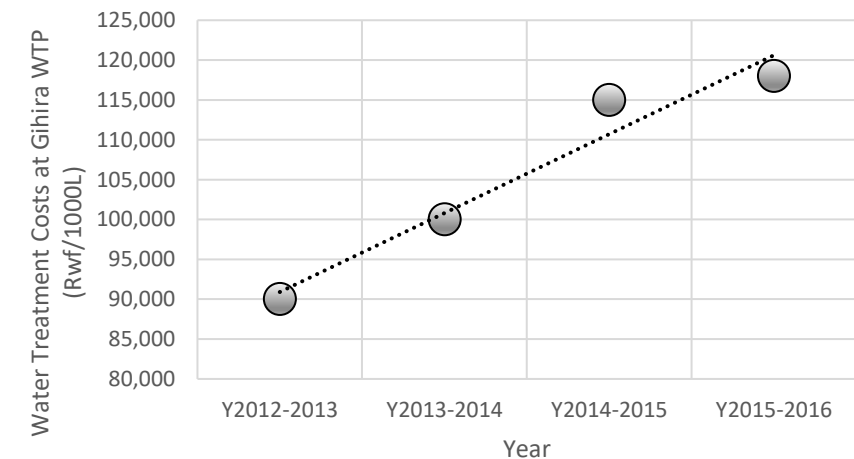
And more directly to private sector:

1. Increased water treatment costs.
2. Impacts power production at HEP stations
  - Cost associated with damages to hydropower turbines.
  - Cost of direct sediment removal from reservoirs.
  - Loss of revenue from hydropower production.
3. High production costs and inability to meet product demand.

*“Most of the time we are forced to stop operation for an hour trying to handle the river's erosion and then after one single month, we take nine hours of non-operational to remove all sediments brought into the river by soil erosion and flooding.” Serugendo narrates “This costs us a loss of sixty six Kilowatts which is supposed to serve more than four thousands homes”*

