

COMMUNITY PERCEPTION OF DIRECT AND INDIRECT DRIVERS OF DEFORESTATION IN WEST BUGWE CENTRAL FOREST RESERVE IN BUSIA DISTRICT IN UGANDA

BY

**TUSABE VICENT** 

BU/UP/2018/3556

0786611189

0753432032

Email: tusabev2019@gmail.com

**SUPERVISORS** 

MADAM CARO KAUMA MERE.

DR. ANDAMA EDWARD.

THE RESEARCH REPORT SUBMITTED TO THE DEPARTMENT OF BIOLOGY IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE EDUCATION OF BUSITEMA UNIVERSITY

**JUNE, 2022** 

# **DECLARATION**

| TUSABE VICENT                     |                   |                  |              |
|-----------------------------------|-------------------|------------------|--------------|
| Signature:                        |                   |                  |              |
| Busitema University.              |                   |                  |              |
| This research report is my own wo | ork and I present | it for the award | of degree in |

## APPROVAL

| I accept that the research work in this research report was done by TusabeVicer     | nt |
|---|----|
| under my close supervision as the Busitema University biology department supervisor | r  |
| SignatureDate   |    |

# MADAM CARO KAUMA MERE

# **DEDICATION**

I dedicate this research work to all my lecturers, friends and family members who have always guided, supported and encouraged me to attain my education irrespective of the challenges encountered.

#### **ACKNOWLEDGEMENTS**

I thank God for the gift of life and knowledge he gave me to pursue my academic endeavors.

Also great thanks go to my supervisors Madam Caro Kauma Mere and Dr.Andama Edward for their generous guidance and personal contributions towards the success of my research work as well as my parents and good friends who supported me financially.

## LIST OF ABBREVIATIONS

WBCFR: West Bugwe Central Forest Reserve

CFM: Collaborative Forest Management

WBF: West Bugwe Forest

CFR: Central Forest Reserve

NEMA: National Environmental Management Authority

NFA: National Forest Authority

FAO: Food and Agriculture Organization

# LIST OF FIGURES

| Figure 1: A map of West Bugwe Central Forest Reserves located in Busia distric | t10 |
|--|-----|
| Figure 2: Drivers of deforestation in WBCFR in Busia district                  | 13  |
| Figure 3: Measures to reduce deforestation in WBCFR                            | 14  |

# Table of Contents

| DECLARATION  | ii   |
|--|------|
| APPROVAL   | iii  |
| DEDICATION   | iv   |
| ACKNOWLEDGEMENTS   | v    |
| LIST OF ABBREVIATIONS  | vi   |
| LIST OF FIGURES  | vii  |
| LIST OF TABLES   | viii |
| ABSTRACT   | xi   |
| CHAPTER 1: INTRODUCTION  | 1    |
| 1.1 background of study  | 1    |
| 1.2 problem statement  | 2    |
| 1.3 General objective.   | 3    |
| 1.3.1 Specific objectives  | 3    |
| 1.4 Research Questions   | 3    |
| 1.5 Significance of the study.   | 3    |
| CHAPTER 2: LITERATURE REVIEW   | 4    |
| CHAPTER 3: STUDY AREA AND METHODOLOGY                                      | 6    |
| 3.1 Description of the Study Area  | 6    |
| 3.2 Research design  | 7    |
| 3.3 Data Collection Methods and materials                                  | 8    |
| 3.4 Data analysis  | 8    |
| CHAPTER 4: RESULTS   | 8    |
| CHAPTER 5: DISCUSSION OF RESULTS.  | 13   |
| 5.1: Direct drivers of deforestation in west bugwe central forest reserve. | 13   |

| 5.2 Indirect drivers of deforestation in west bugwe central forest reserve   | 15 |
|--|----|
| 5.3 Measures to reduce on deforestation in west bugwe central forest reserve | 15 |
| CHAPTER 6: CONCLUSION AND RECOMMENDATIONS                                    | 17 |
| 6.1 Conclusion.  | 17 |
| 6.2 Recommendations.   | 17 |
| REFERENCES.  | 18 |
| APPENDIX 1   | 20 |
| 1.1 Interview guide (for key informants)                                     | 20 |

**ABSTRACT** 

The study aimed at determining direct and indirect drivers of deforestation as well as

possible measures that can be used to reduce deforestation in WBCFR in Busia

district. A household survey and key informant interviews were used to collect

information on the drivers of deforestation around WBCFR. The study of 20

respondents in the neighborhood of WBCFR, Busia district results showed that

charcoal burning (85%), firewood collection (75%), agriculture (70%), Gold mining

(75%), and poverty (80%) had illegally increased beyond the limit in Bulumbi and

Busitema sub county local communities of WBCFR. To reduce on above mentioned

illegalities, respondents recommended that sensitization of people (60%), employing

soldiers to protect forests (65%), use of (National Forest and tree planting Act of

2003)(70%), forest boundaries demarcation (35%) and encouraging collaborative

forest management (CFM)(70%) would minimize deforestation in the proximity of

West Bugwe forest (WBF).

