

UNIVERSITY OF NAIROBI

**INSTITUTE OF DIPLOMACY & INTERNATIONAL
STUDIES**

**Natural Resources Management in the Promotion of Human Security:
A Case Study of Merelani Mines in Manyara Region of Tanzania**

**Desiderius C. Kakoko
R50/9969/2018**

**A Research Project submitted in Partial Fulfilment of the Requirements for the
Award of Masters of Arts Degree in International Studies, Institute of Diplomacy
and International Studies, University of Nairobi**

2018

DECLARATION

This Research Project is my original work and has not been submitted for any award in any other University,

..... Date.....

Desiderius C. Kakoko

Institute of Diplomacy and International Studies (IDIS)
University of Nairobi

This Research Project has been submitted with my approval as his University Supervisor,

..... Date.....

Dr. Kizito M. Sabala

Lecturer,
Institute of Diplomacy and International Studies (IDIS)
University of Nairobi

DEDICATION

I dedicate this work to my dear family; my lovely wife Bertha Fulgence Numvire and my children, Constantine, Costica and Matrída for their great encouragement, support and patience during my study.

ACKNOWLEDGEMENT

My appreciation goes to the Almighty God, for his grace, gift of life and blessings. I sincerely owe special thanks to my Supervisor Dr. Kizito Sabala for his wholehearted guidance and input throughout this research study. Special thanks also go to General Venance Salvatory Mabeyo, the Chief of Tanzania Peoples Defence Forces who allowed me to attend the course at Kenya National Defence College. My gratitude to the college Commandant Major General Andrew Karanja Ikenye and the entire Faculty Staff for providing an enabling atmosphere during the course duration that enabled me to complete this study in time. I also acknowledge the University of Nairobi lecturers for their tireless effort to equip me with the necessary tools for my study. Credit also goes to all the interviewee, respondents and Merelani Community whose contributions were inspiring. Last but not least, I wish to thank all my fellow course participants of course 20 – 2017/2018 for their constant support and encouragements.

ABSTRACT

Generally, this study is about the role of natural resources management in the promotion of human security using Merelani Mines in Manyara Region, Tanzania as a case study. Consequently, it examined the theoretical underlying factors and ultimately analysed strengths and weaknesses of natural resources management structures (normative and institutional frameworks) in the promotion of human security in the area of study through numerous links. The study set out two hypotheses that weak institutional and normative frameworks on management of natural resources in Tanzania largely explain inability in the promotion of human security in the country. Secondly, weak information sharing structures on the management of natural resources form barriers to communities' contribution in the promotion of human security in the country.

The study argues that, these resources are natural assets and passive components of nature. Therefore, their effective utility demands comprehensive human management effort. The study analysed the strength and weaknesses of the management structures currently in place, and found out that weak structures are the result to insufficient promotion of human security in the country. Weak structures were examined to be the consequence of a variety of factors; the main ones being those related to lack of coordinated arrangements and lax implementation of the established structures. The study went further and examined the natural resources management roles in the promotion of human security through economic, food, health, political, environmental, social development and personal dimensions. Economically, assorted human impacts were found to be growing poverty, inadequacy support to education and weakly supported developmental projects. Food security and poor community health have also been identified to form part of the human insecurity. Politically, human security impacts are associated to persistent corruption, lack of transparency and accountability. Environmental insecurity is linked to the inadequacy human safety, environmental degradation, pollution and unsustainable human settlements to resources dependent communities. Personal insecurity includes inadequacy human protection, child labour, increase in crimes and gender issues. The study also found out that insufficient information sharing impact negatively on the natural resources dependent communities along all dimensions of human security. The study also identified information sharing gap between and among natural resources stakeholders.

Lastly, this study has given policy recommendations on enhancing management of natural resources in the promotion human security in the country. The main areas of recommendations include improved coordination and linkage between and among the management structures and natural resources stakeholders in the country. The study recommended that harmonious effort by all stakeholders which are the government and its agencies, Private Companies, International Actors, NGOs and local communities. The study went further to recommend that, the instruments contained in the structures related to artisans and small miners in Merelani and related areas, need to be revisited so as to develop their full potential. Natural resources management structures should award the artisans and small-scale miners a deserving space in the whole exploitation process. Finally, the study recommended that coordinated legal reforms should be pursued in addressing the relations between the government and other stakeholders.

TABLE OF CONTENTS

DECLARATION	i
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
LIST OF ACRONYMS	x
Chapter One	1
Introduction and Background to the Study	1
1.1 Introduction.....	1
1.2 Background to the Study.....	3
1.3 Statement of the Problem.....	4
1.4 Objectives of the Study	6
1.5 Study Questions	6
1.6 Hypotheses of the Study	7
1.7 Justification and Significance of the Study.....	7
1.7.1 Academic Justification.....	7
1.7.2 Policy Justification.....	8
1.8 Conceptual Framework.....	9
1.9 Methodology of the Study	15
1.9.1 Case Study	15
1.9.2 Area of Study	15
1.9.3 Merelani Map.....	16
1.9.4 Target Respondents.....	17
1.9.5 Data Collection Methods and Instruments.....	17
1.9.6 Data Analysis	18
1.10 Chapter Outline	18
Chapter Two	20
Literature Review.....	20
2.1 Introduction.....	20
2.2 The Theoretical Debates	20
2.2.1 Natural Resources Utility and Human Sustainability	21
2.2.2 Natural Resources Utility and Property Use Rights.....	27

Chapter Three	32
Natural Resources Management and Human Security	32
3.1 Introduction.....	32
3.2 Natural Resources Institutions and Norms.....	32
3.3 Global Level Institutions.....	33
3.3.1 The World Bank.....	33
3.3.2 The Food Agricultural Organization.....	35
3.4 Global Level Normative Frameworks.....	38
3.4.1 The International Union for Conservation of Nature	38
3.4.2 The Convention Biological Diversity	39
3.4.3 The Extractive Inter-Stakeholders Forum.....	40
3.5 Continental Level institutions and Norms	41
3.5.1 African Development Bank	41
3.5.2 The East African Community Treaty.....	42
3.6 National Level Institutions.....	43
3.6.1 The Ministry of Natural Resources and Tourism.....	43
3.6.2 State Mining Corporation.....	43
3.6.3 The National Environment Management Council	44
3.6.4 Tanzania Women Miners Association	46
3.6.5 Tanzania Natural Resources Forum.....	47
3.7 The National Level Normative Framework.....	48
3.7.1 The Constitution.....	48
3.7.2 Development Vision 2025	49
3.7.3 The Mining Policy	50
3.8 The Local Government	53
3.8.1 Institutions.....	53
3.8.2 Normative Frameworks.....	55
3.9 Natural Resources Management and Human Security Analysis.....	56
3.9.1 Global Level Analysis.....	56
3.9.2 National Level Analysis.....	57
3.9.3 Local Governments Level Analysis	65
Chapter Four	67
Human Security in Merelani Mines in Manyara Region of Tanzania	67

4.1	Introduction.....	67
4.2	Economic Security	67
4.2.1	Poverty	68
4.2.2	Education	70
4.2.3	Support to Economic Projects.....	72
4.3	Food Security	74
4.3.1	Food and Supporting Infrastructure	75
4.3.2	Agriculture	76
4.4	Health Security.....	77
4.4.1	Water.....	77
4.4.2	HIV/AIDS	78
4.4.3	Occupational Diseases	79
4.5	Environmental Security	80
4.5.1	Environmental Human Safety.....	81
4.5.2	Environmental Degradation	82
4.5.3	Pollution.....	84
4.5.4	Human Settlement.....	84
4.6	Political Security	84
4.6.1	Corruption	85
4.6.2	Transparency and Accountability	87
4.7	Personal Security	88
4.7.1	Human Protection	89
4.7.2	Child Labour	89
4.7.3	Crimes	90
4.7.4	Gender.....	91
	Chapter Five.....	93
	Summary, Conclusion and Recommendations	93
5.1	Summary	93
5.2	Conclusions.....	94
5.3	Recommendations.....	98
5.3.1	Policy	98
5.3.2	Further Academic Research.....	100
	Bibliography	101

LIST OF ACRONYMS

CBD	Conversion Biological Diversity
CHS	Commission of Human Security
CSR	Corporate Social Responsibility
EAC	East African Community
EFR	Environmental Fiscal Reform
EIA	Environmental Impact Assessment
EISF	Extractive Inter-Stakeholders Forum
EU	European Union
FAO	Food Agricultural Organization
FAWETA	Federation of Women Entrepreneurs in Tanzania
FEMAT	Forest Ecosystem Management Assessment Team
FEMATA	Federation of Miners Associations of Tanzania
GDP	Gross Domestic Product
IO	International Organisations
IUCN	International Union for Conservation of Nature
MDGs	Millennium Development Goals)
NCCA	Ngorongoro Crater Conservation Authority
NGOs	Non-Governmental Organisations
NMT	National Museums of Tanzania
OECD	Organisation for Economic Cooperation and Development
PTD	Public Trust Doctrine
SDGs	Development Goals
TANAPA	Tanzania National Parks
TAWOMA	Tanzania Women Miners Association
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TFS	Tanzania Forest Service Agency
TNRF	Tanzania Natural Resources Forum
UN	United Nations

UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UK	United Kingdom
USAID	United States Agency for International Development
US	United States of America

Chapter One

Introduction and Background to the Study

1.1 Introduction

Natural resources underpin the foundation of human activities.¹ These resources are referred to as assets in form of unprocessed materials that exist in nature and are universally used by human beings for economic production and consumption.² Essentially, these assets provide wide-ranging sustainability related to human well-being.³ Such assets include land, water, air, plants, animals and micro-organisms. Therefore, natural resources are recognized to be key and fundamental environmental assets central to human livelihood.⁴

Natural resources utility to livelihood is appraised on how these assets are managed in mitigating human social and economic vulnerability.⁵ In broad sense, natural resources' usefulness depends on how effective they are managed by the society and finally employed in sustaining the general human well-being.⁶ Human well-being signifies a setting where livelihood is adequately protected from adverse and pervasive

¹ "The Management of Natural Resources: An Overview and Research Agenda," *Academy of Management Journal*, Vol.58, No.6 (2015):pp.1595-1613.

² OECD, Glossary of Statistical Terms, 2008.

³ European Union-DG Environment, "Analysis of Selected Concepts on Resource Management," in A Study to Support the Development of a Thematic Community Strategy on the Sustainable Use of Resources, 2002, accessed February 24, 2018, p.7, <http://ec.europa.eu/environment/natres/pdf/cowlstudy.pdf>

⁴ Julia Martin-Ortega, et al., *Water Ecosystem Services: A Global Perspective* (United Kingdoms, UNESCO: Cambridge University Press, 2015), p.3.

⁵ Damas Philip and Md. Israt Rayhan, *Vulnerability and Poverty: What are the Causes and how are they Related?* (Term Paper for Interdisciplinary Course, International Doctoral Studies Program, ZEF, Bonn: 2004), p. 1.

⁶ Richard Mathew, Mark Halle and Jason Switzer, *Conserving the Peace: Resources, Livelihood and Security* (Canada, National Library of Canada Cataloguing in Publication Data: International Institute for Sustainable Development, 202), p.8.

vulnerabilities. It is the setting whereby all resources stakeholders take responsibility to sustainably exploit the resources.⁷ Sustainable exploitation is a management aspect entrenched within suitable processes of conservation focusing on maintaining the quality and quantity to benefit both the present and future human generations.⁸

Globally, natural resources management has therefore been perceived to be an essential economic, political and social security engagement in promulgating human well-being.⁹ Basing on this global perspective on human development and security, Human Development Report of the United Nations Development Programme (UNDP) in 1994 presented a new approach to human well-being and concerns which was referred to as human security.¹⁰ UNDP devised this human security concept to represent people-centric security perception instead of the then traditional state-centric notion. Human Development Report's new approach to human security emphasised a people-centric discernment in international political, economic and social system aiming to addressing the combined and pertinent security threats facing human beings.

In 2001, the Commission of Human Security (CHS) went further to provide a broad defined human security concept to mean the protection of the core of all human lives in ways that enhance human freedoms and human fulfilment.¹¹ At the same time, guided by the principles of the United Nations Charter, human security was further propelled to highlight the right of people to live in freedom and dignity, free from poverty

⁷Sabina Alkire, *A Conceptual Framework for Human Security*, (University of Oxford: Queen Elizabeth House, 2003), p.4.

⁸Washington Ochola, Pascal Sanginga and Isaac Bekalo, *Managing Natural Resources for the Development in Africa: A Resource Book* (Kenya, Nairobi: University of Nairobi Press, 2010), p.12.

⁹Manohar S. Pawar and David R. Cox (Eds.), *Social Development: Critical Themes and Perspectives*, (New York: Routledge, 2010), p.3.

¹⁰ Human Development Report 1994, (Published for the United Nations Development Programme, New York Oxford: University Press, 1994), p.4.

¹¹ S. Neil MacFarlane and Yuen Foong Khong, *Human Security and the UN: A Critical History*, (Bloomington: Indiana University Press, 2006), p.160.

and despair with equal opportunity and rights aiming to fully develop human potential.”¹² This guidance particularised unprecedented obligation to nations to fine-tune their traditional security perception with the view to protect their people from critical and predominant vulnerabilities. The whole idea formed a main part of the UN development and security goals, perceived to give new impetus on mitigating a multitude of threats that cut across different interactions with nature involved in human lifecycle.¹³

1.2 Background to the Study

Numerous scholarly works have significantly acknowledged that human security can be promoted through engaging various resources which are natural assets in a way that is consistent with long-term human fulfilment.¹⁴ Precisely so, natural resources endowed to a community are economically, politically and socially at the centre in addressing desired human well-being. An imperative inquiry remains to be at what extent the resources management structures in place defined through the institutions and normative frameworks can sufficiently be employed in the promotion of the advocated and wished human security. Arguably, people-centred natural resources management remain a setup in addressing fundamental concerns of human livelihood or human security.

Basing on the above advocacy, Tanzania has been engaged in the formulation and re-formulation of natural resources exploitation institutions and normative frameworks to ensure their efficient contribution towards human security of her citizens.¹⁵ Efficient

¹² United Nations General Assembly Resolution 60/1, Paragraph 143.

¹³ Speech delivered by Mr. Sha Zukang, Under-Secretary-General for Economic and Social Affairs on behalf of Mr. Ban Ki-moon, Secretary-General United Nations, “*Dialogues at the Economic and Social Council: Achieving Sustainable Development and Promoting Development Cooperation*,” (United Nations. New York, 2008), p. 12.

¹⁴ Alkire, A Conceptual Framework for Human Security, p .2.

¹⁵ OECD, “The economic Significance of Natural Resources: Key Points for Reformers in Eastern Europe Caucasus and Central Asia,” 2011, accessed November 20, 2017,

management targeting the diverse configurations of natural resources endowed to the country has been asserted through numerous formal and informal institutions and normative frameworks at different levels of implementation.

Various natural resources management discourses in Tanzania reveals that, substantial varying approaches and levels of marrying-up complex linkages between natural resources and human beings uniquely to contribute on human well-being.¹⁶ These linkages target to impose common standards defined through rules and procedures permitting communities to interact with nature in a sustainable way, today and beyond.¹⁷ Particularly, in Tanzania, natural resources sustainability is noteworthy in the rural areas where poor communities form majority of the country's population and largely depend on the various forms of exploitation to sustain livelihood.¹⁸

1.3 Statement of the Problem

Natural resources such as oil, natural gas, coal, diamonds, minerals, forests and water-based natural assets are major sources of any national income. Paradoxically, many countries endowed with such abundant natural resources have found themselves going into conflicts and other social instability particularly in the situation where these resources are mismanaged or unequally shared. It is most likely that, exploitation of such natural assets managed through weak institutions potentially form destructive potency rather than seizing the opportunities envisioned to be generated through them. Furthermore, different conceptual cognizance on the rights of ownership by natural the

http://www.oecd.org/env/outreach/2011_AB_Economic%20significance%20of%20NR%20in%20EECCA_ENG.pdf

¹⁶ Constantine George, "Mineral Extraction for Socio-Economic Transformation of Tanzania: The Need to Move from Papers to Implementation of Mining Policy and Law," *Journal of Social Science Studies*, Vol. 2, No. 2 (2015): pp. 160-175.

¹⁷United Republic of Tanzania, "*Mineral Policy of Tanzania*," (Ministry of Energy and Minerals: 2009), p.7.

¹⁸United Republic of Tanzania" *National Strategy for Growth and Reduction of Poverty*," p. 20.

resources dependent communities have partly caused conflicts when these communities perceive to be denied outstanding merit.

Thus, their underlying management intricacy compels human beings to entirely and profoundly be responsible in shaping positive relations with these resources. Controlled interface forms significant part of human complex activities which should seek to suitably protect shared benefits to both the current and the future human generations. However, human efforts have remained weak and hence fail to sufficiently balance these multifaceted relations. Therefore, mainstreaming the people-centred management of natural resources is considered to form a contemporary discourse envisioned to promote the desired outcomes in terms of human security. Strong institutions and normative frameworks are in this study assumed to be responsible in moderating such relations and depend neither on resources scarcity nor abundance but on how they are managed.

Tanzania is a country endowed with diverse kinds of natural resources. These various forms of natural resources include the long Indian Ocean coastline attached with attractive beach space, wildlife parks and reserves, minerals, forests and the three greatest lakes in the African continent. However, Tanzania has not adeptly apprehended functional natural resources management in the course to sufficiently address looked-for human security. Several preceding researchers on the country's natural resources management point out that, inappropriate implementation of structures in place underscores the lack of the desired achievements.¹⁹ It is therefore on this background, this study endeavours to examine further on the roles of natural resources management in the

¹⁹ Constantine George, "Mineral Extraction for Socio-Economic Transformation of Tanzania: The Need to Move from Papers to Implementation of Mining Policy and Law," *Journal of Social Science Studies*, Vol. 2, No. 2 (2015), pp. 160-175.

promotion of human security with specific reference to Tanzanite mines located in Merelani, Simanjiro District in Manyara Region of Tanzania.

1.4 Objectives of the Study

The main objective of this study is to examine the roles of natural resources management in the promotion of human security in Tanzania. Specific objectives are to:

- 1.4.1. Examine the theoretical discourses on natural resources and human security.
- 1.4.2. Analyse strengths and weaknesses of natural resources management structures (normative and institutional frameworks) in the promotion of human security in Tanzania.
- 1.4.3. Identify the links between management of natural resources and human security in Merelani Mines in Manyara Region.

1.5 Study Questions

There are three questions within this study:

- 1.5.1 What are the theoretical discourses on natural resources and human security?
- 1.5.2 What are strength and weakness of natural resources management structures (normative and institutional frameworks) for addressing human security in Tanzania?
- 1.5.3 What are the links between management of natural resources and human security in Merelani Mines in Manyara Region?

1.6 Hypotheses of the Study

The following are the hypotheses of the study:

1.6.1 Weak institutional and normative framework on management of natural resources in Tanzania largely explains the inability in the promotion of human security in the country.

1.6.2 Weak information sharing structures on management of natural resources in Tanzania forms barriers to communities' participation in the promotion of human security in the country.

1.7 Justification and Significance of the Study

This study has two broad justifications namely: -

1.7.1 Academic Justification

The concept of human security as an alternative viewpoint of the traditional state-centric security to people-centric approach is still disputed in academic arena.²⁰ Similarly, discourses predicting the enviable interactions between natural resources and human security remain an active academic debate.²¹ However, substantial academic efforts made by numerous researchers are currently in place to accurately interrogate the relevant theoretical frameworks and methodological approaches on how human security is likely to be promoted through appropriate resources management structures.²² Yet, the specific discourses which efficiently and sufficiently address human security concerns have not adequately been articulated in many academic forums in developing counties, Tanzania

²⁰Rajan Bhattarai, *Human Security: Concept and Criticism*, in Bishnu Raj Upreti, Rajan Battarai and Geja Sharma Wagle (Eds.), *Human Security in Nepal: Concepts, Issues and Challenges* (Nepal Institute for Policy Studies and South Asia Regional Coordination Office of NCCR-North South, Kathmandu, 2003), p.8.

²¹ Ryerson Christie, "Critical Voices and Human Security: To Endure, To Engage or To Critique?" *Security Dialogue*, Vol.41, No.2 (2010): pp.169-190.

²² Independent Evaluation Group, *Designing a Results Framework for Achieving Results: A How-To Guide*, (The World Bank: Washington D.C., 2012).

inclusive. It is from this backdrop; this case study endeavours to examine the academic perspectives on the roles of natural resources management in the promotion of human security.

1.7.2 Policy Justification

Shaping responsive institutional and normative frameworks governing natural resources management forms a fundamental policy activity to practitioners within various institutes who are responsible in designing measures to alleviate social vulnerabilities. Most of the social vulnerabilities manifest through social dispossession of resources and the outcome has been unsustainable livelihood. The government of Tanzania which is endowed with stewardship of natural resources is duty-bound to continue to craft the ways which can match the means to the ends in pursuing natural resources exploitation by putting in place easy to implement policies, laws and related decision-making processes.

