ASSESSMENTS OF ECONOMIC IMPLICATIONS OF LAND DEGRADATION, A CASE STUDY OF RANGELANDS IN MURCHISON FALLS NATIONAL PARK UGANDA.

BY

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DECLARATION

I Kyaligonza Dianah declare that this hereby submitted report for the Bachelor of degree of natural resource economics and environmental sciences at Busitema University is my own independent work and has not been submitted to any other University.

I also agree that Busitema University has the sole right to publication of this report.

Signature...Date...14./..06../..2017...............

KYALIGONZA DIANAH

APPROVAL

This is to confirm this research report is original and has only been through the efforts of Kyaligonza Dianah after pursuing a three year Bachelor of Science degree in Natural resource economics of Busitema University .She has therefore fulfilled part of her requirements for the award of the degree in Natural Resource Economics of Busitema University.

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DEDICATION

I dedicate this to the Almighty God for his guidance in sustaining my life till this time. I also like to dedicate this work to my mother khaawa Mary and my father Sunday Patrick for their parental elegance and patience while I was away from home. I would also like to dedicate this to my sisters violet and prisca and my entire friends in struggle for the year of 2016-2017 for their level of support in one way or the other.

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ACRONYMS

UWA	Uganda Wildlife Authority
MNP	Murchison Falls National Park
NDP	National Development Plan
NDVI	Normalized Difference Vegetation Index
NEMA	National Environmental Management Authority
MFCA	Murchison Falls Conservation Area
NFA	National Forestry Authority
PA	Protected Areas
GPS	Global Positioning System
GIS	Geographical Information System
IRIN	Integrated Regional Information Network
FAO	Food and Agriculture Organization
VC	Vegetation Cover

ABSTRACT

A case study assessment of rangeland degradation at Murchison Falls National park Uganda was done from December 2016 to June 2017. A significant portion of the grassland and savanna ecosystem is over utilized, due to inappropriate rangeland management. Uganda's rangelands are threatened by overgrazing, followed by altered grassland composition and loss of vegetation cover in the grassland ecosystem, and by bush encroachment in the savanna ecosystem. Although not all land is degraded, there are some parts where signs of degradation can be found. The study objectives were to assess the economic implications of rangeland degradation and determine the status of the rangeland in terms of vegetation cover (range condition). The current status of rangeland was determined through determining the biomass of grass obtained from different areas and this was done through the use of the NDVI images which helped in obtaining data about the vegetation cover of Murchison falls for five years that was from 2010 to 2014. The economic implication of rangeland degradation was through getting of samples of grass through clipping which was dried and the weight of the dry grass and fresh grass was obtained through the use of the micrometer instrument to measure their respective weights.

From the study it was observed that approximately 1million of animals is lost per year due the undergoing degradation in the park as it was also observed that the vegetation cover of the park is seriously deteriorating which is becoming a threat to the parks earnings since the demand of touristic for wildlife depends on the availability of wildlife species in the park.

CHAPTER ONE

1.1 INTRODUCTION

Rangelands are ecosystems which experience some physical limitations hindering their use. They typically contain low and erratic precipitation, rough topography, poor drainage, warm temperatures and other adverse physical conditions for a settled animal species and bird species. Inspite of these limitations they can be used as a source of forage for free ranging domestic and game animals as well as a source of woody products and home of wildlife (Getachew, 2006). Rangeland is an important natural ecosystem that offers a habitat for wildlife, grazing areas for domestic stock and goods for local community (Kawanabe er al, 1998). Rangelands include grasslands, shrub-steppe, desert scrub, savanna, open woodland, grazed forests, mountain meadows, riparian areas and wetlands (Holechek, et al., 2001).

Rangeland degradation is a global concern, affecting not only pastoralists and also reducing on the asthetic value tourists attach on rangelands for survival but others who suffer from resultant hydrological disturbances, dust storms, commodity scarcity, and social consequences of uprooted people. Rangeland grass degradation has been identified as being one of the serious global environmental issues that needs to be addressed (Itill er al, 1995, kassahun er al 2008). Rangeland health also affects biodiversity directly and indirectly because all native flora and fauna have adapted to the long-term evolutionary forces that have shaped these rangeland environments (Harris, 2010). Rangeland degradation has been estimated by several authors. For example, Dregne et al., (1991) estimated that 73 percent of the world's 4.5 billion hectares of rangeland is moderately or severely degraded. Bruce (2007) also reviewed that 29% of the world's pastures are considered to be degraded through overstocking, compaction and erosion, and over grazing accounts for 35% of land degradation worldwide. One of the major aspects of rangeland degradation is reduction in the capacity of the ecosystem to support the various animal and bird species production and productivity. Change in the pattern and state of vegetation or structure, as defined by patchiness and biodiversity in semi-arid region, are the main indicators of the state of land degradation (Saco et al., 2006). This is because in case of rangeland degradation you find that there is a reduction in the number of animal and bird species in the

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