

Presentation from the **2013 World Water Week in Stockholm**

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September

**WORLD
WATER
WEEK**
in Stockholm, 2013

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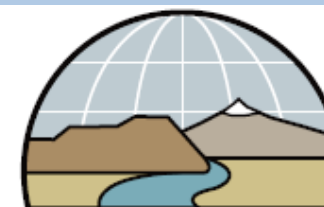
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Investments in Land & Water in the Nile Basin and Transboundary Water Management Nexus

State of the art – Science perspective

Stockholm Water Week: 1st September 2013

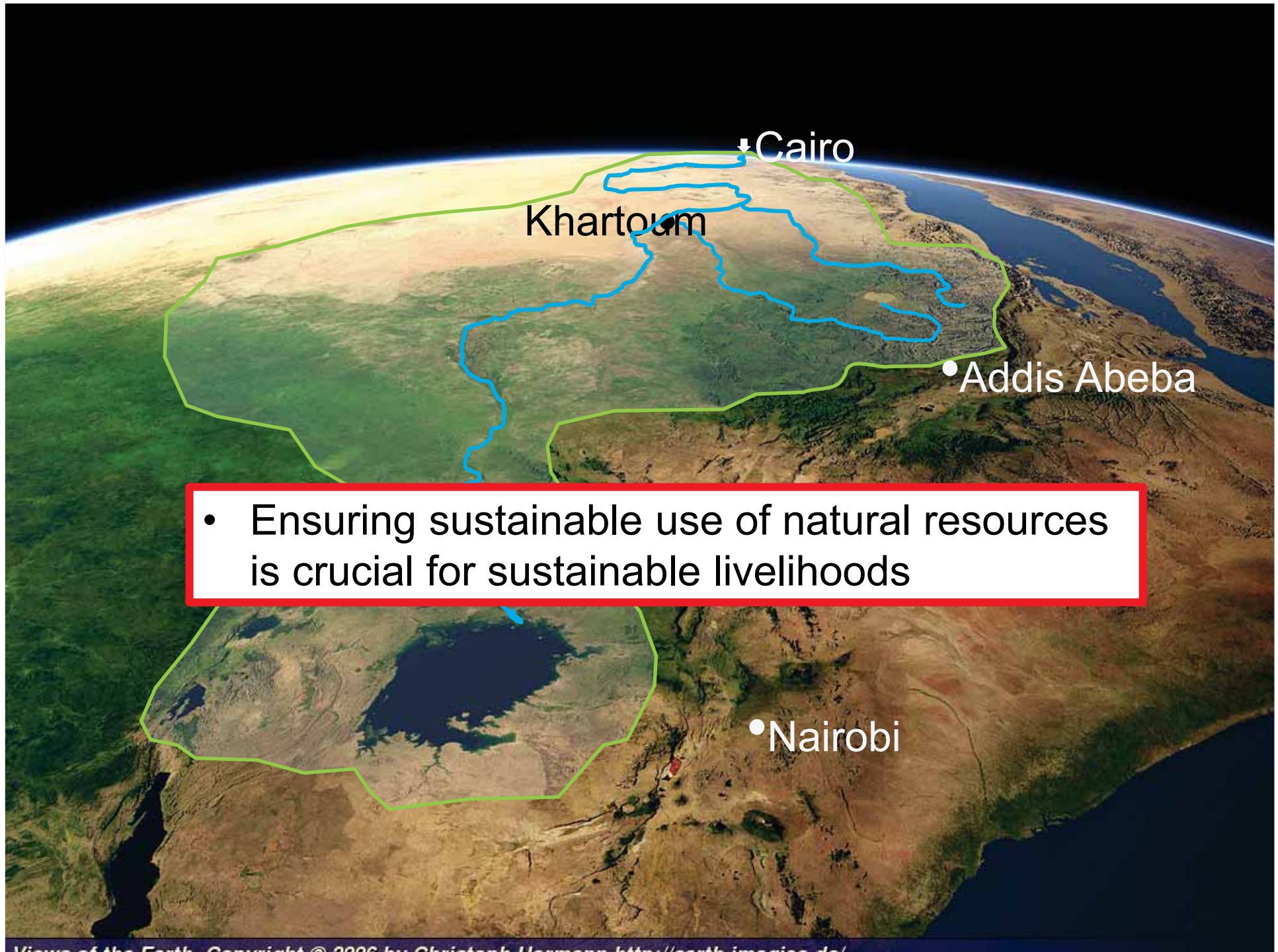
Isabelle Providoli, Gete Zeleke, Tena A., Hans Hurni
Centre for Development and Environment,
University of Bern, Switzerland