It is therefore imperative to study the strength and weakness of the contemporary structures, policies and other related strategies in support of the role of natural resources management in promoting human security. Borrowing a policy example by the Organisation for Economic Cooperation and Development (OECD), the organisation provides special policy on pro-poor natural resources dependents. The policy includes projects that develop the capacity of community-based organizations to manage resources, assuring access to resources by providing clear land tenure, resource use rights and promoting tools such as all-inclusive rural evaluation, strategic environmental assessment, poverty and social impact assessment.²³ This study hence becomes relevant to examine, analyse and finally identify natural resources and human security linkage so

²³ OECD, The economic Significance of Natural Resources: Key Points for Reformers in Eastern Europe Caucasus and Central Asia, p.9.

as to provide practical inputs to policy-makers who are currently engaged in developing substantial strategic policies in Tanzania.²⁴

1.8 Conceptual Framework

This case study is based on the conceptual schema updated by Thomas Sikor, Jun He and Guillaume Lestrelin for arraying property-rights regimes that distinguishes among diverse bundles of rights (figure 1).²⁵ This updated framework was initially developed by Edella Schlager and Elinor Ostrom in 1992.²⁶ The conceptual framework has profoundly influenced researches on natural resources governance, common property and community resource management.²⁷ These rights are claimed through a benefit stream that the country is obliged to protect by assigning duties to other stakeholders. Natural resources property-rights regimes are in this framework referred to three significant dimensional realms which are use, control and authoritative rights.²⁸ These are rights conceptualising how natural resources actors undertake particular actions such as distribution, exercise, and accountability related to power and authority over nature in natural resources exploitation.²⁹

²⁴ From the Editors, the Management of Natural Resources: An Overview and Research Agenda, 1595.

²⁵ Thomas Sikor, Jun He and Guillaume Lestrelin, Property Rights and Natural Resources: A Conceptual Analysis Revisited, World Development, Vol. 93 (2017), pp.337-349.

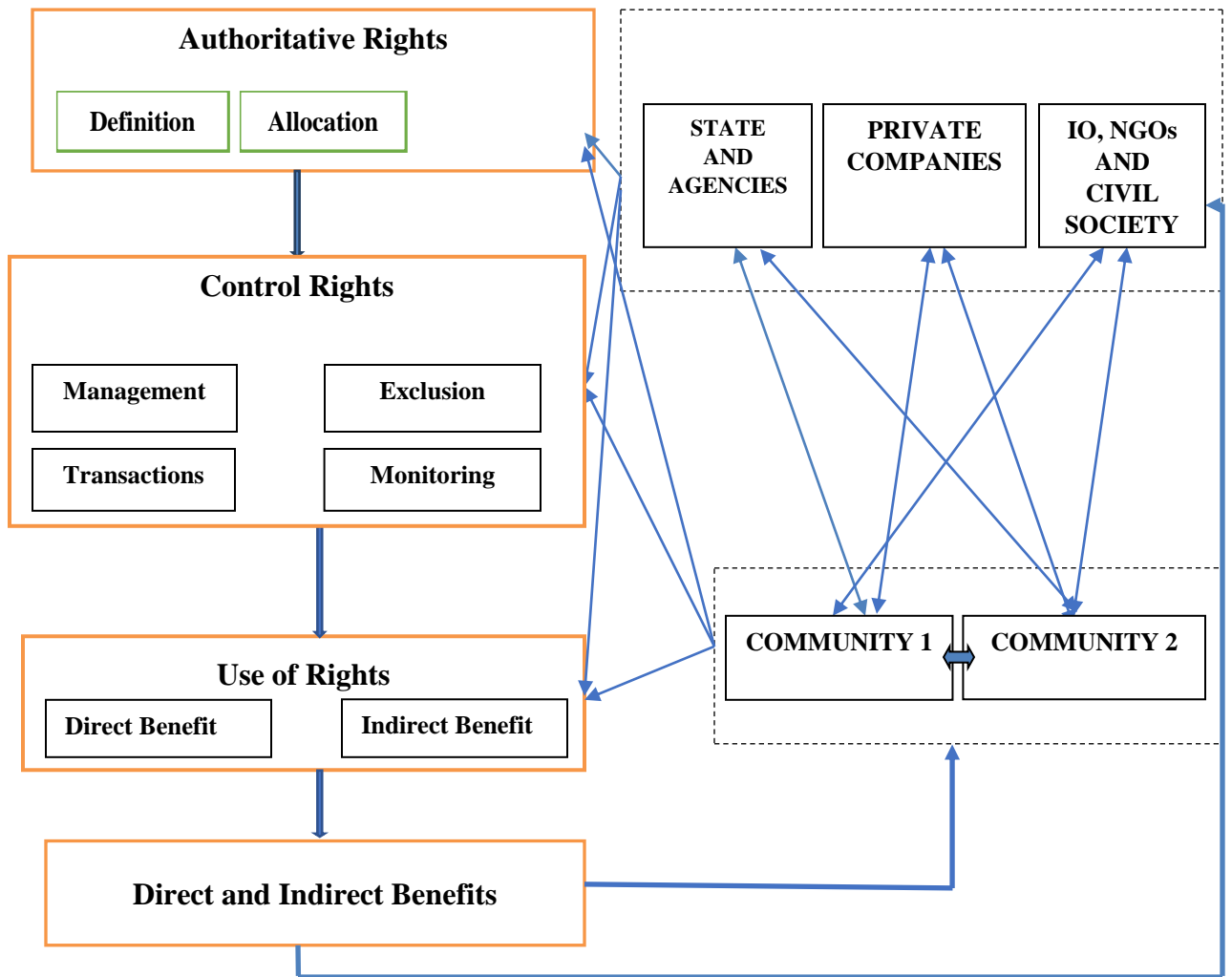
²⁶Ibid.

²⁷ Ibid.

²⁸Ibid.

²⁹Ostrom Elinor and Hess Charlotte, *Private and Common Property Rights: Encyclopaedia of Law & Economics* (Northampton, MA: Edward Elgar, 2008), p.1.

Fig. 1 Conceptual Schema



Natural resources exploitation rights are based on the norms and entitlements that create constraints and obligations in interactions between communities and institutions.³⁰

Rights form most important determinants of a long term economic, social and ecological sustainability of community depending upon those resources.³¹ Therefore, states have

³⁰ Stormy-Annika et al., "Scarcity and Abundance Revisited: A Literature Review on Natural Resources and Conflicts," *International Journal of Conflicts and Violence* Vol.5, No.1 (2011): pp.155-172.

³¹Jesca Campese, et al. (Eds.), *Rights-Based Approaches: Exploring issues and opportunities for Conservation* (CIFOR and IUCN, Centre for International Forestry Research, Indonesia, 2009), p.1.

always played a central role in formalising and protecting natural resources exploitation rights.

This conceptual framework moves beyond simplistic traditional conception of state being solitary actor when distinguishing different kinds of common property regimes.³² It provides conversant understanding towards natural resource management because its application conceptualises the direct implications to sustainable resource governance. The framework supports different exploitation rights that relate the motivation individual actors face, types of actions they take and the expected outcomes.

The first-order of the schema conceptualises the use rights. Use rights are the rights to enjoy direct and indirect benefits derived from a resource.³³ Direct use rights offers the natural resources dependent community exploitation privileges for agriculture, livestock keeping, fishing, basic material and fuel, both to meet their own subsistence requirement as well as to sell in markets for cash income.³⁴ Indirect use rights involve other benefits such as cash payments, use of public goods or in-kind support. Indirect use right is a policy-based provision where social actors are defined to be legitimate recipients.

The second-order forms a concept on the control rights.³⁵ Control rights refer to privileges conferred in determining the scope of use rights.³⁶ They include management

³² Michael Barry, *Property Theory, Metaphors and the Continuum of Land Rights* (United Nations Human Settlements Programme (UN-Habitat), Nairobi, UNON Publishing Services Section, 2015), <http://www.ucalgary.ca/mikebarry/files/mikebarry/barry-2015-property-theory-metaphors-and-the-continuum-of-land-rights-published.pdf>

³³ FAO, *The Rights to Food and Access to Natural Resources: Using Human Rights Arguments and Mechanisms to Improve Resource Access for Rural Poor*, in Lorenzo Cotula (Ed.) (Rome: 2008), p.9, accessed April 24, 2018, www.fao.org/3/a-k8093e.pdf

³⁴ Edward B. Barbier, *Natural Resources and Economic Development* (UK, Cambridge: The Edinburg Building, Cambridge University Press, 2005), p.1.

³⁵ The United Republic of Tanzania, *National Strategy for Growth and Reduction of Poverty – (NSGRP)* (Vice President’s Office, 2005)

rights to regulate any use and renovation of the resource. An example may be related to the restrictions on the exploitation of some species of resources, seasons or landscape. Either exclusion management rights infer the right to define who is privileged to use rights. Furthermore, exclusion defines who can extract a resource or entitled to cash payment.

Monitoring defines the right to monitor the use of direct benefits such as mineral resources exploitation operations. Monitoring indirect benefits involve issued related to auditing of payments and monitoring the condition of a resource during exploitation operations. Monitoring is evidenced to be a vital element as it pays attention to transparency issues.³⁷ Transaction rights relate the undertakings required for the realization of benefits. Distinguishing these transaction rights from use rights is significant because the rights to conduct exploitation operations and freely market natural resource products is often withheld from local community even where they have use rights. Indirect benefits involve the handling of the contractual matters, such as the collection and disbursement of payments. This is forms an important distinction from direct use rights because local community may hold rights to receive payments but denied rights to make decisions.

Authoritative rights are third-order rights which delineate control rights. They include the rights to define the flexible space for the exercise of control rights and allocation interpret the right to assign control rights to particular actors or the right to sell or lease control rights. Authoritative rights involve legal acts under national law, international rules or customary arrangements. Definition outlines the right to define the

³⁶The United Republic of Tanzania, *Tanzania Mining Act: Part II*, 2010, p.13.

³⁷Rosemary Lyster, "REDD+, transparency, participation and resource right: The role of Law," *Environment Science & Policy*, Vol.14, No.2 (2011): p.118.

discretionary space for the exercise of control rights while allocation outlines the right to assign control rights to particular actors.

Management of natural resource develop to be more sustainable if societies participate actively in resource governance.³⁸ In the due course, other actors including international Partners, Non-Governmental Organizations (NGOs), State' Agents, social and environmental activists develop new collaborative mandates and practices that facilitate society participation in decisions making within the management framework.³⁹ Current practice shows that local, national and international organizations, non-governmental actors make rules and regulations relevant to resource management in a particular social environment.⁴⁰

Additionally, resource management progressively creates access to a variety of direct and indirect benefits. Indirect benefits such as payments for environmental services and other kinds of external support and subsidy assistance become part of policy. Indirect benefits are also gaining importance for local administration due to governments' reluctance to decentralise natural resource management. Policies are established where local community benefit through different relevant project-based. Financial compensations to local community become one mode of management designed at improving human security. The conceptual framework therefore recognises the multiplicity of actors in of indirect benefits provision and puts attention to a more

³⁸Ibid.

³⁹ Rights and Resources Initiative Supporting forest tenure, policy and market reform, <http://rightsandresources.org/wp-content/uploads/2017/02/RRI-Press-Kit--February-2017.pdf>

⁴⁰Arun Agrawal and Jesse Ribot, "Accountability in Decentralization: A Framework with South Asian and West African Cases," *The Journal of Developing Areas*, Vol.33, No.4 (1999): pp.473-502.

comprehensive set of relationships among social actors with regard to direct and indirect benefits.

Empirically, changes within natural resource management may not affect society outright dispossession since the local community continue to possess direct use rights to natural resources. However, empirical application also foresees that society are generally deprived of higher ownership of property rights with control and authoritative rights to natural resource exercised exclusively by the state, agencies and international actors. State, agencies and international actors provide indirect benefits to society which may or may not advance use rights in the sense of policy-based entitlements. Thus, a number of institutions and norms increasingly are developed to influence natural resource management on the ground.

The conceptual framework offers opportunities to take concise interpretation of natural resource management at particular times and locations and avail concepts on how management arrangements influence realisation of human security. It can be adjusted to consider intra-community interests and situations in which more than one society holds rights to one single resource.⁴¹ Among numerous exploitation interested parties in resource management, are the NGOs, private companies, and international organizations.

Basing on this elaborated conceptual framework, this case study takes the position that addressing human security concept is developed with purposes to establish all-inclusive and objectively functional communities. Through social co-existence of these communities, human security is to be promoted in an extensive and all-inclusive natural

⁴¹Agrawal Aun, "Common Property Institutions and Sustained Governance of Resources," *World Development*, Vol.29, No.10 (2001): pp.1649-1672.

resources use rights. Furthermore, benefits related to human security are well defined in an integrated and combination of diverse social actors and environment.

1.9 Methodology of the Study

1.9.1 Case Study

This research adopts a case study design. Robert Yin defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.⁴² Case study design is considered a robust research method predominantly when a holistic investigation is required and is a powerful tool in many social science studies particularly on researches related to community based problems.⁴³

However valuable and important is case study; it is very probable for the researcher to form a bias.⁴⁴ In most cases, bias can fall on how the researcher's engage with the subject, the subject perception and mood, the form of data methods and instrumentation, or the way the data is interpreted.⁴⁵ Furthermore generalization of results when using a case study becomes limited since the study is only focusing on one small area.

1.9.2 Area of Study

The area of study is Merelani Mines and its neighbourhood as shown in the subsequent maps. Merelani Tanzanite Gem Mines is an area about 2 km wide and 50 km long in the North-Eastern of Tanzania. It is located in the Merelani Hills on the slopes of Lelatema

⁴²Robert K. Yin, *Case Study Research: Design and Methods*, 4th Ed. (USA: SAGE Publications, Thousand Oaks, Inc., 2009), p.4.

⁴³Zaidah Zainal, "Case study as a method," *Jurnal Kemanusiaan*, 2007, accessed October 29, 2017, http://psyking.net/htmlobj-3837/case_study_as_a_research_method.pdf

⁴⁴ Bent Flyvbjerg, "Five Misunderstandings about Case-Study Research" *Qualitative Inquiry*, Vol.12, No.2 (2016): pp.219-245.

⁴⁵ Ibid.

Mountains. Merelani is politically and geographically located in Simanjiro District, Manyara Region in Tanzania. The area is strategically important to the country as Tanzanite gem is found nowhere else in the world except in Merelani.⁴⁶ Simanjiro District has estimated an area of 19,928 km² and the 2012 population census documented 178,693 people representing population density of 8.967/km².⁴⁷

1.9.3 Merelani Map



Map 1⁴⁸



Map 2

⁴⁶ United Republic of Tanzania, *Nurturing Industrialization for Economic Transformation and Human Development* (Ministry of Planning and Finance: Tanzania National Five-Year Development Plan 2016/17 – 2020/21), p.51.

⁴⁷National Bureau of Statistics Tanzania (web).

⁴⁸ BBC World News, World Edition, “Tanzania suspends gem mining”, 300x150in., accessed October 17, 2017, <http://news.bbc.co.uk/2/hi/africa/2059985.stm>

1.9.4 Target Respondents

Targeted respondents were the natural resources management departments, Merelani mines management, local community and authorities who mirror the human security real situation within the indicators represented by the economic, food, health, environment, personal, and political human security dimensions. The aim of this study targeted respondents was to come up with a generalised understanding related to human security realisation in the study area expressed through either institutional experiences or normative thinking and feeling. Therefore, the main targeted respondents were approached from Mines Management and employees, Mining Government Agencies, Private Companies, Non-Governmental Organizations, local community leaders, civil servants and other individuals who are part of the community.

Relevant sampling was done by approaching the most utilitarian respondents. Ongoing interpretation of responses was performed in the view to indicate other relevant subjects to be approached. Limitation to approach larger sample size was limited by the availability of adequate time. Time factor challenge was tried to be alleviated by conducting the data collection through recorded observations and use of photographs.

1.9.5 Data Collection Methods and Instruments

A combination of primary and secondary data was used in this study. Primary data were gathered through key informants and direct personal interviews. Information and interviews from large groups of Merelani mining stakeholders were planned through the use of telephone communication, electronic mails and direct observation, but the number was limited by time and resources. Only nineteen (19) key informants responded. The field study was conducted during the end of year limiting most of the targeted

respondents who were on vacation. Either, the area of study was found to limit the use of internet and mobile telephone communication. Information were sought to examine, identify and finally critically analyse human security realisation through the seven dimensions of human security. These dimensions are economic, food, health, environmental, personal, and political security. Direct observation was done and the desired observations recorded in the area of study. The researcher ensured the data collection was in conformity to ethical issues.

Secondary data are information obtained from literature sources and publications. Secondary data provide second-hand information and include both raw data and published data collected from books, journals, articles, periodicals, newspapers, websites and government policy papers and official manuals. Secondary data was accessed in the view to correlate global, continental, national and local discourses related to the roles of natural resources management in the promotion of human security in Tanzania.

1.9.6 Data Analysis

The collected data was analysed using deductive qualitative analysis. Data analysis on different dimensions as related to the hypothesis provided a comprehensive and generalised understanding on human insecurities faced by Merelani Mines neighbouring community based on their real livelihood. Identified qualitative indicators of livelihood for each human security dimensions were analysed to come up with the findings and provided the base for the recommendations.

1.10 Chapter Outline

Chapter One presents an introduction and background of the study, statement of the problem, objectives, study questions, hypotheses, justification, conceptual and

operational framework, and methodology of the study. **Chapter Two** reviews the literature and discourses on the links between natural resources and human security. The literature discusses the theoretical debates and paradigms related to natural resources utility and human sustainability. **Chapter Three** critically analyses the strength and weakness in line with the objectives and hypotheses of the study. The strength and weakness identifies the effectiveness of the institutions and the way they respond to human security concerns. **Chapter Four** identifies the links between management of natural resources and human security in Mererani neighbouring communities. The links elucidate the livelihood reality analysed against the main human security dimensions. **Chapter Five** sums the study findings, conclusion and provides recommendations followed by a bibliography and an annex of the sample questionnaire used to collect the primary data for the study.

Chapter Two

Literature Review

2.1 Introduction

This chapter reviews selected literatures and other relevant debates linking management of natural resources and human security. The chapter goes further to provide a systematic identification and exploration of documents related in a research problem under a study.⁴⁹ Relevant accounts are analysed for what has been published on a topic by accredited scholars and researchers.⁵⁰ It is therefore through this chapter, an overview of the qualitative theoretical debates and paradigms shaping the links between management of natural resources and human security is done. The chapter finally reviews relevant institutions and normative frameworks within the global, regional and national perspectives where natural resources management and human security converge.

2.2 The Theoretical Debates

In academics and policy circles, there have been debates on the natural resources and human security nexus. Acknowledged key debates recount natural resources utility to human sustainability, human entitlement and use rights. These debates are reviewed in detail below in order to pin them to the UNDP devised human security dimensions.

⁴⁹ Christopher Gakuu, "Research Methods" (PowerPoint Presentation, University of Nairobi, Kenya) http://learning.uonbi.ac.ke/courses/LDP603/document/LDP_603_RESEARCH_METHODS_POWERPOINT_NOTES_FOR_STUDENTS- JANUARY 2013 INTAKE.pdf

⁵⁰ Ibid.

2.2.1 Natural Resources Utility and Human Sustainability

Early theoretical debates and perspectives linking natural resources utility and human beings are attached with the Cornucopian philosophical point of view.⁵¹ The philosophy critically asserts that the linkage between natural resources utility and human sustainability is an assumed enquiry which can easily be addressed through technological adaptation.⁵² The philosophy maintains that, technology is a tool which can effectively and sufficiently be utilised to regenerate and replace natural resources under pressure, hence affording the reduction of endured damage.⁵³ This philosophy for this reason rejects the concept regarding natural resources as finite reserves. Cornucopian takes the libertarian outlook and thus discards any restrictive frameworks put upon natural resources exploitation.

Anthropocentrism are other related debates placing human beings to be central and significant entities superior to nature and the resources contained therein. In this sense, the Anthropocentrism backs the Cornucopian point of view.⁵⁴ The philosophy goes further to interpret that, the world and its nature makes value only if it is fully benefitting human beings. Economist Julian Simon and American Futurist Herman Kahn support such human being-nature relations and use the philosophy to justify exploitation of the resources for solitary human benefit.⁵⁵

⁵¹ Patrick A. Regoniel, *Malthusians vs Cornucopias: A contemporary Perspective on Population Growth* (2012), accessed January 6, 2018, <http://simplyeducate.me/2012/12/03/malthusian-vs-cornucopians-a-contemporary-perspective-on-population-growth/>

⁵² Jo Arney, *Cornucopian Philosophy*, accessed January 2018, www.britannica.com/topic/cornucopian

⁵³ Michael Toman, *The Roles of the Environment and Natural Resources in Economic Growth Analysis*, (2002), accessed February 24, 2018, <http://ageconsearch.umn.edu/bitstream/10510/1/dp020071.pdf>

⁵⁴ A Guide for Higher Education in Kenya, in Ayub Macharia Ndaruqa and Richard Kerich, *Environment and Sustainable Development: Environmental Philosophy, Education and Sustainable Development Nexus*, p.26.

⁵⁵ Julian Simon, *Hoodwinking the Nation* (London: Routledge,1999), p.8.

