

Austrian - African University Network: engagement for mutual benefit for a sustainable future

Hubert Hasenauer

BOKU University of Natural Resources and Life Sciences, Vienna
Gregor Mendel Straße 33,
1180 Vienna, Austria

BOKU - University of Natural Resources and Life Sciences



- Since 1872 we do research and teaching in:
 - (i) protect the environment and secure live on earth
 - (ii) management of natural resources
 - (iii) secure food supply and health
- 8 Bachelor, 26 Master, 4 Doctoral Programs
- Faculty and staff: 2860, Students 12.500 (25 % foreigners)

***...we have a long tradition and strong co-operations with
African Universities***

Austrian – Africa Uninet

Two Best Practice Examples of the BOKU cooperation with African Partners

- Land use change and its consequences for sustainable development in the Amhara Region, Ethiopia
- Sustainable management of water and fish resources in Burkina Faso



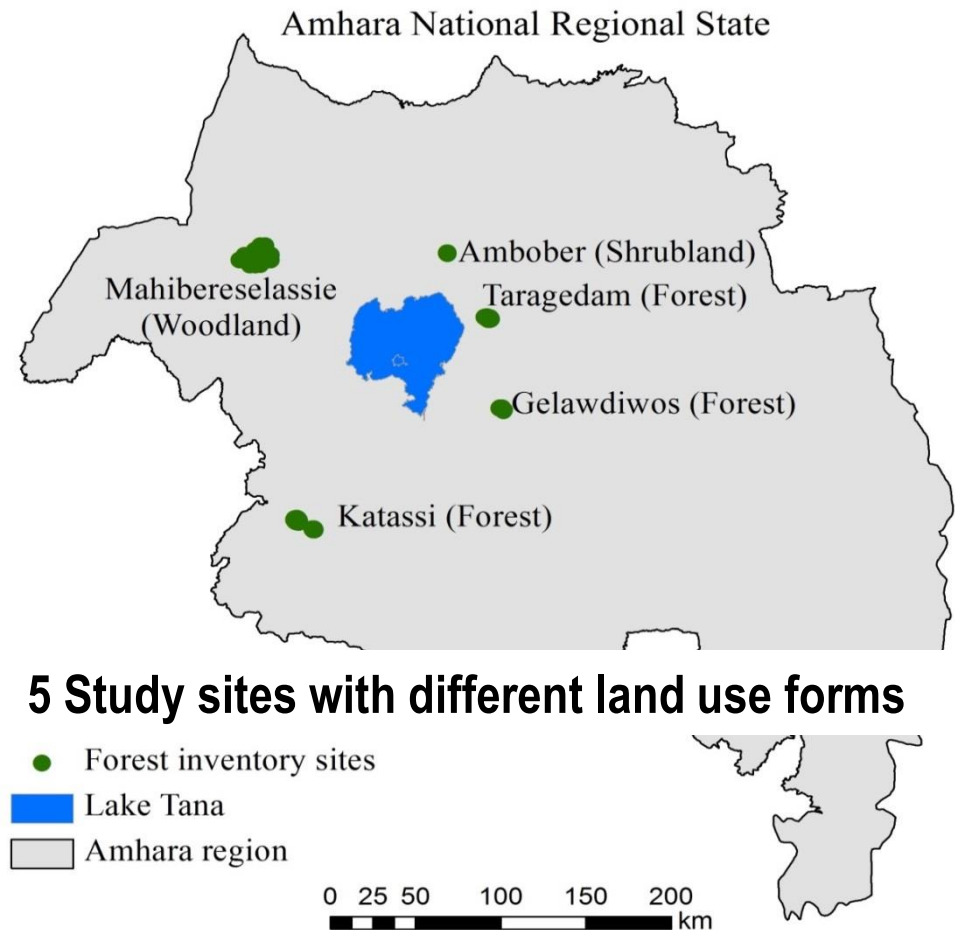
Example 1: Land use change in the Amhara Region, Ethiopia (lead by H. Hasenauer & D. Godbold)

- Ethiopia's forest cover was once 40%
- currently it is less than 10% and decreasing.
- Causes are:
 - The growing population depends on forests
 - Land use change for agriculture
- Historically reforestation efforts have a tradition
- E.g. the government wants to plant 1000 Mill. trees ?