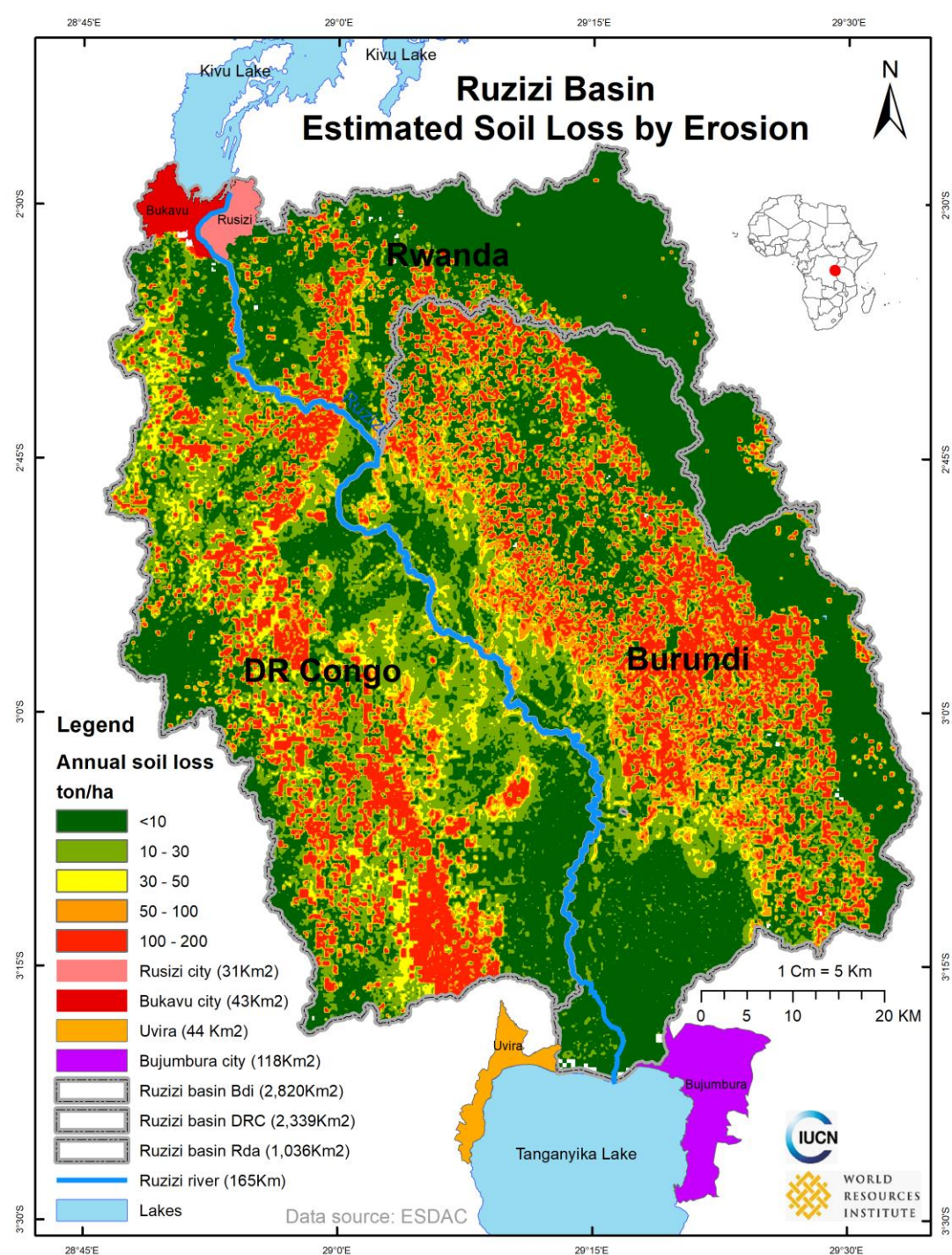


Sebeya data from the Mining Analysis Study



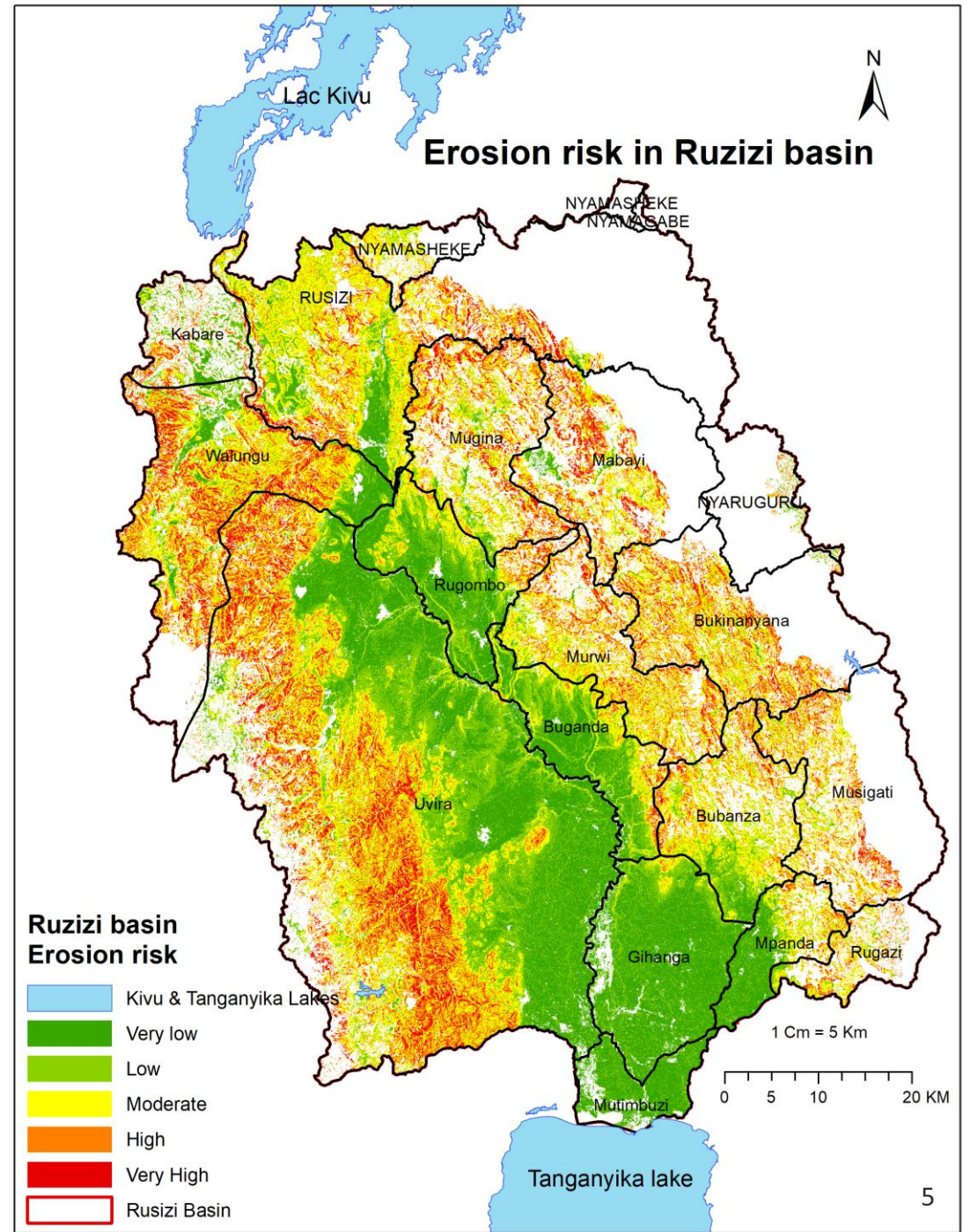
Bizimana, A. 2017

# Annual Soil Loss in Rusizi basin





# Soil Erosion Risk in Rusizi.



# Forest Loss in the Rusizi Basin

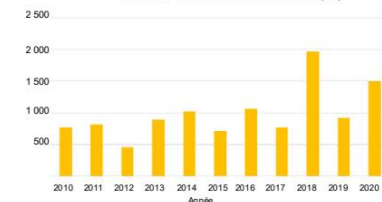
Ruzizi Landscape  
Forest cover loss 2010-2020



Data source :  
 - Forest cover loss : Global Forest Watch  
 - Forest cover : Global Forest Watch  
 - Population : <https://worldpopulationreview.com/world-cities>

City	Population
Bujumbura	1.074.642
Bukavu	1.600.000
Cyangugu	71.065
Uvira	622.862