Cornucopian and anthropocentric philosophies both challenge the concept of other scholarly conception referred to as the world's population carrying capacity. World population carrying capacity was a conceptualised model by an American Ecologist Garrett Hardin and referred it to as the tragedy of the commons.⁵⁶ In this view, Hardin framed the term tragedy of the commons to be an ecological philosophy that expresses the close relationship between human beings and the surrounding natural environment. The scholar projects the limitation on the number of beneficiaries that can be supported at an assumed level of consumption without degrading the environment and consequently reducing the future carrying capacity. The philosophical context cautions various actors who are inconsiderate in maximizing natural resources utility while destroying the common goods such as clean air and water, resources meant to be shared by all.

The Club of Rome which met in 1968 advanced one significant debate on natural resources and their relationship to the complex human needs.⁵⁷ The Club theoretically modelled complex challenges projected to face human beings in terms of poverty in the midst of plenty impacted by environment degradation.⁵⁸ For example, the Club accentuated the finiteness of non-renewable resources and predicted exhaustion of several major resources within decades. However, such claims are still debated with different views. On one hand, supporters provide that the actual reserves of natural resources are much larger than the estimates.⁵⁹ They further advocate that exploration and production

⁵⁶ P. Alexander Latta, *The Tragedy of the Commons*, in David V.J. Bell and Yuk-Kuen Annie Cheung (Eds.), *Introduction to Sustainable Development: Encyclopaedia of Life Support Security* (United Kingdom, Oxford: Eolss Publishers Co. Ltd, 2009), p.9.

⁵⁷Hans Günter Brauch, et al., (Eds.), "Globalisation and Environment Challenges: Reconceptualising Security in the 21st Century," *Hexagon Series on Human and Environment Security and Peace*, Vol.3 (2008), p.117.

⁵⁸ Dennis L. Meadows, et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Book, 1972), p. 9.

⁵⁹ Ibid.

technology are increasingly recuperating the reserves. Additionally, advocacies point out that exploitation of natural resources has not fully fledged as fast as was originally predicted. Technological development leading to increasing resource efficiency, the development of substitutes and increased levels of recycling are assumed to backup the philosophy.⁶⁰ On the other hand critics contend that, natural resources utility cannot match with human needs through envisaged technologies.⁶¹ They continue to claim that technology does not end fundamental needs of human life but creates more complexity. They provide that technological competition is likely to create a want more situations and finally raise new resources exploitation challenges.

Scholar Adam Smith joined the debates through what is referred to as the “*Invisible Hand*”. Smith’s market self-regulation propels a belief that technology can overcome all human problems.⁶² The invisible hand is a metaphor for how, in a free market economy, self-interested individuals through a system of mutual interdependence promote benefit of the general society. Smith used the symbol of the invisible hand to argue that actors who pursue their own self-interest in resources exploitation are at the same time contributing to societal interests by increasing revenue and economic welfare for the society as a whole.

Invisible hand basically attempts to convey the message that, without any interventional frameworks, individuals in the economy who act in their best self-interest, automatically enhances interests of the community livelihood. For example, basing on Smith’s philosophy, Artisans and Small Scale Miners who operate under self-interest

⁶⁰ Ibid.

⁶¹ Marshall Vian Summers, *The Allies of Humanity: Human Unity, Freedom and the hidden Reality of Contact* (United States of America, The Society of the Greater Community Way of Knowledge, 2005).

⁶² David F. Hardwick and Leslie Marsh (Eds.) *Property and Prosperity: New Studies on the Philosophy of Adam Smith* (United States of America: Palgrave Macmillan, 2014), p.4.

have in various ways contributed towards positive community livelihood.⁶³ The artisans and small miners have pursued self-interest regardless of their inability to borrow money due to financial structural challenges, lack training, equipment and technical expertise in mineral evaluation and processing but they have coped and finally increase community livelihood.⁶⁴

The critics to the invisible hand philosophy point out one example related to what they refer to be a likely market failure.⁶⁵ They foresee situations where natural resources are collectively exploited without focused central interventional frameworks, a situation which is likely to escalate severe degradation. Contextually, the invisible hand is seen not to guide individuals' decisions of self-interest which avert social common good and consequently resulting to severe cumulative deterioration. They contend that natural resources institutions acting as interventions or constrains are important in orienting individual self-interests and decisions in the most desired direction.⁶⁶

The invisible hand opponents go further to explore inspiring perspectives within policy cycles. First, they advocate that efficient consumption of resources is a result from cautions, educational programs and other forms of information sharing that tend not to arise out of free market. Secondly, they point out that such barriers prevent small number of actors who are likely to become more powerful threatening exploitation efficiency. The third is the side effects to societal support. This is the philosophy in terms of side

⁶³ United Nations Environment Programme, *Analysis of formalization approaches in the artisanal and small-scale gold mining sector based on experiences in Ecuador, Mongolia, Peru, Tanzania and Uganda: Tanzania Case Study*, 2012, p.4.

⁶⁴ Rosemarie Mwaipopo, et al., A report prepared for the Department for International Development (UK), *Increasing the Contribution of Artisanal and Small-Scale Mining to Poverty Reduction in Tanzania Based on An Analysis of Mining Livelihoods in Misungwi and Geita Districts, Mwanza Region*, October 2004, p.8.

⁶⁵ Y. Haimés and J. Kindrel (Eds.), *Water and Related Land Resource System* (Cleveland, Ohio: IFAC, 1980), p.4.

⁶⁶ Ibid.

externalities. They identify that externalities problem can be addressed with taxes, subsidies and property rights that help people feel for themselves or externalise the effect of their own behaviour. Fourth, the critics caution free riders awaiting open benefits through free provision of public goods.⁶⁷ In summary contestants to the invisible hand take position to elaborate inept natural resources management which fail to balance desired supply and anticipated demand. One momentous impact to human livelihood has been seen to develop through excessive deforestation.

Neo-Malthusian Theory is one other significant scholarly and hypothetical analysis used to make in-depth study on the symbiotic relationship between human beings and the management of nature.⁶⁸ The theory introduces a management broader view by conceptualizing how natural resources and human security dimensions interrelate or impact one another.⁶⁹ Among many other areas, Neo Malthusian theory is valued in concluding whether human being's concept of over-population may be the cause to hitches related human security. The theory explores the cognitive foundation that human security concerns may be addressed through adapting alternative measures taken by human beings through creation of new technologies and processes.⁷⁰ Validity of the premise may be proved right by the efforts of the researchers in the view to boost human access to water. Scientific researchers are currently diversifying water technologies,

⁶⁷Underson, Environment Economics and Natural Resources Management, p.2

⁶⁸Koula Mellos, "Neo-Malthusian Theory," in *Perspectives in Ecology* (London: Palgrave Macmillan, 1998), pp. 15- 42.

⁶⁹ Olli Tahvonen, "Economic Sustainability and Scarcity of Natural Resources: A Brief Historical Review," *Resources for the Future*, June 2000, accessed October 16, 2017, <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-IB-00-tahvonen.pdf>

⁷⁰ GEOG 3104, "Overpopulation-Poverty," accessed on October, 18, 2017, <http://web1.cnre.vt.edu/lsg/3104/Overpop.%20FINAL/Poverty4.html>

including developing new water desalination to make sea water usable by human beings.⁷¹

The Neo Malthusian argument has gone further to propose that the earth's available resources may fail to cope with the over-growing population significantly affecting the human security concerns. Malthusian urges for further comprehensive measures to population growth mitigation if essential community sustainability is to be supported for long-term.⁷² Neo-Malthusian theory further argues that natural resources should be respected as an international relations apprehension. This is anchored on what is referred to as the mandatory preservation of the world by which the natural resources dependent community has to assume responsibility of safeguarding.

The conceptual link between natural resources management and human security aspects may further be explained within the poverty-environment nexus.⁷³ The Malthusian argument elaborated above assumes that poor peasants of the developing countries exploit environment out of absolute inevitability. The debate has remained contentious whether poverty alleviation would automatically decrease environmental degradation and that reducing environmental degradation would alleviate poverty.⁷⁴ In this regard, Thomas Reardon and Stephen Vosti were first scholars who determinately set out to develop a conceptual basis on differentiating types of poverty and types of

⁷¹ The Reporter, 'New Technologies could make Sea Water Drinkable' *Guardian*, (Dar es Salaam), April 15, 2017.

⁷² Samuel O. Idowu and René Schmidpeter, *Corporate Sustainability*, in Paolo Taticchi, Paolo Carbone and Vito Albino (Eds.), *CSR, Sustainability, Ethics & Governance* (New York, Dordrech, London: Springer-Verlag Berlin Heideberg, 2013), p.5.

⁷³Washington Ochola, Pascal Sanginga and Isaac Bekalo, *Managing Natural Resources for the Development in Africa: A Resource Book*, p.21.

⁷⁴ The International Bank for Reconstruction and Development, *The World Bank, Linking Poverty Reduction and Environmental Management Policy Challenges and Opportunities* (Washington, 2002), p.21.

environmental changes and the way they interact.⁷⁵ Their findings were published in the Series of World Development (1995) and significantly form a milestone in the discourse.⁷⁶

2.2.2 Natural Resources Utility and Property Use Rights

Prosperity and property rights are inseparably linked.⁷⁷ The importance of having definite and strongly protected natural resources property rights is currently extensively embellished by policymakers. Community property rights system provides them the exclusive right to use their natural resources in the way they wish. This forms a dominion where property users take full account of all the benefits and costs of exploiting the resources in a manner they wish. It is only through the process of weighing absolute costs and benefits the concept develops equitable living standards.

Stewardship forms another debate that links natural resources to community human security realization. National policies have in one way or other explained to hold stewardship as recorded through the Public Trust Doctrine (PTD).⁷⁸ PTD was put in public policy records by the ancient Roman Empire. The doctrine rests primarily on the principle stewardship of certain resources like air, sea, waters and the forests should as such be of great importance to the communities as a whole. The Supreme Court of India in the Case of M.C. Mehta vs. Kamal and Others in 1920 stated that:

⁷⁵ Thomas Stephen Reardon A. Vosti, "Links between Rural Poverty and the Environment in Developing Countries: Asset Categories and Investment Poverty: Asset Categories and Investment Poverty," *World Development*, Vol. 23. No.9 (1995): pp. 1495-1506.

⁷⁶ *Ibid.*

⁷⁷ Tom Bethell, *Noblest Triumph: Property and Prosperity through Ages* (United States of America, New York: Library of Congress Cataloguing-in-Publication Data, 1998), p.8.

⁷⁸ Rugemeleza Nshala, "Management of Natural Resources in Tanzania: Is the Public Trust Doctrine of any Relevance?" accessed December 21, 2017, <http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/1405/nshalar042400.pdf>

“The state is a trustee of all-natural resources, which are by nature meant for public use and enjoyment. Public at large is the beneficiary of the sea shore, running waters, airs, forests and ecologically fragile lands...”⁷⁹

Further, the other pertinent delivery on this discourse is the National Human Security Reports System which explicitly identified that human security to be based on national ownership.⁸⁰

Regardless of the numerous theoretical debates, human-nature relationship is also revealed in various religious discourses since the epoch of Adam and Eve.⁸¹ This is sufficiently supported in Stephen Kaplan work, *The Restorative Environment: Nature and Human Experience*, where it is argued that “early human beings were part of nature.”⁸² Human-nature nexus is additionally traced in the history of mankind since the hunter-gatherer societies until the contemporary age of human civilisation. According to Charlene Browne, “landscaped grounds and the inclusion of natural elements ... may play a role in promoting psychological, social and physical well-being among residents.”⁸³ Natural resources dependent community is therefore entitled to favourably use various natural assets such as ocean coastlines attached with attractive beachscapes and wildlife parks and reserves for recreation.

Natural resources and human use privilege is further debated through literature and discourses in what is referred to Earth Charter. The Earth Charter sets principles by arguing that human beings must join together to bring forth a sustainable global society

⁷⁹ Ibid.

⁸⁰ Oscar A. Gomez and Des Gasper, “A Thematic Guidance Note for Regional and National Human Development Report Teams” United Nations Development Programme, *Human Development Report Office*, 2016, accessed October 18, 2017, http://hdr.undp.org/sites/default/files/human_security_guidance_note_r-nhdrs.pdf

⁸¹ Davood Mohammadi Moghadam, et al., “A brief Discussion on Human/Nature Relationship” *International Journal of Humanities and Social Science*, Vol. 5, No.6 (2015): pp. 90-93.

⁸² Stephen Kaplan, “The Restorative Environment: The Role of Horticulture in Human Well Being and Social Development” in Diane Relf (Ed.), (Portland: Timber Press, 1992): pp. 134-142.

⁸³ Ibid.

founded on the respect of nature.⁸⁴ The charter articulates that well-being of human beings uncompromisingly depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals fertile soils, pure waters and clean air. The charter goes forward to be firm on the credible utilisation of the global environment with its finite resources as a common responsibility of all communities. The charter explores the global situation where dominant patterns of production and consumption are predicted to cause environmental devastation, depletion of resources and massive extinction of species.

The charter takes position that ecological and social systems which are foundation of human life have been over-burdened by unprecedented rise in human population. The charter further emphasises on the fundamental changes in human values, institutions and ways of living, as a condition to sustainable natural resources. Knowledge and technology are categorised to be spheres which have to be employed to reduce human impacts on environment. Additionally, the charter sets principles that support the present and future human generations and other ecological dependent species. The charter summarises the roles of natural resources management in promoting human livelihood through ecological integrity, social and economic justice and adopting non-violence management approach.

Management of natural resources has been at the centre of the scholarly debates for more than two decades now. Most applicable has been the two models related to the right of use and control referred to as centralisation or decentralisation models. The centrality of the debate lies within a paradigm where natural resources management is

⁸⁴ Peter Blaze Corcodan and A. James Wohlpart, (Eds.) *A Voice of Earth: American Respond to the Earth Charter* (London: The University of Georgia Press, 2008), p.12.

encouraged to shift away from costly-centred control toward simple approaches where recognised beneficiaries are awarded wider opportunity to play a much more active role.

The likely to be more favoured approach is the contemporary decentralised model. This model is visualized to profoundly focus on the empowerment of targeted community where decision making and benefits are appraised and controlled at local levels management structures. Agrawal and Ribot support decentralization through social participation and inclusion as the model likely to project an increasing social welfare.⁸⁵ The whole discourse emphasises the need for the local participation and inclusion as a means for increasing management effectiveness and equity.

Advocates of decentralization model validate it as the ground of increased efficiency and greater participation and responsiveness of the government to their citizens. However, several recent scholarly works reveal that decentralization has either not adequately evolved to acquire the wished-for effectiveness and has otherwise remained weak without necessary management powers to local authorities or communities.⁸⁶ The predisposition of the decentralisation model of natural resources management has been to positively deliver human livelihood and services efficiently through entirely decentralised real powers related to productive resources. Additionally, the model has remained weak in providing divergent interests among various actors so that the externalities related to natural resources management are not disproportionately carried along by self-interested individual groups.⁸⁷

⁸⁵ Jesse C. Ribbot and Anne M. Larson, (Eds.) *Democratic Decentralization through a Natural Resource Lens* (New York: Routledge Taylor & Francis Group, 2005), p.91.

⁸⁶ Ajali Mustafa Nguyahambi, "Decentralisation Reforms and Poverty Reduction in Tanzania," in Rehema Kilonzo and Tiina Kontinene (Eds.) "Contemporary Concerns in Development Studies: Perspectives from Tanzania and Zambia," (Finland: Department of Political and Economic Studies, No.23 (2015), p.64.

⁸⁷ Arun Agrawal and Jesse Ribot, "Accountability in Decentralization: A Framework with South Asian and West African Cases," pp. 473-502.

The idea of learning from experience and modifying subsequent behaviour in light of that experience has long been part of adaptive management. A well-built strategy for natural resource management is traced to the seminal work of Holling (1978), Walters (1986) and Lee (1993).⁸⁸ These scholars framed an approach that treats on-the-ground actions and policies to form hypotheses from which learning is derived. This contemporary concept of adaptive management has then been developed and applied across a variety of natural resource based sectors of agriculture, water and fisheries. This quality work led adaptive management to become a central component of the Forest Ecosystem Management Assessment Team (FEMAT) report in 1993 and the subsequent Northwest Forest Plan. Haber (1964) traced the origins of adaptive management to the ideas of scientific management that took root in the early 1900s.⁸⁹

⁸⁸ George H. Stankey, Roger N. Clark, Bernard T. Bormann, *Adaptive Management of Natural Resources: Theory, Concepts, and Management Institutions*, (U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 2005), p.1, https://www.fs.fed.us/pnw/pubs/pnw_gtr654.pdf

⁸⁹Ibid., p.5.

Chapter Three

Natural Resources Management and Human Security

3.1 Introduction

This chapter discusses the strength and weakness within institutions and norms related to the management of natural resources in the promotion of human security in Tanzania. Briefly, a few selected and relevant global and continental natural resources management conventions are alluded to, but the chapter endeavours to critically analysing the natural resources management structures in place at the national level. The analysis seeks to interrogate the varying levels of appropriateness and effectiveness of the natural resources management institutional and normative frameworks in place basing on the way they predominantly influence human security in the country.

3.2 Natural Resources Institutions and Norms

The global, continental and national levels and their corresponding institutions and normative frameworks form pertinent structures through which this study bases its analysis. Such institutions and normative frameworks link natural resources management and the role they play in the promotion of human security.⁹⁰ Relevantly, the Global Sustainable Development Goals (SDGs) lays the foundation of the study where sustainable exploitation of natural resources is fundamentally well-expressed. SDGs connote efficient utilisation of natural resources and such goals are central to the promotion of human potentials and their related livelihood.⁹¹

⁹⁰ Alessandra Giuliani, et al., “Shaping Institutions for Natural Resources Management” *info-Resources Focus*, No 3/08, p.3, accessed April 17, 2018, https://boris.unibe.ch/70310/7/focus08_3_e.pdf

⁹¹Swiss Agency for Development and Cooperation, Working with a Sustainable Livelihood Approach,” 2007, accessed October, 29, 2017, <https://www.shareweb.ch/site/Poverty-Wellbeing/currentpovertyissues/Documents/sla.pdf>

The SDGs conception is set to reverse the damage to the environmental natural assets, failure of which results to detrimental consequences to human livelihood.⁹² In particular, the frameworks in which SDGs work; focus on communities' livelihoods defining the sense in which communities depend directly or indirectly on the ecosystems and the diverse goods and services provided within.⁹³ Undoubtedly, SDGs maintain significance in safeguarding the ecosystems which provide a range of visible and invisible services that are essential for sustainable livelihood and development to human beings. Guided by such sustainable development goals, Tanzania has consistently taken efforts to create, maintain and develop equivalent natural resources management structures shaping the countries' projected interests, aspirations and expectations for both current and future generations.

3.3 Global Level Institutions

3.3.1 The World Bank

The World Bank has for decades formed a leading part in managing and coordinating the global natural resources developmental projects designed and carried out in collaboration with Tanzania. The World Bank has pertinently worked within the country's environmental resources structures with a comprehensible focus and interest on human poverty alleviation among others.⁹⁴ The World Bank effort has been to put more attention on the mechanisms enhancing the environmental conservation through participatory joint mechanisms and community based natural resource management.

⁹² Barry Dalal-Clayton and Stephen Bass, *Sustainable Development Strategies: A Resource Book* (London, OECD: Earthscan Publications Ltd, 2002), p.5.

⁹³ Matthew Agarwala, et al. "Assessing the Relationship between Human Well-Being and Ecosystem Services: A Review of Frameworks," *Conservation and Society*, Vol. 12, No.4, pp.437-449.

⁹⁴ The World Bank, *Empowerment and Poverty Reduction: A Sourcebook*, Deepa Narayan (Ed.). 2002. p.6.

The World Bank Group's Environment and Natural Resources Global Practice has been active in providing expertise, training, technical assistance and financing. These activities have empowered Tanzania's management base of natural resources and other related projects. Additionally, the World Bank supports the implementation of strategies related to social development through various programs, schemes and projects empowering the poor communities, marginalised and vulnerable groups through efficient natural resources exploitation. Bilateral established environmental projects are progressively undertaken by the World Bank Group and these include the Marine and Coastal Environmental Projects whose objectives have aimed at developing broad ecological representation.

Other initiatives include the establishment and sustainment of the environment institutional and financial networks through the Environmental Fiscal Reform (EFR), Environmental and Social Framework (ESF), Environmental Impact Assessment (EIA) and Environmental Tax Reforms framework (ETR). These structures in place seek to influence the management of land, sea and freshwater in a sustainable way. Sustainable resources utilization have consistently improved human livelihoods and enhanced ecosystem services through the reduction of various forms of air and water pollutants. Specifically, the World Bank has supported Tanzania to take on management initiatives on a clean, green growth and healthy environment to communities.

EFR has been a noteworthy global environmental institutional framework helping Tanzania to raise revenues while creating incentives that generate environmental benefits and support poverty reduction efforts. EFR has substantially contributed to the establishment of the infrastructures that has significantly improved poor communities'

access to water, sanitation and energy services.⁹⁵ ERF goes further to encourage more sustainable use of natural resources, reducing pollution from energy use of industrial activities and thus stimulating the use of innovative clean technologies. Therefore, EFR has directly and indirectly addressed environmental predicaments that threaten the livelihoods of the communities.

