

Participatory Ecological Land Use  
Management (PELUM) Uganda

# **Towards Enhancing Small-Scale Farmers' Livelihoods and Food Security Through Indigenous Climate Change Adaptation.**



A PELUM Uganda Study 2010



*Towards Enhancing Small-Scale Farmers' Livelihoods  
and Food Security through Indigenous Climate Change Adaptation.*

### Did you know?

100 million people were affected  
by climate disasters in 2004,  
more than 98 per cent of them  
in developing countries



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Published by: PELUM Uganda Country Desk

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Layout and design by: Andrew Kibuuka Nakedde



# List of Abbreviations

<b>CCCU</b>	Climate Change Coordination Unit
<b>COP</b>	Conference of Parties
<b>FAO</b>	United Nations Food and Agricultural Organization
<b>FGD</b>	Focus Group Discussion
<b>GHG</b>	Greenhouse Gas
<b>IPCC</b>	Inter-Governmental Panel on Climate Change
<b>KAP</b>	Knowledge Attitude and Practice
<b>KII</b>	Key Informants' Interviews
<b>LDCs</b>	Least Developed Countries
<b>MDGs</b>	Millennium Development Goals
<b>NAADS</b>	National Agricultural Advisory Services
<b>NAPA</b>	National Adaptation Programme of Action
<b>NGO</b>	Non-Government Organization
<b>PEAP</b>	Poverty Eradication Action Plan
<b>PELUM</b>	Participatory Ecological Land Use Management
<b>PLA</b>	Participatory Learning and Action
<b>PMA</b>	Plan for Modernization of Agriculture
<b>PRA</b>	Participatory Rural Appraisal
<b>SSF</b>	Small Scale Farmers
<b>SLM</b>	Sustainable Land Management
<b>U-SLM SIF</b>	Uganda Sustainable Land Management Strategic Investment Framework
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>PVA</b>	Participatory Vulnerability Analysis
<b>SSI</b>	Semi-Structured Interviewss



## Foreword

Climate change and variability coupled with increasing environmental degradation have recently become of great concern to many sectors in Uganda including agriculture. Degenerating soil fertility, pressures on land for farming and human settlement, deforestation for industrialization coupled with other forms of environmental degradation worsen the already complex climate change problems.

Without mass education for skills development in mitigation and adaptation; awareness creation and public debates coupled with environmentally friendly policies on development and investment, climate change is likely to cause more human suffering than what the country has ever recorded in history.

Participatory Ecological Land Use Management Uganda deserves our support and congratulations for the tireless work on one of Uganda's most intractable problem of climate change and variability. A growing realization is emerging among the population about the adverse effects of climate change. This has been spurred on by the recent landslides in Bududa- Eastern Uganda and floods in Western Uganda. Their aftermath indicates that Ugandans must work quickly to solve the issues of environmental degradation to avoid massive related problems in the near future.

With this report on Enhancing Small scale farmers Livelihoods and Food security through indigenous climate change adaptation options, PELUM Uganda has produced yet another well researched piece of information highlighting a set of critical recommendations to address the challenges of Climate change especially in a country whose livelihoods base on the shoulders of small scale farmers. PELUM recognizes the truism that adaptation to climate change requires long-term capacity strengthening within the Small Scale Farmers (SSFs) structures as well as other civil society. The National Adaptation Programmes of Action (NAPA) process, which started under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC), is one mechanism through which the Ugandan government and other national stakeholders can understand the problem of climate change and their role in building resilience to its adverse impacts. However, all these policy issues are not yet sufficiently addressed to the understanding of the poor farmers at grass roots. We hope this study will generate further discussions between civil society organizations and government.

Agnes Kirabo  
**Country Board Chairperson,  
PELUM Uganda**



# Executive Summary

**T**he purpose of this study was to document climate change impacts on small scale farmers, identify adaptation options and assess the appropriateness of the indigenous knowledge (IK) towards food security and income improvement approaches. This report suggests possible ways of building farmers' resilience for sustainable agriculture amidst climate change challenges. This study was conducted to assess the indigenous knowledge of small scale farmers of Mubende and Nakasogola districts, through a thorough analysis of community Knowledge, Attitudes and Practices (KAP) on adaptation to climate change. Specifically, the study identified myths, beliefs, traditional philosophies and practices in relation to seasonal changes. Climate change and variability related events experienced by the study communities were probed in order to map out the best interventions or adaptation measures.

The study mapped out small scale farmers' resources as well as livelihoods and income capacities to cope with the likely adverse impacts of climate change and variability. Community based Socio-Economic supportive infrastructure in relation to climate change adaptation and mitigation were identified. The study used qualitative tools which included Participatory Rural Appraisal (PRA) - Focus Group Discussions (FGDs), Key Informant Interviews (KII) and Semi-Structured Interviews (SSI). Other tools included seasonal calendars, social maps, observation and recording, transect walks and diagramming. The study involved 8 FGDs with about 100 participants and 15 key informants.

The study findings revealed that agriculture is the prime activity in the districts of Nakasongola and Mubende. The vast majority, approximately more than 75% of the population depends on subsistence farming as the main source of livelihood.