WATER & LAND
RESOURCE
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Outline

- > Background and challenges
- > Available information on land and water management
- > WLRC project



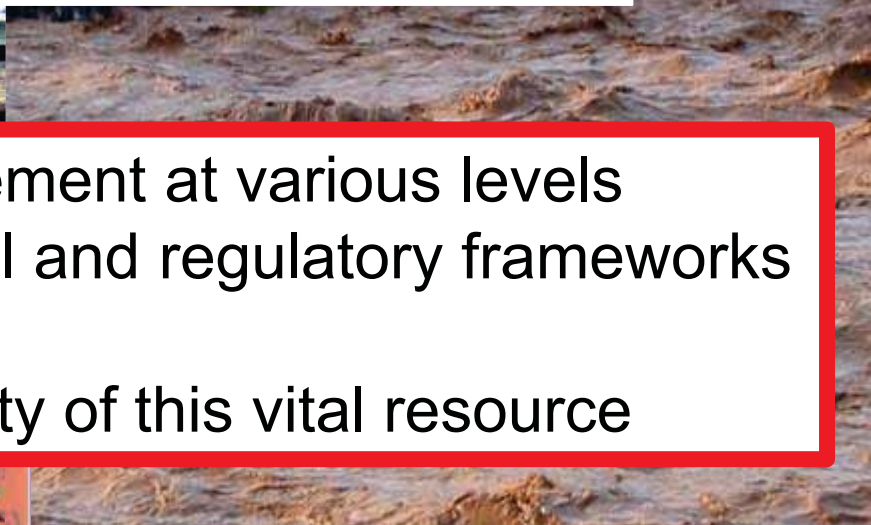
- Ensuring sustainable use of natural resources is crucial for sustainable livelihoods

Challenges: e.g. in Ethiopian Highlands

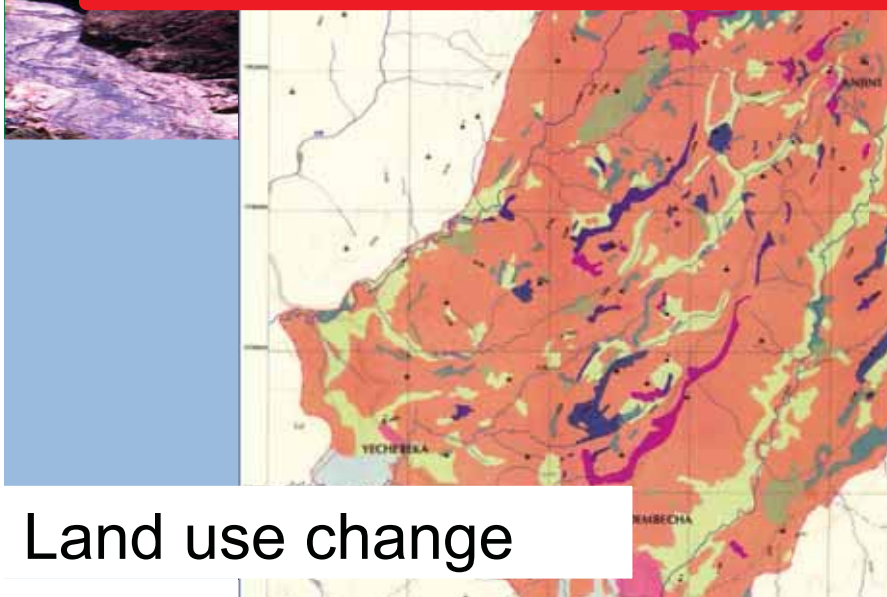
Land degradation / erosion



Water degradation



- Failure of water management at various levels
 - Lack of appropriate legal and regulatory frameworks
- Leads to growing scarcity of this vital resource



