



Climate Change Impact Assessment and Adaptation Options in Vulnerable Agro-Landscapes in East-Africa

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Background

- Climate change is recognized risk to peoples' livelihoods in Tanzania.
- Projected impacts include: variability in temperature, rainfall, LGP, flooding and drought.
- This affects different sectors namely agriculture, water resources & ecosystem services among others. Final effects are being felt in reduced agricultural production, diminishing river flow & possibly ground water.
- This will be coupled with increasing demand for food due to increase in human pressure.
- Rain-fed mixed crop livestock systems of north, east and central Tanzania are likely to be most severely affected by these changes.

Objectives

- Assess the regional impacts of climate change on agro-landscapes and environment.
- Design adaptation strategies and practices for small-scale agriculture.

Study Area

- Tanzania (Mpwapwa 6°25'17.69"S, 36°30'24.17"E & Morogoro 6°48'20.37"S, 37°39'13.60"E).
- The region's agricultural sector composed of >80% peasant farmers of its total population depend on agriculture for their livelihood.
- The study area is among most food insecure regions.
- The region will be impacted by climate change which is likely to aggravate food security.

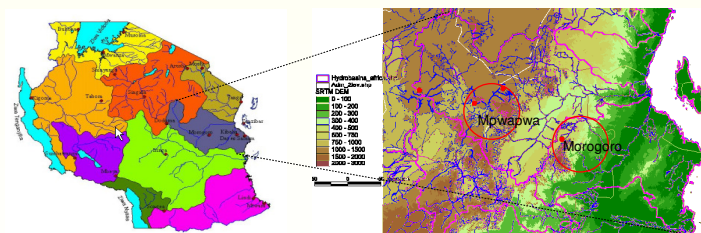
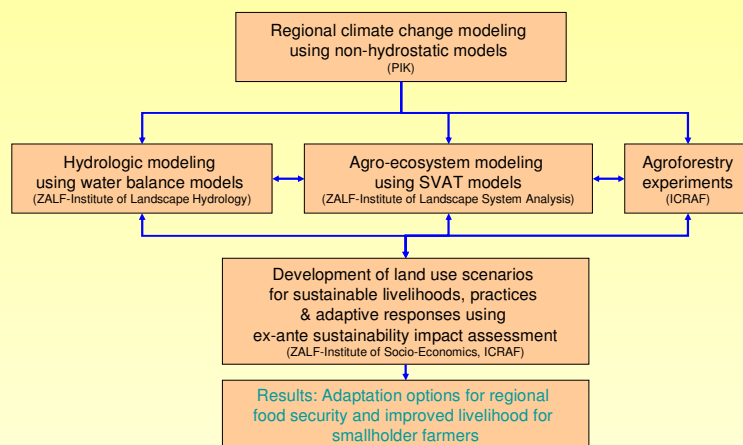
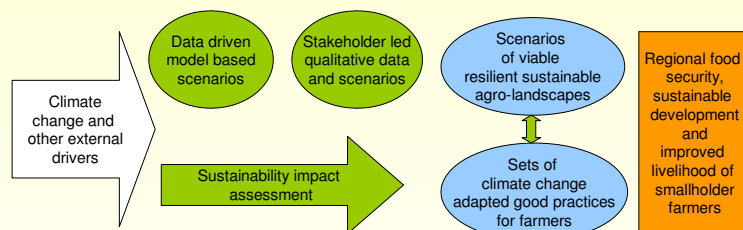


Fig. 1: Map of Tanzania showing river basins and study site near Mpwapwa and Morogoro

Methodological framework



Implementation framework



Expected outputs

- Downscaled climate change scenarios for different IPCC emission scenarios.
- Model based estimations of climate change impacts on hydrological cycle and assessment of land use options.
- Scenarios of sustainable livelihoods and resilient agro-landscapes under climate change.
- Assessment of adaptive practices and criteria for best adaptation practices.

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