

**TANZANIA LEGAL FRAMEWORK IN CONSERVATION AND
MANAGEMENT OF NATURAL RESOURCES BY COMBATING
DEFORESTATION: A CRITICAL ANALYSIS**

By

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**A Dissertation Submitted in Partial Fulfilment of the Requirements for the
Award of Masters of Laws (International Laws) of Mzumbe University**

2012

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation paper entitled **Tanzania Legal Framework in Conservation and Management of Natural Resources by Combating Deforestation: A Critical Analysis**, in partial fulfilment of the requirements for award of the degree of Masters of Laws in International Laws (LL.M-IL) of Mzumbe University.

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ACKNOWLEDGEMENTS

I take this opportunity to give thanks to Almighty God I am alive healthy and sane that I have reached at this point of life. It is not that I deserve but by his grace I have, praises to God. Heartfelt thanksgiving to my wife Rose and my daughters Aireen and Aneth for being so patient, and always being there for me in the whole period of writing my dissertation, taking your time to listen and being a phone call away and a shoulder to lean on.

I don't have enough words to say to my supervisor Miss Isabela M. Warioba. Thank you for being patient and providing comments. Your input has always been appreciated and has enabled me to complete this dissertation. You showed me the other side of life. Thank you so very much madam.

A special thank you to Mzumbe Faculty of Law, and the University staff at large your cooperation has enabled me to fit in the academic world. Thank you my class mates to mention some, Frank Akyoo, Augustino Karichuba and Anceth Boyi for making me feel like I can achieve anything and for listening to my dilemmas and helping me to see the silver lining. Thank you for motivating me when things were not looking good and when I was ready to give up.

Thank you Dr. Felix Maginga and Bernadeta Mosha, really your academic advice made me achieve more and more, thank you very much. Without forgetting I really appreciated the Ministry of Natural Resources and Tourism Dr. Alou who was ready to answer all the questions that I asked him, those confidential will remain confidential.

Thank you to the Mzumbe Law Faculty's administrative staff and library staff. Thank you for always helping out and making space for all Masters' students. It makes it much easier to cope with the pressures. Thank you to all the other Masters' students, we really tried to help each other out and that helps to take the pressure off.

DEDICATION

This work is dedicated to my beloved parents Mr. Ukhotya M. Itunka and Ms. Mariana H. Said, who brought me up and from whom I learnt a lot from their words of advice, spiritual and material support.

I also dedicate this research paper to my wife Rose I. Mndeme who really inspired me to do this study. I proudly now say, you really showed me the beauty of life by motivating me to be educated.

I further dedicate this work to my daughters Aireen and Aneth for their moral support in all time when I was doing this research.

ABBREVIATIONS AND ACRONYMS

CITES	Convention on International Trade of Endangered Species
DBSA	Development Bank of Southern Africa
EAC	East Africa Community
EIA	Environmental Impact Assessment
EMA	Environment Management Act
FAO	Food and Agriculture Organisation
JFM	Joint Forerst Management
MNRT	Ministry of Natural Resources and Tourism
NEMA	National Environment Management Act
NEMC	National Environmental Management Council
NGO	Non – Government Organisation
PFM	Participatory Forest Management
PMO-RALG	Prime Minister’s Office, Regional Administration and Local Government
SADC	Southern Africa Development Community
SAIEA	Southern African Institute for Environmental Assessment
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Program
UNFCC	United Nations Framework Convention on Climatic Change
VPO	Vice President’s Office

ABSTRACT

Deforestation is one of the major global problems facing conservation of natural resources, forests in particular and has internationally, regionally and sub-regionally been addressed through instruments. The instruments are CITES, UNFCCC, UNCBD, ACCNNR, EAC and SADC. Tanzania is a Party to these instruments.

The objective of this research is to critically analyse the Tanzania legal framework on conservation of natural resources by combating deforestation in relation to international instruments. It strives to analyse and find out the weaknesses and challenges in the implementation of Tanzania legal framework in combating deforestation and making recommendation for the effective legal framework in combating deforestation.

In conducting the analysis the study has employed both doctrinal and empirical research. With doctrinal research the study examined various international, regional and sub-regional instruments, legislations both principal and subsidiary. With non-doctrinal research the researcher selected a sample of 34 respondents from MNRT, Bagamoyo and Handeni Council, Kibindu and Gole villages were interviewed, viz, Forest officers, legal officers, agriculture officers, land officers, environment, officers, village leaders, villagers and other persons interested.

The findings of this study are that principal legislations and by-laws providing for forests conservation and management does not directly address the problem of deforestation and the instructional set-up is not well coordinated as there are parallel structures all intended to address the natural resources conservation.

It is the conclusion of this study that the Tanzania legal framework in conservation and management by combating deforestation do not adequately address the problem of deforestation. It is recommended that the framework need to be reviewed by amending both principal legislation and by laws to directly address the problem of deforestation and institutional set up be properly coordinated.

TABLE OF CONTENTS

	Page No
Certification.....	ii
Declaration and Copyright	iii
Acknowledgements.....	iv
Dedication	v
Abbreviations and Acronyms	iii
Abstract.....	vi
List of Instruments and Statutes	viii

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction	1
1.2 Background Information	2
1.3 Statement of the Problem	24
1.4 Hypothesis	56
1.5 Objectives of the Study	77
1.6 Significance of the Study	77
1.7 Limitation of the Study	88
1.8 Literature Review	8
1.9 Research Methodology.....	176
1.9.1 Research Design.....	176
1.9.2 Area of Study.....	187
1.9.3 Study population	198
1.9.4 Sample size	198

1.9.5 Sampling techniques and procedures	198
1.9.6 Data collection	198
1.9.6.1 Library research (documentary Review)	209
1.9.6.2 Field Research.....	209
1.9.6 Data analysis	219

CHAPTER TWO

CONCEPTUAL FRAMEWORK

2.1 Introduction	Error! Bookmark not defined. 1
2.2 Natural Resources	Error! Bookmark not defined. 0
2.2.1 Classification of Natural Resources	Error! Bookmark not defined. 2
2.2.1.1 Biotic and abiotic	Error! Bookmark not defined. 2
2.2.1.2 Renewable and no-renewable	Error! Bookmark not defined. 2
2.2.1.3 Inexhaustible and Non-exhaustible	23
2.3 Deforestation.....	Error! Bookmark not defined. 4
2.4 Forest.....	25
2.5 Conservation and Management of Natural Resources.....	25
2.6 Natural Resources Conservation under International law	26
2.6.1 Before the Stockholm Conference.....	27
2.6.2 During Stockholm Conference	28
2.6.3 Rio Conference on Sustainable Development	29
2.7 Conclusion.....	Error! Bookmark not defined. 30

CHAPTER THREE

INTERNATIONAL FRAMEWORK FOR COMBATING DEFORESTATION

3.1 Introduction	Error! Bookmark not defined. 1
------------------------	---------------------------------------

3.2 CITES.....	Error! Bookmark not defined.	1
3.3 UNFCCC	Error! Bookmark not defined.	2
3.4 UN Convention on Biological Diversity	Error! Bookmark not defined.	4
3.5 Convention to Combat Desertification.....	Error! Bookmark not defined.	35
3.6 ACCNNR	Error! Bookmark not defined.	36
3.7 EAC.....	Error! Bookmark not defined.	37
3.8 SADC		38
3.9 Agenda 21, Chapter 11 “Combating Deforestation”		39
3.10 Rio’s “Forest Principles”		40
3.11 General Principles of Natural Resources Conservation		41
3.12 International Instruments Compliance System		44
3.13 Conclusion.....	Error! Bookmark not defined.	45

CHAPTER FOUR

TANZANIA LEGAL FRAMEWORK ON COMBATING DEFORESTATION

4.1 Introduction	Error! Bookmark not defined.	6
4.2 Legislations on Combating Deforestation.....	Error! Bookmark not defined.	6
4.2.1 The Forest Act	Error! Bookmark not defined.	48
4.2.2 The Land Act and Village Land Act		50
4.2.3 The Land Use Planning Act		51
4.2.4 The Wildlife Conservation Act		52
4.2.5 The Local Government Authorities Acts		54
4.2.6 The Environment Management Act		56
4.5 General Environmental Management Institutions	Error! Bookmark not defined.	8

4.6 Conclusion.....	Error! Bookmark not defined.	61
---------------------	-------------------------------------	----

CHAPTER FIVE

FINDINGS

5.1 Introduction.....		62
5.2 Analysis of legislation framework		62
5.3 Analysis of Institution Structure		69

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion.....	Error! Bookmark not defined.	73
6.2 Recommendations.....	Error! Bookmark not defined.	73
BIBLIOGRAPHY.....	Error! Bookmark not defined.	74

LIST OF LEGAL INSTRUMENTS

Africa Convention on Conservation of Nature and Natural Resources, 2003

Convention on International Trade of Endangered Species, 1973

Southern Africa Development Community, 1992

Treaty for Establishment of East African Community, 1999

United Nations Convention Framework on Climatic Change, 1992

United Nations Convention on Biological Diversity, 1992

United Nations Convention to Combat Desertification, 1994

LIST OF STATUTES

The Constitution of the United Republic of Tanzania 1977

The Criminal Procedure Act, Cap 20 R. E 2002

The Environmental Management Act, Act No. 20 of 2004

The Forest Act, Act No. 10 of 2002

The Land - Use Planning Act, Act No. 6 of 2007

The Land Act, Cap 113 R. E 2002

The Local Government (District Authorities) Act, Cap. 287 R. E 2002

The Local Government (Urban Authorities), Act Cap. 288 R. E 2002

The Village Land Act, Cap 114 R. E 2002

The Wildlife Conservation Act, Act No. 5 of 5 of 2009

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

Natural resources conservation and management is an international concern regulated by various International and Regional instruments, declarations and resolutions. The conservation is linked with development of human beings in that population increase and technological development have led to unprecedented extinction of natural resources. The instruments provides for sustainable utilization of natural resources to serve the existing and future generations in the use of natural resources.¹

Natural resources can be biotic (plants and animals) or abiotic (non living matters such as soil, water, mineral ores etc). Forests as one of the natural resources are very important to the human development as they play multiple roles in enhancement of human life.² They supply economic commodities such as wood, wool, medicine; they are rich in biodiversity and play hydrological role; recreational and climatic values. However their existence has been threatened by human activities, such as agriculture, logging and charcoal production which has caused a vast amount of deforestation of these natural resources. Therefore conservation of these natural resources is of great importance in any country.

For purposes of this research “conservation” means planning and management of these resources so as to secure their wide use and continuity to supply while maintaining and enhancing their quality, value and diversity.³ “Deforestation” means the permanent removal of naturally occurring forests or stand of trees.⁴

¹ Natural resources for purposes of this research mean those which exist within the environment, they are found naturally and have significant commercial value.

² <http://raselnirjhon.hubpages.com/hub/LegalAspectofEnvironmentalResourceManagement>

³ M. Allaby, (1990); *Macmillan Dictionary of the Environment*, The Macmillan Press Ltd, London p.96

⁴ Ibid p. 113

In this research the researcher intends to make critical analysis of Tanzania legal framework in combating deforestation thus conserving and managing the natural resources both flora and fauna in compliance to international, regional and sub-regional instruments.

1.2 Background Information

The conservation and management of natural resources has a long history. It has been addressed through various declarations, resolutions and conventions at national, regional or international level. It became inter-state issue in 1900's where various multilateral instruments were adopted to regulate and provide standards for the use of natural resources.⁵ Natural resources here mean both flora and fauna. But this paper focuses mainly on flora conservation and management by combating deforestation.