For example, in 2004, Tanzania benefitted from sustainable development programmes supported by the EFR basing on what had been applied with great success in other developed countries. Among related targeted areas has been the boosting of employment, public education and protection of water catchments.⁹⁶ It is from this setting, EFR continues to prioritize the livelihood and food security of the poor communities which depend on the well-conserved ecosystems and the diversity of goods and services they provide. Logically, the ecosystems underpin human well-being through goods and services they provide.⁹⁷

3.3.2 The Food Agricultural Organization

Food Agricultural Organization (FAO) has been involved in drafting a number of conventions related to sustainable utilisation of natural resources. FAO's has established a Strategic Frameworks which have persistently maintained support to Tanzania in developing and implementing resources normative and standard-setting structures as one of its core functions.⁹⁸ Additionally, one significant achievement of FAO in the management of natural resources has been to promote the conservation of natural

⁹⁵Barbier, *Natural Resources and Economic Development*, p. 1.

⁹⁶ United Republic of Tanzania, *High Level Dialogue on Inclusion of Environmental Sustainability in Budget Guidelines and Environmental Reform*, (President's Office, Planning Commission, 2012)

⁹⁷ "Ecosystem Goods and Services, European Union," September 2009, accessed November 3, 2017, <http://ec.europa.eu/environment/nature/info/pubs/docs/ecosystem.pdf>

⁹⁸ International Regulatory Co-operation and International Organisations: The Case of the Food and Agriculture Organization of the United Nations (FAO), (FAO Legal and Ethics Office: OECD and FAO, 2016), p. 11.

resources and the adoption of improved methods of production within the agricultural, fisheries and forestry sectors.⁹⁹ Environmental issues have acquired a deserving priority and consideration in addressing the corresponding developing human insecurities. In most of the mining sites; the environmental challenges have been clearly depicted through the on-going environmental dilapidation, water and forest resources depletion, destruction to landscapes and other factors manifested through natural and man-made disasters.

Payment for Ecosystem Services (PES) forms a vital part of natural resources management. PES is currently supported by FAO in the view to promote human wellbeing in Tanzania.¹⁰⁰ However, PES initiatives still face diminutive recognition as several ecological projects are supported through weak institutional links and henceforth, necessitate strengthened management frameworks.¹⁰¹ Other few PES supported schemes on the ground has demonstrated effectiveness through successful monitoring, and they have been reported to yield positive results.

Successful PES supported projects include Ruvu watershed found in the Uluguru Mountains by CARE-WWF Programme. Farmers neighbouring the scheme have been receiving payments for the adoption of sustainable agricultural practices. Together with such payments, the neighbouring communities are equipped with practical training on controlling rain water run-off and soil erosion resulting to improved food production. Such programme is linked to improved upstream land use management and thus

⁹⁹ Food and Agriculture Organisation of the United Nations: The State of Food and Agriculture Climate Change, Agriculture and Food Security, (FAO, 2016), p.15 accessed March 2, 2018, <http://www.fao.org/3/a-i6030e.pdf>

¹⁰⁰Dosteus Lopa, et al. "Towards operational payment for water ecosystem services in Tanzania: A case study from Uluguru mountains," *Fauna & Flora, Oryx*, Vol. 46, No.1 (2012): pp. 34-44.

¹⁰¹ European Commission, Enhancing for the Effectiveness of Payment for Ecosystem Services (PES), Science for Environment Policy, Thematic Issue, 2012, p.5, accessed May 10, 2018, http://ec.europa.eu/environment/integration/research/newsalert/pdf/30_en.pdf

addressing poverty alleviation and livelihood enhancement in that area which is recorded to be highly populated.¹⁰² Other successful PES programmes in Tanzania are carried out in the forests of East Mount Usambara Mountains, an area which is internationally recognised as one of the world's most biodiversity ecosystems,¹⁰³ Tarangire National Park,¹⁰⁴ and the Usambara forests. All these areas form important agricultural landscapes of the future farming community.¹⁰⁵

Tanzania also collaborates with FAO through numerous legal and institutional frameworks in managing, promoting and regulating national development programs related to natural resources management. Close partnership is linked through law reform practice, legal research and environmental data collection. Specifically, The Development Law Branch of the Legal and Ethics Office of FAO provides programmatic legal advice and extended direct technical assistance to Tanzania in designing legal frameworks on the management of land, water, fisheries, plants, animals, food, forestry and wildlife and agriculture biotechnology supported researches. These all efforts by FAO are acknowledged to significantly de-escalated conflicts associated to competitive natural resources exploitation.

¹⁰² Payment for Ecosystem Services, Sustainability Pathways, accessed December 1, 2017, www.fao.org/3/a-ar584e.pdf

¹⁰³ David Kaczan, Brent S, Vic Adamowicz. "Payment for Ecosystem Services (PES) program design in Tanzania: Farmers' Preference for enforcement and payment options," *Selected Paper Prepared for presentation at the Agricultural & Applied Economics Association 2011 AAEA & NAREA joint meeting* (Pittsburgh, Pennsylvania, 2011), p. 2.

¹⁰⁴ Nelson F., et al. "Payment for ecosystem services as a framework for community-based conservation in Northern Tanzania," *The journal of the Society and Conservation Biology*, Vol.24, No.1 (2010): pp. 78-85.

¹⁰⁵ A.C. Hamilton and R. Bensted (Eds.), *Forest Conservation in the East Usambara Mountains Tanzania* (IUCN: International Union for Conservation of Nature and Natural Resources, 1989), p. 1.

3.4 Global Level Normative Frameworks

3.4.1 The International Union for Conservation of Nature

International Union for Conservation of Nature (IUCN) is an international initiative working in the field of nature conservation and sustainable use of natural resources. IUCN's main mission is to normatively influence, encourage and assist societies in the conservation of nature at the same time ensuring that any use of natural resources is ecologically equitable and sustainable. With IUCN, Tanzania has significantly profited from participatory frameworks in the areas of resources data gathering, data analysis, technical education, field projects and other associated research areas of national interest.¹⁰⁶

Participatory approaches to natural resources management have significantly attracted local community support particularly within the areas related to environmental conservation. IUCN has been cooperating with the government of Tanzania within a number of Forums. Many of these forums mainstream sustainable initiative related to biodiversity concerns into a business strategy.¹⁰⁷ In particular, IUCN has been involved in environmental adjudication, in supporting the judicial experts to respond to environmental disputes,¹⁰⁸ land use at risk of deforestation,¹⁰⁹ international climate change assessment initiatives, monitoring of the quality of governance on protected and

¹⁰⁶ Sayuni B. Mariki, Conservation with a Human Face? Comparing Local Participation and Benefit Sharing from a National Park and a State Forest Plantation in Tanzania, Sage Open (2013), pp1-16.

¹⁰⁷ International Union for Conservation of Nature, (Annual Report, 2017), p.24, accessed March 1, 2018, <https://portals.iucn.org/library/sites/library/files/documents/Rep-2018-003-En.pdf>

¹⁰⁸ Ibid., 31.

¹⁰⁹ Ibid.

conserved areas,¹¹⁰ comprehensive training to farmers on issues related to agricultural growth based on integrated corridor schemes.¹¹¹

Collaboratively, Tanzania has been integrated within IUCN through a multilateral environmental Memorandum of Understanding on the conservation and management of Dugongs and their habitats.¹¹² Dugongs are officially protected under the 1970 Fisheries Act. Furthermore, IUNC is currently engaged to guide conservation and sustainable use of resources in the Kilombero landscape.¹¹³ The IUNC institutional strength is associated to its working conception defined through total transparency, inclusiveness and participation in bringing and working together with relevant environmental stakeholders and representatives from communities, business and government departments and agencies.

3.4.2 The Conversion Biological Diversity

Conversion Biological Diversity (CBD) is acknowledged to embrace common norms and initiatives with significant concerns to mankind. CDB initiatives protect the ecosystem, species and genetic natural resources. CBD is responsible to all spheres that are directly and indirectly related to diversity and its role in development work within; science, politics, education, business, agriculture and culture specialities. Within this conversion; ecosystems, species and genetic resources are accentuated to be used for the benefit of human beings in such a way that does not lead to the deterioration of biodiversity. For example, Article 8 (j) of the CBD stipulates that:

¹¹⁰Ibid., 41.

¹¹¹ Ibid., 44.

¹¹² Barbara Lausche, Guidelines for Areas Legislation (IUCN: Environmental Policy and Law Paper No.81, 2011), p.59.

¹¹³Ibid., 45.

“Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices”.

Tanzania government adopted the Convention Biological Diversity (CBD) in May 1992 and ratified the convention in 1996.¹¹⁴ The country has been preparing and submitting to the CBD reports on measures taken for implementation of the provisions of the convention. Furthermore, numerous projects and programmes have been initiated to implement these management programmes in Tanzania which include, inland water ecosystem in lake Tanganyika, Victoria and Nyasa, Marine and Coastal Biological Diversity in Zanzibar, Tanga and Mafia, agriculture and forest biological diversity in Rufiji.¹¹⁵

3.4.3 The Extractive Inter-Stakeholders Forum

The other significant global level normative framework working in the country is the Extractive Inter-Stakeholders Forum which was registered in 2008 as a non-profit company under Companies Act of 2002. The forum works collaboratively with Tanzania Ministry of Natural resources and Tourism to harmoniously ensure sustainable inter-operational relationship among mining stakeholders. The forum has successfully established shared prospective benefits to the government, investors and local communities in a number of ways. The forum works with other platforms to support the implementation of various policies. The forum has also managed to provide meaningful normative implementation of corporate social responsibility based projects. Corporate

¹¹⁴ United Republic of Tanzania, Fifth National Report on the Implementation of the Convention on Biological Diversity (Vice [Presidents Office: Division of Environment, 2014), p.1.

¹¹⁵Ibid., p.12.

Social responsibility based projects have fundamentally been instrumental in creating peaceful coexistence and mutual understanding between investors and the local communities.

The forum has gone further to develop its contemporary setting in coordinating two vital key activities in the extractive industry in the country. The first activity has been to influence positive incentives to the extractive industry by preparing the Presidential Corporate Social Responsibility and Empowerment Award in the Extractive Industries which was officially launched in 2012. The secondly is the initiative which draws direct attention on the conduct and coordination of all activities that are anticipated to transform local communities' livelihoods by promoting participation in the extractive industry supply chain.

3.5 Continental Level institutions and Norms

3.5.1 African Development Bank

African Natural Resources Centre which is under the African Development Bank Group, is a continental institution supporting African countries to maximise their development outcomes derived from natural resources. This continental level institution has consistently devised means by which management of natural resources focuses on benefitting societies through various mechanisms such as environmental services (ES) payments. Such services are appreciated to be a promising means in addressing challenges to sustainable natural resources management in Africa, Tanzania inclusive.¹¹⁶

¹¹⁶ African Development Bank Group, Payment for Environmental Services: A Promising Tool for Natural Resources Management in Africa, 2015, p. 13.

ES has the potential to raise new sources of sustainable finances aiming at improving the efficiency of environment conservation interventions.¹¹⁷

3.5.2 The East African Community Treaty

Cooperation in the management of environment and natural resources is provided under Article 5 (c) of the East African Community (EAC) Treaty.¹¹⁸ Partner States within the treaty includes the Republics of Kenya, Tanzania, Uganda, Rwanda, Burundi and South Sudan. Partner States agree to take concerted measures to foster cooperation in the joint, efficient management and the sustainable utilisation of natural resources within the Community for their common benefits. Among other aspects, the treaty aim at promoting joint exploration, efficient exploitation and sustainable utilisation of the common border and shared resources.¹¹⁹ This sub-regional natural resources management arrangements work along with other individual Partner States efforts articulated within mineral policies and mining regimes. The treaty goes further to undertake natural resources inventories and work on related policies in the view to harmonise them.

A feasibility assessment of mineral resources in the sub-region with potential for local value addition has been set to be one priority of the treaty.¹²⁰ Local value addition program has proved to be a tool in creating a substantial local employment while ensuring that the local community derives maximum benefit from the mineral resources in the sub-region. Capacity building on best practices related to the mineral sector regulations and value addition are among promoted strategies conducted in June 2012.¹²¹

¹¹⁷ Ibid.

¹¹⁸ East Africa Community Development Strategy (2011/12 – 2015/16), August 2011, p.5.

¹¹⁹ In the East African Legislative Assembly (EALA), 97th Sitting-Third Assembly: Sixth Meeting-Third Session, p. 16.

¹²⁰ East Africa Community – Vision 2050, p.65.

¹²¹ Ibid.

3.6. National Level Institutions

3.6.1 The Ministry of Natural Resources and Tourism

The main role of the Ministry of Natural Resources and Tourism include to collaboratively working with other Ministries, Government Departments and Agencies together with other relevant private entrepreneurs in the natural resources management. It is responsible in formulating, regulating, developing and coordinating natural resources policies and guidelines seeking to promote and facilitate the all stakeholders of the mineral sector activities.¹²² In this sense, the ministry maintains to be the overseer of the mining, dominating the control and authoritative rights.

Under the constitution of the United Republic of Tanzania (1997), the Minister of Natural Resources and Tourism works under the President who has all the powers related to governance of natural resources and environment in the country and responsible for establishing the institutions and ministerial appointments of such office bearers. The Ministry of Natural Resources and Tourism practically has the control and monitoring rights which finally guide the use rights by various other actors including public, private, local communities, NGOs and civil society and the agencies¹²³

3.6.2 State Mining Corporation

The State Mining Corporation (STAMICO) was established as the public Corporation through the Act of Parliament in 1972 under the Public Corporations Act, 1969. One main function of the corporation is provided in the Established Amendment Order (2015), Article 6 (g) which obliges the corporation to promote, facilitate or support

¹²² The United Republic of Tanzania, Ministry of Energy and Minerals, Tanzania Mining Industry Investor's Guide, June 2015, p.8.

¹²³ Robert Kibugi et al., Enabling Legal Framework for Sustainable-use Investment in Tanzania: Legal Assessment Report, Working Paper No 191 (Indonesia, Bogor: CIFOR, 2015), p.20.

transformation of artisanal and small scale mining into well organised, sustainably productive and environmentally conscious to medium scale mining operations. Currently, STAMICO is facilitating artisanal and small-scale miners in accessing appropriate mining equipment, mineral processing technologies, loans from financial institutions, training and extension services and provision of reliable markets information.¹²⁴

STAMICO has strived to deliver its mandated functions despite of the obstacles facing the implementation of its strategic plans and objectives. Other challenges facing the institute are associated to inadequate human and financial resources. Along with these challenges, joint venture partnership with private companies is in place to form a viable solution to ease the financial burden.¹²⁵ The corporation efficiency is in progress to strengthen its financial management system ensuring proper usage of funds borrowed from the financial institutions. The institution is also re-framing its set targets by abiding to specific, measurable, achievable, realistic and time-bound objectives depending on the financial and human resources available.

3.6.3 The National Environment Management Council

The National Environment Management Council (NEMC) was established in 1983 when the Government of Tanzania enacted the National Environment Management Act No. 19 of 1983. NEMC was established because there was a high demand of establishing an institution responsible in environmental management issues at the national level. NEMC establishment is also linked to the implementation of the resolutions laid down by the Stockholm Conference in 1972. The Stockholm Conference requested all nations to establish and strengthen their national environmental councils whose responsibilities

¹²⁴ Wilfred E.N. Mbowe et al, "Tanzanite Processing in Tanzania: Challenges and opportunities", *Red-fame Publishing*, Vol. 3, No.3, (2016): pp. 236-257.

¹²⁵ *Ibid.*

among many others have been to advise their governments and other international stakeholders on environmental matters. More efforts to strengthen NEMC was effected when the enactment of Environmental Management Act No. 20 of 2004 (EMA, 2004) by Parliament in October 2004, repealed the National Environmental Management Act No.19 of 1983 to re-established NEMC.

Environment Management Act No. 20 of 2004 provides NEMC with legal and institutional powers for supervising sustainable management of the environment; particularly in addressing challenges related to pollution prevention and control, waste management, environmental quality standards, public participation, environmental compliance and enforcement. In addition, the Act gives NEMC the mandate to undertake enforcement, compliance, monitoring and review of environmental impacts assessments, research, facilitate public participation in environmental decision-making, raise environmental awareness, collect and disseminate environmental data and information.¹²⁶

Operational challenges of NEMC can well be traced through its relationship with the government. NEMC which is a fully fledged government agency relies on government allocation of resources. Its decision-making powers are therefore curtailed by lacking full autonomy as this situation has always resulted into inadequate accountability. In other circumstances, lack of full and independent control of its assigned mandate has resulted to making unpopular decisions. NEMC has in some cases failed to

¹²⁶ Meserecordias Wilfred Lema, "Analysis of Challenges Related to Poor Environmental Regulatory Framework on Mineral Exploitation Projects: A Case Study of Tanzania," *Journal of Geoscience and Environment Protection*, Vo. 4 (2016): pp. 89-96.

effectively act as a watchdog to the Environmental Impact Assessment particularly on government owned projects as a result of it being a part of the government structure.¹²⁷

3.6.4 Tanzania Women Miners Association

Tanzania Women Miners Association (TAWOMA) is a non-governmental and non-profit organization which was formed in 1997. In 2010, TAWOMA had 400 active members (miners, mineral brokers and dealers, service providers and mine works), 17 regional office branches and 15 local branch offices in all active mining areas.¹²⁸ Its mission has been to facilitate women in the mining sector in accessing required financial, technical and marketing services so that they can carry out mining activities that are both economically and commercially viable, and environmentally sustainable.¹²⁹ TAWOMA has therefore strategically influenced women miners to up-lift their economic and social standards of living and appropriately get hold of the livelihood of their families.

In enhancing its influence and capability, TAWOMA is currently integrated to various business networks including the Federation of Miners Associations of Tanzania (FEMATA). TAWOMA is also a member of Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA), Federation of Women Entrepreneurs in Tanzania (FAWETA), NGOs Network, Tanzania Private Sector Foundation, Tanzania Association of Non-Government Organisations (TANGO) and Southern Africa Development Cooperation Women in Mining Trust and Association of Women Geo-Scientist in Africa.

¹²⁷ Hussein Sosovele, "Governance Challenges in Tanzania's Environmental Impact Assessment Practice" *African Journal of Environmental Science and Technology*, Vol. 5, No. 2 (2011): pp.126-130.

¹²⁸Eunice Negele, "Global Forum on Artisanal & Small- Scale Gold Mining" (PowerPoint Presentation, Manila, Philippines, December, 2010) accessed on May 13, 2018,

http://wedocs.unep.org/bitstream/handle/20.500.11822/Supporting_the_Disadvantaged_Ones.pdf

¹²⁹ Ibid.

Among others, one of the objectives of TAWOMA has been to set up a revolving fund to enable women miners in accessing the necessary funding required for their projects. TAWOMA has nationally been in a front position in harmonising women from local mining communities in providing the entrepreneurship skills, information gathering and use, mining and processing technologies, peer educators in health, safety, HIV/AIDS pandemic and other relevant environmental management schemes.¹³⁰

3.6.5 Tanzania Natural Resources Forum

Tanzania Natural Resources Forum (TNRF) is a member-driven, civil society-based initiative. Its purpose is to improve natural resource management in Tanzania by providing pertinent advice related to fundamental challenges facing natural resource industry.¹³¹ TNRF has greatly contributed to resources management by shaping the nature of governance in terms of natural resources management priorities, policies, laws and programs.

The forum operates through determining the level at which natural resources benefit and support the livelihoods of Tanzanians.¹³² TNRF has strived at improving the accountability, transparency and local empowerment in natural resource management. TNRF promotes the resources management by getting together a diverse range of stakeholders with various interests and thus enable information sharing, build partnership and join resources common efforts towards projected communal goals.

¹³⁰“Tanzania Women Miners Association (TAWOMA),” (Progress Report – Nov 1997 – Dec 2004) accessed on October 20, 2017,

http://siteresources.worldbank.org/FSLP/Resources/TANZANIA_WOMEN.pdf

¹³¹ The Constitution of Tanzania Natural Resource Forum, November 2005, accessed April 24, 2018,

http://tnrf.org/files/TNRF_Constitution_2015.pdf

¹³² Ibid.

3.7 The National Level Normative Framework

3.7.1 The Constitution

The constitution of the United Republic of Tanzania was passed in the Constituent Assembly on the 25th April 1997. The human security perception within the constitution is interpreted in Part I, Art 8 (1), (b) and explicitly spells out that:

“...the primary objective of the Government shall be the welfare of the people”.¹³³

Tanzania exercises its natural resources management strategy through state controlled frameworks.¹³⁴ The constitution as a supreme national framework explicitly secures citizens interests defined through natural wealth and resources. The constitution provides that, natural wealth and resources are only privileged to the people of the United Republic of Tanzania. The ownership and control of natural wealth and resources in the country are exercised under Article 9 (1) (c) of the Constitution of the United Republic of Tanzania and places obligations on the part of the state and its agencies to:

“...ensure that the national resources and heritage are harnessed, preserved and applied toward the common good...”

Article 27 of the Constitution calls the public to ensure that the natural resources of the country are managed properly as it states that:

“(1) Every person is obliged to safeguard and protect the natural resources of the United Republic, state property and all property jointly owned by the people...”