Land use change in the Amhara Region - Objectives



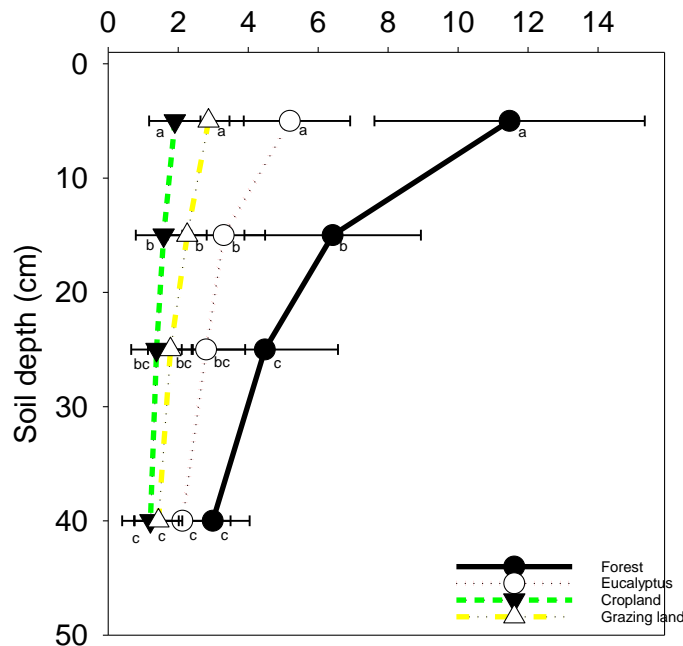
- Assess degradation effects by land use type in the Amhara Region, Ethiopia
- Potential reforestation in the region.



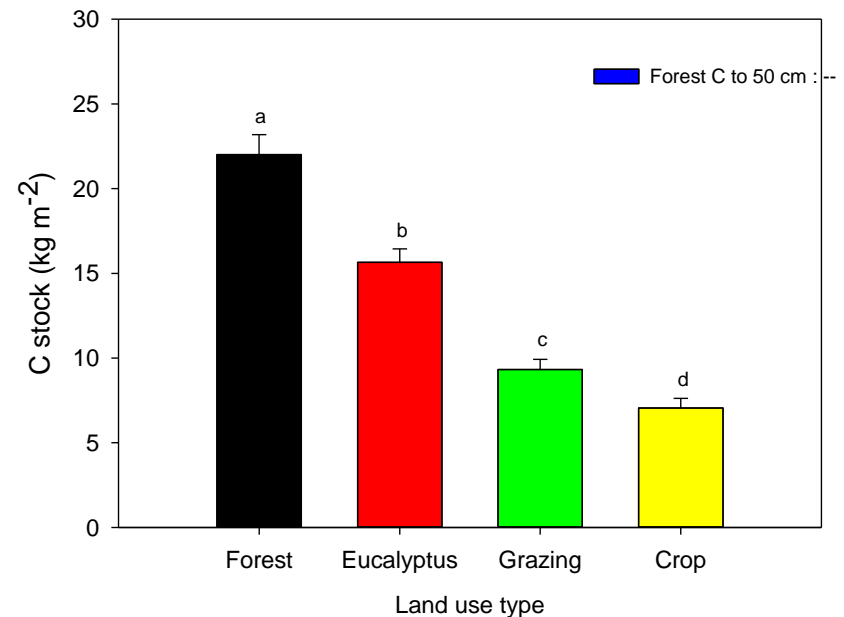
Results: Degradation Effects

Soil conditions (C & N) by land use type

Summed vertical distribution



Total C storage (50cm)



Key message: removing forests erodes the two top soil layer which relates to about 40 % of the C and N pools

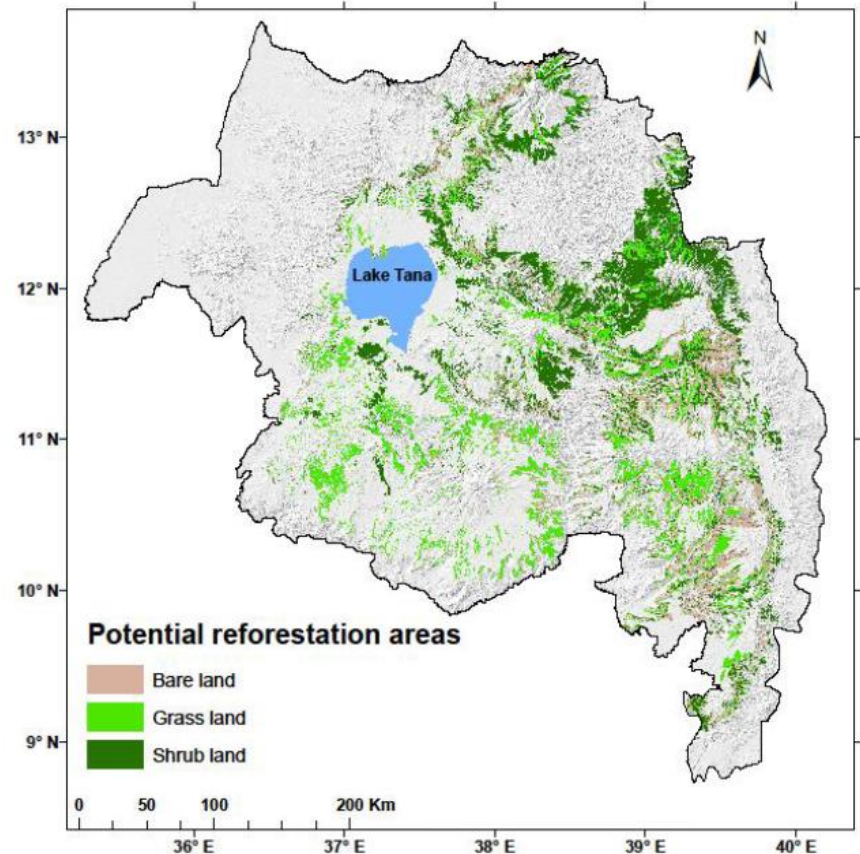
Results: Potential reforestation area in Amhara Region of Ethiopia