In 1960's United Nation recognizing that environment was a sensitive issue organized a world conference on human environment which was held at Stockholm in 1972. The conference titled "human environment" was an attempt to solve the global problems of conservation and regulation of human environment by international agreement at a universal level.⁶ Three documents resulted from the conference are very important to mentions, viz, Stockholm declaration, action plan for the human environment and the Resolution on Institutional and Financial Arrangements which recommended the establishment of UNEP, a UN environment governing body.⁷

⁵ A. Kiss and Dinah Shelton, (2003); *International Environmental Law*, 3rd Ed, Transnational Publishers, Ardsley NY p. 1

⁶ M.P. Tandon, (2005); *Public International Law*, 16th Ed, Allahabad Law Agency, Faridabad p. 152

⁷ S. K. Kapoor, (2009); *International Law and Human Rights*, 17th Ed, Central Law Agency, Allahabad p. 411

In relation to natural resources conservation principle 2 of the Stockholm declaration provides that:-

The natural resources of the earth, including the air, water, and flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Deforestation is one of the major global problems facing conservation of natural resources, forests in particular and has internationally been addressed through declarations, resolutions and conventions. It was extensively discussed in the 1992 Rio conference on environment and development.⁸ The main concern of the international participants was the increased rates of clearing forests for agriculture, logging for export markets, and use for fuel, fibre and timber threatening the ability of forests to perform their environmental functions. These environmental functions consist of regulating global climate, local air quality, water flow, and soil productivity. Forests also provide numerous resources such as food, fuel, building materials, and a variety of chemicals including pharmaceuticals.⁹

The solution to the deforestation problem agreed was combating deforestation. This is provided for in the document adopted in the conference famous as Agenda 21, chapter 11. In addition, the participants adopted a separate agreement entitled the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests. This agreement is commonly referred to as the Forest Principles. The parties agreed to have sound management and conservation of all types of forests in their appropriate levels of governments and communities with their respective national laws.¹⁰

⁸ M.P. Tandon loc cit (note 6) p.155

⁹ MNRT; National Framework for Reduced Emission from Deforestation and Forest Degradation (REDD), August, 2009

¹⁰ S. Bucknum, (1998); The U.S Commitment to Agenda 21:Chapter 11 Combating Deforestation-The Ecosystem Management Approach, *Duke Environmental Law & Policy Forum*, Vol: 8:306

Combating deforestation as a way of conserving and managing natural resources is further provided for under legally binding international instruments in which Tanzania is a party these are; UN Framework Convention on Climate Change (UNFCCC), UN Convention on Biological Diversity (UNCBD), Convention on International Trade of Endangered Species(CITES) and UN Convention to Combat Desertification (UNCCD). All documents argue states to enact legislation to the effect of combating deforestation in their territories.

Regionally, Africa in particular combating deforestation has been a matter addressed by states. It is worth to mention 1933 Convention relative in Conservation of Flora and Fauna in their Natural State which was replaced by 1968 Africa Convention on Conservation of Nature and Natural Resources. The later was revised by African Union General Assembly session held in Maputo, Mozambique in 2003.

At sub-regional level the matter is further addressed by the Treaty for the Establishment of East Africa Community and Treaty for South African Development Community. Tanzania is a party to these sub-regional treaties.¹¹

At national level Tanzania being a party state to both international and regional instruments, declarations and resolutions pertaining to combating deforestation it has addressed this matter in its legal system. However out of the 385,000 square kilometres of the existing forest cover, 2,300 square kilometres of forests are being destroyed yearly.¹² It is warned that Tanzania forests could disappear in 10 decades¹³

¹¹ Article 114 and 5 respectively

¹² Report by Conservation International, an NGO with headquarter at Washington US available at <http://thecitizen.co.tz/component/content/article/37-tanzania-top-news-story/1917-tz-forests-to-disappear-in-10-decades.html> accessed on 26/07/2011 at 13:43hrs

¹³ Felician Kilahama, Director of Forests in MNRT presentation during the high level roundtable discussion on Millennium Development Goals (MDGs) and Climate Change held at Dar es Salaam, 2010.

1.3 Statement of the Problem

Deforestation has been practiced by humans before the beginning of civilization. Fire was the first tool that allowed human beings to change their landscape. Human development and demographic dynamics which are the major causes of deforestation have lead to the increase rivalry between forests resources and protection of forests for survival of people.¹⁴

According to FAO, each year about 13 million hectares of the world's forests are lost due to deforestation, but the rate of net forest loss is slowing down.¹⁵ That is the annual net loss of forest area between 1990 and 2000 was estimated 8.9 million hectares/year and that of between 2000 and 2005 was 7.3 million hectares/year.

For restoration and conservation of forests an International legal framework was constructed from international agreements which addressed these problems, including Forests principles and other agreements signed in 1992 in the UN Conference on environment and development.¹⁶

Tanzania has about 33.5 million hectares of forests and woodlands. Almost two thirds of this area consists of woodlands on public lands, 13 million hectares have been gazetted as forest reserves. About 6% of the forest area is within National Parks.¹⁷ Forests are used as source of energy and employment where about 90% of Tanzania population uses forests as source of energy and it employs 800,000 people

¹⁴ H. Giest and Lambin, E. (2001); What drives Tropical Deforestation? A meta-analysis of proximity and underlying causes of Deforestation based on sub national: LUCC Report Series; 4, Belgium: Land Use and Land Cover change (LUCC) International Project Office available at http://earthobservatory.nasa.gov/Features/Deforestation/deforestation_update6.php accessed on 22/01/2012

¹⁵ FAO, (2008); *The Global Forest Resources Assessment 2005* available at <http://www.fao.org/newsroom/en/news/2005/1000127/index.html> accessed on 21/01.2012

¹⁶ A. Hooker, (1994); International Law of Forests, 34 *Natural Resources Journal* 823, 828.

¹⁷ MNRT, (1998); *National Forest Policy*, Ministry of Natural Resources and Tourism, Dar es Salaam, p 59.

per year half of them being women.¹⁸ Others are non wood products and services such as fruits, nuts, traditional medicines, honey, beeswax, tannins and gum Arabic;¹⁹ protective function as against erosion, water sources and habitats of living organisms; productive function as source logs for timber, paper products and biodiversity of flora and fauna.²⁰

The forests in Tanzania both reserved and unreserved are under enormous pressure from deforestation due to expansion of agricultural activities, livestock grazing, fires, charcoal burning, illegal logging and other human activities. Other causes of deforestation are poverty, loss of traditional knowledge in forest management, population dynamics, and poor agricultural practices.²¹

The estimates regarding the rate of deforestation in Tanzania are diverse however all estimates shows that there is a tremendous disappearance of forests. Thus, in 1989 the loss of forests was estimated to be between 300,000 – 400,000 hectares per annum.²² In 1990 the rate was 130,000 or 0.3%.²³ Currently environmental experts estimate 2,300 square kilometres of forests are being destroyed yearly and thus Tanzania forests could disappear in 10 decades.²⁴

¹⁸ FBD (2000): *Forestry for Poverty Reduction and Economic Growth: National Forest Programme Formulation in Tanzania (Draft)*. Forestry and Beekeeping Division, Tanzania available at <http://www.fao.org/docrep/003/AB575E/AB575E05.htm> accessed on 06/11/2011 at 12:30hrs

¹⁹ MNRT (1998), National Forest Policy, Ministry of Natural Resources and Tourism, Dar es Salaam,

²⁰ J. Mugabe and N. Clark (1998): *Managing Biodiversity: National Systems of Conservation and Innovation in Africa*. African Centre for Technology Studies (ACTS), Nairobi Kenya p. 279

²¹ VPO (1998); Tanzania Country Study on Biological Diversity, Vice President's Office, Tanzania. p 163

²² Ministry of Lands, Natural Resources and Tourism (MLNRT) (1989), *Tanzania Forestry Action Plan 1990/91 -2007/08*. Dar es Salaam.

²³ World Resources Institute (WRI) (1990), *World Resources 1990-91*, New York: Oxford University Press, World Bank; (1992), *World Development Report 1992: Development and the Environment*, Oxford, Oxford University Press.

²⁴ Report by Conservation International, an Non - Government Organisation (NGO) with headquarter at Washington US in <http://thecitizen.co.tz/component/content/article/37-tanzania-top-news-story/1917-tz-forests-to-disappear-in-10-decades.html> accessed on 26/07/2011 at 13:43hrs

Tanzania legal framework consists of both laws enacted by parliament and by-laws on the conservation and management of forests. Despite the existence of the legal framework to address it the deforestation problem still persists. Based on the above observation this study intends to make analysis of Tanzania legal framework in conservation and management of natural resources particularly to find out whether combating deforestation is well addressed to cure the problem of deforestation or not.

1.4 Hypothesis

It is hypothesized that Tanzania legislations and institutions set up do not adequately address conservation and management of natural resources by combating deforestation. Therefore results into persistence of the problem of deforestation at alarming rate.

1.5 Objectives of the Study

The general objective of this research is to critically analyse the Tanzania legal framework on conservation of natural resources by combating deforestation in relation to international instruments. It strives to examine Tanzania legal framework providing for conservation and management of natural resources by combating deforestation in compliance to international instruments, declarations and resolutions providing the same. The aim is to find out legal framework's effectiveness in conserving and managing natural resources.

To achieve this objective the following are specific objectives;-

- (a) Examining the international framework for conservation and management of natural resources by combating deforestation in which Tanzania is bound to adhere.
- (b) Analysing and finding out the weaknesses and challenges in the implementation of Tanzania legal framework in combating deforestation.

- (c) Making suggestion as to the weaknesses and challenges identified for the effective legal framework in combating deforestation therefore conserve natural resources.

1.6 Significance of the study

The research is useful in the field of international law since it aims at providing useful recommendations which can improve conservation and management of natural resources for development by combating deforestation. Moreover the research provide recommendations as to the Tanzania compliance to International instruments, declarations and resolution regarding conservation and management of natural resources by combating deforestation.

Furthermore it is useful as it identifies some loopholes in the existing legal framework on combating deforestation in Tanzania and recommends the amendment or repeal of the existing legislations.

1.7 Limitation of the study

The researcher faced financial constraints associated with limited funds allocated for the purpose of this study. Therefore it was sometimes difficulty in collection of materials by visiting sparse allocated libraries at Tanga, Morogoro and Dar es Salaam.

Inadequacy of books on the research topic and unavailability of some of government officials in offices made the collection of information very difficult but the researcher in alternative used electronic sources.

1.8 Literature Review

Various scholars have discussed the issue of conservation and management of natural resources in Tanzania in relation to the problem of deforestation. This part of research proposal review literatures on the topic which the researcher will use as references in conducting his research as hereinafter:-

In a dissertation titled “Income Generating Activities and Environment Conservation” Mtui identifies three causes of deforestation. These are commercial farming, farming for subsistence as population increases and illegal logging. Citing Uluguru Mountains, reserved forests the writer insists that the three reasons have led to the loss of forest. Uluguru mountains are rich in biodiversity both flora and fauna and is exceptional in the world’s important forest for conservation of biodiversity. They are recognized as one of the hotpots which are the richest and most threatened reservoirs of plants and animals on earth. It contains species which are not found elsewhere in the world, these are; 13 vertebrates, 169 invertebrate and 135 plants and water catchment. The writer argues that degradation and deforestation in Uluguru Mountains continues despite the existence of legislations to conserve natural resources therein because of technical loopholes in legislations.²⁵ The writer has not identified the technical loopholes in legislation other than making emphasis to social and economic reasons which causes deforestation.