(2) All persons shall by the law be required to safeguard state and communal property, to combat all forms of misappropriation and wastage and to run the economy of the nation assiduously, with the attitude of people who are masters of the fate of their nation.”

¹³³Constitution of the United Republic of Tanzania, 1977

¹³⁴United Republic of Tanzania: National Strategy for Growth and Reduction of Poverty, p.20

3.7.2 Development Vision 2025

Tanzania Development Vision 2025 explicitly declares Tanzania as a nation imbued with five main people-centred attributes. High quality livelihood of its citizens ranks first in the hierarchy. High quality livelihoods of citizens commit Tanzania Government to the delivery of individual's entitlement to freedom from want with equal opportunity.¹³⁵ Under such a commitment, diverse natural resources are therefore dedicated to human support and services.¹³⁶

Vision 2025 is a strategy which is designed to be implemented through a series of five year development plans. The second development plan (FYDP II) has effectively been committed as strategy to monitor and evaluate the environmental quality through use of environmental sustainability index (ESI). In general, using ESI, numerous interventions plans have been geared towards the realization of the projected objectives, aiming at promotion of green energy technologies such as biogas, LPG and solar energy. Other aspects are related to climate change adaptation, enforcement of EIA in the conservation of natural resources and strengthening the contribution of natural resources and products leading to poverty reduction and economic growth.¹³⁷

FYDP II has formulated considerable structures to enhance the implementation of the active adaptation measures in reducing environmental susceptibility while sustaining human economy of the communities in Tanzania. Water being one of the vital natural resources that cut across all aspects of human life of any community has been given a deserving priority within the FYDP II management structures. Water vitality is

¹³⁵ United Nations General Assembly, Resolution 66/290; 2012.

¹³⁶The United Republic of Tanzania: Ministry of Finance and Planning, *Nurturing Industrialization for Economic Transformation and Human Development*, (National Five-Year Development Plan 2016/17 – 2020/21), p.58.

¹³⁷Ibid., p.59.

fundamentally acknowledged to be the source of large portions of domestic, agricultural and industrial development. Therefore, FYDP II is appositely acknowledged to support human security in terms of availability of adequate, clean, safe water and sanitation services in a the country.

3.7.3 The Mining Policy

Before the 1990's, mining legal and regulatory frameworks Tanzania was ill-equipped in dealing with the International financial Institutions.¹³⁸ It is from this background that Tanzania was obliged to craft the Mining Policy in 1997 which was repealed to be replaced by the 2009 Mineral Policy. In 2010, the Mining Act was put in place to translate the 2009 Mineral Policy into achievable implementation. Among other objectives of these policies and acts has been to maintain a coordinated involvement and participation of the local communities in mining projects. Furthermore these policies and acts have successfully encouraged the mining companies to increase their corporate social responsibilities.¹³⁹

Through such policies and acts the government has ultimately and pertinently continued to enhance its engagements in raising the community participation through numerous structures. The Supplementary Bill on Natural Wealth and Resources (Permanent Sovereignty) Act, 2017, Part II, Article 4 provides that:

“4(1) The People of the United Republic shall have permanent sovereignty over all-natural wealth and resources.

¹³⁸LUC in association with GEUS & Matrix Development Consultants, SESA of the Tanzanian Sustainable Management of Mineral Resources Project: Final Report, 2013, p.4, accessed March 3, 2018, <http://documents.worldbank.org/curated/en/490911468165856238/pdf/E21380V20Strat00Box385425B00PUBLIC0.pdf>

¹³⁹The United Republic of Tanzania: Mineral Policy of Tanzania, Ministry of Energy and Minerals, 2009, p.25.

“4(2) The ownership and control over natural wealth and resources shall be exercised by, and through the government on behalf of the People of the United Republic.”¹⁴⁰

These policies and acts have further elevated the reputation and corporate citizenship notion in natural resources management which reflects a shift from an idea of “doing no harm” to one of adopting a role for “positive good.”¹⁴¹ Within this view, Article 5.9 of Tanzania Mining Policy (1997) articulates the promotion of positive relations between the mining companies and communities surrounding the Mines. Basing on the Article, good relationship orchestrates high level participation of the local communities in development of the mining projects, appropriately contributing the communities’ wider involvement in promoting their well-being.

Corporate Social Responsibility (CSR) is provided within the Tanzania Mining Policies and plausibly becomes a natural management strategy in the promotion of human security in the country. According to the EU Commission (2002), CSR is defined to be a concept whereby, companies integrate social and environmental concerns in business operations and in their integration with their stakeholders on a voluntary basis. Crisply, benefit sharing means the sharing of any benefits arising from the utilization of natural resources in a fair and equitable manner.¹⁴² The notion of benefit sharing in natural resources was first formalised in the international law in 1992 through the Convention on Biological Diversity (CBD). CBD advocates that benefit sharing may be distinguished

¹⁴⁰The United Republic of Tanzania, “The Natural Wealth and Resources (Permanent Sovereignty) Act, 2017 (*Special Gazette of the United Republic of Tanzania No. 4, Vol. 98 dated 28th June, 2017*), p. 5.

¹⁴¹ Jackie Tuck, Julian Lowe and Pam McRae-Williams, *Managing community relationships, reputation and sustaining competitive advantage: The case of mining towns in 2nd Future of Australia’s Towns Conference* (Bendigo: Latrobe University, 2005), p.2.

¹⁴² Republic of Kenya, “Kenya Gazette Supplement,” No.137, Senate Bills No.34, 2014, Available at National Council for Law Reporting Library

between three main types namely: direct financial payment, benefits from changes in natural resources use, indirect and non-monetary terms.

Scholars like Dahl asserts that “... every large corporate should be thought of as a social enterprise that is an entity whose existence and decision can be justified insofar as they serve public and social purpose”.¹⁴³ Carroll states that business encompasses the economic, legal, ethical and discretionary expectation that society has of organisation at a given point in time.¹⁴⁴ Normatively, in modern business related areas, companies and their management have been subjected to well-exposed rules and procedures which oblige them to play an increased active role in the welfare of society.¹⁴⁵

Benefit sharing is hence translated through CSR and is further referred to a commitment to allocate some kind of returns whether monetary or in-kind services back to the wide-ranging designated participants or relevant resource dependent community. It is acknowledged to be a setting where a proportion of revenue earned by a business entity having a natural resources use right recompense to local communities through indirect and/or direct benefit sharing arrangements. Direct benefit sharing refers to cash payments to individuals or communities, and indirect benefit sharing includes other non-cash benefits, including economic infrastructure provision or community facilities and services and relevantly supporting the grass-root developments activities.¹⁴⁶

Through CSR based initiatives, Tanzania natural resources extractive actors have been investing some of their profits towards the development of the local communities

¹⁴³David Crowther and Esther Ortiz Martinez, *Corporate Social Responsibility: History and Principles*: (Penang, Social Responsibility World: Ansted University Press, 2004): pp.102-107.

¹⁴⁴Ibid.

¹⁴⁵Ibid.

¹⁴⁶ David Mwayafu and Richard Kimbowa, *Issues and Options for Benefit Sharing in REDD+ in East Africa: A Case Study of Mount Elgon Regional Conservation Programme* (Network for Equity in Forest Climate Policy, REDD Net: 2011), p.2.

particularly in the projects related to education, health, safe water and roads infrastructures. For example, Tanzanian policies within liberalisation codes require the investors in the mining sector to contribute to development in the local areas where mining projects are taking place. Actors in the mineral sector such as the international organisations, NGOs, private companies have resolutely assumed the obligation to oversee the implementation of the corporate social responsibility policies using various official and unofficial platforms. Regrettably, a few actors have abided to the norm at varying levels of commitment but others have not done so. Inefficient CSR is likely to happen due to the lack of strong legal structures in place.

Tanzania Mining Policies also provide authority to the National Environment Management Agency (NEMA) to explore positive incentives which can stimulate environmental compliance through a number of prize awards. Likewise, mining companies diverging from recommended environmental conformity meet reproach incentives recommended by NEMA. Indirect extra taxes and direct non-compliance financial charges have been imposed to environmental unfriendly made products, machinery and equipment operating in the natural resources exploitation sites.¹⁴⁷

3.8 The Local Government

3.8.1 Institutions

Tanzania Administrative Regions are divided into sub-national units referred to as districts councils and village governments. These are local administrative elements which have control and authoritative rights over the natural resources management through

¹⁴⁷ Headquarter Relations Officer, in interview with the researcher, December 22, 2017.

institutions and norms working under the country's decentralised policy.¹⁴⁸ Since the decentralisation policy was institutionalised, the management system has played significant governance roles, particularly in the natural resources sector, as it was projected to consistently and pertinently increase the local governments thrust in the delivery of the most important and basic livelihood services to the communities at the grass-root.¹⁴⁹

These local governments have institutions in place aiming at enhancing human security dimensions in the country. Practitioners have argued that, natural resources management through a decentralised system may be effective when accountability is directed downwards to local actors.¹⁵⁰ Currently, local institutions include the district environmental monitoring teams under the District Executive Director who heads the district administration, the professional staff, councillors and the key NGOs.

The focussed responsibilities within such institutions have constantly held the monitoring and evaluation processes, formed a close follow-up and shaped harmonious exploitation relationships among various stakeholders related to an effective use of all environmental assets and the manner they are exploited.¹⁵¹ For example, the teams are involved in the provision of periodic training aiming at educating the communities on the efficient exploitation of the natural resources such as timber, conservations of animal grazing fields, controlled use of sand and stones for building works and the designated

¹⁴⁸ L. Massoi and A.S. Norman, "Decentralisation by Devolution in Tanzania: Reflections on Community in the Planning Process in Kizota Ward in Dodoma," *Journal of Public Administration and Policy Research*, Vol. 1, No. 1 (2009): pp.133-140.

¹⁴⁹ A. Elsageer Ahmed and Jonathan Stephen Mwambo, Does Decentralisation have positive Impacts on the Use of Natural Resources? (ZEF Bonn: Term Paper for the Interdisciplinary Course, International Doctoral Studies Program at ZEF, 2004, p.7.

¹⁵⁰ *Ibid.*, p.6.

¹⁵¹ Zacharia Lenganasa, (Simanjiro: District Environment Co-ordinator) in interview with the researcher, December 27, 2017.

water sources and wetlands. These institutions also has jurisdiction to closely supervise the locally funded community projects.

At village level, the local authorities have established the councils and adjudication committees which work together with other NGOs Staff in monitoring and evaluating the sustainable use of these projects. These committees have been provided with by-laws by which they are empowered to impose minor punishments in terms of fines to individuals who flout the resources use.

3.8.2 Normative Frameworks

The Local Governments Acts works under the bill passed in the National Assembly in 1982 and divides the local administrative into two administrative units which are the District and Urban Authorities. Complimentarily, the Village Land Act also was passed in the National Assembly in 1999 and amended in 2004. The Village Land Act apporitions the stewardship of the natural resources management in some administrative issues among others being to:

“...declare any area of land to be reserved for the purpose of reconditioning, whether by artificial measures or natural degeneration”

“...require the taking of measures for the conservation of natural resources and prevention of soil erosion, including the prohibition and control of cultivation”

“...establish and maintain the fire fighting and fire prevention services and take and require the taking of measures for the protection of life, property and natural resources from damage of fire”.

The main challenges facing the local governments on implementing such apporitioned resources management institutions is asserted to emanate from the fact that they are still nascent stage of development.¹⁵² They hence lack formal management

¹⁵² Pius Jacob, (Tanzanite One Judicial Department), in interview with the researcher, December 28, 2017.

structures and more specifically those related to finance.¹⁵³ Insufficiencies in such structures are the major source to the deficiencies related to financial transparency. Most of the sub-national governments in Tanzania, fail to sufficiently deliver their mandates because they operate with limited human resource capacity both in terms of numbers and expertise and particularly within legal establishments.

At the local levels, trilateral partnerships between the local government, mining stakeholders and the community are usually promoted through numerous meeting held by these parties depending on the agenda in hand. The meetings discuss pertinent development schemes to various communal projects and the communities are availed space to air their resources exploitation expectations and given wider opportunities to request for more new developmental projects.

3.9 Natural Resources Management and Human Security Analysis

3.9.1 Global Level Analysis

Positively, International and Inter-governmental Organisations have been credited to significantly play a major role in shaping natural resources management in the promotion of human security particularly to resources dependent communities. Being not part of the major mining direct beneficiaries, they have irrevocably been pushing on enhanced environmental related human concerns. Negatively, the arguments they push have in some cases been interfering with the governments, local authorities and other mining companies' management ambitions. Global level organisations have in most cases managed to impose their influence through both formal and informal platforms, and forums particularly towards the mining companies failing to take care of their externalities.

¹⁵³ Ibid.

There also have been a growing tendency and practice covering the perception that the international natural resources actors make self-interest rules and regulations rather than dedicated mitigation of the emerging dynamics of social vulnerabilities.¹⁵⁴ Uncertain and weakly implemented global natural resource exploitation frameworks have negatively been perceived by the local communities to be of little benefit and hence referred to being deceiving veracities. The challenge would remain to be that, the local communities have constantly and unfavourably been subjected to policies and practices managed by the government and controlled by diverse international actors entrenched through secretive and obscured development and conservation institutions.¹⁵⁵

3.9.2 National Level Analysis

At the outset, the national level, institutions and normative frameworks general setting are found to lack coordinated property rights and legal structures. Land ownership which is captured in the Constitution under Act 24 and the Land Act, lacks sufficient coordination¹⁵⁶ causing numerous land related disputes between the local communities and mining investors. Poor coordination whose outcome becomes frequent conflicts has been associated to the lack of institutional management precautions.¹⁵⁷

Institutionally, no precautions have significantly been taken when unlicensed investors grab large, rich natural resources and community owned pieces of land. Severe conflicts have unfortunately been missing practical and premeditated solutions where the mitigation efforts are employed when it is relatively late. There have been conflicting

¹⁵⁴Arun Agrawal and Jesse Ribot, "Accountability in Decentralization: A Framework with South Asian and West African Cases," *The Journal of Developing Areas*, Vol.33, No.4, (1999); pp. 473-502, accessed October 28, 2017, [.http://about.jstor.org/terms](http://about.jstor.org/terms) (Accessed 21 October 2017)

¹⁵⁵Mining, Minerals and Sustainable, p.28

¹⁵⁶Charles W. Marwa & Isabela Warioba, Challenges Posed on the New Mining Act and its Regulation in Tanzania, *Journal of Politics and Law*, Vol. 8, No. 4 (2015), p.187.

¹⁵⁷ Siri Lange, Land Tenure and Mining in Tanzania (Norway: CMIREPORT, R 2008:2), p.44.

decisions between ministries, departments and government agencies when it comes to addressing such conflicts.

The central cause to such conflicts are claimed to be related to land which has dishonourably been granted to the investors without consulting communal owners with customary rights of tenancy.¹⁵⁸ The lesson behind this backdrop is that, appropriate natural resources management which most likely goes hand in hand with promoted human security requires not only the economic bit related to the investors' acquisition of the exploitation licence but also should keep alive the appropriate norms ensuring social rationalisation.

However, Tanzania has considerably taken effort to review and harmonize relevant legislation to accommodate land compensation, relocation and re-settlement schemes for land resource dependent around the planned mining operations within its institutions and normative frameworks. For example, the legislation in place necessitates investors in the mining industry to prepare and implement sound compensations in terms of relocation and re-settlement schemes when new mining activities emerge. The legislation requires the mining companies to adequately involve the local communities, leadership and other relevant stakeholders at all levels in setting favourable environment for relocation and re-settlement of the targeted communities. The legislation allows the execution of the investors' projected plans but restricts the interference with resources specific priorities identified by the community for development projects, environment sustaining and other related socio-economic schemes.

¹⁵⁸ The United Republic of Tanzania, Section 14 of the Village Land Act, Act No. 5 of 1999.

Natural resources have been observed to unceasingly form an effervescent source to social, political and economic conflicts in many areas world-wide.¹⁵⁹ For example, it has been observed that, in Tanzania, most of the communal life supporting lands are normally mentioned to be worthy for mining activities. Precisely, these lands have been found to be ones which traditionally have been identified suitable for agricultural and pastoralist activities; both being critically vital economic engagements for human livelihoods in Tanzania.

Considerably, the mining structures are in position to reasonably offer alternative solutions in handling community and land conflicts; where people have to give away their suitable land for mining projects. For example, Section 96 of the Mining Act, 1998 states that the licence offered shall be utilized without causing any harm to the landowner or the rightful resident. In particular, section 96 (3) emphasises that compensation for the resident should reflect the market value and should be rightful and sufficient.

Additionally, other available frameworks necessitate all stakeholders to collaborate with district authorities and honestly involve the local communities who are eligible for displacement. Among the institutional designed mechanisms to ensure through involvement and full consent of the communities, is the hierarchical procedure where the government evaluator is eligibly bound to work on the final document related to the compensating amounts for each property in close collaboration with the citizens. Under Article, 41 (4) (d) and 97 of the 2010 Mining Act, local communities are required to be properly compensated, relocated and resettled before any mining activities commence.

¹⁵⁹ Sylvester Bongani Maphosa, *Natural Resources and Conflict: Unlocking the Economic Dimension of Peace- building in Africa* (African Institute of South Africa: Policy Brief No. 74, 2012), p.2.

Natural resources exploitation institutions and norms which oblige compensation be made before any related projects commence, have always been violated. One finds such projects initiated and operated without full collaboration with the communities who own right of use to them. Either, communities have thinly been offered opportunity or involved in the whole compensation process. The communities have on the other hand been thwarted by the lack of necessary information sharing frameworks which would have stimulated their sense of ownership and use rights. There have been cases where the stakeholders conspire or collaborate with the administrations to shun away from making the compensation and the related payments.¹⁶⁰

The Mining Act of 2010 does not provide the definition of artisans and small Scale Miners although section 15 and section 16 give a definition of Designated Areas which are exclusively to be used by these mining stakeholders holding Primary Mining Licences.¹⁶¹ Basing on the Mining Act, of artisans and small-scale miners refers to mining by individuals, groups, families or cooperatives with minimal or no mechanisation, often in the informal sometimes illegal sector of the market. Therefore, to attain the desired sound mining resources management, a distinction should be made between artisanal mining that is purely manual and on a very small scale, from small-scale mining that is more mechanised and on a larger scale.

Furthermore, while the Mining Policy provides the linkage between the mining sector and other sectors of economy such as local procurement of goods and services, this norm has not effectively been implemented. Large scale mining companies have always contravened and failed to comply with contractual procurement regulations by procuring

¹⁶⁰ Ibid.

¹⁶¹LUC in association with GEUS & Matrix Development Consultants, Final Report, p.13

goods and services from outside the country while some of these goods and services are locally available.¹⁶² Local procurement aims at support a diversified local economic base.

Natural resources management frameworks and the related arrangements in the country have entirely not been willing to flexibly soak-up the global and other continental level natural resources policies.¹⁶³ Tanzania being a signatory to the General Assembly resolution 1803 (XVII) of 14 December 1962 on the Permanent Sovereignty over natural resource,¹⁶⁴ tightly hold that resources management in the country are bound to remain state controlled arrangements where the country claims to be ready to co-opt minimal involvement of the global and continental level institutions and norms.¹⁶⁵

Tanzania has moderately made use of numerous global and continental natural resources management institutions and norms by stepping up harmonious and coherent management frameworks through agencies and partnership within various countries. The main partners have been USAID (United States), GIZ (German), JICA and JIRCAS (Japan), SIDA (Sweden). Other Partners are the international non-governmental organisations such as WWF (Switzerland), all aiming at making natural resources exploitation reflect promoted human security.

Management structures which demands coordinated legal frameworks between Tanzania and other international stakeholders form one more formidable challenge in addressing natural resources related conflicts. Remarkably, the mining sector in the

¹⁶² Constantine George, "Mineral Extraction for Socio-Economic Transformation of Tanzania: The Need to Move from Papers to Implementation of Mining Policy and Law," *Journal of Social Science Studies*, Vol. 2, No. 2 (2015), pp. 160-175.

¹⁶³ See, Bernard Lugongo, "Stiegler's Debate Put to Test," *Daily News*, (Dar es Salaam), July 02, 2017.

¹⁶⁴ See, General Assembly resolution 1803 (XVII) of 14 December 1962,
<http://www.ohchr.org/Documents/ProfessionalInterest/resources.pdf>

¹⁶⁵ Stephan Hobe, "Global Challenges to Statehood: The Increasingly Important Role of Nongovernmental Organizations," *Indiana Journal of Global Legal Studies* Vol.5, No. 10, (1997), p.199.
<http://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1115&context=ijgls>

country has recently raised a debate on the country's legal supremacy to influence the global extractive industry and the related business environment. The government whose feeling has been that, the mining companies have for so long violated the country's permanent sovereignty related to natural resources rights and has finally undertaken steps to reform its domestic regulations related to natural resources exploitation.