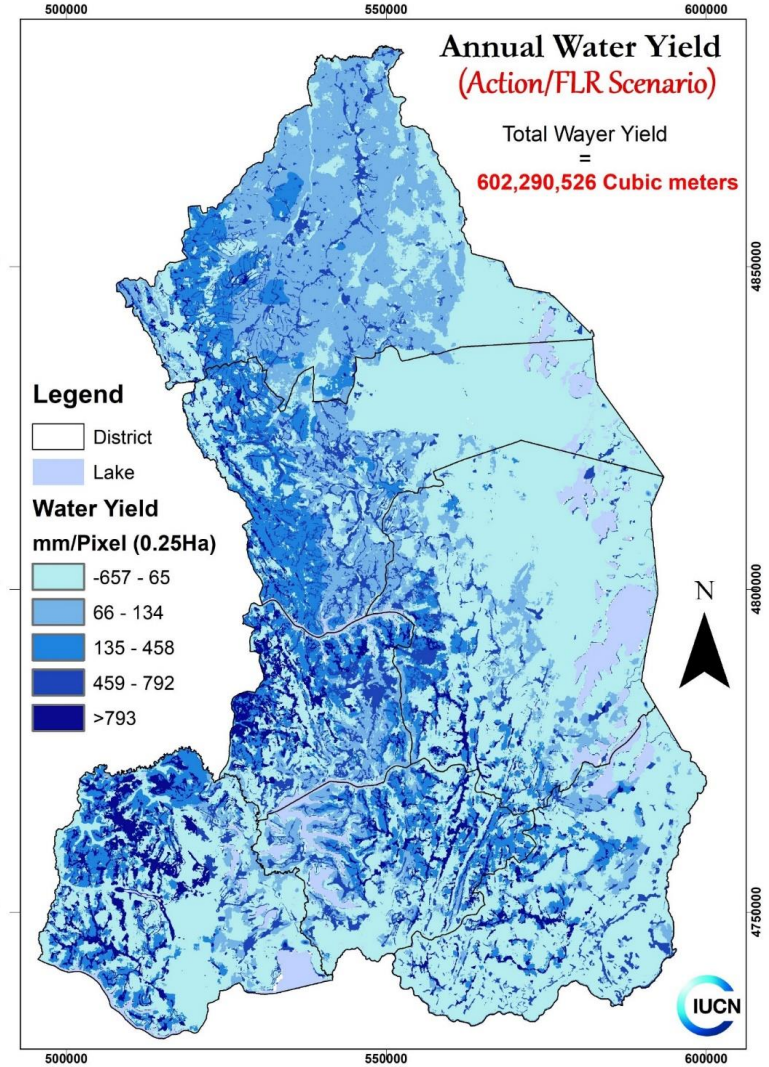
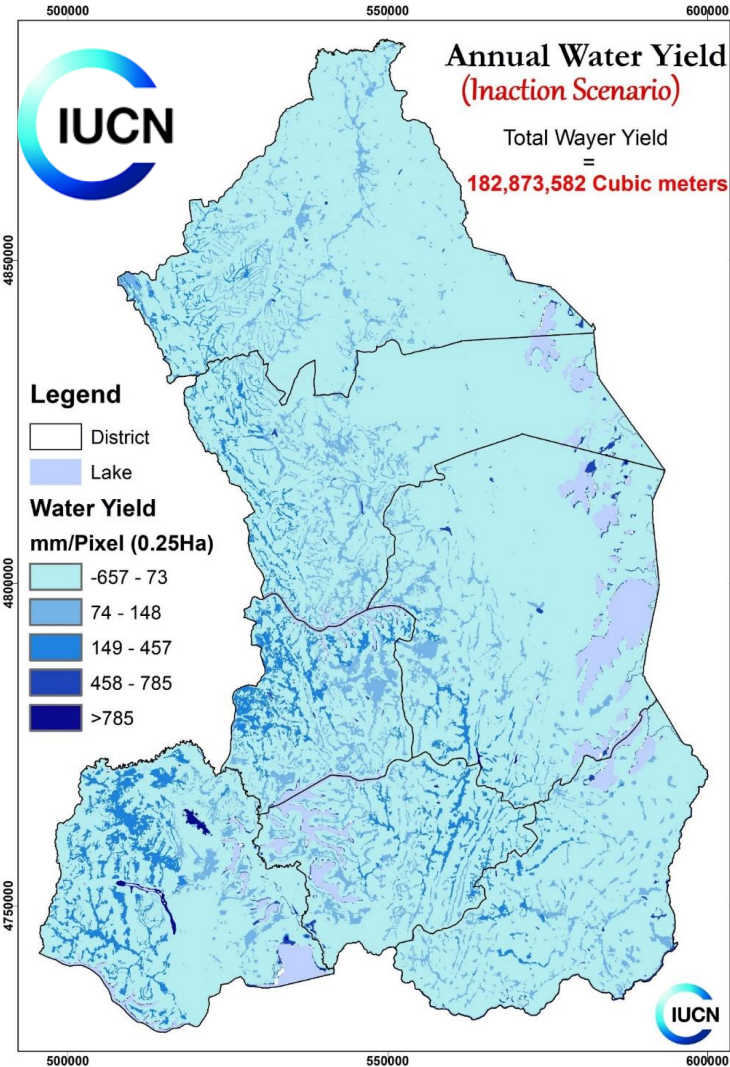
FOREST COVER LOSS 2010-2020 (ha)