Mganilwa, Mbilinyi, Kweka, and Msilanga support the argument of farming as a cause of deforestation in Tanzania that degrades natural resources and organisms. Relying on tobacco, a non food crop farming in Uyui-Tabora the writers narrates that the production of tobacco depends on clearing new land and supply of fuel wood for tobacco curing. It is estimated that one hectare of tobacco requires about two hectares of miombo woodland. The tobacco production has led to massive clearing and destruction of the miombo woodland which is rich in several natural hardwood species of vegetation. The clearing of forests also has affected climate of the area especially the fall of annual rainfall of the area.²⁶ The literature has discussed social-economic factors which causes the problem of deforestation but never discussed the relevance of legal framework in solving the problem.

²⁵ N. Mtui, (2005); *Income Generating Activities and Environmental Conservation: A Case Study of Uluguru Mountains Biodiversity Conservation Project*, MBA (F & B) Thesis, Mzumbe University

²⁶ Z.M. Mganilwa, B.P. Mbilinyi, A.E. Kweka, and B.B. Msilanga (2009) *Environmental Impact of Cereal-Tobacco Farming System in Miombo Woodlands: A Case study of Uyui District, Tabora Region, Tanzania*, Tanzania Journal of Forestry and Nature Conservation, Volume 79(1) January, 2009

Moreover it is argued that deforestation occurs mainly due to farmland expansion, requirements for fuel wood and charcoal for agricultural produce processing such as cooking, tobacco and pyrethrum curing and building materials for settlement.²⁷. To mitigate the negative effects of agricultural activities to environment thus conserve natural resources mitigation measures through economic, social, policies, legislations and regulations are very crucial. Legislation provides for framework within which sustainable use of resources is addressed and regulations set standards for desirable agricultural and economic practices to minimize their negative effects. They also provide for land tenure and securities and standards for Environmental Impact Assessment (EIA). However there is no clear Institutional and administrative arrangements to implement the above. The literature is of value to the researcher as it examines and analyses the role of policy and legislations in addressing the problem of environmental degradation including deforestation therefore conservation and managing the natural resources.

Charcoal production for trade has impacts on forests and woodlands. Its production processes involves the cutting trees and clearing of forests in large areas therefore causing land degradation that also destroys the biodiversity naturally existing in the area. In Tanzania charcoal production has been the leading factor to deforestation and illegal logging being the second cause of deforestation regardless of legislations to conserve and manage forests for community development. To mention some of the legislations are the Forest Act, Mining Act and regulations made thereunder. The laws provides that Central government is responsible for issuing policy and guidelines while local governments i.e. District and Village Councils are to issue licence and permits for charcoal trade through District Forest Harvesting Committee.

In 2006 the minister of Ministry of Natural Resources and Tourism had banned charcoal production however the ban existed for only two weeks as it was removed due to mass outcry for shortage of energy (charcoal) and loss of government

²⁷ A. R. Kwayu (1994); *Environmental Impact of Agriculture in Tanzania: Policies for Sustainable Development* available at <http://www.tzonline.org/dbtw-wpd/exec/dbtwpub.dll> accessed on 20/09/2011 at 21.04hrs

revenues.²⁸ To reduce deforestation caused by unregulated trade of charcoal four policy interventions are necessary;- promotion of fuel-switching; introduction of fuel-efficient charcoal stoves; improve charcoal production kilns and reforestation measures designed to increase the supply of woody biomass. The interventions are supposed not to be applied in isolation; they should be applied all together.²⁹ The literature is of importance to this research as it provides for the relationship and role of various government institutions in regulating charcoal trade which is a major cause of deforestation in Tanzania. Also it examines policy role in the regulation and or control of deforestation.

Uiso and Balama add that in developing countries Tanzania in particular charcoal production activities have been proven to result into deforestation. The activities involve the consumption of trees from forests without considering environmental compliance, conservation and management. The activities persist due to the fact that charcoal business supports the livelihood of the rural people in village as it requires low capital and low operational costs. Regardless of policies and legislations such as national Land Policy (1995), National Environmental Policy (1997), Forests Act, 2002; Environmental Management Act, 2004 which directly or indirectly relates to conservation and management of natural resources the problems of deforestation persist. The writers suggest that the problem persists as charcoal producers lack environmental education and awareness. Therefore government should provide environmental education and awareness to charcoal producers; initiate alternative income generation, awareness and price control of alternative energy in urban areas the main consumers of charcoal; initiation of tree planting programmes in areas where there is not and make recognition and registration of charcoal producers.³⁰

²⁸ World Bank, (2009; *Environmental Crisis or Sustainable Development Opportunity?* Transforming the Charcoal Sector in Tanzania, a Policy Note pp 15-16 available at <http://www.worldbank.org/tz> accessed on 30/08/2011 at 10.00hrs

²⁹ Ibid

³⁰ A. J. Uisso, and C. Balama, (2009); *Charcoal Production activity compromise Environmental Compliance, Conservation and Management Strategies in Tanzania*, Tanzania Forestry Research Institute (TAFORI)

The writers have acknowledged the existence of legal framework but have not explained its weaknesses which make the problem of deforestation to persist.

Furthermore community lack of knowledge on conservation and management of forests is the main cause of deforestation in Tanzania. Munishi and Temu citing the South Highlands of Tanzania argue that deforestation problem is a result of agriculture and population pressure, overgrazing and soil erosion. These activities are done by community which has a minimal awareness of the complexity of the interrelationship between matters of forests and development, population growth, agricultural production, climate change and biological diversity. The writers suggests measures to be taken including prevention of shifting cultivation, use of coal as source of energy instead of fuel wood, afforestation, improve agricultural activities and law enforcement.³¹ The writers insist on law enforcement as the immediate measure to be taken but they have not explained whether the law exists and how its contents regulate environmental conservation problems deforestation in particular. The literature is of important as it details the problem which encounters the existing forests.

Conservation and management of natural resources in Tanzania is mainly regulated by principal and subsidiary legislation. By principle legislation means Acts of parliament such as the Forest Act, the Wildlife Conservation Act and subsidiary legislations means regulations, by-laws, orders, notices and proclamations. The later are enacted by competent authorities under specific principle legislation. For example, Regulations are normally enacted by ministers and bylaws by local government authorities such as district and municipal councils.³²

³¹ P.K.T. Munishi, and R.P.C. Temu, (1992); *The Natural Forests and Environmental Conservation in the Southern Highlands of Tanzania*, Session 6, Sokoine University of Agriculture, Morogoro Tanzania.

³² Palamagamba J. Kabudi; *Study on Natural Resources Related By-laws for Handeni District*, Natural Resources Management and Buffer Zone Development Programme, MNRT, September 2001

The Local Governments have legislative powers to enact bylaws to regulate land use pertaining to agricultural activities, livestock husbandry and bylaws to preserve, maintain, improve and regulate the use of forests and forest produce.³³ Subsidiary legislations play a great role in conservation and management of natural resources. They fill the *lacuna* that has been left or not properly covered by the principal legislation. Citing Handeni district as case study, Palamagamba Kabudi explains that by-laws are enacted to establish specific protected areas such as forest or game reserves.³⁴ They provide for land use thereof and therefore conserve forests and regulate the use of forest produce by establishing land use zones specific for residence, agriculture, grazing, forests and water sources.³⁵ However most of the bylaws focus on revenue rather than conserving natural resources. The literature recognizes the importance of subsidiary legislations especially by-laws in legal framework for conservation and management of natural resources but has not discussed whether they have succeeded in combating deforestation.

In the handbook titled “Environmental Handbook for Business in Tanzania” it is explained that most of laws of Tanzania on conservation and management of environment are penal in nature therefore fails to induce compliance. The violation of the laws leads to criminal offences the penalties of which are fines and imprisonment. The fines imposed are proportional to the costs of repairing the destructed natural resources. In providing guide to business owners on legal requirements of their activities in relation to environmental protection the literature analyses Tanzania legal framework impacting the environments in specific economic sectors, these are agriculture; economic services (transport, water supply, construction and energy; tourisms (hunting methods and hotel construction); trade and commerce, products, imports; Mining and Forestry. Forests laws, forest ordinance in particular regulates the use of forests, by requiring permits for construction therein and licence for production of charcoal.

³³S. 148(1) Local Government (District Authorities) Act, Act No. 7, 1982 currently Cap 287 R.E 2002

³⁴ P. J. Kabudi loc cit (note 32) at p. 42

³⁵ Ibid

Mining is allowed by the Mining Act both in reserved and unreserved area and trees necessary for mining are allowed. The literature notes that there about 50 principal laws which relate to environmental issues but many of these laws are outmoded, not understood or overlap in terms of functional authority.³⁶ Most of the legislations examined have been repealed such as Land Ordinance and Forest Ordinance therefore the literature do not reveal the current position in combating deforestation.

Participatory forest conservation and management as enclosed in some of Tanzania legislations have proved success in decreasing deforestation problem. Emphasizing in this position Hamza and Kimwer explains that historically conservation and management of natural resources especially forests in Tanzania were being managed centrally through MNRT, Forest and Beekeeping Division.³⁷ This system had vested extensive state control without involving the local people therefore traditional institutions were much interfered by the central government. The system resulted into forest degradation and deforestation through illegal activities. With the forest policy 1998 and the forest Act, 2002 the system of natural resources conservation and management is three fold; MNRT, regional secretariats which is the foreseer of all natural resources in the regional and Local government authorities which own and manage local governmental forests. The policy and the Act enhance the participatory forest management (PFM) approach. The participatory approach is however enclosed by a number of legislations such as Land, wildlife, local government, fisheries and beekeeping. The writer concludes that the new system has generally decreased illegal harvesting of forest resources. The authors admit that problem of forest degradation and deforestation regardless of new approach have never ended, it still exists.³⁸

³⁶ LEAT (2000) Environmental Handbook for Business in Tanzania

³⁷ K.F.S Hamza, and E.O. Kimwer, (2007); *Tanzania's Forest Policy and Its Practical Achievements with Respect to Community Based Forest Management in MITMIOMBO*, Working paper of the Firnish Forest Research Institute 50:24-33, The First MITMIOMBO Project Workshop held in Morogoro, Tanzania, 6th -12th February 2007

³⁸ K.F.S Hamza, and E.O. Kimwer (op cit) (note 34)

The authors have not precisely pointed out as to how participatory approach entailed in policy and laws improved the conservation and management of natural resources by combating deforestation.

