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Integration and Modelling

Keywords: Integrated modelling, decision support

GlobE Wetlands follows a multi-disciplinary research approach for characterising the consequences of human-environmental interaction in East-African wetlands. Quantitative and qualitative modelling methods are applied to support cross-disciplinary communication, to sharpen research hypotheses and to integrate the findings of the cooperating groups. An integrated model, characterizing wetland responses to management activities and climate related fluctuations of the bio-physical environment, will be an important result of these activities. The model is successively constructed during the course of the collaborative research based on frequent interaction between all partners. My prime role in GlobE is to moderate this exchange as the leader of research cluster C and to integrate the resulting findings into a unified model. The model will provide the basis for regional scaling studies conducted in cluster D.

I am also responsible for supporting yield-gap studies (cluster A) and explorations of management options (cluster B) with crop-modelling exercises. Programming and managing automated weather stations in all East-African countries is a side activity in this context. Dedicated field trials and surveys provide data for model calibration under different crop management scenarios. The calibrated crop models will be used for assessing alternative management options under different global change scenarios (cluster C).

The research foci of GlobE wetlands were set by ministerial representatives and environmental/agricultural management authorities of each participating African country. The integrated modelling activities are accompanied by frequent exchanges with decision makers to ensure that research of GlobE Wetlands remains relevant throughout the project duration and beyond. A decision making tool will be the result of these activities.



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Cluster	C
Work Package	3
Countries of work	Kenya, Rwanda, Tanzania, Uganda
Institute	Institute of Crop Science and Resource Conservation (INRES)
University/Organisation	University of Bonn