## ENVIRONMENTAL AND SOCIAL IMPACTS OF MINING-RELATED ACTIVITIES ON PASTORALISTS LIVELIHOODS IN MOROTO DISTRICT, UGANDA.

BY

#### NGOROK SIMON PETER

#### BU/GS18/MCC/24

## A RESEARCH DISSERTATION SUBMITTED TO THE FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES IN PARTIAL FULFILLMENT FOR THE AWARD OF A MASTER OF SCIENCE IN CLIMATE CHANGE AND DISASTER MANAGEMENT DEGREE OF BUSITEMA UNIVERSITY

**SEPTEMBER 2021** 



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### **SEPTEMBER 2021**

### DECLARATION

I, the undersigned **NGOROK Simon Peter**, declare that this dissertation is my original work, except where due acknowledgement has been made. I declare that this work has never been submitted to this University or to any other institution for any award.

## Student Name: NGOROK Simon Peter

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### SUPERVISOR(S) APPROVAL

This dissertation is being submitted in partial fulfilment for the award of Masters of Science in Climate Change and Disaster Management Degree of Busitema University, with my approval as the academic supervisor.

1. Dr. Nakiyemba Alice Signature:

Date (DD/MM/YYYY): 20109/2021

2, Dr. Biira Saphina Signature:

Date (DD/MM/YYYY): 26 11 2021

## DEDICATION

I dedicate this piece of work to all pastoralists across the globe who are struggling to keep their livelihood afloat in an increasingly domineering capitalist World.

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I would like to extend my sincere gratitude to my dissertation supervisors Dr. Alice Nakiyemba and Dr. Biira Saphina. Their doors were always open whenever I ran into a trouble spot or had a question about my research writing. They consistently allowed this paper to be my own work, but steered me in the right direction whenever they thought I needed it. This milestone will reshape my focus to contribute to sustainable development around SDG priorities most especially SDG 13 of the climate action.

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Finally, I must express my very profound gratitude to my family and friends for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them. Thank you.

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## ACRONYMS AND ABBREVIATIONS

ANARDE	Advocates for Natural Resources and Development
ASM	Artisanal Small Scale Mining
COPACSO	Coalition of Pastoralists Civil Society Organisations
COVID-19	Corona Virus Disease _ 2019
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
HRW	Human Rights Watch
IGAD	Inter-Governmental Authority on Development
KDF	Karamoja Development Forum
KII	Key Informant Interview
LSM	Large Scale Mining
MWR	Matheniko Wildlife Reserve
MWR NEMA	Matheniko Wildlife Reserve National Environment Management Authority
NEMA	National Environment Management Authority
NEMA NFA	National Environment Management Authority National Forest Authority
NEMA NFA NGO	National Environment Management Authority National Forest Authority Non Governmental Organzition
NEMA NFA NGO QGIS	National Environment Management Authority National Forest Authority Non Governmental Organzition Quantum Geographical Information Systems
NEMA NFA NGO QGIS SOP	National Environment Management Authority National Forest Authority Non Governmental Organzition Quantum Geographical Information Systems Standard Operating Procedures

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#### ABSTRACT

Pastoralism is coming under growing pressure from mining-related activities, wildlife conservation, infrastructure and crop farming often linked to changing land tenure systems. This study aimed at assessing the environmental and social impacts of mining-related activities on Pastoral livelihoods. The data for this study comprised of both primary data gathered through a household semi-structured questionnaire using Kobo toolbox and google forms; and secondary data sourced from peer reviewed articles, geospatial information was sourced from Uganda Bureau of Statistics; all these data were entered, analysed using Microsoft Excel, SPSS and QGIS. The results enhanced understanding of natural resource use conflicts that have fuelled environmental and social impacts. Traditionally, pastoralists use planned grazing patterns to create ecological balance as well as balance the nutrient needs of their livestock. Unfortunately, the dawn of extractives (mining-related activities) in Karamoja and especially in Rupa Sub-County has created a dire shift in pastoral grazing patterns. For example, in Naput grazing area, livestock no longer takes a turn to the East grazing routes as they have been largely occupied by huge industrial and commercial mining companies including MIA Marble, Sund belt and Hima Cement. These mining companies have taken up major water sources and fenced off some grazing resources such as salt leaks and nutritious pastures thus reducing the quality of pasture and consequently shrinking of grazing space as informed by the chi-square test results (p=0.025<0.05). This has at times created conflicts between pastoralists and mining companies. Moreover, the security installations in mining companies such as the use of huge foreign dogs scare away pastoralists and their livestock. This study also found out that across pastoralist communities, the main climate variabilities and changes that have been perceived include more erratic and reduced rainfall, rise in temperatures and prolonged/ frequent droughts. These changes have therefore meant that pastoralists move longer distances more frequently and increased administration borders, competing land uses that have accelerated natural resource use conflicts, have exacerbated this. In conclusion, this study underscores the need for joint land use planning avenues amongst the various land users; to reduce natural resources use conflicts; government, mining companies and civil society actors ought to prioritise more investment in water for production across cattle corridors; and informs development of policies to govern rangeland use alongside competing land uses.

#### CHAPTER ONE

#### INTRODUCTION

#### 1.1 Background of Study

Karamoja remains one of the poorest regions in Uganda, experiencing slow rates of development coupled with economic hardships, and is among the most prone to civil conflict and social unrest. Yet, the region is one of the most richly endowed regions in Uganda in terms of mineral resources. For instance over 50 different minerals are known to occur in this region, including gold, silver, copper, iron, gemstones, limestone and marble (Consultant et al., 2015).

Recently, Karamoja sub-region has become the new mining hub in Uganda, and the discourse on the mining is resounding some of the typical features of a resource curse (M. B. Mosebo, 2017). Thus, attracting twenty foreign and domestic companies presently have exploratory and/or mining rights in the region. These numbers of mining companies are expected to rise with growing demand for metals and minerals, favorable long-term trends in global commodity prices and increased exploration. In spite of its rich mineral potential, the commercial viability of large scale mining (LSM) and artisanal and small scale mining (ASM) and the full range of economic contributions and benefits of mining in Karamoja remain unclear (Alliance for Responsible Mining, 2018).

The mining sector has had additional environmental costs that have increasingly become a burden to a region that is poor, vulnerable, and heavily dependent on livestock as a viable livelihood option. There has been virtually no comprehensive investigation of the economic contribution of mining in Karamoja an estimate of the economic, environmental and social costs and benefits of both Large Scale Mining (LSM) and Artisanal and Small-scale Mining (ASM). This is not surprising since Uganda has had a history of policy, legal and regulatory constraints in the mining sector dating back to at least 1964 (UNEP, 2012).

The (Institute, 2016) describe experiences in countries such as Norway, Canada and Botswana suggest that extractives can indeed be effectively managed to contribute to sustainable economic growth. As such, extractives could be an asset if the necessary regulatory frameworks and policies are in place, coupled with visionary and accountable leadership. The huge potential benefits notwithstanding, extractives are also associated with a

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