Moreover Madulu argue that one of the methods of conserving and managing the natural resources is through declaring areas “protected area” famously known as game or forest reserve.³⁹ In Tanzania for example the Wildlife Conservation Act, No.12/1994 lists a number of activities prohibited in National park or game reserve. These are entering without permit, possession of firearms, bow and arrows, starting bush fires, tree felling and removal of plants, digging ditches and setting traps capable of killing, grazing of livestock and capturing or wounding animals. Citing Swangaswanga Game Reserve (SGR) as case study the writer explains that the reserve was made without taking into consideration of population dynamics and the need of local communities. The need of communities includes fuel wood, charcoal for business, agriculture, food, medicine and building materials. The volume of needs increases as the populations grows. For that reason the SGR has been encroached by the population to fulfil their needs regardless of the legislation which prohibits several acts in this protected area. The writer further explains that the population perceive the protected areas are for the government and not the community. To solve this lacuna in the legislation he suggests the involvement of local community in conservation and management of natural resources by making them participate both in planning and sharing of benefits accruing from protected area.⁴⁰

The sustainable conservation and management of forests is effective whenever there is collaboration between state and people. There is a need of having joint forest management. But it has been observed that in the partnership between state and people the state always retains decision powers sometimes without involving local

³⁹ Madulu, N.F. (2009): *Population Dynamics and Sustainable Conservation of Protected Areas in Tanzania: The Case of Swangaswanga Game Reserve in Kondoa District*, Institute of Resource Assessment, University of Dar es Salaam, Tanzania available at <http://www.tzonline.org/pdf/populationdynamics.pdf> accessed on 23/11/2011 at 2000hrs

⁴⁰ Ibid

people especially where the forests considered valuable in revenue generation or biodiversity.⁴¹ The system of making the communities partners in management of natural forests in deeper and promising sustainability. The system needs back up by policy and legislations which makes or establishes legal and institutional framework. In Tanzania, policy and legislation on community based forests management is permissive and diverse.⁴² There are several principal legislations of which each one provides in its own way, e.g. Forest Ordinance, Land Ordinance. The local communities in district and village level have authority to make by-laws purposely for management of natural resources. Although both policy and legislations permits community based forests management it is not adequate, they need amendments.⁴³ Though the literature has indicated the success of community based forest management in Tanzania it refers and examined the repealed laws the contents of which may have changed, these are Forest Ordinance and Land Ordinance. The literature is of value to the researcher as it explains the basis upon which community based forest management is of important in conservation and management of natural resources.

Of all literatures reviewed there is no one which has specifically analysed Tanzania legal framework on conservation and management of natural resources by combating deforestation. Most of the literature acknowledge the existence of legislation for conservation and management of natural resources however they explain the causes of deforestations being economic and social activities. Even literature which has briefly examined legal framework such as that by LEAT and Palamagamba Kabudi the laws examined have been repealed therefore changes are likely. For these reasons this research is valuable as it will reveal Tanzania position in conservation and management of natural resources by combating deforestation in compliance to international instruments, resolutions and declarations.

⁴¹ Liz Willy (1997); *Finding the Right Institutional and Legal Framework for Community based Natural Forest Management*, The Tanzania Case, Centre for International Forestry Research. Jakarta- Indonesia retrieved from <http://www.cgiar.org/afor> on 28/09/2011 at 22.00hrs

⁴² Ibid at p. 21

⁴³ Ibid

1.9 Research Methodology

In this part of research the researcher explains the way in which the study was carried out. It clarifies about the research design, area of the study, study population, sampling technique and procedure, data collection and data analysis.

1.9.1 Research Design

The research design is the case study design.⁴⁴ It aimed at finding out and analysing Tanzania legal framework on reserved and unreserved forests, Pwani and Tanga regions being the case. The regions above mentioned have experienced tremendous deforestation due to agriculture activities, population increase and they are in near towns which raise wide demand of energy/charcoal, settlement areas, building materials and illegal logging.

Further the researcher applied different types of the research, these included: doctrinal research and empirical research. With doctrinal research, the researcher collected and compiled selected international and regional instruments, laws and related articles from various libraries and documentation centres and undertook a systematic review thereof. The review of the documents enabled the researcher to understand their coverage in conservation and management of natural resources by combating deforestation.

International instruments selected for the purposes of this research includes Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); United Nations Framework Convention on Climate Change (UNFCCC); United Nations Convention on Biological Diversity (UNCBD); Convention to Combat Desertification. Regionally African Convention for Conservation of Nature and Natural Resources (ACCNNR) is selected; and sub-regional instruments are Treaty for Establishment of the East Africa Community (EAC) and the Treaty of South African Development Community (SADC).

⁴⁴ J. Adam and F. Kamuzora, (2008); Research Methods for Business and Social Studies, Mzumbe Book Project, Tanzania, p. 80

The research further selected non-legal binding documents, these are Agenda 21-Chapter 11”Combating Deforestation”; Rio’s Forest Principles” for review;

The principal and subsidiary legislation that governs natural resources conservation and management and environmental related matter reviewed includes; The Forest Act, 2002, The Environment management Act, 2004, Land Act and Village Act, 1999, Land Use Planning Act, 2007 and Wildlife Conservation Act, 2009. Legislations regulating local Government authorities were also reviewed; these are Local Government (District Authorities) Act and Local Government (Urban Authorities) Act, 1982.

Non-doctrinal research (field) was also applied with intention of identifying new problems if any relating to legal framework in conservation and management of natural resources by combating deforestation. This study was conducted at Dar es Salaam, Bagamoyo –Pwani region and Handeni – Tanga region. In conducting this research some government officials from MNRT (TFS) in particular were interviewed.

In Tanga and Bagamoyo, interviews were conducted with district forest officers, district agricultural officers, District legal officers, counsellors forming the committee dealing with natural resources and environment and village natural resources and environment committees. Moreover random selection of surrounding communities and individuals who were harvesting and transporting forest produce were also interviewed. Along with the researcher has observed some of the areas which undergone tremendous deforestation at Gole village at Handeni and Kibindu village at Bagamoyo.

1.9.2 Area of Study

This study took place at Pwani and Tanga regions. The choice of the Pwani and Tanga was determined by the fact that the regions are near the big towns of Tanga, Dar es Salaam and Morogoro where the demands of energy/charcoal, areas of settlement, agricultural produces and building materials are high. Moreover the areas are subjected to influx of livestock from other regions seeking pasture and water.

It was further noted that Handeni and Bagamoyo districts had been the pilot areas for the projects aimed at conserving forests, these are Land Use Plan and Participatory Forest Management (PFM)

1.9.3 Study population

The targeted population was all government officials implementing or enforcing the laws on forests, legal practitioners and mere citizens in Tanzania. Regarding the objectives of this research, the targeted population was 60 persons who in one way or another dealt with forests. But only 34 respondents were available to avail information on forests. Information has been explored from central MNRT officials who are responsible for the formulation of policy and laws, Local Government officials who implements and enforces laws on forests, villagers and other individuals with interest on natural resources conservation.

1.9.4 Sample size

The study consisted of the sample size of 34 respondents. These included 4 government forest officials at ministry, 12 district officials, 8 village leaders and 4 villagers and 6 individuals interested in forests conservation including charcoal producers and Council forest cess collection agents. Through this sample size the researcher was able to gather sufficient information relevant to legal framework in conservation and management of natural resources by combating deforestation.

1.9.5 Sampling techniques and procedures

The selection of sample based on stratified random sampling where respondents were divided into groups and random selection of respondents from each group affected. The groups in which the respondents were drawn are ministry of natural resources and tourism, district councils, village councils and mere citizen from urban and rural areas. Legal practitioners on environment were also consulted and provided their views on legislations for forest conservation and management in Tanzania.

1.9.6 Data collection

The researcher employed the following methods in data collection:-

1.9.6.1 Library research (documentary review)

As for library research, the researcher visited the libraries of Mzumbe University, University of Dar es Salaam, High Court of Dar es Salaam, MNRT and PMO-RALG Library whereby the analysis of the problem was done through statutes, textbooks, journal, articles and reports on related study. Furthermore online materials and other relevant materials available through magazines were visited.

The researcher also visited forest law enforcement entities for forest data collection due to the fact that library research might not provide enough information regarding the case study particularly the estimates and scope of the problem and lacuna in the enforcement of laws.

1.9.6.2 Field Research

The field research was conducted through the following ways:-

(i) Interviews

The structured and unstructured interview was applied. In the former, predetermined set of questions and in the later there was none to allow flexibility of the researcher in asking questions. The interview was carried out to the senior officials of the Ministry of Natural Resources and Tourism, Local Government Authorities at regional and district level and legal practitioners on environment. The structured interview based on the point of the existing laws was carried out and the researcher gathered information on the problem and their recommendation.

The unstructured interview was carried to the officials other than senior officials, village officials and mere citizens. It contained open ended questions depending on the availability and flexibility of targeted groups.

(ii) Observation

The researcher visited some areas in Tanga and Pwani region which underwent tremendous deforestation due to agriculture activities, energy (charcoal) and logging activities and made observation thereof.

From this method, the researcher concludes that the problem is really tremendous if protective measures will not be taken immediately then the country will to a large extent loose natural resources.

1.9.7 Data analysis

The researcher reviewed and analysed the collected data in assessing whether the collected data supports the formulated hypothesis and the objective of the study. The researcher used both quantitative and qualitative data analysis in analysing the collected data. Qualitative data analysis involved factual and logical interpretation, and explanation of study findings. By qualitative analysis the researcher came up with useful conclusions and recommendations.

CHAPTER TWO

CONCEPTUAL FRAMEWORK

2.1 Introduction

A conceptual need which inevitably arises in the study concerning conservation and management of natural resources is the meaning of natural resources, forests, deforestation, conservation and factors which affects the natural resources, deforestation for the purpose of this research. Therefore, this chapter of the research clearly defines different concepts relating to various terms relating to natural resources conservation and management and on how they operate in the field of international law.

2.2 Natural resources

Natural resource means any naturally occurring subsistence or feature of the environment physical or biological that while not created by human effort can be exploited by human to satisfy their needs or wants.⁴⁵ Example of natural resources includes fossils fuels (crude oil, coal), minerals and timber (trees). A natural resource can be of economic value or non-economic value.

From the definition above there are two conditions for a substance or feature to be classified as a natural resource.⁴⁶ Firstly, the resource must exist naturally in the environment that is not synthetically produced by human being such as in a library or factory. Secondly, the resource must be able to be exploited by human to directly satisfy a need or want. However exploitation sometimes depends on the technological advancement as some resources may not be exploited due to lack of technology; this cannot make them not being natural resources.

⁴⁵ Dr. Frederick Swarts, (2011); Natural Resources, *New World Encyclopedia*, available at http://www.newworldencyclopedia.org/entry/natural_resources accessed on 24/04/2012 at 2038hrs

⁴⁶ Ibid

Noting the difficulties in defining the term natural resources Judge Barry Schaller explains it as a complex of interrelated elements existing in a state of ecological balance which must be preserved for life to survive in the planet.⁴⁷

In the African Convention on Conservation of Natural resources and Nature, natural resources means renewable resources tangible and non-tangible that including soil, water, flora and fauna and non renewable resources.⁴⁸

2.3 Classification of natural resources

Natural resources are categorized into three, viz; biotic and abiotic; renewable and non-renewable and exhaustible and non-exhaustible.⁴⁹

2.3.1 Biotic and abiotic

Biotic natural resources are living resources such as forests and wildlife. They also include resources obtained from living resources such as trees and their products such as coconut and timber, agricultural products and birds and their products.⁵⁰ Fossils fuels such as coal are classified as biotic because they are derived from organic matters, plants.

Abiotic are natural resources which are not able to replace themselves. These resources are obtained from non-living sources; these are minerals such as gold, diamond, copper as well as air, land and water.⁵¹

⁴⁷ Dr. Frederick Swarts Loc cit (note 45)

⁴⁸ Article 3 (a) African Convention on Conservation of Nature and Natural Resources, 2003

⁴⁹ Resource and Development; Classification of resources available at http://www.excellup.com/Notes/10_SocSc_resource&Development.pdf accessed on 24/04/2012 at 1930hrs

⁵⁰ Ibid

⁵¹ Ibid

2.3.2 Renewable and non renewable

Renewable natural resources are those physical ones which are used by people but can be replenished in a timely manner, for example forests, fish stocks and agricultural crops can be replenished overtime with forest taking longer time than fish or water and agricultural crops which replenished over a short time period.⁵²

Renewable resources can further subdivided into plentiful and limited resources. Plentiful resources are that natural resources that are plentiful and continuously available and are not affected by human environment, these are sunlight, air and wind.⁵³ Limited natural resources are the resources which are limited and can be depleted by human use but also can be replenished or reproduced relatively quickly. These includes plants, forests, water and agricultural crops

Non – renewable natural resources are those which are limited in amount that cannot be replenished in a timely manner or feasibly and are essentially irreplaceable once extracted. For example minerals and fossils fuels are formed over a very long geological periods, they cannot be replenished once extracted. These include gold, copper, petroleum, diamond and natural gases.

