THE EFFECT OF FARMING ON MABIRA CENTRAL FOREST RESERVE: NAGOJJE SUBCOUNTY, MUKONO DISTRICT

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DECLARATION

I SSERUGO WILLIAM hereby declare that this research report is solely a result of my own efforts and findings. I therefore affirm that it has never been submitted for an award of a degree or any other academic qualification in any University or academic institution.

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Date: 61/06/2021

APPROVAL

This research has been done under the guidance of:

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Date:01/06/2021

MR. SSUUNA JAMES Supervisor

Signature:

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DEDICATION

I dedicate this research report to my sister Nabakooza Caroline and I encourage her to work tirelessly to achieve all the best. I also dedicate it to my friends Kakaire Abbey and Majweega Ahmed as a sign of appreciation for their contributions toward my success in several ways.

ACKNOWLEDGEMENTS

Firstly, I convey my sincere gratitude to the almighty God who has brought me all this far, blessed me with the gift of life, knowledge and courage to go through my studies despite all the hardships.

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ACRONYMS AND ABBREVIATIONS

CARD	Community Action for Rural Development
CFRs	Central Forest Reserves
CSR	Corporate Social Responsibility
DFOs	District Forest Officers
FLR	Forest Landscape Restoration
FSSD	Forest Sector Support Department
GHG	Greenhouse Gas
H.O.D	Head of Department
JESE	Joint Effort to Save the Environment
LGs	Local Governments
MEMD	Ministry of Energy and Mineral Department
MoWE	Ministry of Water and Environment
NFA	National Forest Authority
NGO	Non-Government Organization
NWFPs	Non-Wood Forest Products

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A s	Private Areas
REDD	Reduction in Emission from Deforestation and Degradation
REG. NO.	Registration Number
SANE	South African New Economic Network
SCOUL	Sugar Corporation of Uganda Limited
TCC	Talent Calls Clubs
UBOS	Uganda Bureau of Statistics
UGX	Ugandan Shillings
USD	United States of America Dollars
WWF	World Wide Fund for Nature

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ABSTRACT

This study aimed at assessing the effect of farming activities on Mabira Central Forest Reserve taking Nagojje Sub County as a case study. Data was collected using four methods: interviewing, questionnaire, observation, and document analysis. Both probability and non-probability sampling techniques were used to come up with a sample of 95 respondents. Data collected was analyzed using Microsoft excel 2010.

From the study, it was found out that majority of the respondents stopped at secondary level of education (57.9%). Furthermore, 68.4% were farmers, 71.9% were challenged by pests and diseases, 42.9% carried out subsistence farming and 43.0% practice agroforestry. It was also found out that shortage of arable land was the major cause of farmers' encroachment on the forest. It was also identified that deforestation is the major negative effect of farming on Mabira forest. Other activities that impact on Mabira forest were; charcoal burning, lumbering, and firewood cutting.

It was concluded that more efforts were still needed so as to protect Mabira forest. This could be through intensifying agriculture productivity whereby a small piece of land can be used to produce a high output. This could be through coping up with modern farming practices like application of fertilisers, use of pesticides and herbicides among others. Creating alternative jobs like industrial work by setting up industries.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the study

Farming is the activity of growing crops or keeping animals on a farm. Synonyms: Agriculture, cultivation, husbandry, land management among others (Roberto, 2019). It has been playing a big part in Uganda' s economy and it has greatly contributed on the livelihoods of the people of Uganda. According to (Onyango, 2016), the agricultural sector continues to be the most important sector in Uganda; it employs approximately 69% of the population and contributed about 26% to the Gross Domestic Product in 2015/2016 and the main agricultural crops include grains, sugarcane, cotton, tea and coffee.

Forestry and farming are closely linked, posing challenges for the coordination of development, adoption and mitigation policies. Land use change in the form of deforestation and forest degradation is a major source of greenhouse gas (GHG) emissions (Rodriguez, 2016). Farming is the heart of most low-income economies and it provides livelihoods for the majority of the poor. But, it is an important driver of deforestation so contribute indirectly to GHG emissions through the use of fertilizers, animal manure, and methane emission from livestock and rice cultivation.

Climate change will have impacts on both forests and agriculture. In particular it will cut agricultural yields in dry and tropical regions putting further pressure on remaining forests if farmers respond by extending cultivated areas.

Investigation by both Daily Monitor and a report by Nature and Livelihoods on 8th of June, 2014, a conservation organization, reveal that several parts of Mabira Forest, 54 kilometers

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Aukland, L. (2003). A conceptual framework and its application for addressing leakage: The case of avoided deforestation. New York, NY: Macmillan

Bamwesigye, D. (2017). Firewood and charcoal production in Uganda. Vienna: SGEM

Emmanuel, M. (2010). Effects of agricuture inputs and extnsion services on household crop production in Uganda. Kampala: Makerere University

Gibson, W. (2004). Impacts of farming activities on vegetation in Ghana. Acra: Ermgassen

Giday, K., Humnessa, B., Muys, B., Taheri, F., & Azadi, H. (2018). Global Ecology and Conservation: Effects of livestock grazing on key vegetation attributes of a remnant forest reserve. Desa: Jespa

Kagolo (2010). Forestry in Uganda over years and its future. Kampala: JStor

- Marshall, H. (2011). Organic Farming and Biodiversity : A review of the literature. Texas: FiBL MDLG. (2016). Mukono 5 year District Development Plan (2016-2021). Mukono: MDLG
- Mineau, P. (2016). The impact of agricultural practices on biodiversity. New York, NY: Macmillan.

MoWE. (2016). State of Uganda's Forestry 2016. Kampala: FOA. Retrieved from www.mwe.go.ug on 03/02/2020

Nabukalu, C. (2019). Charcoal as an Energy Resource. Kampala: M.K publishers.

Nelson, T. (2006). Local Capacity to Manage Forestry Resources Under a Decentralised System of Governance : The Case of Uganda. Scellebosch: Scellebosch University NEMA, (2007). Forest law enforcement and governance. Kampala: FOA

NFA. (2010). Efforts to Evict Encroachers in Uganda. Kampala: FOA

Odokonyero, G. G. O. (2005), Pitsawn timber production in natural forests of Uganda. Rome: FOA

Olupot. (2014). Nature and livelihood. Kampala: M.K publishers

Onyango, S. (2016). Uganda Economic Outlook 2016: The Story Behind the Numbers. Kampala: Deloitte

Opoku, E., Macgregor, C. J., Sloan, S., & Sayer, J. (2019). Scientic African: Deforestation is driven by agricultural expansion in Ghana 's forest reserves. Acra: Ermgassen

Paul Cohen. (2019). Agricultural Productivity and Forest Conservation . York, NY: Macmillan.

Roberto, S. (2019). Farming concepts. New York, NY: Macmillan.

Rodriguez, R. (2016). State of the World's Forests. New York, NY: Macmillan.