BUSITEMA UNIVERSITY

FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES DEPARTMENT OF NATURAL RESOURCE ECONOMICS

ASSESSMENT OF AGRICULTURE AND CLIMATE CHANGE THROUGH A
GENDER LENS: A Case Study of Banana Crop Growing Farmers in Namasagali Sub
County Kamuli District, Uganda

BY

NAMAWEJJE WINNIE

BU/UG/2012/128

Supervisor: Associate Professor Isabirye Mosses

A RESEARCH REPORT SUBMITTED TO THE FACULTY OF NATURAL
RESOURCES AND ENVIRONMENTAL SCIENCES IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF SCIENCE DEGREE
IN NATURAL RESOURCE ECONOMICS OF BUSITEMA UNIVERSITY

JUNE 2015

DECLARATION

I, NAMAWEJJE WINNIE, do declare that this is my own work and has not been submitted for any other award to any other university or higher institution of learning.

Signature:

Date: 17/06/15

APPROVAL

I hereby certify that this research report titled "Assessment of Agriculture and Climate Change through a Gender Lens; A Case of Banana Crop Growing Farmers in Namasagali Sub County Kamuli District" is the original and individual work of Namawejje Winnie. It has been done under my supervision and is ready for submission to the board of examiners of the Faculty of Natural Resource and Environmental Sciences, Busitema University with my due knowledge.

SIGNATURE

ASSOCIATE PROFESSOR ISABIRYE MOSES

RESEARCH SUPERVISOR

DEDICATION

This book is dedicated to Namawejje Winnie for being persistent to education regardless of the challenges faced.

ACKNOWLEDGEMENT

First of all I would like to express my appreciation and thankfulness to the Lord Almighty for granting me grace that has taken me this far academically.

Next I would like to say thank you to my supervisor Associate Professor Isabirye Moses for the guidance he granted me during the research period.

I appreciate the support of family including; my parents my father Mr. Lwanyaga Emmanuel and mother Miss Nabukeera Madrine, brothers, sisters and relatives for praying and supporting me physically, morally and financially throughout my academic journey.

I appreciate the community members of Busitema university faculty natural resources and environmental sciences including; lecturers for the knowledge they gave to me, non teaching staff for their assistance and corporation during my stay in Busitema university, my dear classmates for their guidance, corporation and my friends; Ssuubi Victoria, Nambooze Josephine, Ssemakula Isma, Nahayo wycliff, Mugalu Simon, Wakalanga Sulayi, Kasango Ramadhan, Segawa Frank, Mayanja Brian, Jjinjo Herman, Bisanga Sufian, A. Emmanuel, Otto Ronaliro, Wasswa Husein, Engur Isaac, Mabiriizi Julius and Namazzi Betty for the support, courage, corporation and company they gave me during my stay at Busitema University.

Finally my deepest gratitude goes to the government of Uganda for the scholarship and financial support given to me without which may study at Busitema university who be impossible.

May the Almighty God bless you all.

TABLE OF CONTENTS

DECLARATION
APPROVALi
DEDICATIONii
ACKNOWLEDGEMENT
LIST OF FIGURESvi
LIST OF TABLES
ABSTRACT
LIST OF ACRONYMS
CHAPTER ONE
GENERAL INTRODUCTION
1.1 Introduction
1.2 Background of the study
1.3 Problem statement
1.4 General objective of the study
1.5 Specific objectives of the study
1.6 Specific Research Questions
1.7 Scope of the Study
1.8 Significance of the study
1.9 Conceptual Framework
LITERATURE REVIEW
2.0 Introduction
2.1 Agriculture
2.2 Banana Crop
2.3 Gender
2.3.1 Agriculture Gender Based Activities
2.4 Climate Change
2.4.1 Causes of Climate Change
2.4.2 Climate Change and Agriculture
2.5 The extent to which gender related agriculture activities are vulnerable to climate change
2.6 Gender Based Perceptions and Knowledge towards Climate Change
CHAPTER THREE