2.3.3 Inexhaustible and non exhaustible

Inexhaustible natural resources are the resources which are not changing or exhausted by mans activities and are abundantly available forever, example solar energy, wind power, power from tides.⁵⁴ Most renewable resources are classified as inexhaustible but if not properly maintained they become extinct, for example ground water.

⁵² Classification of Natural resources available at <http://lifestyle.iloveindia.com/lounge/types-of-natural-resources-14017.html> accessed on 24/04/2012 at 2000hrs

⁵³ Ibid

⁵⁴ Ibid

Exhaustible natural resources are the resources which are limited in nature and they are not maintainable for example coal and petrol.⁵⁵ These resources fall under the category of non-renewable category. From the detailed above forests are natural resources classified as renewable, biotic and exhaustible.

2.4 Deforestation

Deforestation means different things to different people. For some it means the total clearing of trees, for others it any activity which disrupts the natural ecology of the virgin forest. But lumping together all activities which disrupt the forest ecosystem and regarding them deforestation obscures the real issues.⁵⁶

Food and Agricultural Organization (FAO) in 1978 defined deforestation as simply the loss of forest land. This encompasses the full range of forests types and use; that is closed forests such as rainforests, open woodland, wooded savannah and degraded forests. FAO also define deforestation as the clearing of forests and its conversion to non-forest uses such as cropland and shifting cultivation.⁵⁷ With this definition effects of fuel wood collection and other influences is not taken into account. Forests that have been lodged and left to regenerate are also not included.

Other definitions of deforestation include “temporary and permanent clearing of forest for agriculture or other purposes”.⁵⁸ The “loss of original forest”, this does not include re-clearing of secondary forest.⁵⁹

⁵⁵ Loc cit (note 52)

⁵⁶ S.B. Misana, (1999); *Deforestation in Tanzania: a Development Crisis? The experience of Kahama*, Social Research Reports Series, no. 13, Addis Ababa, Ethiopia at p. 43

⁵⁷ World Resources Institute and IIED (1986) *World Resources 1986*, Basic New York: Books Inc.

⁵⁸ P. M. Fearnside, (1993); *Deforestation in Brazilian Amazonia: The Effect of Population and Land Tenure. Ambio* 22 (8): 537-545.

⁵⁹ A. Grainger, (1993) *Rates of Deforestation in the Humid Tropics: Estimates and Measurements, The Geographical Journal* 159 (1): 33-44.

From the above definitions, deforestation means forest replacement by another land use, including different types of shifting and permanent agriculture as well as non agricultural uses such as mining and settlements. Deforestation in this context does not include disturbances such as selective logging or selective cutting of trees for charcoal that leave the forest canopy intact.

2.5 Forest

Forest has been defined differently in different legislations and literatures. In the Tanzania National Forest Policy forest means all land bearing a vegetative association dominated by trees of any size, exploitable or not and capable of producing wood or other products of exerting influence on the climate or water regime or providing shelter to livestock and wildlife.⁶⁰ However in the Forest Act forest means area of land with at least 10% tree crown cover naturally grown or planted and or 50% or more shrub and tree regeneration cover.⁶¹

In German under the Forest Act, forest means all tracts of land where forest trees grow including functionally related parts.⁶² This definition excludes woodlots, tree nurseries, trees outside closed woodlands such as trees planted in the built areas. National Forest Act of South Africa defines forest to include a natural forest, woodland and plantation, the forest produce in it and the ecosystem that makes it up.⁶³

In conclusion all definitions share two major ingredients, that is forest means vegetation or trees whether natural or planted and such trees or vegetation must have grown or planted on land.

⁶⁰ MNRT (1998); National Forest Policy, Government Printers, Tanzania; TASONABI, 2001; *Forest Landscape Restoration*, Tanzania Country Report, p. 41

⁶¹ Section 2 of the Forest Act, Act No. 14 of 2002

⁶² Forest Act of German, 1975

⁶³ National Forest Act of South Africa, 1998

2.6 Conservation and management of natural resources

The term conservation is not defined in treaty or international instruments. However the term is generally used in the field of living resources and is based upon the status quo, mainly demanding maintenance of the condition necessary for continued existence.⁶⁴ When applied in relation to flora and fauna it signifies exploitation of the resource without exceeding the limits that guarantee its renewal, thus its sustainability. The term conservation is sometimes supplemented by reference to sustainable development therefore assuring the ongoing productivity of the exploitable natural resources and concerning all species of flora and fauna.⁶⁵

In legal perspective the term conservation has several definitions depending on the theme of the writer. When defined in relations to land use it means control on the use of environment and development that concerns the land in general. In this context Conservation of forest is considered as a result of conflict between the productions of food with protection of environment, in which the former is said to dominate. This conflict is summarized by Williams as “industrialization of agriculture”.⁶⁶

But when defined in relation to development conservation of natural resources implies the sustainable use and management of natural resources which includes wildlife, air and water. It focuses on the needs and interest of human beings such as biological, economic, cultural and recreational values. As far as the relationship between natural resources and development the conservationists have the view that development is necessary for a better future but only when the changes occurs in ways that are not wasteful.⁶⁷

The different approach of the definition focuses on the control and or regulation in use of natural resources, forests for the purpose of this research.

⁶⁴ A. Kiss and D. Shelton Loc cit (note 5) at pp 200-201

⁶⁵ Ibid

⁶⁶ William M. Adams (2003); Future Nature: A vision for Conservation p 117-8

⁶⁷ Conservation of natural resources available at <http://feelfriendly.com/information-preservation-conservation.html> accessed on 25/04/2012 at 0530hrs

2.7 Concept of Natural Resources Conservation and Management under International Law

International conservation and management of forests can be traced back in the early 19th C. It started at the national level where various approaches such designation of forest reserves were established but later it was developed to international level.

The need for regulation and control of the use of forests was due to the tension between exploitation and conservation that has resulted into effects which went beyond territorial boundaries, for example emission of gases affect climate which knows no boundary. Therefore international regulation was inevitable.

The concept of natural resources conservation including forests under international law can be easily understood by dividing it into three phases; Before 1960, during and after the Stockholm conference and after the 1990,s Rio conference

2.7.1 Before Stockholm conference

Concept of forest management was firstly launched by German forester in 1804.⁶⁸ The foremost driving force behind forest management was for the need of industries; need to provide industries with secure supplies of raw materials of timber. This concept was continued during colonial eras though at this era it was interrupted in a narrow term of maintaining heterogeneity of ages and species, the capacity of natural regulations, the forests hydrological function in a watershed and soil protection through continuous forest cover.⁶⁹

The belief in human dominion over the earth and all its living resources has led to many people to see other species plants and animals as having only utilitarian value. This perception has led to uncontrolled utilization of natural resources the fact which threatened its existence in earth.⁷⁰

⁶⁸ K. F. Wiersum, (1999); Forestry: Changing Perspective in forestry science or practice, PHD thesis, Wageningen Agricultural University, p. 40

⁶⁹ R. Schmidt, *Tropical Rainforest management: A Status Report*, Unasylva (1987) 39, 2-17

⁷⁰ Ibid

With the rise of awareness of extinction of some species of plants and animals the world had experienced several international treaties in the 1900's to protect certain species. For example the International Convention on Protection of Birds Useful to Agriculture, 1902 and Convention for the Preservation of Wild Animals, Birds and Fish in Africa, 1900. The later convention never entered into force as it encouraged the destruction of creatures deemed harmful to human interests including lions, leopards, crocodiles and poisonous snakes.

The need for protection this time was considered only to animals and birds, plants were considered to be free for taking and utilization without limit.⁷¹ With this concept birds which were not useful for agriculture such as predators were not protected at all, thus its extinction was allowed.

In 1933 through the Convention on Preservation of Nature and Natural Resources Flora and Fauna, plants were now considered for protection where by national parks and forest reserves were established and strictly protection laws were made in respect thereof. The concept of plants and animals conservation this time was been viewed to have been neglected human needs and interest to the extent of being labeled "ecototalitarian".⁷² Under ecototalitarian preservation of natural resources is more important than people's life. For example if people have to move from preserved area such as forest or catchments area they don't care where these people will stay, if people will suffer or die because of inadaptability of new system.

In Africa conservation of natural resources has been dominated by authoritarian approach. That is the authorities have been protecting natural resources in national parks and nature reserves supported by effective patrols and penalties for unauthorized access and activities. Such protection is implemented by making and enforcing laws.

⁷¹A. Kiss and D. Shelton loc cit (note 5) at p. 293

⁷²A.J. Dietz, (1996); *Entitlements to Natural Resources: Contours of Political Environmental Geography*. Utrecht International Books Press, Australia at p 13

The laws restrict access and sanction non-compliance with strict rules for use. This approach is sometimes referred to as a “fines and fences” approach.⁷³ Hulme and Murphee call this approach as “fortress”.⁷⁴

2.7.2 During and after Stockholm Conference, 1972

After the Second World War new concepts of conservation of natural resources as a result of global environmental consciousness where the protection was widened. It was no longer based on useful species of natural resources. The protection went further to insist on the protection of habitats and ecosystem of living natural resources.⁷⁵

This position is evidenced by the 1972 Stockholm conference titled “human environment” where three documents were adopted; these are Stockholm declaration, action plan for the human environment and establishment of UNEP, a UN environment governing body.⁷⁶ Of the three documents, the Stockholm declaration provides for safeguarding of natural resources flora and fauna and their natural ecosystem by careful planning and management.⁷⁷ The document further provides for the reason of safeguarding natural resources; that is for the benefit of the present and future generations.

2.7.3 Rio Conference on Sustainable Development, 1992

In 1980’s the concept of conservation and management of natural resources changed. The changes were provoked by the Brundtland Report titled “Our Common Future”.⁷⁸

⁷³R. Hughes and F. Flintan, (2001); *Integrating Conservation and Development Experience; A Review and Bibliograph of the ICDP Literature*, IIED, London at p.

⁷⁴D. Hulme, and M. Murphee (eds) (2001); *African Wildlife and Livelihoods: The Promise and Performance of Community Conservation*, Heinemann, Portsmouth at p.

⁷⁵ S.K. Kapoor, loc cite (note 7) at p. 411

⁷⁶ Ibid

⁷⁷ Principle 2 of the Stockholm Declaration, 1972

⁷⁸ Brundtland report is the report by the World Commission on Environment and Development (WCED) established vide UN General Assembly resolution 38/161, 19th December 1983 with the mission of uniting countries to pursue sustainable development together.

The report promoted integration of production with resource conservation and enhancement and that linked both the provision of an adequate livelihood base and equitable access to resources.⁷⁹ Under this report it was made clear that forest conservation and management was no longer overlook people's needs and their rights to stable livelihood base.

The Brundtland report further introduced the concept of sustainable development.⁸⁰ Sustainable development is defined in the report to mean development that meets the needs of the present without compromising the ability of the future generations to meet their own needs. This concept was strengthened in the United Nations Conference on Environment and Development (UNCED) held at Rio de Janeiro in 1992.⁸¹ The conference adopted very important binding and non binding instruments; these are United Nations Framework Convention on Climatic Change (UNFCCC), United Nations Convention on Biological Diversity (UNCBD), Rio declaration and "Forest principles". The documents are the very base of forests conservation by combating deforestation of which state parties, Tanzania inclusive have ratified the instruments therefore bound to comply.