Land use change



Population growth / poverty



Land degradation





**Some of the off-site impacts of LD
– transboundary implications**

Siltation of Dams

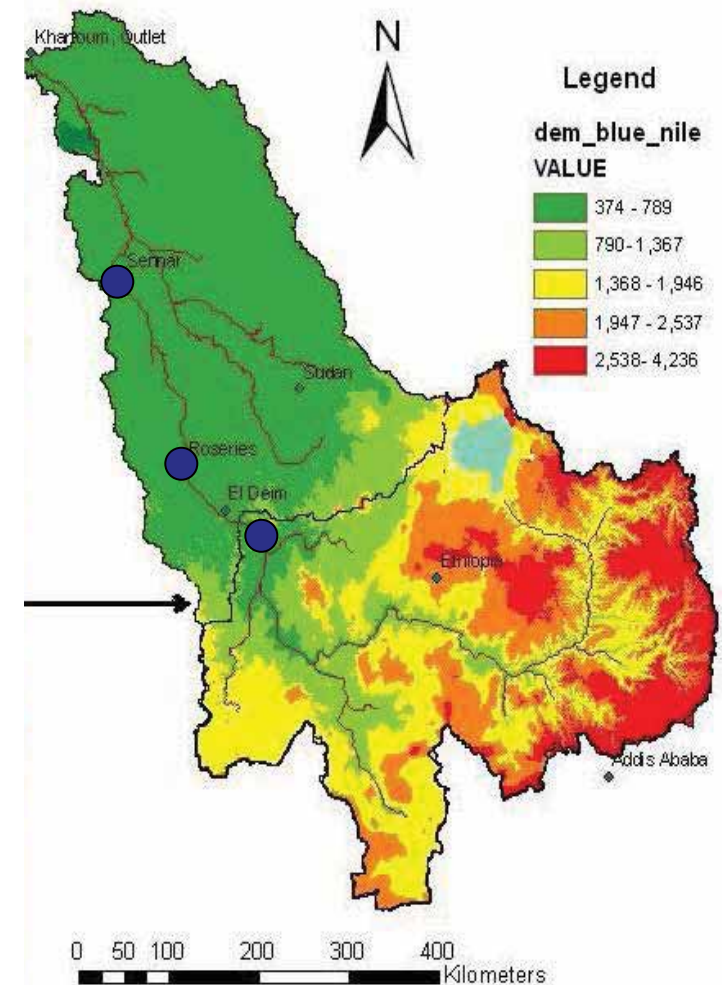
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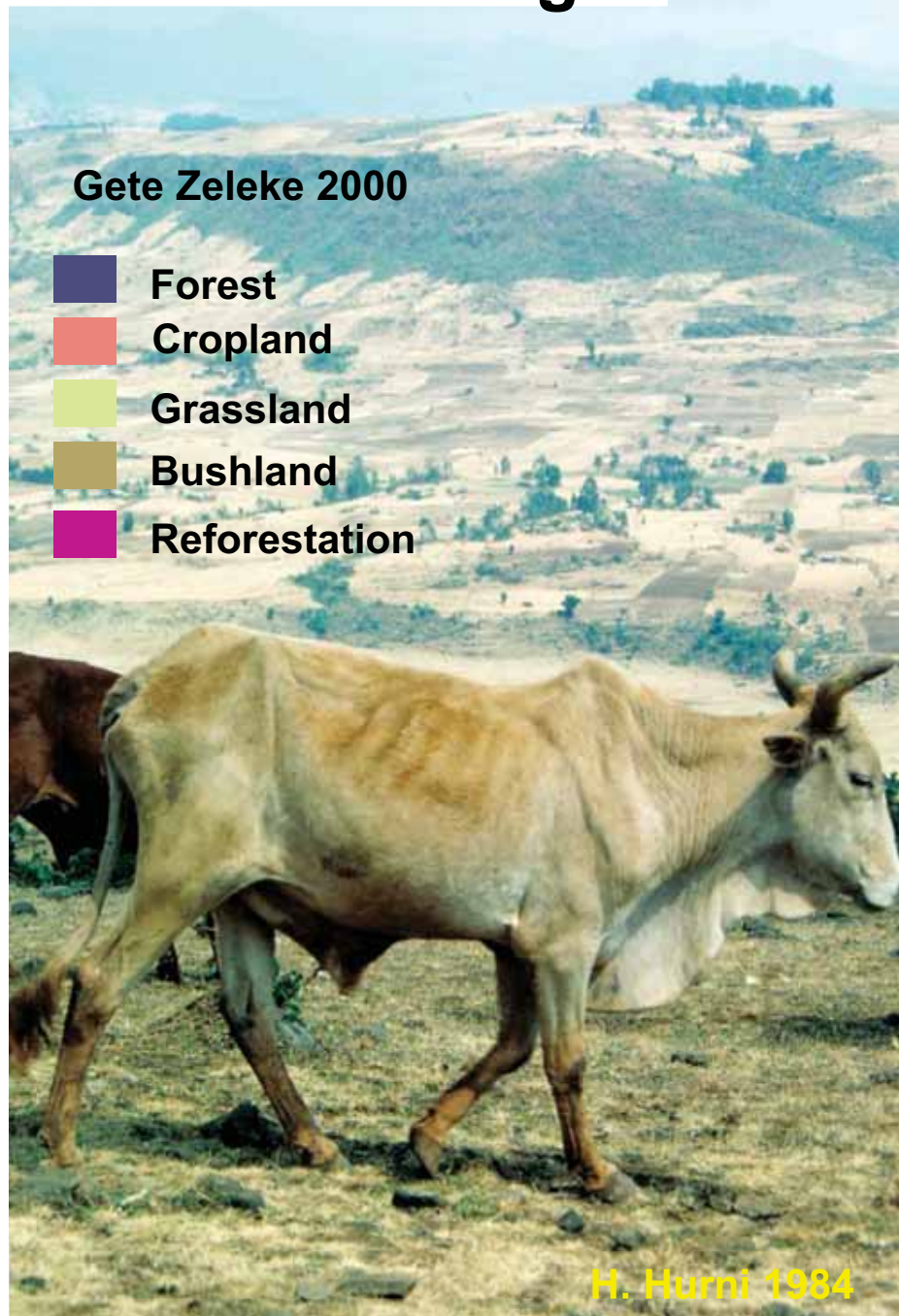
- > Roseires Dam, (in 1966) reduced its capacity by **34% in 30 years** (Abbas 2000)
- > Sennar Dam (in 1925) reduced its capacity by **60%** (Simon, 2004), **50%** (Getnet Dubale, 2008) in about 80 years
- > Calculated Sediment load reaching GRD, **140 Million tons** (ENTRO, 2006)