METHODOLOGY17
3.0 Introduction
3.1 The Study Area
3.2 Research Design
3.3 The Study Population
3.4 Sampling Techniques
3.5 Sample Size
3.6 Data Type and Sources
3.7 Data Collection Methods and Instrument
3.8 Data Analysis
3.9 Ethical Considerations
4.0 Limitation of the Study
CHAPTER FOUR
RESULTS PRESRNTATION AND DISCUSSION
4.0 Introduction
4.1 Social Characteristic of Namasagali Sub County farmers
4.1.1 Age groups and Gender distribution
4.1.2 Level of Education and Gender Distribution22
4.1.3 Marital Status and Gender Distribution
4.2 Banana Growing in Namasagali Sub County
4.2.1 Banana Growing in Namasagali Sub County
4.2.2 Age of Banana Plantation27
4.2.3 Commercial Banana Farming
4.2.4 Expenses Incurred Benefits of Banana Crop Growing
CHAPTER FIVE31
CONCLUSIONS AND RECOMMENDATIONS
5.0 Introduction
5.1 Conclusions31
5.2 Recommendations
5.3 Areas for Further Study
REFERENCES
APPENDICES

LIST OF FIGURES

Figure 1: Conceptual Framework for Climate Change, Agriculture and Gender	5
Figure 2: Map of Namasagali Sub County	
Figure 3: Bar Graph Showing Age Group and Gender Distribution	
Figure 4: Bar Graph Showing Marital Status and Gender Distribution	
Figure 5: Pie Chart Showing Age of Banana Plantations	27
Figure 6: Pie Chart Showing Commercial Banana Farming	28

LIST OF TABLES

Table 1: Education Level and Gender Distribution	22
Table 2: Banana Growing	25
Table 3: climate change knowledge, awareness and perception	29

ABSTRACT

This research was carried out to assess agriculture and climate change through a gender lens a case study of Banana Crop Growing Farmers in Namasagali Sub County, with specific objectives; to analyse agriculture activities from a gender point of view, to analyse the extent to which gender related agricultural activities are vulnerable to climate change, to find out the economic benefit of the agricultural activities carried out basing on gender, to determine different gender-based perceptions and knowledge towards climate change.

The study involved use of both qualitative and qualitative research designs and data was collected from the field through observation and direct interviews with a sample of 50 farmers respondents in Namasagali Sub County. Also data was obtained from secondary sources that were already published by different researcher through internet. Data collected was analysed using descriptive analysis.

The study shows that all farmers in the sub county are affected by climate change regardless of their gender distribution however the study shows that vulnerability and resilience to climate change shocks may differ for both males and females depending on their marital status, level of education, and access to resources such as land and credit facilities.

Key words: Gender, Agriculture, and Climate change.

LIST OF ACRONYMS

CCSP Climate Change Science Program

CEDAW Convention on the Elimination of All Forms of Discrimination against Women

FAO Food and Agricultural Organisation

FOWODE Forum for Women and Democracy

GDP Gross Domestic Product

GHG Green House Gases

HIV Human Immunodeficiency Virus

ILO International Labour Organization

IPCC Intergovernmental Panel on Climate Change

MAAIF Ministry of Agriculture, Animal Industry and Fisheries

MDG Millennium Development Goal

NAADS National Agriculture Advisory service

NAARI Namulonge Agricultural Animal Production Research Institute

NDP National Development Plan

NGO Non Government Organisations

NRC National Research Council

SPSS Statistical Package for the Social Scientist

UNDP United Nations Development Programme

UNFCCC United Nations Framework Convention on Climate Change

VEDCO Volunteer Efforts for Development Concerns

WHO World Health Organisation

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

This chapter presents the background, problem statement, objectives and questions, scope, significance and conceptual framework of the study.