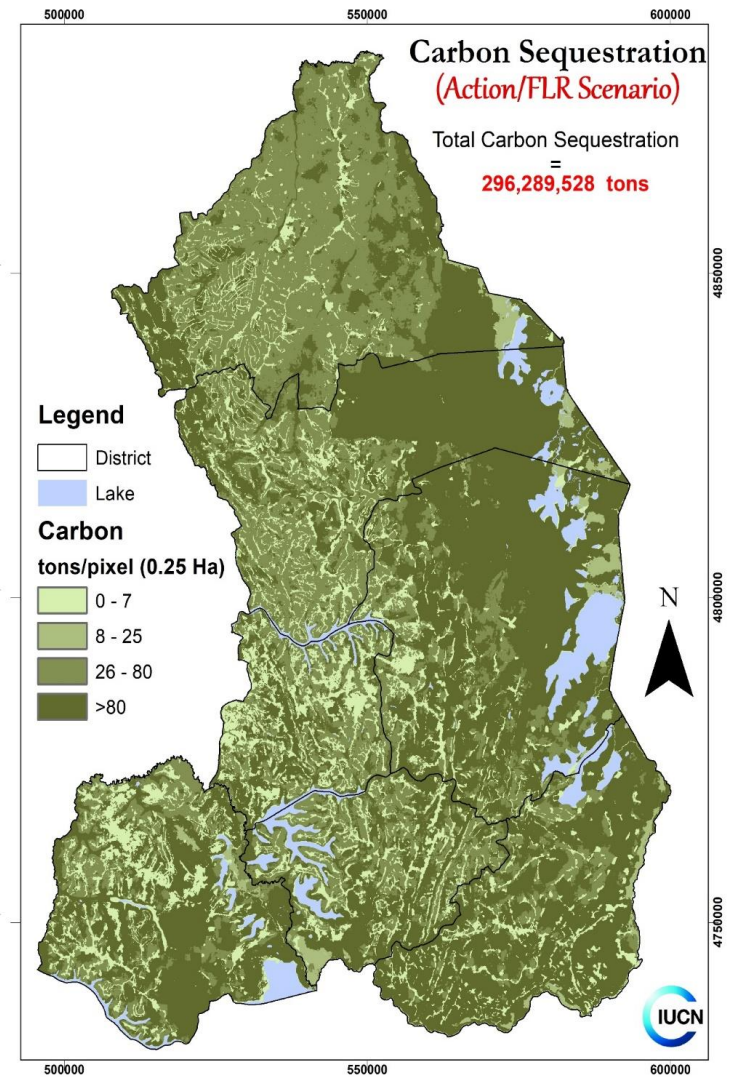
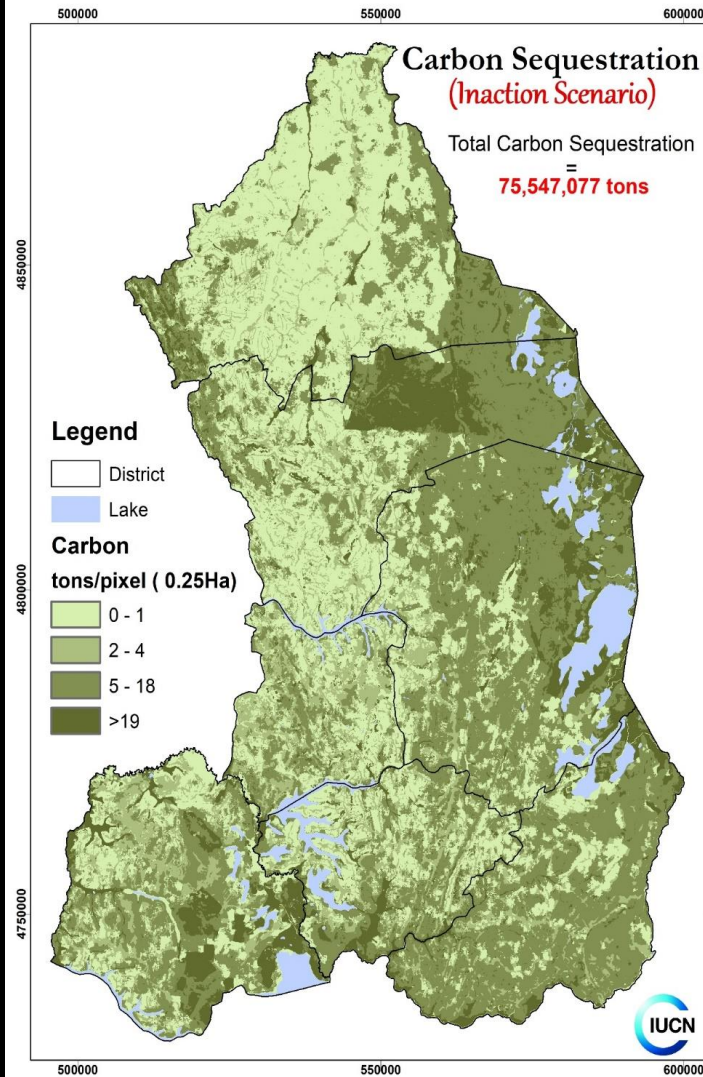
# Ecosystem Quantification Using Invest