## Observed Climate and Seasonal Changes

Small-Scale Farmers in the study area have observed several seasonal changes in recent years that can be linked to climate change and variability. When the rain comes it is interspersed with dry spells. Climate Change is having a wide range of interrelated impacts on farmers' wellbeing, livelihoods and incomes. Climate change impacts are becoming an extra hardship to the existing poverty related problems. In the study districts there were clear indications of climate change impacts directed on small scale farmers in terms of unpredictable seasonal changes. In Nakasongola there were serious climate change implications in the form of long term droughts and poor soils. The drought had frustrated farmers' agricultural productivity capacities. Crop farming survives mostly on rain which is no longer predictable as it does not rain continuously in a year. In the two study areas, farming is also affected by small scale farmers' limited knowledge and skills in adapting to the changing seasons.

Poverty reduction through increased agricultural production is affected by poor harvests that do not ensure households food security and income generation. Climate change becomes an extra hardship when coupled with poor market for farmers' produce and flow of information to farmers. Moreover, there is no early warning system to alert farmers on the likely climatic catastrophes.



## Small Scale Farmers Adaptation Limitations

In addition to the climate challenge, small scale farmers were already facing other barriers to improved agricultural production. These included;

- Limited affordability of inputs and technologies for production
- Limited access to credit facilities
- Limited access to seeds
- Food insecurity and increasing food prices
- Limited access to and Control over Land Tenure
- Extreme drought and soil erosion conditions are increasingly manifest.
- Crop and Animal Diseases
- Limited access to relevant information
- Absence of bye-laws to guide food security at household level
- Gender related challenges/social cultural

## Adaptation to Climate Change and the National Policy Environment

Adaptations are adjustments or interventions which take place in order to manage the losses or take advantage of the opportunities presented by a changing climate. Indigenous knowledge is an integral part of small scale farmers' lives. Local coping strategies are providing the foundation for small scale farmers' own ideas on how to survive during harsh times. For example, the Plan for Modernization of Agriculture (PMA) contains significant content on adaptation to climate change, including the development of drought resistant cultivars, provision of water for production, agricultural information dissemination, training and research. However, the PMA sectoral programmes, such as the National Agricultural Advisory Service (NAADS), are top-down in design. This and similar policies have faced challenges during the implementation stage. The results of these policies have been of little use to poor people who still depend on rain fed agriculture, lack good land, irrigation facilities and financial means among others. Any adaptation to climate change that is being practiced is based on past experiences, which are passed on from one generation to another. Whilst the traditional coping mechanisms have their merits, the study does not ignore the fact that we live in a global village and cannot fence off local communities from global influences. But we have to be aware of these influences so that traditional coping and survival mechanisms are not lost, but rather become a point of reference within a broader system. Mainstreaming adaptation and mitigation to climate change is important to Uganda. The government of Uganda has ratified numerous international climate change commitments including the National Adaptation Programme of Action, as determined by the seventh Conference of Parties to the United Nations Framework Convention on Climate Change. The Government of Uganda has since shown significant efforts towards addressing climate change issues at a policy level, however, the issue of popular participation remains a challenge. Additionally the lack of information sharing among government's stakeholders, including the farmers is another serious shortfall. There is still lack of wide consultations on the government's policy framework, yet Ugandans; especially the vulnerable poor communities need to be offered opportunities to express themselves, since they mostly bear the brunt of climatic changes.

## Climate Change Adaptation to Ensure Food Security

It was found out that farmers ensure food security in their homes through the following practices;

1. Food reserves are kept in granaries for a few families and those who don't have granaries put their reserves in sacks and store them in their houses. NAADS promotes setting up of granaries and the service providers have trained farmers how to construct them.



2. Growing food crops that stay in the garden for a long time especially root crops like cassava, sweet potatoes and yams. Kitchen gardens where they grow vegetables and fruits to improve on the nutrition are common.
3. The Kitchen garden concept has been conceptualized and practiced by almost all the households that we visited.

## Recommendations

- The capacity of the Uganda Meteorology Department needs to be enhanced in order to give accurate and, timely information on likely weather and rainfall patterns
- Improvement of rural infrastructure relevant to poor people will facilitate the development of income generating activities by providing access to water and electricity.
- National adaptation Programme of Action (NAPA) process should enhance research and capacity building needs to be undertaken.
- In rural livelihood systems, development agencies must accept that food security is a critical challenge and hence the need to address it at different levels . At ecosystem level, the maintenance and enhancement of biodiversity, reflecting environmental variation is critical; and at farm level the diversification of production activities including off-farm income, drawing on local system, to draught and flood proof livelihood activities.
- Adaptation activities must undertake a bottom-up approach to diversified development activities that is gendered; premised on ensuring equitable energy access; and recognizing that poverty alleviation requires energy services that are based on secure and reliable supplies and stable prices. The empowerment of women in the agriculture sector must receive some attention as it remains a challenge to adaptation
- Government of Uganda should adhere to the Maputo declaration it committed itself to; by increasing the budget share of agriculture to over and above 10%. This up to now has just remained on paper. The budget share to agriculture is still less than 5%!
- On policy matters, the government should pass the food and nutrition bill and approve the Agricultural policy.
- Civil Society and Farmers' organisations should enhance engagements and participation in climate change policy processes at all levels, in order to bring about sustained long-term change. Civil society should mainstream climate change and development policy advocacy in their thematic work.
- Civil society must be pro active and engage in research in for evidence-based advocacy if they are to significantly inform or influence policy.

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