1.2 Background of the study

In Uganda 80% of the population depends on agricultural production while in the rural areas more than 85% of the total population depends on agriculture as the main source of livelihood either as pure subsistence or with little commercial farming (UBOS, 2008). Agriculture is also the main occupations of women with over 83% are employed in agriculture as primary producers according to NDP 2010/11-2014/15. Nation-wide, 72% of all employed women and 90% of all rural women work in agriculture. Only 53% of rural men do so (FOWODE, 2012). The majority of subsistence farmers are poor men and women faced with many constraints that keep them poor such as lack of knowledge and skills, lack of credit, lack of information about what to produce and how to produce to earn more money, HIV/AIDS, malaria, insecurity and poor yields as a result of use rudimentary technologies and climate change. However despite these constraints both men and women continue to play a critical role in the agriculture sector, producing, harvesting, processing, marketing and producing food that is consumed at the household levels.

In recent years, the agriculture sector in Uganda has become increasingly dependent on women due to; Change of attitude towards agriculture because of low earnings leading to migration of men and the youth from rural areas to urban areas in search of alternative (off-farm) job opportunities, insecurity especially in the northern Uganda where mostly men, boys and girls were abducted, sicknesses and death due to HIV/AIDs and other diseases. Available statistics show that close to 26.3 % (a third) of the rural households in Uganda are headed by women most of whom are young (between 26-49 years), less educated and have less capital compared to their male counterparts (FOWODE, 2012). Yet women are very vulnerable and are most likely to be disproportionately affected by the adverse impacts of climate change because they constitute the majority of poor people. Women's traditional roles as the primary users and

REFERENCES

52nd session of the Commission on the Status of Women (2008) "Gender perspectives on climate change," Issues paper for interactive expert panel on Emerging issues, trends and new approaches to issues affecting the situation of women or equality between women and men.

Abate. S, 2009, Climate Change Impact on Livelihood, Vulnerability and Coping Mechanisms: A Case Study of West-Aris Zone, Ethiolopia.

Adger, N.W., Dessai, S., Goulden, M., Hulme, M., Lorenzoni, I., Nelson, D. R., Naess, O. L., Wolf, J. and Wreford. A, 2008, Are there social limits to adaptation to climate change? Springer Science + Business Media B.V. Climatic Change 93:335 - 354.

Blaikie, P, Brown, K, Stocking, M, Tang. L, Dixon. P and Sillitoe. P, 1997, Knowledge in Action: Local Knowledge as a Development Resource and Barriers to its Incorporation in Natural Resource Research and Development. Great Britain: Elsevier Science Ltd. Agricultural Systems 55(2): 217-237

Brody A, Demetriades J, Esplen E, 2008, Gender and Climate change; Mapping the linkages: A scoping study on knowledge and gaps, Bridge, IDS University of Sussex, and Brighton, UK.

Carvajal-Escobar, Y., M. Quintero-Angel and M. Garcia-Vargas, 'Women's Role in Adapting to Climate Change and Variability', 2008, Advances in Geo Sciences, Issue 14, 277–280.

CCSP, 2008, The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. Backlund, P., A. Janetos, D. Schimel, J. Hatfield, K. Boote, P. Fay, L. Hahn, C. Izaurralde, B.A. Kimball, T. Mader, J. Morgan, D. Ort, W. Polley, A. Thomson, D. Wolfe, M. Ryan, S. Archer, R. Birdsey, C. Dahm, L. Heath, J. Hicke, D. Hollinger, T. Huxman, G. Okin, R. Oren, J. Randerson, W. Schlesinger, D. Lettenmaier, D. Major, L. Poff, S. Running, L. Hansen, D. Inouye, B.P. Kelly, L. Meyerson, B. Peterson, and R. Shaw. U.S. Environmental Protection Agency, Washington, DC, USA.

Christina Seeberg-Elverfeldt, 2010, Carbon Finance Possibilities for Agriculture, Forestry and Other Land Use Projects in a Smallholder Context, FAO Natural Resources Management and Environment Department, Rome.

F. Opio, 2003, Gender Mainstreaming In Agriculture With Special Reference To Uganda: Challenges And Prospects, Namulonge Agricultural Animal Production Research Institute (NAARI) P. O. Box 7084, Kampala-Uganda, African Crop Science Conference Proceedings, Vol. 6. 699-703 Printed in Uganda. All rights reserved ISSN 1023-070X \$ 4.00.