3,4 Mill ha suitable

- 0,7 Barland
- 1,2 Graslan
- 1,5 Shrubland

Carbon storage if everything is replanted

- 177 Tg C total potential
- 11 Tg C in the soil
- 166Tg C in the aboveground



Example 1: Summary

The current management is not sustainable - why?

- Increase in agriculture land due to a growing population
- Enormous soil degradation effects
- Loss in productivity and resource supply
- Reforestation programs (including management) are needed



Example 2: Sustainable Management of Water and Fish Resources in Burkina Faso (lead by A. Melcher)

In Burkina Faso the pressure on freshwater ecosystems is high to feed a growing population

Austrian
= Development Cooperation



appear

Austrian Partnership Programme
in Higher Education and Research
for Development

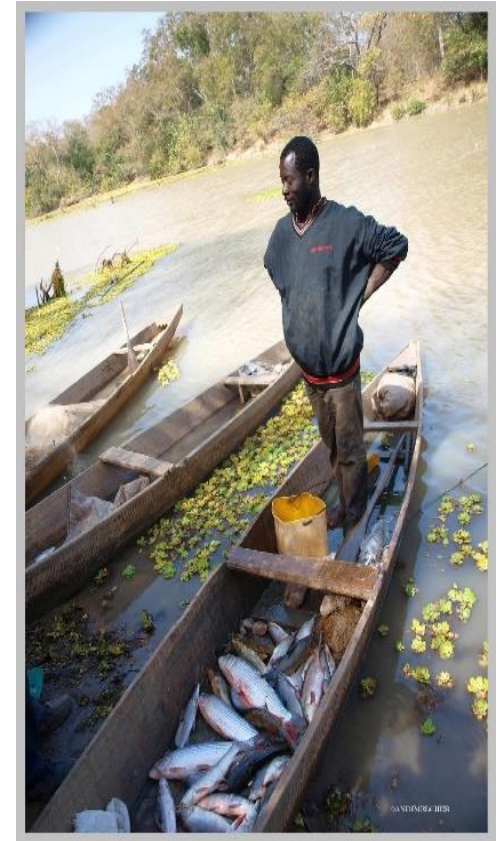
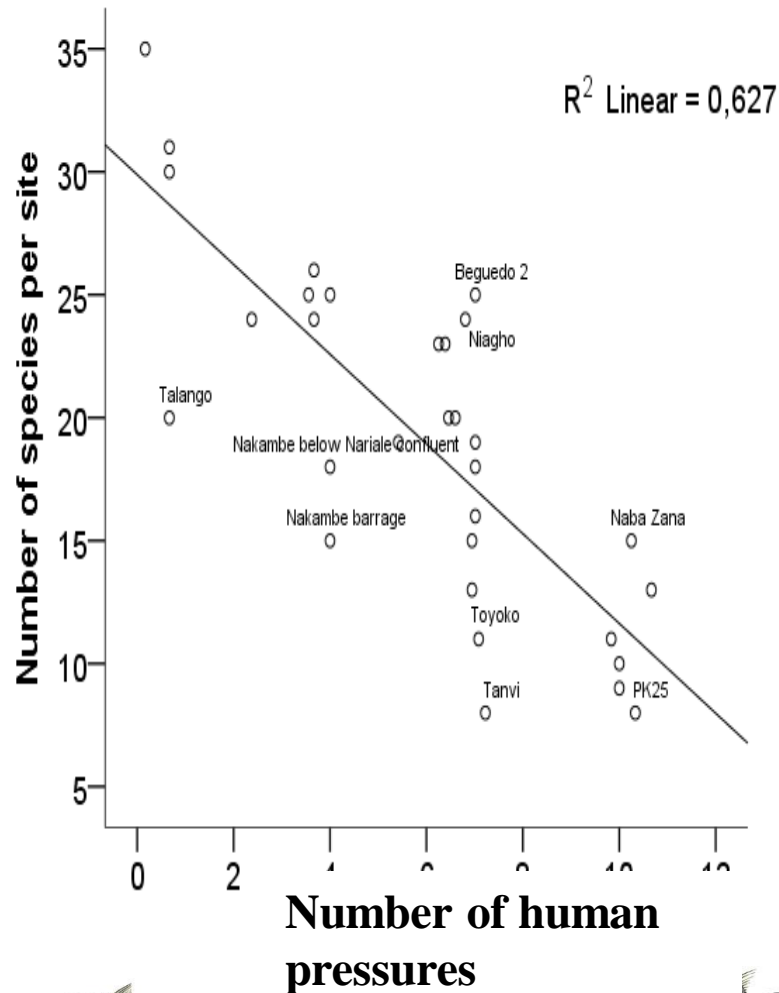
oead

