Presentation from the 2013 World Water Week in Stockholm

www.worldwaterweek.org
Investments in Land & Water in the Nile Basin and Transboundary Water Management Nexus

State of the art – Science perspective

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Outline

- Background and challenges
- Available information on land and water management
- WLRC project
• Ensuring sustainable use of natural resources is crucial for sustainable livelihoods.
Challenges: e.g. in Ethiopian Highlands

Land degradation / erosion

Water degradation

- Failure of water management at various levels
- Lack of appropriate legal and regulatory frameworks

→ Leads to growing scarcity of this vital resource
Some of the off-site impacts of LD – transboundary implications
Siltation of Dams

- Roseires Dam, (in 1966) reduced its capacity by 34% in 30 years (Abbas 2000)
- Sennar Dam (in 1925) reduced its capacity by 60% (Simon, 2004), 50% (Getnet Dubale, 2008) in about 80 years
- Calculated Sediment load reaching GRD, **140 Million tons** (ENTRO, 2006)

→ Threat for down-stream countries / transboundary implications

Source: G. Dubale, 2008
Land use change

Gete Zeleke 2000

Forest
Cropland
Grassland
Bushland
Reforestation
High dynamics of land use and diversity of actors

Small-scale farming

Large scale farming / FDI

Industry

Urbanisation

- Evidence based information and knowledge for decision making is needed
Current available information on water and land management?

- Available information on water and land resources for planning of land & water management is **highly fragmented**

- Existing **data and information gaps** or data are not **accessible**

- **Weak capacity and awareness**

- Important to **compile and share knowledge** on **water and land resources** in the region between different stakeholders / institutions / organisations
Role of research and universities?

> Knowledge generation (cross-sectoral)
> Knowledge for cross-scale policy dialogue
> Outreach through capacity building

> Generate **concrete products** that help key stakeholders take action and policy making
> Influence national, regional and international debates
Resource Centres

3 basins:
> Blue Nile (Ethiopia)
> Ewaso Ngiro north (Kenya)
   — Pangani Basin (Tanzania)
Project objectives

> Establish **Water and Land Resource Centres** which serves as knowledge base

> Improve the collection, processing and dissemination of **hydro-meteorological and land management data** and related socio-economic information
Ethiopia component

Focus on

> Rainfed agriculture / land degradation
> Integrated Watershed Management

> 6 Learning watersheds
> 3 Observatories
Kenya / Tanz. component

Focus on

- Water users / WUAs / forum
- Mitigating water conflict
- 1 observatory
Products of WLRC

> Water and Land Resource Centres which serve as knowledge base → open access resource database

> Establish learning watersheds – R & D
> Water Users Associations -> forum
> Continue long-term monitoring on Observatories

> Capacity building on IWM
> Produce periodic and client oriented outputs
# Knowledge for cross-scale policy dialogue

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<tr>
<th><strong>WLRC ETH</strong></th>
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<tbody>
<tr>
<td><strong>Sub-national</strong></td>
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<tr>
<td>6 Learning Watersheds serve as <strong>model cases / learning platforms</strong> → <strong>guidelines for up-scaling</strong> for government and development partners</td>
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<td>8 network of observatories as a source of data on <strong>hydro-sedimentology, climate and land use</strong> → for <strong>extrapolation/modeling</strong></td>
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<td><strong>National</strong></td>
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<td><strong>Share model case</strong></td>
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<td>2 <strong>policy briefs</strong></td>
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<td>Tailor-made <strong>periodic outputs</strong> of WALRIS (spatial and non-spatial information, e.g. climate, hydrology)</td>
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<td><strong>Regional/Trans-boundary</strong></td>
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<td><strong>Share model case</strong> and <strong>integrate to NBI, ENTRO, tripartite agreement actors</strong></td>
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<td><strong>Impact scenarios</strong> about implications of change and infrastructure investment in Upper Nile Basin and <strong>transboundary effects</strong> → publication and shared at international event</td>
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<td>1 <strong>high-level transboundary forum</strong> (Ethiopia, Sudan, South Sudan)</td>
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Outreach through capacity building

> WALRIS (ETH) and all the spatial information were displayed to wider audience at UN-ECA conference on Climate Change and Productivity for Africa
Target groups for WLRC

- Policy and decision makers
- Resource / land user
- Scientific community
- Development group (planners / implementers)

-> tailor-made products