

Climate Change Impacts, Coping Strategies, and Adaptation Practices in East Africa: A Comparative Analysis of Ethiopia and Kenya

Jonathan Mockshell, Alwin Keil

Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, University of Hohenheim, Germany



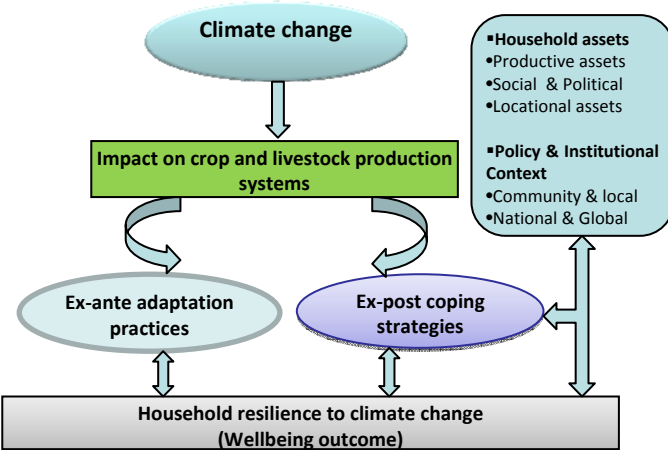
I. Introduction

- "A warmer world with a more intense water cycle and rising sea levels will influence many key determinants of wealth and wellbeing, including water supply, food production, human health, availability of land, and the environment.... The poor will be hit earliest and most severely' (Stern Review, 2006 p.84)
- Climate change has become a highly prominent topic in the 21st century with its impacts, adaptation and coping mechanisms being examined in numerous recent studies.
- The current prominence of this subject among researchers and decision-makers is justified by its far-reaching social, political, environmental, and economic consequences on rural households who depend largely on rainfall for farming activities.

II. Research objectives

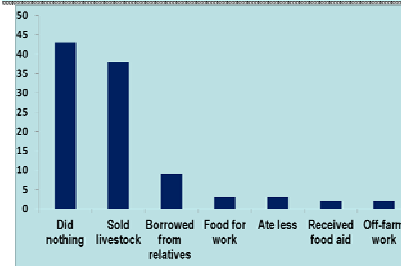
1. Examine the current impact of extreme climate change on agriculture production in Ethiopia and Kenya.
2. Identify the current coping strategies employed by farm households using the asset based approach.
3. Investigate the current adaptation practices and the adaptation potential of farm households.

III. Conceptual framework



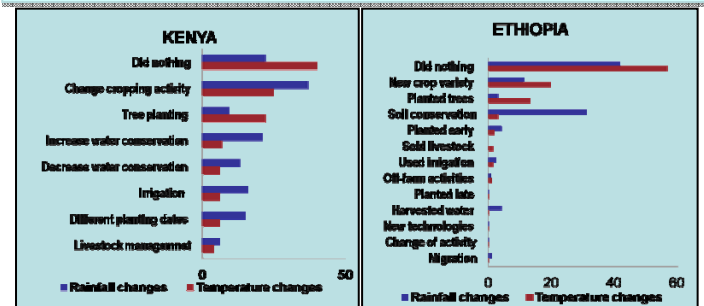
IV. Findings

Coping mechanisms employed by farm households



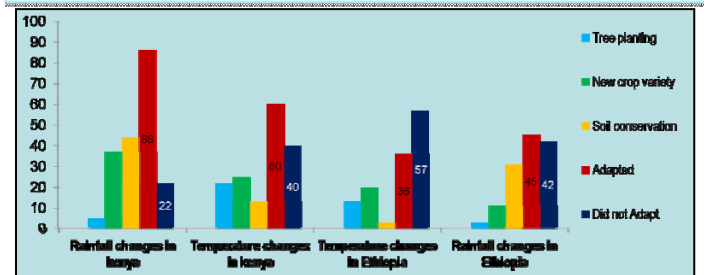
- **Productive assets**
 - Sale of livestock, taking children out of school to trade, eating less, credit from informal sources, Off-farm work, rural-urban migration.
- **Social and Political net work**
 - Use of social networks or ties, participation in decision making.
- **Policy and Institution strategies**

Adaptation practices employed by farm households



Similar household adaptation practices to rainfall and temperature variability.

Comparison of adaptation potential of farm households



V. Conclusions

There is evidence that farm households in Kenya are better adapted to climate change than farm households in Ethiopia.

Identified reasons for the relatively low degree of adaptation in Ethiopia are lack of information, inadequate access to credit and lack of technical knowledge.

VI. Policy recommendations

Proactive Government interventions to formulate policies that will create social networks to support farm households.

Better credit access to farmers will facilitate private investments in irrigation systems.

Crop and livestock insurance should be used as alternative means of supporting the poor.

Seasonal weather forecasts should be made accessible to farmers to increase awareness of future weather conditions for effective planning.

Adaptation potential

- Adaptation potential was assessed based on the percentage of respondents that used a set of observed adaptation practices in the study area.
- Limitation of approach: Less observed adaptation practice may not always imply lower adaptation potential.

Impact of climate change on agriculture production

Impact on crop production



Impact on livestock production