**Annual Water Yield**



# Ecosystem Quantification Using Invest

## Carbon Sequestration





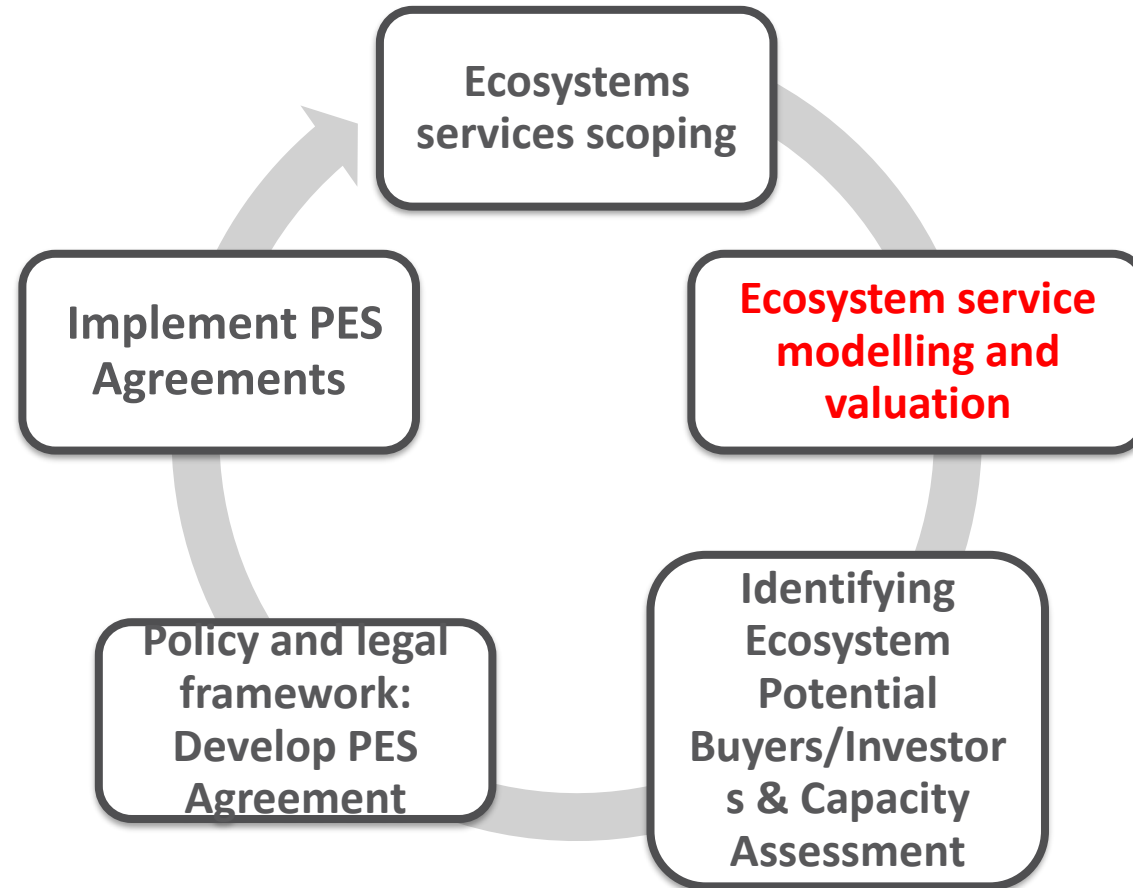
# The solution

1. Landscape Restoration in degraded areas of Congo Basin
  - a) Biophysical measures including, tree planting, river bank protection, terracing, dispersed water storage,
2. Collaboration of local communities, public and private sector
  - a) Community participation in planning and implementing landscape restoration
  - b) Capacity building of local communities
  - c) Supporting human livelihoods e.g. agroforestry, value chains of crops and livestock, kitchen gardens, water storage
3. Performance based-payments to provide incentives for catchment landowners and communities to improve their land management and reduce deforestation
  - a) Payment for ecosystem service schemes
  - b) Community Environment Conservation Funds (CECF)