One significant domestic regulation which was recently taken through reforms is the Natural Wealth and Resources Contracts (Review and Re-negotiation of unconscionable Terms) Act of 2017.¹⁶⁶ In the vision to improve her natural resources ensued benefits, Tanzania has re-structured the mineral bilateral Investment Treaties (BITs) including the plan to move away from some investor-state dispute settlements involving International Centre for Settlement of Investment Disputes (ICSID) and the Multilateral Investment Guarantee Agency (MIGA).¹⁶⁷

Recently, Tanzania went through a tax related dispute with the Acacia Mining Plc, Bulyanhuru Gold Mine Ltd and Pangea Minerals Ltd.¹⁶⁸ These latest legal reforms which captures such sets of policies and practices are perceived to catapult the resource nationalism bringing out the most radical amendments within the country's political context and legal frameworks governing investment in the natural resources sector.¹⁶⁹ The reforms have framed natural resources policy questions and wide-ranging feelings from numerous stakeholders and other mining business community particularly those related to the acceptability levels of these reforms within the global legal frameworks.

¹⁶⁶ The United Republic Of Tanzania, Act Supplement No. 6 to the Gazette of the United Republic of Tanzania No. 27, Vol. 98 dated 7th July 2017, accessed April 17, 2018, <http://www.tcme.or.tz>

¹⁶⁷ Ibid.

¹⁶⁸ Fumbuka Ng'wanakilala and Susan Taylor, "Barrick Strikes Deal with Tanzania to Settle Tax Dispute" *Reuters*, (Dar es Salaam/ Toronto), October 19, 2017.

¹⁶⁹ Juma Mwapachu, "Resources Nationalism and Economic Empowerment," *The Citizen*, (Dar es Salaam), September 01, 2013.

The mining industry stakeholders, both at the international and the national levels, predicts that the government interference in the existing mining contracts is likely to distress investors and affect most foreign investments in the natural resources sector. Furthermore, the mining investors observe that Tanzania move is likely to violate its existing contractual obligations and likely to risk by being held accountable for its umbrella clause commitments. These commitments include mining investors' rights to fair and equitable treatment and rights to compensation claimed through unlawful expropriation. In line with these essentials, the legislation reforms provide that natural resources disputes must be adjudicated by judicial bodies or other organs established in Tanzania and in accordance with Tanzanian law. Mining investors remain doubtful whether arbitral tribunals would offer fair effect within Tanzania political context.

In this context, natural resources management and its institutional and normative frameworks have in some cases been taken hostage by the political pressure and eventually drive away the fundamental concerns related to the promoting the human security particularly to the resources dependent communities. The government's strategic institutions find themselves in a deep socio-political dilemma when it comes to decision making process by balancing the economic benefits and detriments particularly those which out-rightly contravene the communities' well-being.

For example, The Selous Game Reserve which since 2014 was listed to be one of the world's natural and cultural heritage sites has raised a resources management concerns related to an increased economic pressure on it. This game reserve has currently been listed by UNESCO to disrepute the principles of world natural and cultural heritage conventions that Tanzania has signed. The reserve is observed to be overloaded with

other numerous economic endeavours, the main ones being new extractive activities and the hydro-electric dam projects, a step which is predicted to have environmental detrimental effects downstream on communities' livelihood next to it.

The government which has all the property rights pushes forward such economic projects despite mounting appeals from numerous ecological stakeholders and other interested parties.¹⁷⁰ These include the resource neighbouring community, civil societies including Lawyers Environmental Action Team (LEAT), World Bank, IUCN and UNESCO. These stakeholders are currently involved in formulating plans to reverse the government's decision on the alternative use of the reserve.

In general, the debate remains whether the government can alternatively come up with alternatives which are likely to be supported by sufficient strategic environmental assessment and thus reliably balance the benefits against the vulnerabilities to the communities which depend on it for their economic developments.¹⁷¹ The debating parties have listed some negative effects to include cutting off the wildlife migration routes, endangering of the existing wetlands important for farming and seriously harming the present livelihoods of the communities reliant on fishing downstream.¹⁷²

The Selous ecological testimony stands close to the resources management quandary where in 2010 the international environmental community prompted a concern over a controversy when the government planned to construct a tarmac highway that

¹⁷⁰Fumbuka Ng'wanakilala, "Tanzania Invites Bids for Hydropower Project in Game Reserve," *Reuters*, (Dar es Salaam), August 31, 2017.

¹⁷¹ Daniel Mirisho Pallangyo, "Environmental Law in Tanzania: How far have We Gone?" *Law, Environmental and Development Journal*, Vol.3, No.1 (2007): pp. 28-39.

¹⁷² WWF Report, *The True Cost of Power: The Facts and Risks of Building Stiegler's Gorge Hydropower Dam in Selous Game Reserve, Tanzania*, 2017.

would navigate through the northern part of Serengeti National Park.¹⁷³ Some environmental and conservation organizations predicted a significant ecological abuse and finally initiated a campaign against the construction of the road. Foreign governments, including the United States and Germany and other international institutions such as the World Bank became involved in direct diplomatic discussions with the government about the road. The government's argument based on the economic benefits by which the construction of the road would link large agricultural, extractive, livestock and fishing industries around Lake Victoria and the other economic hubs of the country.

The outcry of the environmental international community basically focused on the ecological impact on Serengeti National Park, being one of the World Heritage Sites and a Biosphere Reserve. Particular threats enumerated included the detrimental impacts to the wild animals, habitat loss and fragmentation, new and invasive species, increased road killings of animals, poaching and threats to endangered species. The government nevertheless, rebutted and continued with its plans arguing that it would take all necessary steps to mitigate negative impacts.¹⁷⁴

3.9.3 Local Governments Level Analysis

The study submits that there is lack of coordination mechanisms endeavouring to strengthen the natural resources mechanism at the local level. The local management planning is made on ad hoc bases rather than being within comprehensive regional master plans. Inadequate financial resources are associated to the lack of capabilities to carry out

¹⁷³ Tim Caro "Roads through National Parks: A successful Case Study" *Tropical Conservation Science*, Vol.8, No.4 (2015): pp.1009-1016.

¹⁷⁴ Jafari R. Kideghesh. et al. "Serengeti shall not die: Can the ambition be sustained?" *The International Journal of Biodiversity Science and Management*, Vol.1, No.3 (2005): pp.150-166

regular resource assessment and monitoring at this lowest management level. However, other factors such as human resources, transparency and accountability, and corruption forms part of the local government laxity towards achieved the desired outcomes. Mechanisms to strengthen the local governments' level of natural resources management, by other stakeholders should endeavour to enhance their capacity and ability to enforce the regulations in place both technically and financially.

Chapter Four

Human Security in Merelani Mines in Manyara Region of Tanzania

4.1 Introduction

This chapter critically analyses natural resources management in the promotion of human security to the communities neighbouring Merelani Mines, Simanjiro District in Manyara Region of Tanzania. It first deals with the local level content of the institutions and norms and finally explores their effectiveness in managing natural resources through the human security dimensions devised by UNDP. These human security dimensions are mentioned to be the economic, food, health, environmental, political and personal securities.¹⁷⁵ The chapter applies a combination of primary and secondary data to discuss the contemporary livelihood of the local communities' and how their livelihoods are influenced by natural resources management arrangements in Tanzania and distinctively, within the Region.

4.2 Economic Security

Sound economic management of natural resources is critical to poverty reduction, not only for the communities in the locality, but also country wide.¹⁷⁶ Tanzania has progressively been framing and invoking numerous institutions and norms with the view to sufficiently and adequately support the economic conception of human security linked to the mining industry. The processes taken to frame and re-frame some of the natural resources management structures or frameworks are being taken in order to positively shape the economic dynamic environment. Such economic insecurities are defined

¹⁷⁵Human Development Report 1994: Published for the United Nations Development Programme, p.24.

¹⁷⁶ United Republic of Tanzania, National Strategy for Growth and Reduction of Poverty II, NSGRP II, (Ministry of Finance and Economic Affairs, July 2010), p.20.

through a set of vulnerabilities faced by local communities which include persistent poverty, unemployment, insufficient education and other income earning restraints.

4.2.1 Poverty

Poverty to communities have been defined by the UN as a condition characterised by severe deprivation of basic human wants, including food, safe drinking water, sanitation facilities, health, shelter and information.¹⁷⁷ Poverty in most natural resources dependent communities around Merelani Mines has been associated to the lack of resources use rights. Community exclusions and social inequality in accessing natural resources, significantly elaborate why persistent poverty remains a distinctive image to these natural resources dependent communities around Merelani Mines.

The natural resources management structures in place at all levels are weakly implemented and finally fail to provide alternative frameworks to support the necessary household level economic investments. In the contemporary setting, Merelani community household investments hardly sustain families livelihood needs.¹⁷⁸ The families survival depends on the earnings ensued as a daily struggle and regrettably the whole income is consumed in a single day. This study finds that there are few occasions by which the local governments in collaboration with resources actors assist communities deprived of the use rights to natural resources in Manyara Region. The field study were informed of a few encouraging efforts related to poverty alleviation where destitute local communities

¹⁷⁷Robert J. Hanlon & Kenneth Christie, *Freedom from Fear and Freedom from Want: An introduction to Human Security* (University of Toronto Press, 2016).

¹⁷⁸George Mutasayo, (Arusha Town Gems Businessman), in interview by the researcher, December 30, 2017.

in Merelani attain support from the local financial institutions particularly through loans acquired from the small savings and credit cooperatives.¹⁷⁹

However, some interviewees exposed the defacement accompanying such initiatives. Some community members commented that the initiatives discriminatively privilege a few individuals through small-scale credits. In response, the local leadership supported the initiative where special focus targets the economically marginalised groups such as women, youth and people living with disabilities.¹⁸⁰ Further, the interviewer was told of the challenge where the support provided becomes insufficient to raise viable investments and administration challenges makes the process take longer time to be obtained.¹⁸¹ Deductively, such initiatives are shortened by lacking strong financial structures which can aptly navigate up to the end the realistic achievements to be accrued by the beneficiaries. In general, the study notes a substantial progress made by the local governments handicapped by the inability to gather authentic and adequate human data related to persons who are entitled or should be privileged to benefit from such earnest arrangements.

The study was informed on numerous community based projects which include water infrastructures for domestic use, funded projects related to the development of water sources, supply systems and boreholes for animal use. The field study observed the various projects developed collaboratively between the local governments, mining companies and community. Such projects include road constructions and repairs and donated medical equipment in Merelani Dispensary. Several informants mentioned the supported projects from the mining companies to include the bursaries programs for

¹⁷⁹Ndesa Alisayei, (Mererani Businessman), in interview with the researcher, December 28, 2017.

¹⁸⁰Harlod Moshi, (Merelani Ward Officer), in interview with the researcher, December 28, 2017.

¹⁸¹ Ibid.

students at various levels, building of two police stations and their accommodation facilities in Nasinyai village. Other mentioned projects included the building of two classes and dormitories for female and orphan students in Nasinyai village and a donation of a new gems-sorting machine to small-scale women mining teams.¹⁸²

4.2.2 Education

Education is acknowledged to be a significant economic foundation of human capital and a means of parting from poverty.¹⁸³ In support of educational programmes, this study found out that the local governments in collaboration with the mining companies and other individual mining teams in Merelani to have established education supportive mechanisms. Various mining institutions have distinctively established arrangements to assist children from the poor communities to benefit from education support as part of CSR. CSR programs which are encouraged within national normative frameworks are in place and have at different levels endeavoured to extend sufficient educational support to Merelani mines neighbouring communities.

The interviewees mentioned that several supported educational projects are provided through facilities such as text books, laboratory equipment and dormitories equipment. These focused projects were mentioned to bring out improved school children performance in Manyara Region.¹⁸⁴ The community acknowledged efforts extended by the mining actors who are currently equipping natural resources dependent youth with

¹⁸² Harlod Moshi, (Merelani Ward Officer), Merciana Japhet, (Mererani: Ward Health Officer), in interview with the researcher, December 28, 2017 and Kalina Ole Sande (Police Officer), in interview with the researcher, December 29, 2017.

¹⁸³Martha Osorio, Monika Percic and Federica Di Battista, “*Gender Inequality in Rural Employment in Tanzania Mainland: An overview*,” (Tanzania Mainland Country Profile: Food and Agriculture Organization of United Nations, Rome) 2014, p. ix.

¹⁸⁴ Mr. Ole Sendeka, (Merealani Secondary School Teacher), in the interview with the researcher, December 28, 2017

technical vocational education and skills particularly those related to the entrepreneurship related to mineral exploitations.

However, several interviewees went on to put blame on the Merelani community whose morals towards education are considered to be low. They went on to add that the poor communities opt to submit their children to numerous social malpractices such as child labour in the mining activities rather than encouraging their pursuance to education. In validating of the attitude, the study finds that in 2010, Manyara Region net enrolment rate was recorded to be low at 87.3% and at the same time the school drop-out was recorded high.¹⁸⁵

The findings summarises major challenges restraining educational development to include society's laxity to educational needs and in particular girls, children propensity towards business activities than education accomplishments and life extravagance. All these stances were mentioned to result to early-age pregnancy and adolescence excessive use of alcohol. In particular, the study finds that early marriages within nomadic families in Simanjiro District in Manyara Region of Tanzania to have been a great cause to school drop-out. This study affirms that this social trend goes contrary to the UNESCO signification which points out quality education as a birth right and a means to relieve communities from long life poverty.¹⁸⁶ The study submits that such substantial CSR normative frameworks in place are likely to off-set the prevailing youth predicaments in the region.

¹⁸⁵ Arun R, Joshi and Isis Gaddis (Eds.) Preparing for the Next Generation in Tanzania: Challenges and Opportunities in Education (Washington DC, World Bank Group: International Bank for Reconstruction and Development/ The World Bank, 2015), p.9.

¹⁸⁶“Essay about Lack of Education in Developing Countries,” Bartleby.com, accessed November 11, 2017, <https://www.bartleby.com/essay/Lack-of-Education-in-Developing-Countries-PKCO4843VC>

4.2.3 Support to Economic Projects

The study found out that Manyara local government to be facing predicaments due to the lack of adequate human resources with adequate experience to sustainably support the economic development projects in place.¹⁸⁷ In addressing this situation, the study was informed on the provisional arrangements where the Merelani Mines Management which holds diverse human resources capabilities opts to support community projects using their professional workforce.¹⁸⁸ Nevertheless, the study recommends Merelani Mines stakeholders to devise and step-up robust frameworks which may innovatively retune communities' aspirations by providing appropriate expertise support.

The study finds the areas of expertise requiring support to the natural resources dependent communities and their local leadership to include the sectors of engineering, finance, environment, education, healthcare and civil security. The communities have aspired to see vibrant arrangement in place which would likely form a significant setting in resolving many of the challenges limiting the development of the standards of their livelihood.¹⁸⁹ Unfortunately, in some cases; the effectiveness of such assistances has always been demeaned by the elites within the communities who transform such support initiatives to suit their political ambitions and positions.¹⁹⁰

There is a shared understanding between the international and regional mining stakeholders in improving the technological aspects of the communities.¹⁹¹ A number of

¹⁸⁷Mthethwa Ami Mpungwe with Interview with Newton, "Tanzania Mining Sector: The highs and lows of the sector with potential to be a major force in the continent, (*Africa Mining Brief*, 2016).

¹⁸⁸ Jerfrey Malisa, (Merelani Mines Human Resources Manager), E-mail to researcher, March 10, 2018.

¹⁸⁹Jerfrey Malisa, (Human Recourses Manager), E-mail message to author, February 21, 2018.

¹⁹⁰Harlod Moshi, (Merelani Ward Officer), in interview with the researcher, December 28, 2017.

¹⁹¹ Wilfred E.N. Mbowe et al, "Tanzanite Processing in Tanzania: Challenges and opportunities" Op Cit, p.278.

interviewees acknowledged that this concept has worked well around Merelani Mines.¹⁹² Merelani Mining stakeholders have developed supportive technological skills which are vital in enhancing the value-added mining particularly to artisans and small-scale miners. The study figures out that improved natural resources exploitation technologies and skills are likely to lessen communities' economic distresses and concerns.

Artisans and small-scale miners are key components in any country's mineral exploitation economy.¹⁹³ They contribute significantly to rural job creation and furthermore, their earnings and incomes are acknowledged to enhance cash flow in the mining area.¹⁹⁴ The study finds out that, regardless of the role artisans and small-scale miners play in the mining industry, their resources exploitations methods have currently been criticised to have far-reaching environmental and health risks to them and other communities around. Artisans and small-scale miners are accused to employ simple and cheap methods of exploitation seeking to accumulate higher profits. The study emphasises that, as far as artisans and small-scale miners are institutionally recognised within the country's mining management structures that they form a vital economic segment; comprehensive, all-inclusive educative measures and information sharing should meticulously be extended in Merelani to addressing their challenges.

The study was also informed of the endeavours pursued by most of the artisans and small-scale miners on being involved in small scale entrepreneurship. The field study visited the investments, in individual and group partnerships in existence to form more stable businesses. Such groups form partnership in businesses such as shops, restaurants

¹⁹² George Mutasayo, (Arusha Town Gems Businessman) in interview with the researcher, December 30, 2017.

¹⁹³ Lucie C. Phillips, et al, Tanzania's Precious Minerals Boom: Issues in Mining and Marketing, African Economic Policy, Discussion Paper Number 68, March 2001, p.6.

¹⁹⁴ Ibid.

and guest houses around Merelani Mines which are acknowledged to be functional entities of the society.¹⁹⁵ The study went out to find out that, the limiting factors to such efforts are associated to weak local governments' tax structures which create and impose higher taxes to them. Interviewees explained that artisans and small-scale miners lack strong umbrella organisations to defend their interest. They argued that, their mining activities are taken seasonally and they frequently move out widely in search of fortunes in new mining locations.¹⁹⁶ The study sums-up that, lack of strong umbrella organisations and cooperative unions and related associations to artisans and small-scale miners' deprive them the desired synergetic thrust towards markets. This situation makes them end up in a competitive business environment and finally makes their individual efforts counter-productive.

4.3 Food Security

Food insecurity is appraised through a set of social vulnerabilities related to persistent hunger, malnutrition and food scarcity.¹⁹⁷ Mineral exploitation neighbouring communities in Merelani who dwells in small and highly populated settlements have been impacted with such vulnerabilities from the fact that they cannot adequately be supported by small scale public food services available.¹⁹⁸ The study observed lack of adequate infrastructures such as roads and energy services to limit the population easy access to food. The researcher visited Merelani Mines locality and its neighbourhood and

¹⁹⁵ Jengo Mathayo, (Merelani Town Shop Attendant), in interview with the researcher, December 29, 2017.

¹⁹⁶ George Mutasayo, (Arusha Town Gems Businessman), in the interview with the reasearcher, December 30, 2017

¹⁹⁷The International Bank, *Poverty and Hunger: Issues and Options for Food Security in Developing Countries* (USA, Washington D.C: A World Bank Policy Forum, 1986), p.1.

¹⁹⁸ Edward B. Barbier, *Natural Resources and Economic Development*, p. 1.

observed that the communities depend on feebly maintained seasonal roads and get services using inferior energy sources which fail to meet their food storage requirements.

4.3.1 Food and Supporting Infrastructure

Deficient infrastructures necessary to support food supply in Simanjiro District were mentioned to be one among critical features increasing the transportation durations from larger towns to rural areas. The outcome has been food scarcity and increased cost of food stuff.¹⁹⁹ The other lacking food security supporting infrastructure was mentioned to be inferior energy and power sources in Merelani Mines and its neighbourhood. Inferior energy infrastructures were claimed to have significantly caused difficulty in food processing mechanisms such as maize, oil-seed and grain grinding.²⁰⁰ Additionally, inferior energy sources have failed to satisfy communities need to provide food preservation mechanisms, mainly at the household level.

Food security is thought to exist when all people, at all times, have physical and economic access to sufficient and nutritious food that offers dietary requirements and other wide range choice and preferences for an active and healthy life.²⁰¹ The field study found out that lack of physical and economic infrastructure diminish access to nutritious food vitally needed by children of the natural resources dependent communities. Health officers who were interviewed vindicated higher levels of malnutrition in Manyara Region.²⁰² The study goes out to find the consumption patterns recorded by Comprehensive Food Security and Vulnerability Analysis Report, 2009/2010, depicts

¹⁹⁹ Ndesa Alisayei, (Mererani: Businessman), in interview with the researcher, December 28, 2017

²⁰⁰ Jengo Mathayo, (Merelani Town Shop Attendant), in interview with the researcher, December 29, 2017.

²⁰¹ World Food Summit (1996), "EC-FAO Food Security Programme" accessed November 7, 2017, p.1 <http://www.foodsecinfoaction.org/>

²⁰² The United Republic of Tanzania, "*Follow-up of the Implementation of the World Food Summit Plan of Action,*" (Ministry of Agriculture, Food Security and Cooperation, 2006), p. 2.

Manyara Region to be identified with poor consumption pattern within 17.6% of the households.²⁰³

4.3.2 Agriculture

The interviewed members of the Merelani community ascertained that the region is affected by unfavourable agricultural and pastoral climate associated with long-time severe droughts.²⁰⁴ Hence, destitute farmers and pastoralists move from one place to another in such of wet lands for agriculture and fresh pastures for animal feed. In the due course, interviewees claimed that people neighbouring national parks that move out regularly in search of fertile soils and grazing fields are always injured or killed by wild animal. Additionally, the study found out that impacts to the mobile agriculturalists and pastoralists are related to lack of storage facilities which can support their livelihood during severe droughts. However, in their new locations of their habitation, they find themselves more food insecure, a predicament accompanied along with lack of necessary medical services.

