

PhD projects at Research group of Economics and Ecosystem services

Gebrekidan, Bisrat Haile**Economic analysis of the dynamics of land use and land cover change in East African wetlands****Keywords: Wetlands, East Africa, Land use and land cover, Agent Based Modelling, Spatially explicit, human decision making**

The PhD Research Project Presents economic assessment of land use option in comparisons with current land use under specific natural, economic and institutional conditions. It is part of the GLOBE- Project “Wetland in East Africa: Reconciling future food production with Environmental Protection.” under working package B”.

Human activities arising from multiplicity of Economic and social objectives are considered the immediate source of land use change around wetlands. Despite the establishment of regulation policies, land use decision in terms of choice between alternative farming systems remains largely dependent on the individual farmer around the wetlands. Improving our understanding of farmer’s decision making and their heterogeneity and interaction in the wetland catchment is the critical step in design of successful policy instruments to improve the sustainability of wetland ecosystem.

To this end , I will develop spatially explicit Agent Based Model to evaluate the heterogeneous farm agents reaction to different socio-economic, management and climate change scenarios and asses their impact on land use change in the Kilombero Valley Flood Plain(KVFP). In the first stage I will conceptualize the model for identified types of agents using the wetland(s), in the second stage I will implement the behavioral models for agents and calibration to the status quo. And finally I will implement alternative production management options and climate variations in model formulation and application in scenario analysis.



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Work Package	B2
Countries of work	Tanzania
1 st Supervisor	Professor Dr. Thomas Heckeley
2 nd Supervisor	
Subject	Economics and Agricultural Policy
Faculty	Faculty of Agriculture
University	University of Bonn
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