Fish is an important source for food because

- Protein
- Nutrition
- Farmers
- Gender
- Market
- Bio-Indicators
- Religion



Results: Fish species decrease with number of human pressures



Example 2 Summary



- High traditional knowledge on water and fish
- Little scientific knowledge on water ecology and human impacts
- Capacity building and adaptive management is needed
- Science and know how makes the difference
- Think globally act locally – think long term but act now

WWW.SUSFISH.BOKU.AC.AT

The Austrian – Africa UniNet

Mission


Initiate a cooperation between Austrian and African higher education institutions

Organization

- Financed by the Austrian Ministry of Science
- Operated by Austrian Development Agency
- Led by BOKU

africa
uninet



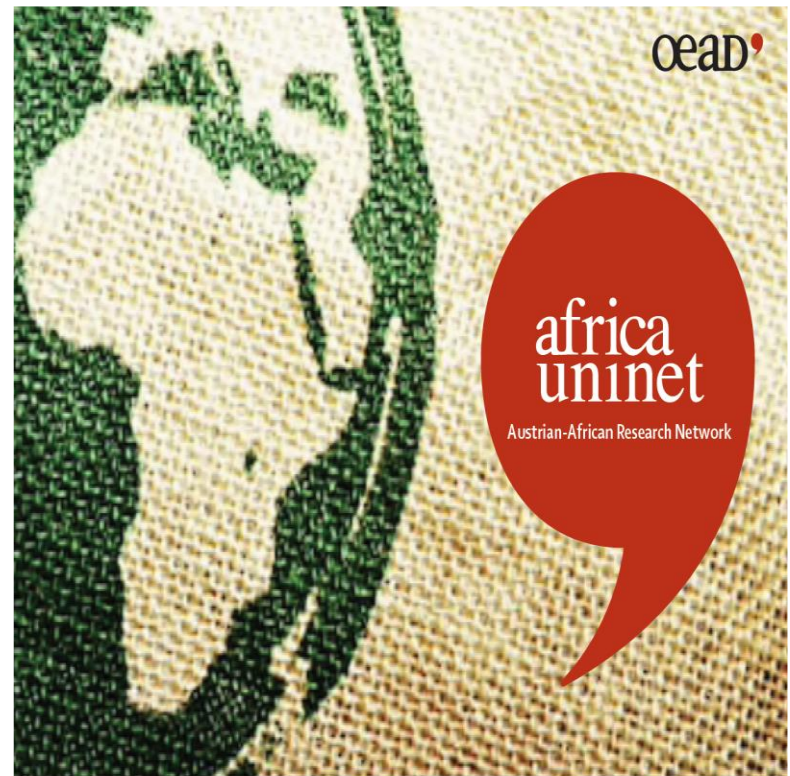
 Bundesministerium
Bildung, Wissenschaft
und Forschung

œad

The Austrian – Africa UniNet

Activities

- Exchange Professors
- Exchange Students
- Promote joint projects
- Organize conferences
- Promote networks



The Austrian – Africa UniNet

Who can apply:

Austrian and African Universities with a master program

Next Steps:

- Invitation is out
- Kick off Meeting will be on Jan 30 to 31, 2020
- Reception by the Minister & invitation to the BOKU Ball



**Thanks for
your attention**