

## Project Summary

|                 |   |
|-----------------|---|
| Title           | The impact of climate change and climate variability on agricultural productivity in selected climatological zones of Uganda  |
| PI              | Dr. Margaret Nabasiye<br>Department of Crop Science, Makerere University<br>P.O. Box 7062, Kampala<br>Tel: +256 772 519 966<br>Email: <a href="mailto:mnabasiye@agric.mak.ac.ug">mnabasiye@agric.mak.ac.ug</a>  |
| Co-researchers  | Assoc.Prof. Moses Makooma Tenywa<br>Makerere University Agricultural Research Institute<br>Kabanyolo (MUARIK)<br>Makerere University<br>Email: <a href="mailto:tenywamakooma@yahoo.com">tenywamakooma@yahoo.com</a><br><br>Mr. Yazidhi Bamutaze<br>Department of Geography<br>Makerere University<br>Email: <a href="mailto:yazidhibamutaze@gmail.com">yazidhibamutaze@gmail.com</a><br><br>Assoc. Prof. Chris A. Shisanya<br>Department of Geography<br>Kenyatta University<br>P.O. 43844, GPO 00100 Nairobi, Kenya<br>Email: <a href="mailto:chris.shisanya@iwmnet.eu">chris.shisanya@iwmnet.eu</a> ; <a href="mailto:shisanya@yahoo.com">shisanya@yahoo.com</a>  |
| Purpose         | To contribute to improved adaptation to climate change and variability of the dryland communities in East Africa.   |
| Project Summary | Climate change and climate variability are a major threat to livelihoods in sub-Saharan Africa (SSA). The IPCC reports (1990, 1995, 2001 and 2007) consistently indicate that SSA is the most vulnerable region to climate change and climate variability due to the weak economies and lack of technology. If climate change and variability are not timely addressed, they are likely to worsen the poverty levels and further weaken the economies of the region. The poor agro-based communities in the dryland areas are particularly more vulnerable to adverse effects climate change and climate variability. Therefore, there is an urgent need for concerted efforts through designing of appropriate mitigation and adaptation strategies to buffer communities in these ecologically sensitive areas with limited livelihood options against climate change and climate variability. Designing mitigation and adaptation strategies requires information and knowledge on the impact of climate change on the targeted sites. To-date, the impact of climate change and variability on the agricultural productivity is not well understood and the climate change threat remains largely unresolved. Most of the available information has been obtained from Global Circulation Models (GCM) but these models are too coarse to spatially differentiate the diverse ecosystems and adaptive capacities and that information can hardly be used to inform policy. The thrust of study is to improve our understanding of climate change and climate variability impacts on agricultural productivity in the some climatologically contrasting districts of Uganda. The two-year multidisciplinary project will adopt diverse |

|                                  |  |
|----------------------------------|--|
|                                  | methods including modelling, experimentation, Participatory Rural Appraisal (PRA) and household interviews. We envisage that the proposed action will provide niche for improved strategies. Since the proposed action area is a dryland, we also envisage that the results and recommendations from the study will potentially be replicated in other dryland areas and communities of SSA. |
| Country and Specific Location(s) | Uganda, Districts of Soroti and Manafwa  |
| Participating Institutions       | Faculty of Agriculture, Makerere University; Makerere University Agricultural Research Institute Kabanyolo (MUARIK); Department of Geography, Makerere University; Department of Agricultural Economics & Agribusiness, Makerere University, NARO/CIAT, Kawanda, Department of Meteorology and Kenyatta University.  |
| Start Date                       | March, 2009  |
| End date                         | March, 2011  |
| Amount of Funding                | USD 30,000   |