FAO, 1999, Readily available data at the global and regional levels. "In filling the data gap. Gender-sensitive statistics for agricultural development"

FAO, 2013: Climate Smart Agriculture Sourcebook

FAO. Women and Food Security. FAO FOCUS.

Fraser, E. 2008. "Crop yield and climate change", Retrieved on 14 September 2009.

Gitz, V, 2013, Usage des terres et politiques climatiques globales: la physique, l'économie et les politiques del'usage des puits de carbone pour lutter contre le changement climatique. Presses Académiques Francophones. Saarbrücken, Germany.

Houghton, John Theodore, 2001, "Appendix I, Glossary". Climate change 2001: the scientific basis: contribution of Working Group I to the Third Assessment Report of the IPCC. Cambridge, UK: Cambridge University Press. ISBN 0-521-80767-0.

Intergovernmental Panel on Climate Change Special Report on Emissions Scenarios retrieved 26
June 2007

IPCC. 2007b, Climate Change 2007: mitigation, B. Metz, O.R. Davidson, P.R. Bosch, R. Dave & L.A. Meyer, eds. Contribution of Working Group III to the Fourth Assessment Report of the IPCC. Cambridge, United Kingdom and New York, USA, Cambridge University Press.

Isabirye Moses, October 2011: Climate Change Initiative Busitema University Roadmap.

Kaggwa. R, Hogan, R., and Hall, B, Enhancing the Contribution of Weather, Climate and Climate Change Employment and Prosperity, 2009, UNDP/NEMA/UNEP Poverty Environment Initiative, Uganda.

Kenneth Nyombi, April 2013: Towards Sustainable Highland Banana Production in Uganda: Opportunities and Challenges, Makerere University, College of Agricultural and Environmental Sciences, P.O. Box 7062, Kampala, Uganda

Lambrou, Yianna; Piana, Grazia. 2005. Gender: the missing component in the response to climate change. FAO Rome.

Leiserowitz, A.A., 2005, American Risk Perceptions: Is Climate Change Dangerous? Risk Analysis 25(6): 1433-1442.

Mubiru, D.N.1 (PhD), Climate Change and Adaptation Options In Karamoja, August 2010.

Namulonge Agricultural Animal Production Research Institute (NAARI), 2003, "Gender mainstreaming in agriculture with special reference to Uganda: Challenges and prospects"

Nikolaus Wögerbauer, September 2012, Above and below ground interactions between bananas and selected indigenous tree species in Uganda.

Nyangoma.P, 2007, Climate Change adaptation: Do Ugandan Women Have a Role?

Senay Habtezion, 2013, United Nations Development Programme.

Smith, P, D. Martino, Z. Cai, D. Gwary, H. Janzen, P. Kumar, B. McCarl, S. Ogle, F. O'Mara, C. Rice, B. Scholes, and O. Sirotenko, 2007. "Agriculture." In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, ed. B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, and L. A. Meyer, Cambridge University Press, Cambridge, United Kingdom and New York.

T. Kisauzi, M.N. Mangheni, H. Sseguya And B. Bashaasha, Gender Dimensions Of Farmers' Perceptions And Knowledge On Climate Change In Teso Sub - Region, Eastern Uganda, 2012.

Uganda Bureau of Statistics report, 2008.

UN Report on Climate Change retrieved 25 June 2007 Archived June 21, 2007 at the Wayback Machine.

UNDP, 2009, Resource guide on gender and climate change.

United Nations Framework Convention on Climate Change (UNFCCC), 2008, Challenges and opportunities for mitigation in the agricultural sector. Technical paper.

What do we mean by "sex" and "gender"? Geneva, World Health Organization, 2011a (http://www.who.int/gender/whatisgender/en/index.html).

Wilberforce K. Tushemerehe, Imelda N. Kashaija, William Tinzaara, Cadme Nankinga, Stephen New, 2001, Banana Production Manual: A Guide To Successful Banana Production In Uganda.

World Bank, World Development Report 2012; Gender Equality and Development, 2011.

www.un.org/womenwatch, Women Watch 2009, note 7.