SUSLAND - Sustainability, scale relations and structure-function-benefit chains in the landscape systems of the Tanzanian Southern Highlands

Eastern Africa is facing several challenges in sustainable land management. Land cover changes are rapid, and natural vegetation including forests are lost at high rate due to agricultural expansion, logging and other human-related factors.

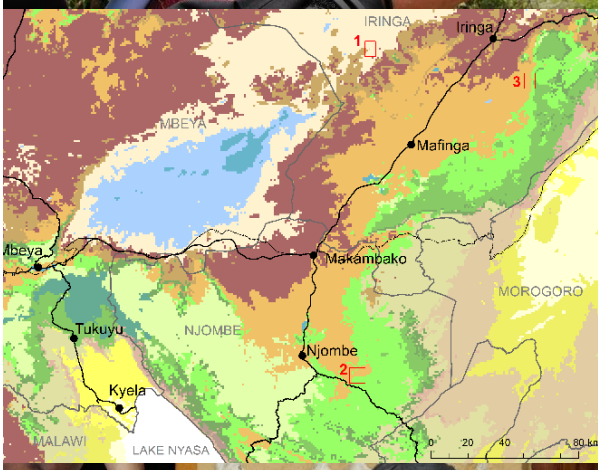
2014-2018

Our research project team is studying landscapes of the **Tanzanian Southern Highlands**, where multiple cash and food cropping strategies, and livestock, forestry and small-scale industrial activities are operating. The region is facing land management problems related to lack of land use planning, population growth and poverty, which raise land use conflicts, environmental degradation and incoherence in the society.

Using geospatial methods, such as **remote sensing, GIS and participatory mapping**, we study physical realities such as land resources and biodiversity and identify what types of dynamics, synergies and trade-offs they have with human values and landscape benefits. This feeds into understanding the sustainability of the whole regional scale landscape system.

We are interested in **developing practical solutions for sustainable landscape planning and natural resource management** in close collaboration with local communities and land use planners. Some examples of our work in the Southern Highlands are:

- Mapping of ecoregions based on freely available climate, topography, soil and vegetation data using Geographical Information Systems (GIS) and remote sensing.
- A spatially comprehensive assessment of forest plantation resources with Open Foris, Google Earth Engine and participation of Tanzanian experts.
- Development of satellite image -based Village Land Use Planning (VLUP) process together with district authorities, civil society actors and Private Forestry Programme.
- Participatory mapping of landscape benefits in Tungamalenga, Iboya and Lulanzi villages with local residents.



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