

**BUSITEMA UNIVERSITY**

**FACULTY OF NATURAL RESOURCE ECONOMICS AND ENVIRONMENTAL SCIENCES**

**ASSESSING THE BENEFITS OF CLIMATE SMART AGRICULTURE ON THE  
LIVELIHOOD OF THE PEOPLE**

**A CASE STUDY OF NAMASAGALI SUB COUNTY, KAMULI DISTRICT**

**BY**

**NAMUKOSE HELLEN**

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**DECLARATION**

I NAMUKOSE HELLEN declares that this research report is my original work and is a result of my independent commitment and has never been submitted either in the same or different kind of institution for any academic qualification.

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Namukose Hellen

BU/UP/2014/372

Date..13<sup>th</sup>..06..2017..

**APPROVAL**

This is to certify that this research report by Namukose Hellen has been submitted with my approval as the University supervisor of Busitema University.

.....

Dr. Isabirye Moses

(Supervisor)

Date.....

## DEDICATION

To the best mothers in the entire world; Ms Kadondi Rachel and Ms Appophia Juliet, thank you so much for your unending sacrifice towards my education. To all my relatives and brothers who have been there supporting me in all ways, thank you so much. May God truly bless you!

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## LIST OF ACRONYMS

NAADS	National Agricultural Advisory Services
BMPs	Best Management Practices
ISU	Iyowa States University, Uganda program
CSA	Climate Smart Agriculture
UNDP	United Nations Development Program
FAO	Food and Agricultural Organization
GHG	Green House Gas
MAIF	Ministry of Agriculture, Animal Industry and Fisheries
SLM	Sustainable Land Management
COMESA	Common Market for Eastern and Southern Africa
SADC	Southern African Development Community
NAMAs	Nationally Appropriate Mitigation Actions
NAPAs	National Adaptation Programme of Actions
INDCs	Intended Nationally Determined Contributions

## **ABSTRACT**

This study examined the benefits of climate smart agriculture on the livelihood of the people of Namasagali sub county, Kamuli District. The major farming practices in the sub county were identified as both climate smart and non-climate smart farming practices.

Both qualitative and quantitative approaches were used to collect data. This involved use of secondary data, observation, interviews and questionnaires. The data collected from a sample of 35 respondents was analyzed using SPSS 6.0 statistical package and EXCEL spread sheet the results were presented by use of tables, pie charts and bar graphs.

The study revealed that the farmers carried out both climate smart and non-climate smart farming practices like; irrigation, mixed cropping, agro-forestry, mono-cropping, fertilizer application and use of manure. The study also revealed that farming is the major source of livelihoods to the people in the area and that the yields vary depending on the season and the farming practices carried out. The major factors fronted by farmers for the reducing crop yields in Namasali Sub-county were prolonged drought, pests and diseases, theft, land size holdings and declining soil fertility. The study revealed that more crop yields are obtained from climate smart practices say use of farm yard manure, agro-forestry, mixed cropping, irrigation and application of mulches thus enhancing food security, adaptation to climate change and conserving the environment.

It's recommended from this study that farmers adapt climate smart farming practices so as to enhance food security, adaptation and mitigation to climate change and environmental conservation with the help of government and private associations such as NAADS and ISU.

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## 1.0 CHAPTER ONE: INTRODUCTION

### 1.1 Background of the study

Agriculture has to address simultaneously three intertwined challenges: ensuring food security through increased productivity and income, adapting to climate change and contributing to climate change mitigation (FAO, 2010a; Foresight, 2011a; Beddington et al., 2012a; Beddington et al., 2012b; HLPE, 2012a). Addressing these challenges, exacerbating global pressure on natural resources, especially water, will require radical changes in our food systems. To address these three intertwined challenges, food systems have to become, at the same time, more efficient and resilient, at every scale from the farm to the global level. They have to become more efficient in resource use (use less land, water, and inputs to produce more food sustainably) and become more resilient to changes and shocks. It is precisely to articulate these changes that FAO has forged the concept of climate-smart agriculture (CSA) as a way forward for food security in a changing climate. CSA aims to improve food security, help communities adapt to climate change and contribute to climate change mitigation by adopting appropriate practices, developing enabling policies and institutions and mobilizing needed finances. Various studies have shown the different Climate Smart Agricultural practices and they are beneficial to smallholder farmers on their farms of crops and livestock. UNDP (United Nations Development Program) with Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) started a project "Mainstreaming Sustainable Land Management activities in Six Cattle Corridor districts of Uganda Kamuli inclusive. They are currently implementing the Enabling environment to overcome land degradation and desertification in two districts namely; Kamuli and Nakasongora specifically in the cattle corridor sub counties. Through these projects, Climate smart farming practices were encouraged and have demonstrated considerable results compared to the traditional farming practices.

### 1.2 Problem statement

Climate Smart Farming practices are commonly referred to as Climate Smart Agriculture (CSA) or Sustainable land management practices (SLM). CSA is agriculture that sustainably increases productivity, resilience (Adaptation), reduces /removes greenhouse gases (Mitigation), and enhances achievement of food security and development goals in existence of climate change. Such practices include; mulching, agro-forestry, rain water harvesting, irrigation, zero grazing, integrated fish farming, mushroom growing and use of farmyard manure.

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