From the UNCED instruments sustainable forests conservation and management understanding share the features that; forests can be managed to different ends not only for sustainable timber production but also for other values such as preservation of nature and wildlife, for climatic values of carbon sinks and reservoirs, uses or protection of habitats of indigenous people. It is further summarized that forest sustainable management should be ecologically sound, economically viable, socially acceptable and technically feasible.⁸²

⁷⁹World Commission on Environment and Development; *Our Common Future*, Oxford: Oxford University Press, 1987 at p. 52

⁸⁰ WCED available at http://www.unece.org/oes/nutshell/2004-2005/focus_sustainable_development.html accessed on 28/02/2012 at 1600hrs

⁸¹ Ibid

⁸² M.A.F. Rose-Toren, and T. Dietz (eds) (2005); *African Forests Between Nature and Livelihood Resources: Interdisciplinary Studies in Conservation and Forests anagement*, The Edwin Mellen Press, Lewiston NY at p. 7

2.8 Conclusion

The concept of conservation and management of natural resources forests in particular has passed various stages with different environment experience and consciousness. It commenced from when plants were meant for utilization without considering its extinction, “utilitarian” and when forest conservation neglected human needs and interest, “ecototalitarian”. Currently the concept is sustainable utilization which considers human needs and interest especially of the indigenous.

From this context the concept of conservation and management of forests is dynamic. The current concept of sustainable development has much shaped international instruments on conservation of forests. Since state parties Tanzania inclusive are bound by international agreements that they have ratified thus, their national legal framework on conservation and management of forests needs to be shaped by this international position.

CHAPTER THREE

INTERNATIONAL FRAMEWORK FOR COMBATING DEFORESTATION

3.1 Introduction

Internationally and regionally there are both non-binding and legally binding agreements that deal with conservation and management of natural resources by combating deforestation. Though not all instruments specifically focus on the conservation of natural resources by combating deforestation they have some influences on the same.

Legally binding instruments include CITES, UNFCCC, UNCBD, UNCCD, ACCNNR, EAC treaty and SADC treaty and Non legally binding agreements to mention a few are the Agenda 21 and Rio forest principles the details of which are discussed as follows:-

3.2 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973

The instrument was adopted by Parties on 3rd March, 1973 at Washington DC and amended in 1979 in the UN Conference held at Bonn, Germany. The main objective of the instrument is to protect many species of plants and animals to ensure that commercial demands do not threaten their existence and survival in the world.⁸³ It regulates export, import and re-export of species and hybrid listed in the instrument schedule including parts and products through a system of permits and certificates.⁸⁴

Under CITES species are listed in three levels of protection named appendix I, II and III to which have different permit requirements. Appendix I include species that are presently threatened with extinction that are or may be affected by trade in which there must be the strictest control of activities involving these species. Appendix II list species that are not presently threatened with extinction but may become so if not regulated.

⁸³ Willem Wijnstekers, (2011); *The Evolution of CITES*, 9th Ed, International Council for Game and Wildlife Conservation (CIC), Budapest – Hungary, at p. 38

⁸⁴ Article 6 Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973

Strict regulation is important to avoid utilization incompatible with their survival. Appendix III includes species listed by range countries to obtain international cooperation in controlling trade.

The Convention allows member parties to adopt stricter domestic measures regarding trade, taking, possession or transport of species in appendix I, II and III or impose the same restriction to other species other than that listed in appendixes.⁸⁵ Measures suggested for violations include pending trade or possession of species or both, confiscation or return to the state of export of such species.⁸⁶ Tanzania ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on 29 November, 1979 therefore bound to adhere to the obligation enumerated in the Convention.⁸⁷

Through restriction and regulation by the convention it is obvious that deforestation of specified species listed in the appendixes and other protected species by parties in their own is combated therefore conserving and managing them. However this Convention totally does not protect species of plants affected by other human activities such as farming and charcoal production which are among the major causes of deforestation.

3.3 United Nations Framework Convention on Climate Change (UNFCCC), 1992

The aim of this Convention is to achieve stabilization of greenhouse gases concentration in the atmosphere at a level that would prevent dangerous anthropogenic interferences with climatic system.⁸⁸ Under the UNFCCC the international community has committed to reduce net greenhouse gas emissions.

⁸⁵ Loc cit (note 84) Article 14

⁸⁶ Ibid article 8

⁸⁷ International Agreements available at

http://www.mnrt.go.tz/index.php?option=com_content&view=article&id=215:wakala-wa-huduma-za-misitu-tanzania&catid=60:agencies&Itemid=163 accessed on 10/08/2008 at 1714hrs

⁸⁸ Article 2 of UN Framework Convention on Climatic Change, 1992

The green house gases originates from human activities and they includes carbon dioxide (CO₂) which accounts for 49% of greenhouse effect, whose prevalence is caused by burning of fossils and deforestation; nitrogen oxide (N₂O) results from agricultural activities such as the use of fertilizers; Chlorofluorocarbons (CFCs) resulting from refrigeration system, fire suppression system and manufacturing processes and methane resulting from livestock fermentation, manure management and pad rice plant.⁸⁹

Under the UFCCC, parties committed themselves to reduce the release of greenhouses gases to the atmosphere. In implementation of this commitment Kyoto protocol, an international agreement linked to the convention was adopted in 1997 to give developed countries specific reduction targets and they could meet these targets by reducing emission or by protecting sink.⁹⁰ Forests have a major role to play in the international response to climate change.

Under the UNFCCC all parties must promote sustainable management of sinks and reservoirs.⁹¹ Forests play important role in climate change mitigation as a source and sink of carbon dioxide (CO₂).⁹² Its biomass acts as a source of carbon when burned or when decays. Also when soil is disturbed it releases CO₂ and other gases to the atmosphere, on the other hand forests acts as carbon sinks where the area or productivity increases, resulting in a increasing uptake of carbon dioxide from the atmosphere.

⁸⁹O.T. Denmead (1991); *Sources of Sinks of Greenhouse gases in the Soil Plant Environment*, Vol. 91 1-2, 73-86

⁹⁰ Kyoto Protocol available at http://unfccc.int/kyoto_protocol/compliance/items/2875.php accessed on 09/09/2012 at 22.00hrs

⁹¹ Article 4 of the UNFCCC

⁹²Vice President's Office (Environment); *National Framework for Reduced Emission from Deforestation and Forest Degradation (REDD)*, August, 2009 ; Brown, S. (1999); *Guidelines for Inventorying and Monitoring carbon Offsets in Forest-based Projects*, A Report prepared for World Bank, Washington DC, USA at p. 13

Forests absorb CO₂ and releases oxygen through a natural process called photosynthesis whereby CO₂ is converted into carbon and stored in wood tissue of plants.⁹³ For this reason forests are used as means for atmosphere CO₂ reduction which contributes to climate change mitigation, thus very crucial to conserve and manage its use.

Tanzania ratified the UNFCCC in April, 1997.⁹⁴ By ratifying the Convention Tanzania is bound to adhere to the obligations of parties to the convention including promotion of sustainable management of sinks and reservoirs, thus combating deforestation.

3.4 United Nations Convention on Biological Diversity (UNCBD), 1992

The UNCBD is one of the internationally legally binding instruments which resulted from the Rio de Janeiro Earth Summit titled Environment for Development. Other instruments are UNFCCC and UNCCD. The Convention was opened for signing in June 1992 and came into force on 29th December 1993, ninety days after the thirtieth ratification.⁹⁵

UNCBD aims at the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.⁹⁶ Conservation by combating deforestation is relevant here as forests play a vital role in biodiversity. They provide most productive natural ecosystems and can provide important habitats for fauna.⁹⁷

⁹³ Loc cit (note 92)

⁹⁴ R. Mwalyosi, Impact Assessment and the Mining Industry: Perspectives from Tanzania 13 (Paper presented in a conference organised by International Association for Impact Assessment, Vancouver, Canada, April 2004).

⁹⁵ L. Knuth, (2005); *Legal and Institutional Aspects of Urban, Peri-Urban Forestry and Greening*, FAO at p. 4

⁹⁶ Article 1 of the UN Convention on Biological Diversity (CBD), 1992

⁹⁷ Loc cit (note 88) at p. 9

With this Convention state parties are urged to develop and maintain necessary legislation or other regulatory mechanism for protection of threatened species and population.⁹⁸ The regulatory mechanism that state parties are obliged to use includes incentives for the conservation and sustainable use of biological diversity and environmental impact assessment (EIA) to minimize adverse impact of the proposed projects to variability of organisms, forests inclusive.⁹⁹ Therefore through regulatory mechanism deforestation shall be combated and natural resources conserved. Tanzania ratified the Convention in March, 1996.¹⁰⁰ Therefore being a party to this Convention Tanzania is bound by the obligations provided for in the Convention including combating deforestation.

3.5 United Nations Convention to Combat Desertification (UNCCD), 1994

The United Nations Convention to Combat Desertification (UNCCD) is the legally binding output of 1992 earth summit on sustainable development formed in 1994. The Convention acknowledges the impact of desertification on arid and semi-arid and dry sub-humid zones. Its aim is to combat desertification and mitigate the effects of drought in countries experiencing serious desertification including Africa.¹⁰¹

From Article 1 of the Convention “desertification” means the reduction and loss of the biological or economic productivity and complexity of forests and woodlands resulting from human activities and variation of climate. Some of human activities which cause desertification include land use processes and habitation patterns such as soil erosion and loss of natural vegetation. These processes are caused by unsustainable management of forests due to industrialization, urbanization increase which raise increase of forestland and produce, thus deforestation.

⁹⁸ M. Bowman and C. Redgwell, (1996); *International Law and the Conservation of Biological Diversity*, Kluwer Law International press, London at p. 75

⁹⁹ Loc cit (note 90) Article 8, 11 and 14

¹⁰⁰ D. M. Pallangyo, (2007); *Environmental Law in Tanzania: How far have we Gone?*, *Law Environmental and Development Journal*, (2007) p.29

¹⁰¹ Article 2 UN Convention to Combat Desertification (UNCCD), 1994

The parties to the Convention are argued to establish practical measures to conserve natural resources by ensuring integrated and sustainable management of natural resources including agricultural and pastoral land, vegetations cover and wildlife, forests and biological diversity.¹⁰² Combating deforestation is relevant to these measures of fighting desertification.

Moreover the parties to the Convention, Africa in particular are obliged to take measures to improve institutional organization by defining the roles of central government and local authorities within the framework of land use planning and adjusting its regulatory framework of natural resources management.¹⁰³ Tanzania is a party to this Convention through ratification dated April, 1997 therefore bound by its obligations.¹⁰⁴

Likewise At regional level there is an instrument which is relevant to the conservation and management of natural resources by combating deforestation, viz; African Convention for Conservation of Nature and Natural Resources. At sub-regional level Treaty for Establishment of East Africa Community and The Treaty of South African Development Community are of crucial importance in conservation and management of natural resources by combating deforestation.