→ Threat for down-stream countries / transboundary implications



Source: G. Dubale, 2008

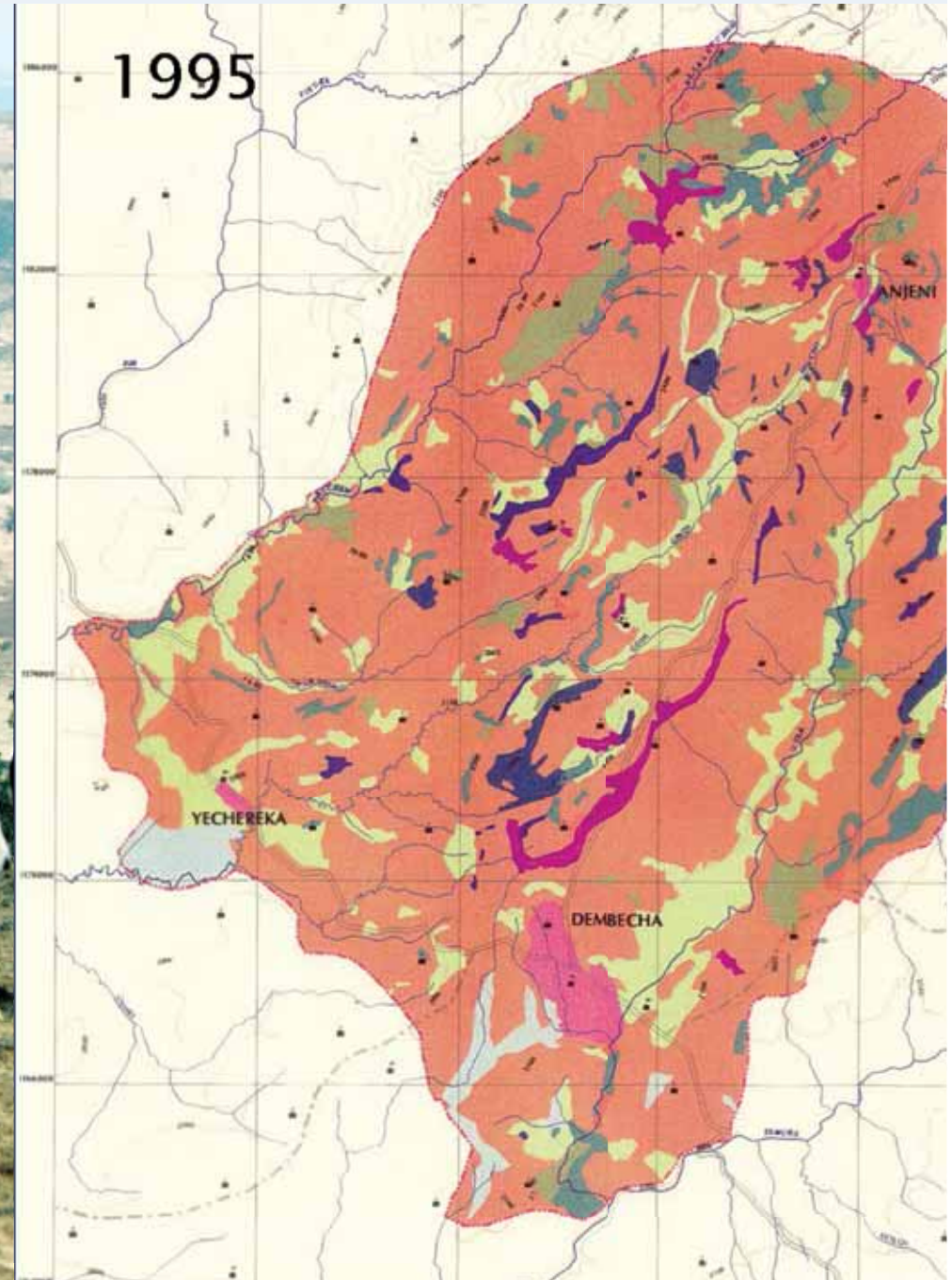
Land use change



Gete Zeleke 2000

- Forest
- Cropland
- Grassland
- Bushland
- Reforestation

H. Hurni 1984

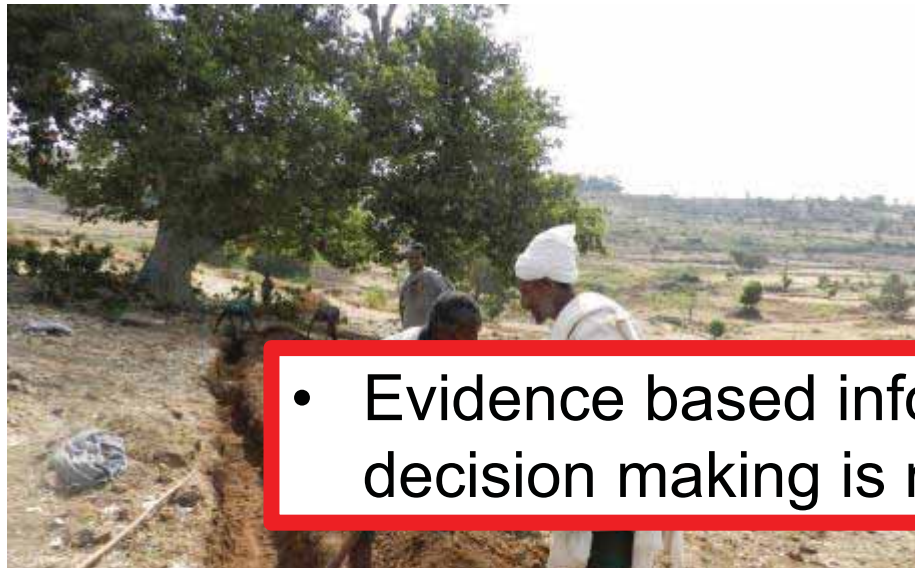


High dynamics of land use and diversity of actors



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Small-scale farming



Large scale farming / FDI



- Evidence based information and knowledge for decision making is needed

Industry



Urbanisation

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?

