



Factsheet

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Strategies for Adapting to Climate Change in Rural Sub-Saharan Africa: Targeting the Most Vulnerable

International Food Policy Research Institute (IFPRI)

Country/Region:	Sub-Saharan Africa (selected ASARECA and FANRPAN countries)
German participation	Potsdam Institute for Climate Impact Research (PIK), Leibniz-Centre for Agricultural Landscape Research (ZALF)
Leading scientist:	Dr. Gerald Nelson
Duration:	May 2008 - April 2011

Initial situation

Long-term changes in climate will disproportionately affect tropical regions, meaning poor farmers in Sub-Saharan Africa will likely bear the brunt of adverse impacts. Adaptation plays an important role in reducing vulnerability to climate change. Promoting adaptation among vulnerable populations and systems requires a comprehensive assessment of global changes and the impact of these changes across disaggregated systems and groups, the factors influencing the initial state of vulnerability and the process by which households choose to adapt to changes.

Approach of the project

The project aims to reduce the vulnerability of rural households to climate change by better coordinating and targeting adaptation strategies.

It will provide regional organizations, policymakers, and farmers in Sub-Saharan Africa with the tools to identify and implement cost-effective adaptation strategies for specific food systems and types of households.



Picture by Till Below

This project differentiates between autonomous adaptation and adaptation addressed through policies and programs. A set of global scenarios is being constructed to project the impact of global change on crop and livestock production systems, using detailed vegetative, land use change, and crop modeling.

The analysis integrates socioeconomic vulnerability and adaptive capacity based on livelihood strategies. It then links with specific production systems and other factors influencing household well-being and the ability to adapt to climatic changes. Finally, food producing systems are linked to constraints to adaptation, including both household characteristics and outside factors.

Major results achieved

Several outputs have been completed to date. Some general circulation model results for selected Special Report on Emissions Scenarios have been downscaled for Sub-Saharan Africa. These climate data are combined with local soil data and information on where crops are grown to model climate change effects on crop yields. The productivity effects are now included in IFPRI's International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT).



A literature review on climate change adaptation practices and their acceptance by farmers in Sub-Saharan Africa has been completed and will be published as an IFPRI/ZALF discussion paper. A household survey is underway in Tanzania to elicit farmers' responses to weather-related shocks and the costs and benefits of adaptation in important cropping systems. The responses of natural and agricultural vegetation's productivity, fresh-water availability, and agricultural water

demand to climate change have been assessed with PIK's LPJmL model.

Finally, policymakers are being interviewed to assess their views of climate change policymaking in Tanzania and the opportunities to help farmers adapt to climate change. At the local level, actors responsible for implementing and disseminating adaptation strategies are being interviewed about usefulness for and acceptance by farmers.

Expected impact

The study will help ASARECA and FANRPAN provide National Agricultural Research Systems with insights on adaptation to climate change.

For FANRPAN, the project contributes to the development of one of the four "flagship projects" identified in its new Strategic Plan. This project will generate new knowledge and provide evidence to inform policymakers and key stakeholders on the types of policies needed to enable the rural poor to adapt to global environmental change.

Collaborating institutions: Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and the Food, Agriculture, and Natural Resources Policy Analysis Network (FANRPAN)

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