Furthermore, the researcher was informed of the insufficient availability of desired agricultural and pastoralist extension services, equipment and inputs such as fertilisers to small scale farmers, factors linked to the causes of food insecurity.²⁰⁵ The needed life sustenance to the local community who are institutionally and normatively excluded from the use rights would have been the provision of agricultural and pastoral support in terms of fertilizers, irrigation schemes and animal feed. Equally, important would have been explicit policy structures making the provision of agricultural and

²⁰³ United Republic of Tanzania, “Comprehensive Food Security and Vulnerability Analysis (CFSVA),” *World Food Programme: ODXF Food Security Analysis Service* (United Nations World Food Programme, 2010), p. 2.

²⁰⁴ Harlod Moshi, (Merelani Ward Officer), in interview with the researcher, December 28, 2017.

²⁰⁵ *Ibid.*

pastoralist extension services to communities who become poor after surrendering the use rights of the neighbouring natural resources.

4.4 Health Security

The health security dimension is one critical threat to natural resources dependent communities in Merelani Mines neighbourhood. Regardless of various efforts undertaken through the local institutions and normative approach and supported by assorted local councils and committees to improve health status in the neighbouring of the Merelani Mining Sites, the availability of clean and safe water at the foremost, remains unresolved challenge and has frequently been reported to be behind the health insecurity.²⁰⁶

4.4.1 Water

The field study witnessed water sources consumed by many of these communities to be contaminated with diverse chemicals and soils from the mining sites in the neighbourhood. Within poorly monitored water treatment conditions, the health centres in the neighbouring pointed out to have recorded frequent outbreaks of stomach diseases such as diarrhoea and cholera, which are incidents associated to the use of unsafe water.²⁰⁷ Other healthy related risks were reported to be severe skin diseases and other water borne diseases and all these have been documented in many areas in the neighbouring of Tanzanite mineral exploitations.²⁰⁸

The researcher found the communities using physically contaminated water sources as people share water sources available with domestic and wild animals. Numerous monitoring teams, councils and committees within the local government and villages have at various levels been engaged in the supervisory and educational efforts to

²⁰⁶Merciana Japhet, (Merelani Ward Health Officer), in interview with the researcher, December 28, 2017.

²⁰⁷Ibid.

²⁰⁸ Ibid.

end such public water malpractice but lack of coercive institutes constitute to the inadequate accomplishment of the desired objectives. The researcher observed sign posts erected within the neighbourhood restricting human and animal activities in some areas but the neighbouring health officials claimed that those posts have always been vandalised by unknown people.

4.4.2 HIV/AIDS

Prevalence of HIV/AIDS pandemic is fundamentally explained to affect the already health delicate communities in Simanjiro District of Manyara Region.²⁰⁹ High rates of HIV/ AIDS among overpopulated villages and small towns neighbouring natural resources extractions was also mentioned. The challenge was elaborated to remain that, no availability of satisfactory and reasonable official figures and related records on HIV/AIDS affected individuals. The study was told that such data has been difficult to acquire and has remained scanty from the fact that people who suspect to have been affected, vacate the mining neighbouring centres immediately when they perceive to be in the deteriorated health status.²¹⁰ Characteristically, the community dispensary nurse asserted that labels, stigma, subjectivity, prejudiced conduct and other local discourses are alleged to be widespread social malpractices among mining neighbouring communities in the district.

The study was informed of considerable efforts in place offering health services to mitigate various health concerns of the local communities, particularly HIV/AIDS affected individuals.²¹¹ Merelani Mines Management in collaboration with the local authorities have devised mechanisms in offering health services and expertise to

²⁰⁹Ibid.

²¹⁰Ibid.

²¹¹ Ibid.

communities which include voluntary cancelling and the provision of Anti-Retroviral therapy to dependants.²¹²

Appropriately, the government's Ministry of Health in consultation with relevant stakeholders are also in progress to develop, devise institutions and legislations which will form a health care supportive guide to the mining companies to work within the Mining Sites. Such a step is likely to sustainably complement the weak follow-up done by the Simanjiro District Local Government. At the same time, communities at large would appreciate such health services plans as it would reasonably uplift Merelani Mines management and other mining stakeholders' reputation and widen good business orientation.²¹³

4.4.3 Occupational Diseases

Practically, artisans and small-scale miners apply illegal methods of sorting out and driving off impurities from mineral rocks and soils using inexpensive way of extraction. This approach has been verified to be disastrous to human health not only to operators but also the local communities who live around the activities. In Merelani, gems deep mining, artisans and small-scale miners employ improvised and local explosives to crack down rocks endangering their life and other local communities.²¹⁴ The study finally confirmed that, education, training programs and other long-term measures empowering artisans and small-scale miners with enhanced exploitation technologies are in place in

²¹² Ibid.

²¹³ Paul Kibuuka Paul, "Tanzania: Key Challenges, New Directions in Tanzania's Mining Sector," *The Citizen*, April 9, 2017, accessed November 5, 2017, <http://allafrica.com/stories/201704100043.html>

²¹⁴ Zacharia Lenganasa, (Simanjiro District Environment Coordinator), in interview with the researcher, December 27, 2017.

the view to reduce mining life threatening risks induced through malpractices and obviously has formed a significant part in addressing the challenges.²¹⁵

Through enhanced CRS programs, natural resources stakeholders in Merelani Mines have considerably been contributing to health centres with medical equipment, supplementing the local authorities' initiatives. A qualified case may be cited from the 2013, where North Mara Mines donated about USD 880 million in support of the youth development in the neighbourhood. The donation was spent to support youth groups' development in the focus of sustainable development.²¹⁶ In August 2017, TANAPA donated USD 110 million for construction of Serengeti District Hospital in the neighbouring Simanjiro District.²¹⁷

4.5 Environmental Security

The environmental officials and local communities described Meralani mining area and its neighbourhood to be exposed to numerous environmental risks in a various ways and at different levels.²¹⁸ From direct observation, the researcher deduced that the burden of such impacts and the associated risks caused by other natural resources' use right beneficiaries have great impact on the poor members of the communities neighbouring the mining sites. The study concludes that the communities hold a few alternatives and options to mitigate such challenges which are predisposed through weak political, social and economic institutions in place. It also becomes clear that weak implementations of the environmental institutions impose adversity unequally to the society and in reality

²¹⁵ Ibid.

²¹⁶ Mugini Jacob, "Tanzania: Gold Mine Spends Sh 400 Million on Youth Projects in Mara Tanzania," *Daily News*, (Dar es Salaam), December 13, 2013.

²¹⁷ Mussa Juma, *Mwananchi Newspaper*, (Dar es Salaam), August 27, 2017.

²¹⁸ Armon Kuwasa, (Merelani Mines Environmental Officer), E-mail to researcher, February 21, 2018.

vulnerabilities happen to incline much against or not in favour of the already marginalized communities.

4.5.1 Environmental Human Safety

Subjective political, social and economic institutions which operate under the central and local governments, being the supreme mining actors holding the control rights, were declared to insufficiently allocate their financial resources in repressing widespread risks.²¹⁹ Rationally, such weak frameworks in place cannot ably compensate everyone affected by those detrimental consequences. Basing on those facts, the study posts that the policy-makers in natural resources exploitation have to definitely endeavour to precisely focus on the destitute communities who are environmentally vulnerable by deciding where, when and how effectively a prioritised attention may be laid in coming up with appropriate responses.

The study appreciates the position taken to address some of these issues where the local governments and the mining environmental departments have collaboratively established normative efforts to educate the mines neighbouring communities on safety precautions to be taken when conducting their routine activities. The researcher observed special tracks used by human and animals' movements to have been identified and well-marked, in particular offering guidance to school children. Security officers are posted around the mining areas to regulate human and animal movements and the mining administration confirmed that they are always ready to offer immediate assistance to unforeseen incidents.

²¹⁹ Ibid.

Environmental conception of human security is tied to peoples' unequal access to environmental risks mitigation capabilities.²²⁰ Arguments related to environmental threats, risks and their impacts have been a great challenge to human security. These threats and risks are directly or indirectly linked to human survival and well-being. Within the Merelani Mines and their neighbourhoods, a number of accidents were mentioned to be associated to open and deep mining pits which have been formed predominantly during heavy rain seasons.²²¹ Open pit mining, deep soil and hard rock's excavation were mentioned to significantly distress the Merelani Mines neighbouring communities. The study remarks that, institutionally and normatively, it is important to put in place frameworks projecting on how to determinately secure human beings and wildlife habitats from all perceived environmental hazards today and the in the future.

4.5.2 Environmental Degradation

Environmental calamities and sustainable human life are linked from the point of view that land is acknowledged to be a critical natural asset to livelihood. Therefore, inadequate management of such critical assets, incredibly bring out severe effect to human quality of life. Merelani community claimed to persistently raise their concerns to their local leadership by reporting sources to numerous distresses related to clearances and excavation of larger areas of land by the mining companies.²²²

The individuals who were interviewed asserted that land clearances and related processes have resulted into deforestation and degradation of vegetation, exposure of large land surface, creation of dams and open pits the outcome being uncontrolled soil

²²⁰Sanjeev Khagram, Clark C. William and Raad Firas Dana, "From the Environment and Human Security to Sustainable Security and Development" *Journal of Human Development*, Vol. 4, No.2 (2003): pp. 289-313.

²²¹ Ibid., p.294

²²²Sandela Wilson, (Merelani Dispensary Nurse), in interview with the researcher, December 28, 2017.

erosion, silting of rivers and flooding. Additionally, they went on to proclaim that unjustifiable large surface clearances have caused aesthetic damage potentially affecting their psychology well-being.²²³ They sympathetically asserted that lack of the desired stewardship of such landscapes would deny the future generations with the good recreational scenery as it is in the contemporary setting.

The field study observed that communities are impacted negatively by environmental degradation from the large scale land clearances resulting to poor fields for grazing and designated areas for provision of livestock salt-licks, wildlife shelters, access to trees for their shelter construction and firewood. The resources dependent communities at length condemned the indiscriminate destruction of the medicinal plants and ritual sites, events they claim to significantly to have impacts on their social life.²²⁴

Oppositely, the environmentalists accused the local communities to have been part of the environmental protection disappointment in a number of practices. Among other environmental unfriendly practices argued to include the employment of uncontrolled bush fires and illegal animal poaching and hunting which has indiscriminately has raised significant impact on rare animal and vegetation species. During the interview, one environment official categorically claimed that indiscriminate hunting has caused uncertain patterns of animal migration in the region.²²⁵

²²³ Ibid.

²²⁴ Ibid.

²²⁵ Zacharia Lenganasa, (Simanjiro: District Environment Co-ordinator), in an interview with the researcher, December 27, 2017

4.5.3 Pollution

Diverse mechanisms related to environment management are already in place in Merelani Mines, partly forming positive incentives to pollution management. However, institutionally and normatively, among other irritant aspects mentioned is related to environmental agencies' disinclination to use their mandated responsibility to assist Merelani Mines neighbouring communities against air and noise pollution through their constitutional rights granted in the law of torts applicable in Tanzania.²²⁶ For example, the study takes position that environmental agencies are indebted facilitating and promoting measures as necessary to help achieving important quality of lives for Merelani communities.

4.5.4 Human Settlement

Comprehensively, Manyara Region authorities have framed pertinent initiatives where Merelani Mines area has been exposed to an intensive survey and planning and as such this has heavily contributed significantly towards better human settlement.²²⁷ Positively, the community acknowledges the established survey data to have essentially ignited gracious relationship among the communities and numerous neighbouring mining stakeholders. However, the barrier remains to be weak information sharing mechanisms affecting the implementation of this earnest effort.

4.6 Political Security

Governance and how it influences natural resources represents the governments' reflection towards the promotion of human security of citizens. In this context, the premise is primarily discussed in reference to the Mining Act (2010) of the United

²²⁶ Pius Jacob, (Simanjiro District Judicial Officer), in interview with the researcher, December 28, 2017.

²²⁷ Ibid.

Republic of Tanzania, Article 95 which explicitly articulates restrictions of rights of entry of holder of a mineral. The Act states that:

“The holder of a Mineral Right shall not exercise any of his rights under his license or under this act (...) in respect of any land within any city, municipality, township, registered village or demarcated settlement, except with the written consent of holders of surface rights and of the responsible Minister or the authority having control over the city, municipality, township, registered villages or demarcated settlement.”²²⁸

4.6.1 Corruption

Corruption has been defined in one document of the Transparency International as misuse of entrusted power for private gain. One major identified political governance weakness related to the above policy statement is tied with the corruption practices within the mining sector. Corruption loop-holes in Tanzania natural resources management rules, procedures, regulations and laws originate on how various actors in individual capacity interpret the use, control and authoritative rights provided within the Mining Act. The Mining Act provides the definition on “the authority having control over ... registered villages or demarcated settlement.” It is through such loop-holes; the village authorities, district councils, government and political elites furtively apportion the resource rights to themselves or other private actors and in the due course attain money and other benefits dishonestly.²²⁹

Unfavourably, this trend contradicts the government initiatives endeavouring to provide the sub-national, local governments with reform programs aiming at improving the quality of people and their unbleached access to deserving services though the

²²⁸CMIREPORT, *Benefit Stream from Mining in Tanzania: Case Study from Geita and Mererani* (2006), p.32.

²²⁹ Ibid.

decentralised policy.²³⁰ Among other components of the decentralised policy reform programs, is related to finance where unconditional block grants which are provided for development within the mineral resources sector.²³¹

The misuse of entrusted power within these programs has been evidenced through acts where local leadership and authorities lobby funds for their political ambitions. Corruption along with self-centredness was reported to form the course aiming at replacing the community proposed development projects or relocated them for personal gains. Corruption in Merelani Mine Sites and its neighbourhood has negatively shaped all spheres of livelihood and in real sense; the social, political and economic environments have severely been deteriorated and have imposed ill-defined quality services within the justice, employment, health and sanitation sectors.²³²

One of the corruption related survey by a Danish organisation cited by the Business Anti-Corruption Portal revealed that a good number of the resources generated revenues in Tanzania were recorded to be lost through corruption. Particularly, the survey recorded and estimated that only 5% of the revenues from timber were availed to villages and local authorities, while the remaining 95% ended up to individuals. The same survey concludes that numerous companies engaging in natural resources imports or exports had close business ties with high level political leaders and elites.²³³

²³⁰ George C. Kajembe and Gerlad C. Monela, Empowering Communities to Manage Natural Resources: Where does the New Power Lie?: A case Study of Duru-Haitemba, Babati, Tanzania, in Sheona Shackelton and Bruce Campbell, Empowering Communities to Manage Natural Resources: A Case Studies from Southern Africa (2000), p.162.

²³¹ Research on Poverty Alleviation (REPOA), The Oversight Processes of Local Councils in Tanzania, Final Report, 2008, p. 5.

²³² Pius Jacob, (Tanzanite One Judicial Department), in interview with the researcher, December 28, 2017.

²³³ Transparency International, “ Tanzania: Overview of Corruption and Anti-corruption,” (Anti-corruption Resource Centre:2009), p.5, accessed on November 25, 2017, (<http://www.business-anticorruption.com/country-profiles/sub-saharanafrica/tanzania/corruption-levels/environment-naturalresources-and-extractive-industry/>)

4.6.2 Transparency and Accountability

Transparency, accountability, participation and inclusion are counted on how the local population honestly, adequately, sufficiently and effectively are likely to be supported through appropriate interactions with various natural resources actors' structures.²³⁴ The institutional frameworks in Tanzania have inadequately established networks which would likely empower the local population in the neighbourhood of natural resources exploitation in accessing information and in particular, when the information can positively or negatively influence their well-being.²³⁵ The study found that, the local communities on the neighbourhood of the mineral resources extraction, have always preferred to be informed of how much revenues are collected and how are spent.²³⁶

Transparency and accountability are generally recognised to be essential indicators to any effective management framework.²³⁷ Transparency and accountability positively influence harmonious relationship among all sets of beneficiaries involved in natural resources extraction. Natural resources exploitation in Merelani Mines is claimed to lack open willingness from the big beneficiaries who ungenerously decline to share feedbacks regarding their actions and utilization. Local mechanisms are in place where beneficiaries are guided to disclose their resources engagements through public notice boards, public meetings, newspapers, radio, televisions or official government websites but these arrangements have failed to embrace coordinated implementations.²³⁸

²³⁴ OECD, *The Economic Significance of Natural Resources: Key Points for Reformers in Eastern Europe, Caucasus and Central Asia*, 2011, p.8.

²³⁵ Deogratias William Ringia and Stephen J. Porter, *Access to Environmental Information in Tanzania*, April 1999, accessed April 24, 2018, <http://citeseerx.ist.psu.edu/viewdoc/download>

²³⁶ Harlod Moshi, (Merelani Ward Officer), in interview with the researcher, December 28, 2017.

²³⁷ Thomas Carothers and Saskia Brechenmacher, *Accountability, Transparency, Participation, and Inclusion: A New Development Consensus?* (Washington D.C. Carnegie Endowment for International Peace, 2014, p.3.

²³⁸ REPOA, "*Transparency and Accountability in local Government in Tanzania*" (Brief No 45, 2014).

Inadequacy in participation and inclusion has always caused ill-feeling and negative perceptions amongst communities particularly within marginalised groups. Merelani local community deeply perceives that the mining companies extremely benefit much leaving them poor and helpless.²³⁹ The local community openly place all blames to the governments' interest on rising revenues while neglecting its obligation and wider consideration to their human security necessities.

In Merelani, weak relationships between the local communities and resources management is reported to result into mining infrastructures sabotage by the local community. Unhealthy communication in terms of transparency, participation and inclusion among resources management and the Merelani local leadership has in some cases resulted into implementation of development projects which are not considered in the priority list of the respective communities.²⁴⁰ Most of the infrastructures were witnessed to have been vandalised by the communities, events underscoring ill-perception on their role of ownership.

4.7 Personal Security

Personal security and societal development are been elucidated to be deeply interconnected aspects. At large, Tanzania political environment has been a significant enabler rendering appropriate utilisation of the endowed mineral wealth into a blessing rather than turning to be a curse.²⁴¹ The difference resources utility outcomes related to personal security have always depended on how well the political, economic and social

²³⁹ Njarika Damus, (Merelani Town Businesswoman), in interview with the researcher, December 28, 2017.

²⁴⁰ United Republic of Tanzania, "Mineral Policy of Tanzania, Ministry of Energy and Minerals," p.17

²⁴¹ The Extractive Resource Industry in Tanzania: Status and Challenges in Mining Sector, (Society for International Development, 2009), p.10.

structures of the country are managed.²⁴² Uncertainties associated with an unstable political environment have in many cases caused conflicts and in due course reduced investment and the pace of social development.

4.7.1 Human Protection

The personal security is interpreted through social stability which ultimately influences investment confidence to natural resources investors. Unstable institutions which fail to offer sufficient shared incentives to both investors and communities hold back the projected benefits. Furthermore, political stability, peace and security of citizens and their property constitute a fundamental and necessary environment for development.²⁴³ In this setting, the human protection has been prioritised among other potency in the study area.

However, miners specifically artisans and small-scale miners in Merelani Mines have distinctively been experiencing personal and community human insecurity through numerous operational activities. Laxity related to the adherence of safety precautions have in resulted to several peoples' deaths. For example, in several cases Tanzania Meteorological Agency mandated to provide accurate weather forecasts, data and climate information, fails to coordinate relevant information to mining stakeholders where the outcome has been deaths to underground deep miners. While human protection strategies fails to caused by weak information sharing related to weather forecast. The study was informed on the lack of professional meteorological human resources in Merelani.

4.7.2 Child Labour

Tanzania laws related to the child labour are explicitly addressed within the fundamental laws protecting children against all worst forms of child labour. The laws protecting child

²⁴² Ibid.

²⁴³ Muharram Macatta. 'Political Stability and Economic Development are Deeply Interconnected' The Guardian, (Dar es Salaam), 4 April 2017.

labour assets the prohibition to a child less than 18 years age to working in all forms of mining activities.²⁴⁴ Child labour which is an apparent negative socio-cultural demeanour has caused adverse impacts on community around Merelani Mines.

The affected members of the child-community are mainly those who in one way or another keep struggling for survival. Orphans and children with disability were mentioned to compose large numbers within this life pattern. These members of the community are marginalised and relevantly should have been well-protected by adequate implementation of the legal and other institutional frameworks in place. They have consequently found themselves aligned to different forms of social violence and crimes including prostitution, illicit drugs and gambling.²⁴⁵

4.7.3 Crimes

Mining sites have been recorded prone to crimes. The crime complex situation in Merelani area was reported to include burglaries, mugging, assaults, robberies and gender based violence.²⁴⁶ Other crimes were associated with inter-personal aggressiveness which is always associated to individuals' greed resulting within the sharing process of the illegally extracted minerals, stolen resources, assets and infrastructures. So many such crimes were reported to result into numerous negative effects to the society including severe human injuries, deaths and property destruction. Additionally, these forms of crimes happen to prompt objectionable insecurity to the local leadership and Merelani

²⁴⁴ See, United Republic of Tanzania, "*Employment and Labour Relations Act*," Sub Part A, 2004, p.9 and the law of Child Act, No. 21 of 2009.

