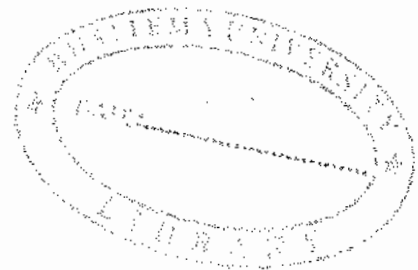


**ASSESSMENT OF THE IMPACTS OF SUGARCANE GROWING ON  
THE WETLANDS ECOSYSTEM AND THE COMMUNITY  
CASE STUDY OF MUKONO DISTRICT KASAWO SUB COUNTY**

**BY**

**KISIRA ISAAC**

**BU/UG/2012/120**




**A RESEARCH REPORT SUBMITTED IN PARTIAL FULLFILMENT OF THE  
REQUIREMENT FOR THE AWARD OF A DEGREE IN BACHELOR OF SCIENCE  
IN NATURAL RESOURCE ECONOMICS OF BUSITEMA UNIVERSITY.**

**JUNE 2015**

## DECLARATION

I **KISIRA ISAAC** declare that this research report submitted to the Faculty of Natural Resource and Environmental Science is my original work and to the best of my knowledge, it has not been submitted by any other person to any institution for any academic qualification.

Signature..........

Date.....25<sup>th</sup>/06/2015.....

KISIRA ISAAC

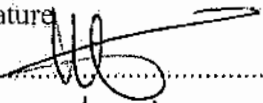
## APPROVAL

This serves to certify that this research assessment of the impacts of sugarcane growing on the wetlands ecosystem and the community by **KISIRA ISAAC** has been submitted with my approval as a University supervisor of Busitema University.

University Supervisors Name;

**Dr. Alice Nakiyemba**

Signature



Date 25/06/2015

## **DEDICATION**

This piece of work is dedicated to the family of my father Muloki Paul and my mother Namusisi Margret in appreciation of the support, care and love offered to me. I also dedicate to my beloved uncles Simali Wilson, Kanyike Nelson, my brother Isooba Fred, all my sisters Musigire Mary, Namuyobe Milly, and friends; Naturinda Zerubabel, Wamala Bazirio, Muhumuza Keneth, Atugumya Armstrong Barcelona, Kijali Julius, Wakoba Fred. May the almighty Lord reward them abundantly.

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I give great thanks to the Almighty GOD who gave me the gift of life and made through unbearable times at the University.

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## LIST OF ACRONYMS AND ABBREVIATIONS

CO <sub>2</sub>	Carbon dioxide
FAO	Food agricultural organization
FGD	Focus Group Discussion
GDP	Gross domestic product
IFPR	International Food Policy Research Institute
IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated Pest Control Management
N/A	Not Applicable
NAADS	National Agricultural Advisory Services
NAAIP	National Accelerated Agricultural Input Programme
SPSS	Statistical package for social scientists
UBOS	Uganda national bureau of statistics
UG	Uganda shillings
UNFCCC Change	United Nations Framework Convention on Climate

## **ABSTRACT**

The research is about assessment of the impacts of sugarcane growing on wetlands ecosystem and the community, the case of Ndese wetland, Kasawo Sub County, Mukono district. Sugarcane is a thirsty crop, consuming a great deal of water. Since many wetlands have been converted to agriculture, according to (NEMA, 2010), the speed of development is higher than that of conservation and this difference has implications on wetland sector appearing as though there is no effort towards wetland conservation. They can also be defined as transitional lands between terrestrial and aquatic systems covered by shallow water. (National Wetlands Conservation and Management Program: republic of Uganda). The increased demand for sugar both at national and international levels has forced many sugar factories to look for vast areas for growing sugar cane. This has led to increased exploitation of wetlands such as Ndese wetland that has led to loss of bio diversity, lives, flooding, food insufficiencies in homes and other challenges. Therefore there is need for the community and the government at large to come up with strategies that promotes sustainable sugarcane growing as well as wetland conservation.

The study composed of a sample of 65 respondents with the main objective of assessing the impacts of sugarcane growing on the wetlands ecosystem and the community. The researcher used questionnaires and interviews to gather information on sugar cane growing that involved interviewing farmers, teachers, politicians and other groups in the study area. The data was analyzed using SPSS software which included which involved computation of percentages and frequencies including pie charts and bar charts.

The research found out that families within the study areas have experienced insufficient food challenges and hunger. This was due to increasing sugar cane growing in the areas with yet they have limited land as shown 86.6% of the respondents have less than or equal to 2 acres but use much of the land for sugarcane growing together with pests and diseases that affects various crops such as maize, beans, cassava, flooding of the wetland that destroys crops as 52.31% of the respondents have experienced flooding in the area. The findings from the study indicated that most of the people around the wetland derive their livelihoods from the wetland to support their families. This therefore calls for government intervention through different ways to mitigate the impacts from these activities though the statistics indicate that 69.23% of the respondents argued that the government has not intervened in the conservation of the wetland. The findings of the study reflected a positive relationship between the dependent and independent variables.

Conclusions from the findings indicates that, from the sex perspective, males were the major users of Ndese wetland in Kasawo Sub County as they covered 58.46% of the total sample taken compared to females of 41.54%. There was a positive relationship between respondents' education level and pest control measures using the Pearson correlation shows that is the P value ( $P 0.011 < 0.05$ ). This means that the education level is significant in determining some ones knowledge about the use of pest control measures. In terms of livelihoods, this was expressed as most of the respondents had small pieces of land for which they gave a part for growing sugarcane. This seemed to be a threat to the community in terms of food scarcity and hunger.

## CHAPTER ONE: INTRODUCTION

### 1.1 INTRODUCTION

Kasawo Sub County is located in Mukono district found in Buganda region known as central Uganda. Kasawo is located approximately 46 kilometers (29 mi), by road, northeast of Mukono, the location of the district headquarters. This location lies on the western banks of River Sezibwa, approximately 60 kilometers (37 mi), by road, northeast of Kampala, the capital of Uganda and the largest city in that country. The coordinates of Kasawo are: 0° 40' 48.00"N, 32° 49' 30.00"E (Latitude: 0.6800; Longitude: 32.8250).

### 1.2 BACKGROUND OF THE STUDY

Sugarcane is essentially considered a tropical crop. The major conducive agro climatic components that control sugarcane growth and productivity include adequate annual rainfall, warm temperatures, and adequate sunshine hours, fertile loamy soils which are freely draining and high incidences of solar radiation all of which are available. In addition, there are enough water bodies like rivers and lakes which provide the necessary water requirements for sugarcane processing and irrigation of cane in the field.

The sugar industry is one of the oldest industries in the country, with its history dating back to early 1920. By the 1960's, the sector's annual production was about 140,000 tonnes of which 120,000 tonnes was for domestic consumption and 20,000 tonnes for export. However production declined significantly during the 1970's because of mismanagement and neglect of the estates. After 1986, the industry steadily picked up following rehabilitation and divestiture programmes undertaken jointly by Government and the private sector. Over the last 10 years, the industry has been expanding production by nearly 20% per annum culminating into production of 287,387 tonnes of sugar in 2009.

The high photosynthetic capacity of sugar cane makes it an important source of energy. A comparison of the energy value of the cane biomass and the energy consumed in its harvest and cultivation shows a ratio of 20:1. This makes sugar cane a biomass of enormous interest at present, as alternatives are under study to reduce the rate of gas accumulation and consequent global warming, as a result of the use of fossil fuels. The cane sugar industry creates its own fuel, bagasse, which is not only capable of satisfying the energy demands of

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