3.6 African Convention for Conservation of Nature and Natural Resources (ACCNNR), 2003

This is the extensively and detailed convention on conservation and management of natural resources in Africa. It was adopted in 1968 in Algiers Algeria, entered into force in 1969 and was revised and adopted on 11th July, 2003 at the Summit of the African Union held at Maputo, Mozambique.¹⁰⁵

¹⁰² Loc cit (note 101) Article 8 of annex I (Africa)

¹⁰³ Op cit (note 95) Article 8 of Annex I (Africa)

¹⁰⁴ D. M. Pallangyo (2007); Environmental Law in Tanzania: How far have we Gone?, Law *Environmental and Development Journal*, (2007) p.29

¹⁰⁵ <http://www.unep.ch/regionalseas/afr.htm> accessed on 23/11/2011 at 2000hrs

The 2003 revised Convention retains the outline and structure of its predecessor, Algiers Convention.¹⁰⁶ This is reflected in the preamble that the convention is the result of a process of amendment of the original convention.

One of objectives of the Convention as provided under article 2 is to enhance environment protection and foster the conservation and sustainable use of natural resources. Natural resources are defined as renewable resources, tangible and non-tangible including flora and fauna and non renewable resources.¹⁰⁷ Therefore forests are natural resources in which the parties are obliged to enhance protection, conserve and manage its use in their jurisdiction. This makes the convention relevant to this study.

The fundamental obligation of the parties is to adopt and implement measures necessary to achieve the objectives of the convention in particular preventive measures and application of precautionary principle.¹⁰⁸ The measures include adoption of plans for conservation, utilization and management of forests, woodland, wetlands and other areas with vegetation cover.¹⁰⁹

The parties to this Convention are further obliged take measures to control fire, forests exploitation, land clearing for cultivation, grazing and invasive species, establish forest reserves and establish forest grazing to season and intensities that will prevent forest regeneration. For the parties who are not party to the 2003 Convention, they are bound to adopt the same measures under the 1968 Convention.¹¹⁰

¹⁰⁶ Achim Steimer, (2006); *An introduction to the African Convention on the Conservation of Nature and Natural Resources*, 2nd Ed, IUCN, Gland – Switzerland at p. 8

¹⁰⁷ Article 5 (1) of the African Convention on Conservation of Nature and Natural Resources, 1968

¹⁰⁸ Loc cit (note 101) Article 4

¹⁰⁹ Ibid article 8

¹¹⁰ Ibid Article 6

Tanzania ratified the 1968 Convention in 1974 and signed 2003 Convention on 15/11/2003 but never ratified it.¹¹¹ As the 1968 Convention has the same obligations regards natural resources as that in 2003 revised Convention, Tanzania is obliged to adopt measures on conservation of natural resources combating deforestation inclusive.

3.7 The Treaty for Establishment of East Africa Community (EAC), 1999

The East African Community (EAC) is the sub-regional intergovernmental organisation of the Republics of Kenya, Uganda, the United Republic of Tanzania, Republic of Rwanda and Republic of Burundi with its headquarters in Arusha, Tanzania.¹¹² The Treaty was signed in November 1999 and entered into force in July 2000 with the original three Partner States – Kenya, Uganda and Tanzania. The Republic of Rwanda and the Republic of Burundi acceded to the EAC Treaty in 2007 making the total number of members being five.¹¹³

The EAC aims at widening and deepening co-operation among the Partner States in, among others, political, economic and social fields for their mutual benefit where partner states agreed to ensure the promotion of sustainable utilization of natural resources and taking effective measures to protect natural environment.¹¹⁴

Under the treaty the partner states are obliged to take joint measures for efficient management and sustainable utilization of natural resources within the community for the mutual benefits of the partner states.¹¹⁵ In particular the partner states are obliged to take measures to conserve natural resources, management of natural resources for the conservation of ecosystem, an arrest of environmental degradation.

¹¹¹ The “African Convention” available at www.lead.or.tz/.../2.2.african.convention.php accessed on 08/09/2012 at 05.00hrs

¹¹² The EAC; Introduction, available at <http://www.eac.int/index.php/about-eac.html> accessed on 22/03/2012 at 2200hrs

¹¹³ Ibid

¹¹⁴ Article 5 of the treaty for Establishment of East Africa Community, 1999

¹¹⁵ Ibid Article 114

Development of guidelines and common regulations for the conservation of shared ecosystems is another obligation of the partner states.¹¹⁶ Forests being one of the natural resources are relevant for conservation and management under the treaty. Therefore partner states including Tanzania are obliged to conserve forests as natural resources by combating deforestation.

3.8 The Treaty of South African Development Community (SADC), 1992

The Southern African Development Community was formed in 1992 at the summit of heads of state and governments held at Windhoek, Namibia by signing a treaty and declaration.¹¹⁷ SADC is a successor of Southern African Development Coordination Conference (SADCC) formed in 1980. The objective of the former was political liberation of South Africa, while the later aims at among other things economic integration among member states.

Other objectives of SADC include achievement of sustainable utilization of natural resources and effective protection of environment.¹¹⁸ To achieve this objective parties are obliged to develop and harmonize policies and strategies for the management of trans-boundary natural resources, environment and biodiversity conservation. However this objective has never been effectively implemented regardless of several initiatives due to state parties' imbalances in law and policy on lands, organisational roles of state and responsibilities of key actors such as Non-governmental organisations and donors.¹¹⁹

¹¹⁶ Article 114 of the Treaty for Establishment of EAC, 1999

¹¹⁷ About SADC available at <http://www.sadc.int/English/about-sadc> accesses on 26/05/2012 at 0230hrs

¹¹⁸ Article 5 of the Treaty of South African Development Community, 1992

¹¹⁹ Y. Katerere, R. Hill, and S. Moyo (2001); *A Critique of Transboundary Natural Resource Management in Southern Africa*, Paper no.1, IUCN-ROSA Series on Transboundary Natural Resource Management.

Also parties are obliged to set up institutional arrangements to facilitate mechanism for sustainable management of forests.¹²⁰ From the provisions of SADC treaty it is implied that its objective include conservation of natural resources, forests inclusive.

As far as non-legally binding agreements, they includes but not limited to the following, viz;

3.9 Agenda 21, Chapter 11 “Combating Deforestation”

Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations system, governments and major groups in every area in which human activities impact on the environment adopted by the United Nations Conference on Environment and development. The plan has four sections and 32 chapters all addressing various environmental matters, chapter 11 being of much interest to this study.

Chapter 11 of the agenda 21 titled combating deforestation is divided into part A and B. Part A provides that there are weaknesses in policies, methods and mechanisms adopted to support and develop multiple roles and functions of all types of forests, forest lands and woodlands. Therefore effective measures and approaches are required at the national level to improve and harmonize policy formulation and legislative measures and instruments.

Part B of chapter 11 insists on enhancing the protection, sustainable management and conservation of all forests and the greening of degraded areas through forest rehabilitation, afforestation, reforestation and other rehabilitative means. Under this part governments are urged to recognize the importance of categorizing forests within the framework of long-term forest conservation and management policies, into different forest types and setting up sustainable units with a view of securing the conservation of forests. Therefore the plan is relevant to the natural resources conservation and management by combating deforestation.

¹²⁰Loc cit (note 118) Article 5

Although agenda 21 is not a legal binding document, the adoption of the text carries with it a strong moral obligation to ensure its full implementation.¹²¹ It reflects a global consensus and political commitment at the highest level on development and environmental cooperation.¹²² Tanzania being one of Nations adopted Agenda 21 it has been reporting its implementation to the United Nations.¹²³

3.10 Rio's "forest principles" 1992

This is a declaration containing non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests adopted by the United Nations Conference on Environment and Development. In its preamble the guiding objective is to contribute to the management, conservation and sustainable development of forests and to provide for their multiple and complementary functions and uses.

The principles of the "forest principles" includes protection of forests against harmful effects such as fire, pollution and pests to maintain their multiple values such as wood and wood products, water, food, medicine, employment, carbon sinks and reservoirs and for other forest products.¹²⁴

Moreover parties had consensus that national legislation for management, conservation and sustainable development of forests should include unique forests such as natural forests, cultural, spiritual, historical, religious forests of national importance and further agreed that forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies.¹²⁵

¹²¹ S. Bucknum (1998); The U.S.A Commitment to Agenda 21:Chapter 11 Combating Deforestation-The Ecosystem Management Approach, *Duke Environmental Law and Policy Forum*, Vol. 8.305 at p. 305

¹²² Ibid at p. 306

¹²³ United Nations, 2002 Country Profile Series - United Republic of Tanzania, at p. 25 available at <http://www.un.org/esa/agenda21/natinfo>. accessed on 10/09/2012 at 20.00hrs

¹²⁴ Principle 2 of the Rio's Principles

¹²⁵ Loc Cit (note 118) Principle 8 (f) and 13 (d) respectively

Thus all principles are in favour of conservation and management natural resources forests in particular.

Like agenda 21 “forest principles” are not legally binding due to the disagreement between the developing and developed countries on the inclusion of an enforceable commitment.¹²⁶ While Developed Countries argues in favour of binding commitment the Developing Countries argue against on the ground that binding forests principles will hinder their development as their technology depends much on forests products. However the principles have been very influential to states policies and plans on forests including Tanzania and they form a basis of further negotiation by States towards a binding agreement.¹²⁷

3.11 General principles on natural resources conservation

In examining the international, regional and sub-regional binding instruments and non-binding agreements there are set up principles focusing on the conservation and management of natural resources. The principles intend to guide policy on conservation of natural resources and also shape legislation of state parties to the instruments.¹²⁸ The principles are prevention principle, precautionary, sustainable development and protection and conservation principles.

3.11.1 Prevention

It is frequently impossible to remedy environmental injury that is to say the extinction of a species of flora and fauna. Even when harm is remediable the costs of rehabilitation are often prohibitive. Thus scientific expertise and experience demonstrate that prevention is a golden rule of environmental conservation for both ecological and economic reasons.

¹²⁶ S. Bucknum (1998); The U.S.A Commitment to Agenda 21:Chapter 11 Combating Deforestation-The Ecosystem Management Approach, *Duke Environmental Law and Policy Forum*, Vol. 8.305 at p. 308

¹²⁷ Forest Principles available at www.un.org/.../ga/.../aconf15126-3annex3.htm accessed on 10/09/2012 at 2113hrs

¹²⁸ A. Kiss and D. Shelton Loc cit (note 5) at p. 113

The preventive principle gives rise to a multiple of legal mechanisms including environment impact assessment (EIA), licensing or authorization that set out the conditions of operation and the consequences for the violation of the consequences, for example article 8 of CITES in case of violation suggests cancellation of permits and confiscation or return to the state of export of such species.

The preventive approach further requires each state to act reasonably and in good faith to regulate public and private activities in their jurisdiction or control that is possibly harmful to any part of environment.¹²⁹ That is to say large farming or projects which are likely to destruct flora and biodiversity, EIA is mandatory before its execution.

The concept of prevention is linked to the notion of deterrence and the idea that disincentives such as penalties and civil liabilities will cause actors to take greater care in their behaviour to avoid the increase of costs, thus conserve natural resources.