**Keywords: Direct, indirect drivers, measures and deforestation** 

хi

#### **CHAPTER 1: INTRODUCTION**

### 1.1 background of study

Forests are important for peoples' survival and and health. They maintain people's livelihoods through provision of useful goods like fruits, herbal medicines and may be source of income for many people (Mutesi *et al.*,2021). More still,(Mutesi *et al.*,2021) reports that forests provide around 20% of income for local people in developing countries like Uganda. Every year over three billion cubic meters of wood was collected as firewood and shelter since approximately 2.4 billion people used firewood for cooking and around 1.3 billion people depended on forests products for shelter(Bon, 2020). Furthermore, forests protected environment by absorbing carbon dioxide resulting in climate modification.

Colonial administration back more than 110 years established formal management of forests in Uganda. Permanent forest estate of the country was about1.9million hectares, these areas were preserved for biodiversity conservation, environmental protection services and sustainable production of forest products. Half of 1.9million hectares were gazetted central forest reserves (CFR) and also 9.5 million hectares comprised of forested areas in national parks and wild life reserves(Cheptoris,2016). It was by 1932 when forest reserves were established in Uganda based on policies and laws established by colonial government by then, some of the reserves were gazetted through Uganda Memorandum of agreement in 1907 and forest Ordinance 1913 like Toro agreement 1900,Ankole agreement 1909 and Bunyoro agreement 1933(Otieno *et al.*,2013).

The colonial government revealed the reserves as set up projects where by local systems of resources management were imprisoned as most researchers assumed that independent states adopted system of state ownership of all resources using colonial tradition(Hamilton,1984). Thus this placed all beneficial resources in hands of powerful people without the silent traditional communities in their amidst yet they were the majority.

According to(Otieno et al., 2010), many researchers agreed that it was stated that

#### REFERENCES.

Mutesi, F., Tabuti, J. R. S., & Mfitumukiza, D. (2021). Extent and Rate of Deforestation and Forest Degradation (1986–2016) in West Bugwe Central Forest Reserve, Uganda. International Journal of Forestry Research, 2021.

Bon, Y. (2020). Deforestation in Uganda. A case study on the Zoka Central Forest Reserve, Adjumani District.

Cheptoris, S. (2016). State of Uganda's Forestry 2016. *ministry of water and environment*. Retrieved from http://www.mwe.go.ug

Cheptoris, R. (2016). Implementation of Public Financial Management Reforms and Programmes in Uganda: An Analysis of Constraints (Doctoral dissertation, Universiteit Antwerpen).

Otieno, A. C., Buyinza, M., Kapiyo, R. A., & Oindo, B. O. (2013). Local communities and collaborative forest management in West Bugwe Forest Reserve, Eastern Uganda.

Hamilton, A.C., 1984. Deforestation in Uganda. Oxford university press, Nairobi, Kenya. Goldstein, S. L., O'nions, R. K., & Hamilton, P. J. (1984). A Sm-Nd isotopic study of atmospheric dusts and particulates from major river systems. Earth and planetary Science letters, 70(2), 221-236.

Otieno, A. C., & Buyinza, M. (2010). Collaborative forest management in Uganda: A strategy for controlling deforestation in West Bugwe Forest Reserve, Busia District. Research Journal of Applied Sciences, 5(5), 337-344.

Ainebyoona, A. (2019). Woody species diversity and composition on grazing fields among pastoral communities in South-western Uganda (Doctoral dissertation, Makerere University).

NEMA,2008. State of Environment Report for Uganda Environment Management authority Kampala, Uganda.

NEMA,2001.State of Environment Report for Uganda 2001.National Environment

Management Authority, Kampala uganda, pp:107-126

Manual, M. H. R. (2015). Ministry of Water and Environment. The author. MOWE Strategic Plan (2016). Ministry of Water and Environment. The author

Waiswa, D. (2011). Dynamics of forest cover extent, forest fragmentation and their drivers in the Lake Victoria crescent, Uganda from 1989 to 2009 (Doctoral dissertation, Virginia Tech).

Kissinger, G. M., Herold, M., & De Sy, V. (2012). Drivers of deforestation and forest degradation: a synthesis report for REDD+ policymakers. Lexeme Consulting.

Kissinger, G., Herold, M., & De Sy, V. (2012). Drivers of deforestation and forest degradation. A synthesis report for REDD+ Policymakers, 48(10.1016).

FAO,2009. State of the Worlds Forest

Waiswa, D., Stern, M. J., & Prisley, S. P. (2015). Drivers of deforestation in the Lake Victoria crescent, Uganda. Journal of Sustainable Forestry, 34(3), 259-275.

Angelsen, A. (2007). Practical experiences on policies and incentives to reduce deforestation in dev. countries (& getting the basics right). In Presentation held on the Workshop on reducing emissions from deforestation in developing countries, Crains, Australia, UNFCCC.

Lambin, E. F., & Geist, H. J. (2003). Regional differences in tropical deforestation. Environment: Science and Policy for Sustainable Development, 45(6), 22-36.

Perez-Verdin, G., Kim, Y. S., Hospodarsky, D., & Tecle, A. (2009). Factors driving deforestation in common-pool resources in northern Mexico. Journal of environmental management, 90(1), 331-340.

Banana, A. Y., Byakagaba, P., Russell, A. J., Waiswa, D., & Bomuhangi, A. (2014). A review of Uganda's national policies relevant to climate change adaptation and mitigation: Insights from Mount Elgon.

Moore, C., Ferrand, J., & Khiewvongphachan, X. (2011). Investigation of the drivers of deforestation and forest degradation in Nam Phui National Protected Area, Lao PDR. Climate Protection through Avoided Deforestation Programme, GIZ.