



Participatory development and testing of strategies to reduce climate vulnerability of poor farm households in East Africa through innovations in potato and sweet potato technologies and enabling policies

International Potato Center CIP

Country/Region:	Kenya, Ethiopia, Uganda
German participation:	Max-Planck Institute for Meteorology (MPI-M), Hamburg, Germany
Leading scientists:	Dr. Lieven Claessens
Duration:	March 2008 – February 2011

Initial situation

Potato and sweet potato based agricultural systems in East Africa are predicted to experience considerable negative impacts of climate change. The IPCC Fourth Assessment emphasizes that adaptation strategies are essential. However, addressing adaptation in the context of small-scale, semi-subsistence agriculture raises special challenges.

Most research on climate change impacts and adaptation have been based on analysis of individual crops, analysis of “representative farms,” or modeling exercises using aggregated data, with little or no participation by farmers and other stakeholders. As a result, existing research has quantified potential aggregate impacts, but has not tested the usefulness of strategies based on specific technologies and practices that could be adopted by farmers to adapt to climate change, or assessed the role that policies could play in enabling such adoption.

An important constraint is that data demands are high, because site-specific bio-physical and economic data are required. The development of relatively simple methods for *ex ante* evaluation of adaptation at the household and system levels is therefore needed.

Approach of the project

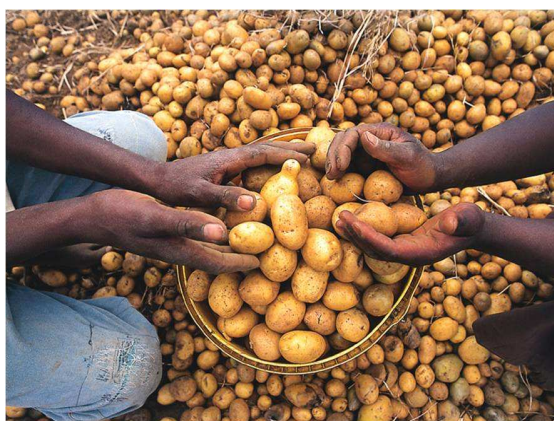
This project is using the Tradeoff Analysis methodology to evaluate the impacts of new potato and sweet potato technologies and enabling policies to help East African farmers to adapt to climate change.



In a multi disciplinary collaboration between CIP scientists, stakeholders and collaborators in Kenya, Ethiopia, Uganda, Europe and the US, the project will develop climate change adaptation strategies using innovations in potato- and sweet potato technologies that have been shown to increase resilience of agricultural systems and reduce vulnerability of poor farm households to climate change.

Major results achieved

Stakeholder workshops in the three project countries revealed the most important vulnerability indicators of the agricultural systems at hand. Farmers, scientists and local policy makers furthermore identified already existing or possible future adaptation strategies in the context of climate change. The multi disciplinary research teams in the project have been trained in using the Tradeoff Analysis methodology and the first available datasets are currently being analyzed.



Expected impact

Results of the project will be used by farmers and local institutions to support improved adaptive decision making. The approach and tools validated in this project will be available to National Agricultural Research Systems (NARS) and national policy decision makers to improve their capacity to assess climate impacts and

develop adaptive strategies based on both technologies and policies that create an enabling environment for technology adoption.

Specific outputs include:

- Regionally-specific technology and policy strategies to reduce vulnerability of poor farm households to climate change;
- Enhanced national and international capacity to utilize new research methods for analyzing impacts of technologies and policies affecting farmers' adaptation to climate change;
- Policy impact pathways identified and actual and expected policy changes assessed.

Collaborating institutions: Kenya Agricultural Research Institute (KARI), Nairobi, Kenya; Makerere University, Kampala, Uganda; Ethiopian Institute for Agricultural Research (EIAR), Addis Abeba, Ethiopia; International Livestock Research Institute (ILRI), Nairobi, Kenya; Wageningen University, the Netherlands; Montana State University, Bozeman, USA

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