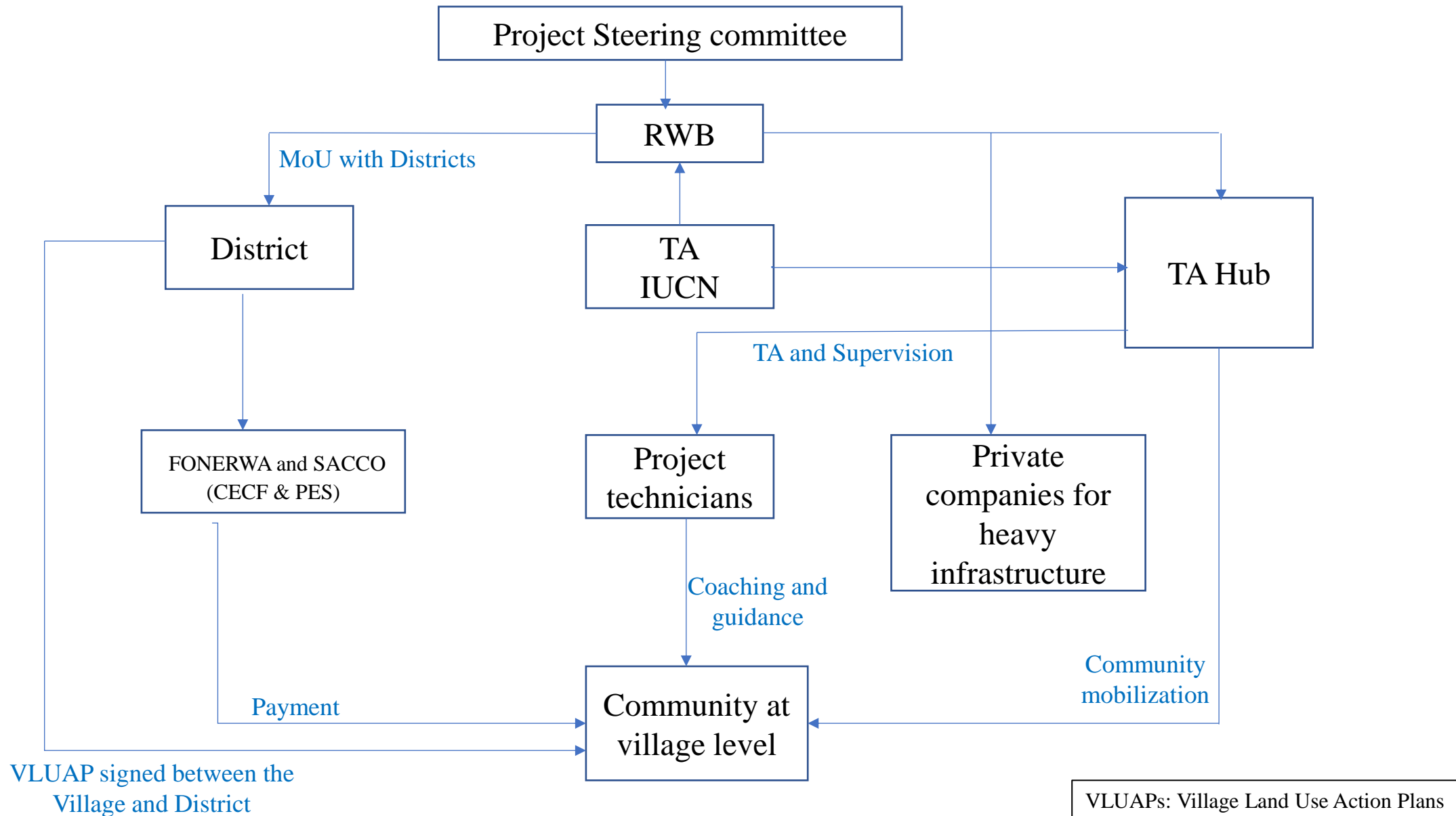


## Our Approach





# PES implementation arrangement. E.g of Rwanda



# Highlighted Achievements



Some of sebeya project interventions







**Achievements, to date, under the ongoing Integrated Water Resources Management Project in Rusizi Basin**

Over  
**3,000 ha**  
Land put under restoration with various measures including terracing, stream bank rehabilitation, and afforestation, among others



Through the support of the EWMR,  
**200 VLUAPs**  
Village Land Use Action Plans developed with participation of the local communities in identifying critical areas within the landscapes and proposing appropriate intervention measures.

At least  
**306 VSLAs**  
Village Savings and Loans groups established to support the innovative finance mechanism component of the EWMR project



As part of EWMR implementation, over  
**31,306 Jobs**  
Green jobs created in Sebeya, through which community members not only benefit but also play a role in landscape restoration



The EWMR project has completed rehabilitation assessment for  
**50 WMS**  
Water Monitoring Stations in all Rwanda catchments. Rehabilitation of these stations will be completed in 2021 to improve water monitoring (quality and quantity) for effective decision making



The EWMR project has distributed  
**407 RWH**  
Water storage tanks to local communities to reduce the risk of erosion due to a concentration of water runoff from roofs during heavy rains, and to reduce the burden of collecting and transporting non-potable water from distant sources



# Highlighted benefits from pilot project

1. Cleaner drinking water for local communities' people within the basin whose primary water source is raw water from streams.
2. A reduction in sediments resulted in positive effects on community health.
3. Landscape restoration (tree planting) helped create a carbon sink and new initiatives on VCM.
4. Sustaining and improving land productivity, food and nutrition security
5. Enhanced resilience and urban development, employment, and growing economy for 600,000 households in the basin.





## Next Septs

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IUCN is working on business cases for PES with Heineken ( BRALIRWA, BRALIMA and BRARUDI) and SINELEC to mobilize scaling up funds.

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Develop a cloud-based systems to monitor impact

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Develop an app to support farmers report their actions linked to high resolution imagery to monitor impact

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Started engagement with GCF and GEF to discuss this mechanisms in Rwanda, Burundi, DRC and Chad.