²⁴⁵ Salesa Ndenganasa, (Tanzania Women Miners Association Representative), in interview with the researcher, December 22, 2017

²⁴⁶ Kalina Ole Sande, (Simanjiro District Police Officer), in interview with the researcher, December 29, 2017.

Mines management personnel. In some cases such crimes setting around Merelani Mines have incorporated the use fire arms by individuals or organised gangs.²⁴⁷

4.7.4 Gender

Feminisation of poverty is one phenomenon highlighting aspects of poverty that are likened to women working or living in the neighbouring of mineral exploitation sites.²⁴⁸

Gender asymmetry in access to assets, services and living support is prevalent Manyara Region communities.²⁴⁹ Cultural and social norms within the communities in the region were reported to limit women from having equal access to formal employment as men.²⁵⁰

Furthermore, women in those areas are claimed to have been positioned outside labour productivity through personified weak bargaining position within the household.²⁵¹

This situation has escalated to mark higher levels of poverty to women along with the actuality that, women have all along singly handled most of the family housekeeping expenditure regardless of these low incomes.²⁵² The discriminative attitudes in Manyara Region are asserted to include the social gender imbalance in schools. These attitudes have caused a good number of women to deficiency of formal education, an unjust social occurrence that underpins justification to be denied opportunities entrenched through formal credit transactions and related financial arrangements. Furthermore, women meet

²⁴⁷Ibid.

²⁴⁸ Society of International Development, *The Extractive Resources Industry in Tanzania: Status and Challenges of the Mining Sector* (Nairobi: Regional Office for Eastern Africa, 2009), p.62.

²⁴⁹Njarika Damus, (Merelani Town Businesswoman), in interview with the researcher, December 28, 2017.

²⁵⁰Martha Osorio, Monika Percic and Federica Di Battista, *Gender Inequality in Rural Employment in Tanzania Mainland: An Overview*, p.ix.

²⁵¹Bina Agarwal. "Bargaining' and Gender Relations within and Beyond the Household," *Feminist Economist*, Vol.3, No.1 (1997): <http://dx.doi.org/10.1080/135457097338799>

²⁵² Fiona Flintan and Shibu Tedala, (Eds.) *Natural Resources Management: The Impact of Gender and Social Issues* (Kampala: Fountain Publishers, 2010), p.8.

formidable loans barrier when credit institutions call for offers of insurance. Unfortunately, most household property is under joint ownership with their spouses.²⁵³

Discrimination milieu in Manyara Region was further associated to traditional beliefs where men in Merelani have inflexibly perceived that mining activities are too demanding physical activity to women.²⁵⁴ However, women are currently demanding higher involvement in mining activities exemplifying their advanced technological capabilities in extractive processes. TAWOMA branch in Manyara Region is currently involved in campaigning active role of women in the Tanzanite mining focusing to improvement to their life standards and the state of affairs of their families.²⁵⁵

²⁵³Ndesa Alisayei, (Merelani Town Businessman), in interview with the researcher, December 28, 2017.

²⁵⁴ Salesa Ndenganasa, (Tanzania Women Miners Association Representative), in interview with the researcher, December 22, 2017.

²⁵⁵ *Ibid.*

Chapter Five

Summary, Conclusion and Recommendations

5.1 Summary

This study set out to interrogate the role of natural resources management in the promotion of human security. Using Merelani Mines in Manyara Region, Tanzania, it examined the theoretical underlying factors and ultimately analysed strengths and weaknesses of natural resources management structures (normative and institutional frameworks) in the promotion of human security in the area of study through numerous identified links.

This chapter therefore summarizes and concludes by revisiting the natural resources management key aspects raised from the study and ends with recommendations on policy and one area for further research. Specifically, the chapter provides an overview of the current natural resources management state in the promotion of human security that framed the study. Furthermore, it presents what has been learned and what can be drawn from the work in understanding human security of the communities in the area of study and other related areas.

The study examined the theoretical debates and perspectives from various literatures related to this area of study. It highlighted the relevant discourses that provide the worldview and perspectives on the most converging areas between natural resources and human security. In general the chapter reveals that, natural resources ought to be managed through most effective structures if they are to maintain a sustainable, constructive and useful posture to human well-being of the current and future generations.

The study went further to examine a few but what were regarded to be significant international, regional and national institutional and normative frameworks interrelated to natural resources management in the promotion of human security in Tanzania. These institutional and normative frameworks were examined in the view to critically analyse their strength and weakness within the mentioned structural levels. There are other global and continental level institutions which were mentioned in the passing even though; they are in the position to emulate the same contextual concerns. Some of these are the World Nature Organisation (WNO), United Nations Environmental Programme (UNEP), Intergovernmental Panel on Climate Change (IPCC), Global Environmental Facility (GEF), Earth System Governance Project (ESGP) just to mention a few.

Finally, the study focused on the Merelani Mines community livelihood analysed against the key human security dimensions. Various factors linking the mining management aspects and livelihood experienced by resources dependent communities in Merelani were examined based on the perceived challenges and opportunities. The study found out that numerous mining stakeholders and communities with diverse economic interests have influenced differently the state of affair as they work within the current natural resources management structures.

5.2 Conclusions

This cases study sought to examine the roles of natural resources management in the promotion of human security. Merelani Mines which is situated in Simanjiro District, Manyara Region in Tanzania was used as a cases study. The study examined the management theoretical discourses on natural resources and human security, analysed the strengths and weaknesses of natural resources management structures in the promotion of

human security in Tanzania. The study finally identified the links between management of natural resources and human security around Merelani Mines.

The case study was anchored on the natural resources property rights (Use, Control and Authoritative) conceptual framework to link the management structures (institutions and normative frameworks) in the promotion of human security in the Tanzania. The study found that use, control and authority pattern over natural resources to have traditionally been acknowledged to form a core thread tying together management concerns between natural resources and human history.²⁵⁶

The study set out two hypotheses that weak institutional and normative frameworks on management of natural resources in Tanzania largely explain the inability in the promotion of human security in the country. Secondly was that weak information knowledge and sharing structures on management of natural resources in Tanzania largely explains barriers to citizens' participation in the promotion of human security in the country.

The conceptual framework relating use, control and authoritative rights which demand close coordination among various natural management institutions for shared benefit were found to form one challenge related to natural resources management in Tanzania. Among coordination areas which form challenges were identified to be related to the planning. Horizontal and vertical coordination lack broad plans within the institutions and normative frameworks, as such they lack harmonised approach. Coordination particularly in the local context was identified to be weak. Information exchange at the sub-government authorities was identified to create a state of confusion

²⁵⁶ Fred Nelson, *Community Rights, Conservation and Contested Land: The Politics of Natural Resource Governance in Africa* (London: EarthScan, 2010), p.6.

and ultimately negative impacts of natural resources conservations. The outcome has been new resources related conflicts at the local level.

Noncompliance with natural resources instruments provided within the management structures has been identified to be among many other sustainable natural resources exploitation challenges. The study found out laxity in implementing technical and financial legislative instruments provided within the management structures particularly at the local level. Institutions and normative frameworks holding control and authoritative rights downplay their responsibility in implementing stringent measures of compliance using legal instruments in place. This challenge has been exacerbated mainly by the lack of transparency, accountability and increasing corruption practices regardless of their emphatic prohibition within the natural resources management structures. The study provided that continual improvement of determinate controls and measures to uphold ethics and governance principles presents remedy to this challenge.

The study has also found out that, natural resources management in Tanzania has been identified to work under pressure from various external actor and in particular the donors and international financial institutions. These institutions which hold control rights through multilateral agreements have potentially played a positive role in shaping the natural resources driven development through technical advice and financial support for capacity building but their interest have in some cases been perceived to diverge from the national interests within natural resources exploitation priorities.

The study went out to find that human resources form an alarming barrier in the implementation of the natural resources management in the country. The main areas associated with this challenge is related to the international fast changing landscapes of

natural resources management aspects of technology, legal and financial capabilities. The administration both at national and local level holding the control and authoritative rights lacks professional human resources both in number and quality. This aspect holds back the inventiveness in achieving the desired integrated and sustainable development of the natural resources sector. This aspect is also informed by the government reluctance to fully devolve natural resources management rights and powers to local communities.

Furthermore, the study found that the examined roles of natural resources management in the promotion of human security, unquestionably elaborate the comprehensive stance on the vulnerability to natural resources dependent communities. Human security dimensions were critically examined through the economic, food, health, environmental, political and personal aspects. The study concludes that, the community in Merelani and related areas, who have surrendered property rights of natural resources such as land, are currently supported within weak management structures in place. The findings also summarises that weak information system is also creating a barrier towards community knowledge on what property rights are and how to claim them.

Specific examples were identified to include, poorly managed conflicts emerging within land property rights among the mining companies, agricultural and pastoralist communities. Relocated communities who experience frequent migrations in search of healthy soils and grazing land find themselves facing severe food insecurity, health hazards, poverty and social conflicts. Regrettably, the community face such challenges because they are distinctively left behind during most community projects appraisal stage.

The study confutes the view that human security challenges are mainly a consequence of the scarcity of natural resources and instead puts prominence on a combination of various management factors which are behind human security and the related vulnerabilities. Furthermore, the study affirms that institutional, normative and legislative frameworks on natural resources management to entirely be held responsible in the promotion of human security of the dependent communities. The study emphasises that weakness and laxity in the implementation of the existing management structures have largely contributed to the deteriorating human security among the natural resources dependent communities. From the study findings, management structures and the linked weakness will form a long term distressing factor to the natural resources dependents in Tanzania.

This chapter brings to the end this study by revisiting the set out objectives and established two inferences which relates to the hypotheses. First, from objective one where critical analysis on strength and weakness were done, the study found out that weak natural resources management institutions and normative frameworks in place fundamentally fail to address human security. Secondly, weak management tools related to information sharing, fail to adequately influence human security achievements in the country and in particular to natural resources dependent communities.

5.3 Recommendations

5.3.1 Policy

The study finds a lacking desired linkage between the constitution, Development Vision 2025 and the Mining Acts, within which adequate coordination among them would likely improve or resolve the salient human security distresses in Tanzania. Therefore, this

policy recommendation invokes precisely elaborated actions responsible to transform Tanzania into a better living place, especially targeting the poor communities. The study therefore recommends to the relevant mining stakeholders in the country to collaborate in revisiting the mining structures, policies and legislative frameworks in strengthening links within the existing institutional and normative frameworks.

These efforts should be put in place harmoniously by the government, exploitation actors, and local communities. The bottom-line of the policy is recommended to focus on how natural resources dependent communities can be awarded priority in promoting their livelihood forming a new people-centred bottom-up paradigm. Near the core of this paradigm is the decentralised process.²⁵⁷

The institutional and normative frameworks related to artisans and small miners should be revisited to explicitly articulate pertinent procedures legalising their mining rights. The government and all mining exploitation actors should involve the people at all levels in decisions making on matters that directly affect them. Artisans and small-scale miners should be policy supported through advanced mining methods so as to make them reduce the environmental impact and risks while significantly contributing to the country's income.

As part of the natural resources management, the government and all exploitation stakeholders should coherently and explicitly agree on multi-disciplinary and interdisciplinary legal approach tailored on how they can interact without imperilling any other party perceived interest. In the quest to ensure fairness, Tanzania government is obliged to abide to the international and continental signed treaties. All parties to natural

²⁵⁷ Robert Chambers. *The State and Rural Development: Ideologies and an Agenda for the 1990s* (Institute of Development Studies, Discussion Paper No. 269, 1989), p.20.

resources exploitation are bound to ensure practicable legal-fiscal regimes during the medial signing phase, and thus avoiding ad hoc changes within lifespan of the projects.

5.3.2 Further Academic Research

This study has submitted that sturdy management of natural resources to be the right conduit in the promotion of human security particularly to resources dependent communities. The findings depict complex and dynamic natural resources management environment which is likely to stimulate similar interest within other areas of natural resources management. Arguably, this study cannot be exhaustive and predicts that there is still much to be known in this field.

This study identifies one area for further research recommending that its outcomes will likely to complement the finding of this study. The recommended academic research should seek to critically examine the relationship between ecological interventions and Community Based Natural Resources Management (CBNRM) with the main focus on incentive-based models such as the Payment for Ecosystem Services (PES). This further research is recommended to help achieve adaptive management of the ecosystem services which is currently vulnerable to perturbation.

Bibliography

- Abraham, B. and Gideon, P. *A Theory of Property*. Cornell. Rev. 531, 2005.
- Adomola, A. *Protecting Human Security in Africa*. Oxford: Oxford University Press, 2012.
- Acharya, A. "A Holistic Paradigm", *Security Dialogue*, Vol.35, No.3 (2004): pp. 355-356.
- Alio, A. *Natural Resources and Conflict in Africa: The Tragedy of Endowment*. USA, Rochester: University of Rochester Press, 2007.
- Ansoms, A. and Marysse S. (Eds.). *Natural Resources and Local livelihoods in the Great Lakes Region of Africa: A Political Economy Perspective*. United Kingdom, Palgrave: Macmillan, 2011.
- Battersby, P. and Joseph M.S. *Globalization and Human Security*. UK, Plymouth: Lowman & Littlefield Publishers, INC., 2009.
- Bavinck, Maarten., Lorenzo Pellegrin and Erick Mostert, *Conflicts over Natural Resources in the Global South-Conceptual Approaches*. London, Taylor & Francis Group: CRC Press, 2014.
- Boer, M., and Wide J.,(Eds.), *The Viability of Human Security*. Amsterdam: Amsterdam University Press, 2008.
- Brauch, Hans Günter., Lioth P.H., Marquina A., Rogers P.F., and Selim, M. (Eds.). *Security and Environment in the Mediterranean Conflict: Conceptualising Security and Environmental conflict*. Germany, Springer-Verlag Heidelberg, 2003.
- Butt, Lyster Rosemary and Stephens Tim, *Climate Change and Forest Governance: Lesson from Indonesia*. London, Routledge, 2013.
- Castellucci, and Markandya (Ed.). *Environmental Taxes and Fiscal Reform*, Palgrave Macmillan, London, 2012.
- Crowther, D. and Ortiz M.E. *Corporate Social Responsibility: History and Principles. Social Responsibility World*, Penang, Ansted University Press, 2004.
- Folke, C. and Kaberger, T. (Eds.). *Linking the Natural Environment and the Economy: Essays From the Eco-Eco Group*. Springer Science+Business Media Dordrecht, Sweden, 1991.
- Fox,. D. John Jr. "Useful Concept and Approaches to Ethics in Natural Resources Management," *Journal of University Education in Natural Resources*, Vol.12, No.28 (2004), pp. 96-103.
- Herrera, P.M., Davies, J., and Baena, P.M. *The Governance of Rangelands: Collective Action for Sustainable Pastoralism*. London: Routledge, 2014.

- Hobe, S. "Global Challenges to Statehood: The Increasingly Important Role of Nongovernmental Organizations," *Indiana Journal of Global Legal Studies*: 5, no. 10, (1997): www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1115&context=ijgls
- Kaldor, M. *Human Security: Reflections on Globalization and Interventions*. United Kingdom, Polity Press, 2007.
- Kessy, F and Mahali, R. Water, Sanitation and Hygiene Services in Tanzania: Access, Policy Trends and Financing. THDR 2017: Background Paper No. 11, ESFR Discussion Paper 72, 2016.
- Knight, L. Richard., and Bates F. Sarah. (Eds.), *A New Century for Natural Resources Management*. Washington D.C: Island Press, 1995.
- Kweka, Demetrius, et al., *The content of REDD+ in Tanzania: Drivers, agents and institutions*. Centre for International Forestry Research, Bogor, Indonesia, 2015, doi:10.17528/CIFOR/005744
- Lawlece, David. *Tanzania: The Land, Its People and Contemporary Life*. Tanzania, Dar es Salaam: New Africa Press, 2009.
- Mini Atlas of Human Security*, Human Security Report Project Canada, 2008.
- Mwagiru, Makumi (Ed.), *Human Security: Setting the Agenda for the Horn of Africa*. Nairobi, Africa Peace Forum, 2008.
- Nelson, F. "Payment for Ecosystem Services as a Framework for Community-Based Conservation in Northern Tanzania." *The Journal of the Society and Conservation* Vol. 24, No.1, 2010.
- Nhemachena, Artwell., and Warikandwa V. Tapiwa. Eds. *Mining in Africa: Law, Environment, Society and Politics in Historical and Multidisciplinary Perspectives*. Cameroon, Langaa RPCIG, 2017.
- Osorio, M., and Battista F, "Gender Inequality in Rural Employment in Tanzania Mainland: An Overview." Tanzania Mainland Country Profile: Food and Agriculture Organization of United Nations, Rome, 2014.
- Paris, Roland, "Human Security: Paradigm Shift or Hot Air?" *International Security*, Vol. 26, No. 2 (2001): pp. 87-102.
- Peon, Sorpong. (Ed.). *Human Security in East Asia: Challenges for Collaborative Action*. Abingdon, Routledge, 2009.
- Resurreccion, P. Bernadette and Rebecca Elmhirst (Eds.) *Gender and Natural Resources Management: Livelihoods, Mobility and Interventions*, United Kingdom, Earthscan, 2008.
- Ruttan Vernon W. *Technology, Development, and Growth: An Induced Innovation Perspective*. United States of America, New York: Oxford University Press, 2001.

Rwechungura, R.B., Pesha, C., and Shamte, P.M. in Erik Richer La Flèche (Ed.). “The Mining Law Review” United Kingdom, The Law Research Ltd: Gideon Robertson Publisher, 2012.

Sivi-Njonjo, Katindi., Odari Edgar, Ataka Valentine, and Dr. Wasunna Melba. *Local Communities in Kenya Extractive Sector: From Paternalism to Partnership*. Sivi- Njonjo Katindi (Ed.), Nairobi: Norwegian Church Aid, 2015.

The United Republic of Tanzania. *Tanzania Mining Industry Investors Guide*: Ministry of Energy and Minerals, 2015.

The Extractive Resource Industry in Tanzania: Status and Challenges in Mining Sector. Society for International Development, 2009.

United Republic of Tanzania. National Public Private Partnership Policy. Prime Minister’s office, 2009.

United Republic of Tanzania. “*Mineral Policy*.” Ministry of Energy and Minerals. 2009.

Thuy, Thu Pham., et al., *Approaches to Benefit Sharing: A Preliminary Comparative Analysis of 13 REDD+ Countries*. Centre for International Forestry Research, Bogor, Indonesia, 2013.

Veri Oscar Mganda, “Challenges on the Practices of Corporate Social Responsibility. *Business Education Journal*, Vol.1, No.2 (2016): pp.1-14

Williams, Aled and Le Billon, Phillipe. (Eds.). *Corruption, Natural Resources and Development: From Resources Curse to Political Ecology*. USA: Edward Edgar Publishing, 2017.

APPENDIX

KEY INFORMANT INTERVIEW GUIDE

CONSENT FORM

My name is *Desiderius Conatus Kakoko*. I am a student at the Institute of Diplomacy and International Studies – University of Nairobi and am carrying out a research on “**Roles of Natural Resources Management in the Promotion of Human Security**”.

The purpose of this study is to identify human security concerns that are likely to be promoted through Tanzanite mining resource management structures in Mererani. The information collected through this research will strictly be kept **CONFIDENTIAL**. A research number will be assigned to you, in place of your name with the view to ensure that information provided cannot be traced back to you. Your decision to participate in this study is entirely voluntary. You may pull out of this study at any point.

If you have any questions or clarifications about the research feel free to contact the following:

Desiderius Conatus Kakoko, P.O Box 24381-00502, Nairobi
Mobile: +254 742 102 238
E-Mail: dnckakoko@yahoo.com
THANK YOU

1. Date.....
2. Age.....
3. Sex: Male [] Female []
4. Please complete this question by ticking the appropriate response to each statement: What has been the relationship between Mererani Mines Management and neighbouring local communities?
(a) Little extent [] (b) Some extent [] (c) Moderate extent []
(d) Great extent [] (e) Very great extent []
5. Please complete this question by ticking the appropriate response to each statement: What has been the relationship between Mererani Mines Management and neighbouring local communities’ leadership?
(a) Little extent [] (b) Some extent [] (c) Moderate extent []
(d) Great extent [] (e) Very great extent []
6. Which laws, regulations or normative framework guides Mererani Mines Management in the promotion of human security concerns of the neighbouring local communities?

7. What is the status of implementation of the laws, regulations or normative framework guiding Merelani Mines Management in the promotion of human security concerns of the neighbouring local communities?
8. What have been Mererani Mines Management initiatives in the promotion of human security concerns of the neighbouring local communities?
9. What have been main challenges for Merelani Mines Management in the promotion human security concerns of the neighbouring local communities?
10. Basing on Merelani Mines Management practical experience, how can better neighbourhood with local communities' human security concerns be promoted?
11. Are there any human security related conflicting concerns among Merelani Mines Management, local leadership and neighbouring local communities?
12. What have been mechanisms in place to address human security conflicting situations between Merelani Mines Management and neighbouring local communities? (If any)
13. What are your views on likely and desirable management strategies which might be put in place in the view to promote better neighbourhood among local communities and natural resources exploitation actors in Tanzania?