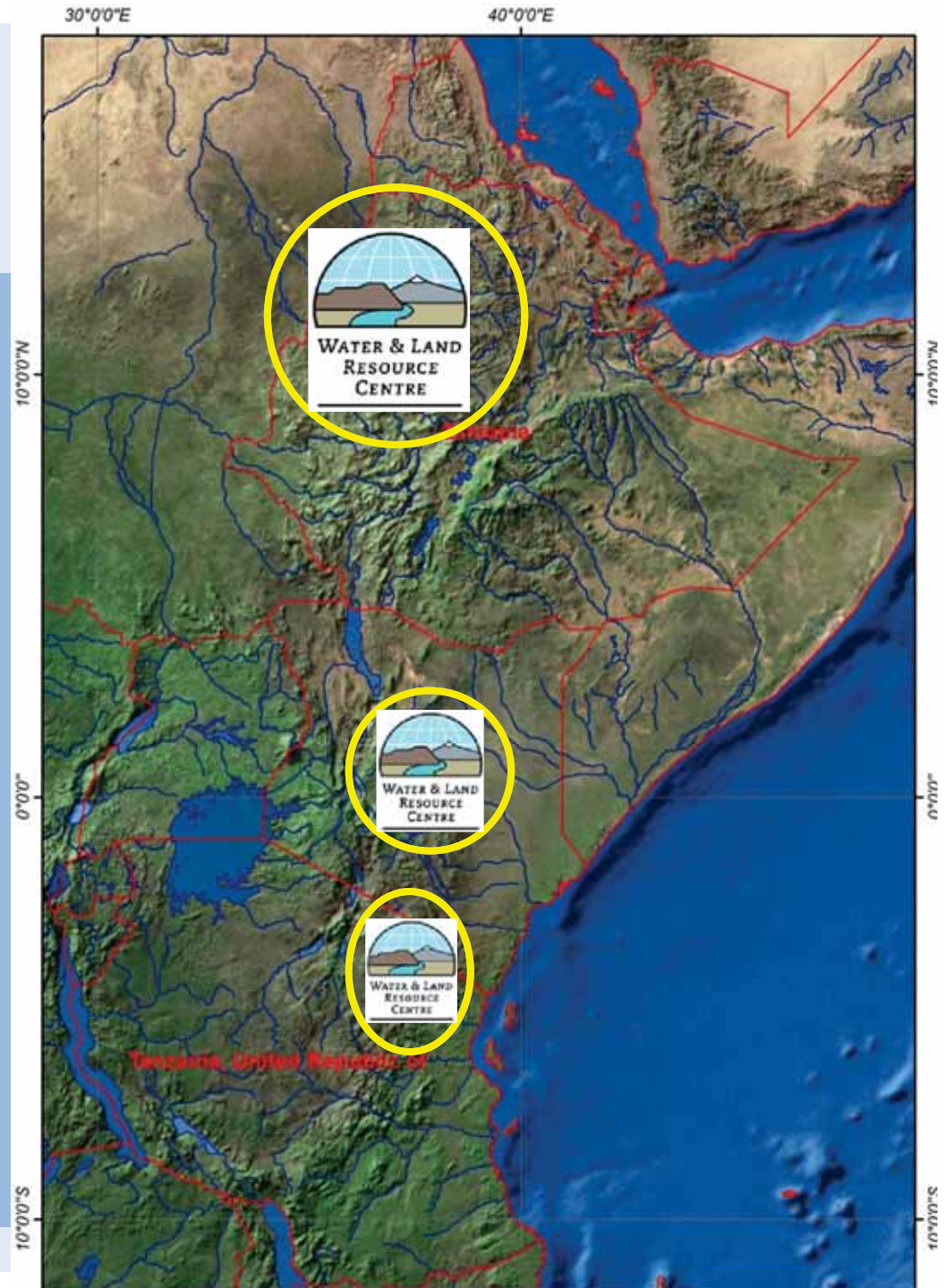
- > Knowledge generation (**cross-sectoral**)
- > Knowledge for **cross-scale** policy dialogue
- > Outreach through capacity building

- > 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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WLRC ETH

Sub-national

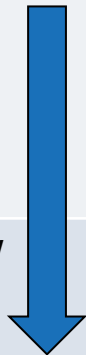
- 6 Learning Watersheds serve as **model cases / learning platforms** → **guidelines for up-scaling** for government and development partners
- 8 network of observatories as a source of data on **hydro-sedimentology, climate and land use** → for **extrapolation/modeling**

National

- **Share model case**
- 2 **policy briefs**
- Tailor-made **periodic outputs** of WALRIS (spatial and non-spatial information, e.g. climate, hydrology)

Regional/
Trans-
boundary

- **Share model case and integrate to NBI, ENTRO, tripartite agreement actors**
- **Impact scenarios** about implications of change and infrastructure investment in Upper Nile Basin and **transboundary effects** → publication and shared at international event
- 1 **high-level transboundary forum** (Ethiopia, Sudan, South Sudan)



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



Thank You