BUSITEMA UNIVERSITY

Faculty of Natural Resources and Environmental Sciences

RISK ANALYSIS AND SOCIAL ECONOMIC CONSEQUENCES OF LANDSLIDES IN MOUNT ELGON REGION, UGANDA: A CASE STUDY OF BUDUDA DISTRICT

By

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A proposal presented as a partial fulfillment of the requirements for the award of the bachelor`s degree in Natural Resource Economics

BUSITEMA UNIVERSITY

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DECLARATION

I **Mukhone Ivan Khaukha** declare that this research report is my original work and has never been submitted to any other institution for the award of a bachelor's degree.

Signed.....

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Student

Date....8/7/2013.....

APPROVAL

This research report has been under my supervision and is now ready for submission to the relevant authority.

Signature:.....

Prof. Isabirye Moses

Supervisor

Date:.....

DEDICATION

I dedicate this research report to my dear parents, Mr. Wandukwa Khaukha Samuel and Mrs. Aidah Khaukha for their tireless support in educating, guiding and encouraging me throughout my education career. To my course mates who worked also tirelessly to ensure that I attain academic excellence in Busitema University.

May God bless you all

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ACRONYMS AND ABREVIATIONS

NEMA	: National Environmental Management Authority
UNEP	: United Nations Environmental Program
UNESCO	: United Nations Educational, Scientific and Cultural Organization.
TACC	: Territorial Approach to Climate Change
ECO-Trust	: Environmental Conservation Trust
DEO	: District Environmental Officer
DFO	: District Forest Officer
CDO	: Community Development Officer
CBOs	: Community Based Organization
OPM	: Office of the Prime Minister
UWA	: Uganda Wildlife Authority
NGOs	: None Government Organizations
UNRA	: Uganda National Roads Authority
MTN	: Mobile Telecommunication Network
LC	: Local Council
ILWIS	: Integrated Land and Water Information System
GIS	: Geographical Information System.
GPS	: Global Positioning Station
SPSS	: Statistical Package for Social Science.
CDM	: Clean Development Mechanism
IAEG	: International Association for Engineering Geology and the environment.
CRED	: Centre for Research on the Epidemiology of Disasters.

ABSTRACT

The study gives the analysis of the predicted impact of landslides in the study area. The analysis was done by finding out the major triggering causal factors of landslides, the leading impact so far suffered from previous landslides and the recommendations towards landslide risk mitigation in Bududa district on the slopes of Mount Elgon.

Both individual interviews and Focus group discussions were conducted at different administrative points in the study area using an interview guide consisting of both open ended and closed ended questions. Open ended questions were designed so as to obtain the amount of valuable assets in the sub county and closed ended were designed to ascertain the major causal factors and major impact suffered through their observations relating to landslide phenomenon of the past.

Rainfall was found to be the major triggering factor of landslides in the area whereas destruction of agricultural fields was the highest impact so far suffered the past landslides

Farmers recommended reforestation and construction of resettlement schemes in the flatter areas around Bududa so as to enable them access their plantation than resettling them in distant areas where they are afraid of losing their cultures and traditions which they are addicted to.

1.0 CHAPTER ONE: GENERAL INTRODUCTION.

1.1 Introduction

Landslides are among the most widespread geological hazards that threaten human lives worldwide in the mountainous regions of the world. (Guzzetti et al., 1999) also noted that Landslides are among the most hazardous natural disasters. Government and research institutions worldwide have attempted for years to assess landslide hazard and risk and to portray its spatial distribution.

Past experiences have shown that several types of landslides are often induced by earthquakes. The 2009 Padang earthquake triggered over thousand of landslides, killing 400-600 people and 3 villages were completely demolished by landslide and many others were damaged (Arifianti et al., 2011),.

A landslide or a land slip is a geological phenomenon which includes a wide range of ground movement, such as rock falls, deep failure of slopes and shallow debris flows, which can occur in offshore, coastal and onshore environments (http://en.wikipedia.org/wiki/Landslide). Although the action of gravity is the primary driving force for a landslide to occur, there are other contributing factors affecting the original slope stability like extensive accumulation of rains and according to some sources lightening. Thus landslides occur when the stability of a slope changes from stable to unstable condition.

Landslide hazard refers to the natural conditions of an area potentially subject to slope movements. It is defined as the probability of occurrence of a landslide of a given magnitude, in a pre-defined period of time, and in a given area (Varnes and IAEG, 1984). The definition incorporates the concepts of spatial location ("where"), magnitude or intensity ("how large"), and frequency of occurrence ("when", or "how often").

According to Guzzetti (2003), he referred a Landslide hazard as "the probability of occurrence within a specified period of time and within a given area of a potentially damaging phenomenon". This definition of landslide hazard incorporates the concepts of location (where a landslide will occur), time (when, or how frequently a landslide will occur) and magnitude (how large, or how fast the landslide will be).

Mainly Landslides describe process of pieces of land flowing or falling downwards from a high point on the cliff to the lower ends of the steep slope of either a mountain or coastal bank of a lake, river or ocean where such places or steep slopes have loss/weak rocks with

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