3.11.2 Precautionary principle

The principle of precaution is the most important provision which appears in many 1990's international and regional instruments related to natural resources protection.¹³⁰ Under this principle state parties to international and regional instruments are obliged in their environmental measures to anticipate, prevent and attach the causes of environmental degradation, deforestation inclusive.¹³¹ In European Union the principle is used as a tool of risk management which is a part of risk analysis framework rather than a guide to implementation. It is temporary measure pending further scientific information.¹³²

¹²⁹ Rio principles 17, Chapter 22 of Agenda 21, article 8(h) of Forest Principles, article 14 (1)(a) and (b) of CBD, article 4 of the ACCNNR

¹³⁰ UFCCC article 4(1)(f); CBD preamble; ACCNNR article 4

¹³¹ A. Kiss and D. Shelton Loc cit (note 5) at p. 113

¹³² Ibid

Generally the principle intends the prevention of natural resources harm basing on probabilities or contingencies but cannot involve eliminating all claimed risks. It applies where the consequences of non action is serious.¹³³

3.11.3 Sustainable development

This principle originates from the 1987 Report of the World Commission on Environment and Development titled “Our Common Future” and it became the main theme of the 1992 Rio Conference.¹³⁴ The Commission defined sustainable development in the report to mean development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It identified the critical objectives of sustainable development to include reviving growth but changing its quality and conserving and enhancing the resource base.¹³⁵

The principle of sustainable development requires states to integrate the conservation and management of natural resources to development plans so as to promote sustainable development. And this can be implemented by monitoring impact of development activities and projects upon natural resources.¹³⁶

3.11.4 Protection and conservation

The terms protection and conservation may mean the same but they are not similar. The term protection in one hand is defined in the American Heritage Dictionary to mean keep from being damaged, attached, stolen or injured.¹³⁷ It also means to guard. Therefore in regard to natural resources protection means abstaining from harmful activities and taking affirmative measures to ensure that natural resources deteriorations do not occur.¹³⁸

¹³³ A. Kiss and D. Shelton Loc cit (note 5) at p. 113

¹³⁴ Ibid

¹³⁵ Part I (2) of the WCED Report; Our Common Future available at <http://www.un-documents.net/wced-ocf.htm> accessed on 04/11/2012 at 1600hrs

¹³⁶ Loc cit (note 95) article 15

¹³⁷ Loc cit (note 127) at p. 121

¹³⁸ Ibid

Conservation in another hand when used in relation to species of flora and fauna means status quo, mainly demanding maintenance of the condition necessary for continued resource existence.¹³⁹ In recent text the term conservation is replaced by sustainable development assuring the on-going productivity of exploitable natural resources and conserving all species of flora and fauna.¹⁴⁰ The same concerns are evident in various International Conventions aimed at protecting living species flora and fauna inclusive which are threatened with extinction by human activities.

3.12 International Instruments Compliance System

Various international, regional, sub-regional binding instruments and non-binding documents are mostly managed through reporting system as a supervisory technique. This supervisory technique obliges state parties to address periodic reports to an organ established or designated by the convention or treaty, indicating the implanting measures they have taken.¹⁴¹ For example the Commission on Sustainable Development established in UNCED examines the progress in implementing the agenda 21 by reviewing periodic state reports along with information provided for by non-governmental organizations.¹⁴²

In most of international instruments on conservation and management of natural resources parties are required to report certain information to the international organization designated by the instrument, for example Convention on Biological Diversity, article 26 requires Parties to report on measures taken for implementation of convention objectives; report on reduction of green house gases is an obligation of Parties under article 12 of UNFCCC and reports on national measures to halt trade in endangered species is provided in article VII of CITES. The interval of reporting is to be determined by the Conference of the Parties.

¹³⁹ A. Kiss and D. Shelton Loc cit (note 5) p 121

¹⁴⁰ Ibid

¹⁴¹ Ibid p. 164

¹⁴² Ibid

Moreover in regional instruments the reporting is of very importance. Under the African Convention on the Nature and Natural Resources State Parties are obliged to supply the secretariat with report on text of laws, decrees, regulations and instructions in relation to the convention and information on bilateral or multilateral agreements relating to the environment and natural resources to which they are parties on the intervals to be determined by the Conference of the Parties.¹⁴³

Reporting system is both psychological and political, that is the states mostly seek to maintain their reputation by mitigating environmental damages that could result into condemnation or criticism during review of reports.¹⁴⁴ It serves to determine compliance and effectiveness of instruments implementation focusing on the objectives of such instruments. However the most difficulties experienced is non compliance to the schedule of reporting by some state parties to international, regional and sub-regional agreements.

3.12 Conclusion

Other than the Rio's "forest principles" and agenda 21, chapter 11 "combating deforestation" which directly addresses the problem of deforestation, Conventions and treaties also do impliedly. From the conventions and treaties the principles for conservation and management of natural resources are extracted. The principles include; prevention principle which advocates EIA; precautionary principle; sustainable development principle and protection and conservation principle. Generally international instruments and conventions address the problem of deforestation by internationally promoting the natural resources conservations.

¹⁴³ Article 29 of the ACNNR, 2003

¹⁴⁴ Nadine Perraut and Erica Hall; *Assessing Compliance of National Legislation with International Human rights Norms and Standards*, UNICEF, November 2008 at p. 15

CHAPTER FOUR

TANZANIA LEGAL FRAMEWORK ON COMBATING DEFORESTATION

4.1 Introduction

Tanzania has about 33.5 million hectares of forests and woodland. These forests are found in forest reserves amounting 12.5 million hectares, forests and woodland in national parks about 2 million hectares and non reserved forests land 19 million hectares.¹⁴⁵ Out of all forests two third of forests are in non reserved forests land which lack proper management. They are subjected to deforestation due to expansion of agriculture, livestock grazing, fires, logging, commercial charcoal production and other human activities. Forests under non reserved forests land includes forests areas managed and owned by village communities and private individuals.¹⁴⁶ Likewise the forests under reserved land and national parks like forests in non-reserved forests land are subjected to deforestation.¹⁴⁷

Tanzania being a party to international conventions and agreements is obliged to establish and implement legal framework on conservation and management of natural resources by combating deforestation which is the current major problem facing forests. Sub-regional cooperation instruments such as EAC and SADC treaty in which Tanzania is a party to, implies forests conservation.

The literature review has shown that many of the causes of deforestation emanates from various sectors such as agriculture, land use, minerals, energy and livestock. Thus the legal framework need to combat deforestation by addressing these multi-sector causes of deforestation hence conserve natural resources and ecosystem available in forests.

¹⁴⁵ TASONABI (2001); Forest Landscape Restoration: Tanzania Country Report at p. 3

¹⁴⁶ Ibid

¹⁴⁷ N. F. Madulu Loc cit (note 35) at 16

4.2 Legislations on Combating Deforestation

Tanzania has at the highest level committed herself to the conservation of countries natural resources. The commitment is shown in the Constitution of the United Republic of Tanzania which makes a clear link between protection of natural resources and the well being of citizens of the country.¹⁴⁸ Under the Constitution, every person is called upon to ensure that the natural resources of the country are managed properly.¹⁴⁹ The article states the following;-

*“27 (1) every person has the duty to protect the natural resources of the United Republic, the property of the state authority, all property collectively owned by the people and also to respect another person’s property.
(2)....”*

Moreover the Constitution requires the government to ensure the national resources are harnessed, preserved, and applied toward the common good.¹⁵⁰ This article portrays the government commitment to ensure sustainable development.¹⁵¹

Taking into consideration the multi –sector causes of deforestations Tanzania through the parliament has enacted laws to cover general aspects of natural resources conservations and specific aspects for a particular sector such as forests and agriculture. The laws enacted also establish institutions which manage forest natural resources.

Tanzania laws that provide for natural resources conservation and management may be grouped into four main categories; natural resources conservation laws, land use laws, pollution related legislations and overall environmental management legislations.¹⁵² This study addresses mostly the first. Others are the second and the fourth category of legislation which deals with over all environmental management.

¹⁴⁸ Daniel M. Pallangyo; Environmental Law in Tanzania: How far have we Gone?, *Law Environmental and Development Journal*, (2007) 3/1

¹⁴⁹ Article 27 (1) of the Constitution of the United Republic of Tanzania of 1977, Cap 2 R.E 2002, Government Printers, Dar es Salaam, Tanzania.

¹⁵⁰ Ibid article 9

¹⁵¹ Op cit (note 148) at p. 30

¹⁵² Ibid

4.2.1 The Forest Act, Act No 10 f 2002

The Forest Act is a comprehensive regulatory instrument for the forests.¹⁵³ The legislation enumerates several objectives pertaining to sustainable management and conservation of forests. Of interest are to promote and enhance the sustainable development of Tanzania by conservation and management of natural resources for the benefit of present and future generations; and to ensure ecosystem stability through conservation of forests biodiversity, water catchments and soil fertility.¹⁵⁴

A national committee is established to advise the minister on aspects relating to the management of forests reserves and declaration of forest reserves. The Act classifies forests under different categories, namely; national forest reserves, local authority forests reserves for village forests, private forests and community forests reserves.¹⁵⁵ National and local government authorities reserved forests may be used for sustainable production of timber forests products, to protect watersheds and wild plants protect biodiversity and genetic resources. The objective of forests under this category demonstrates the clear equilibrium of environmental and economical imperatives. These forests can be accessed for use by licenses and permits which are issued subject to condition and management plans of the reserve.¹⁵⁶

The Act introduces participatory forest management through joint forest management (JFM) and community based forest management (CBFM) in managing central and local forest reserves. JFM is based on the authority of national and Local Government Authorities (LGA) to share management rights and responsibilities and share costs and benefits. This is done through JFM agreements which finalize the contractual relationship between central government and local community.¹⁵⁷

¹⁵³ The Forest Act, Act No. 10 of 2002

¹⁵⁴ Ibid Section 3

¹⁵⁵ Ibid Section 4

¹⁵⁶ Ibid Section 49 and 51

¹⁵⁷ Ibid Part III

Access to village forest land is controlled by village regulations on the harvesting of wood fuels and other forest products. To enhance the conservation of village and private forests, the Act authorizes village governments to enact by-laws for conservation as permitted by Local Government Acts.¹⁵⁸ The procedure of making by-laws on forest aspects by local authorities under section 31 and 37 requires submission of by-law proposals to the Director of Forestry; this procedure contradicts with general procedures of making by-laws under the local government Acts. The procedure under local government Acts requires district or urban authority by-laws to be channelled to the Minister responsible for local government authorities and the villages through local authority council meetings before becoming operational.¹⁵⁹

Furthermore the Act provides for EIA for the proposed development activities in forest reserves. Section 8 of the Act imposes obligation to undertake EIA for any development projects in natural forest reserves, private forest reserves or in environmentally sensitive forest areas including watershed. Such activities include commercial logging, mining developments and agricultural development on an area exceeding five hectares.

The Act does not completely prohibit the use of forest produce rather it allows the sustainable use thereof through permits and licenses. The permits are provided on payment of fees under the Regulations made under the forests Act.¹⁶⁰ The regulations provides for the procedures and conditions for application of permits and licenses and also provide for fees payable to the government on harvest and transportation of forest produces. But where there is non-compliance of such conditions and management plans the permits and licenses may be revoked or suspended pending compliance by the permit or license holder.¹⁶¹

¹⁵⁸Loc cit (note 147) Section 31 and 37

¹⁵⁹ Section 163 of Chapter 287 R.E 2002

¹⁶⁰Ibid Section 77

¹⁶¹Loc cit (note 123) Section 49 and 51

The permit holder may be required to pay compensation to make good losses or damages caused by his breach of conditions and management plan or his properties may be confiscated as part of rectifying the breach.¹⁶²

The Act creates criminal offences for breaches and violations of which fines are imposed or imprisonment.¹⁶³ For example entering in the forest reserve without permit or doing any act contrary to the provisions of the Act attracts fines not less than thirty thousand and not exceeding one million Tanzania shillings. Setting fire to the forest reserve where person is guilty of offence and is liable the penalty is imprisonment for fourteen years there s no alternative of fine.¹⁶⁴

4.2.2 The Land Act and Village Land Act

The land Act, no. 4/1999 and Village Land Act, Act No. 5/1999 were enacted by Tanzania parliament in 1999 and came into force on 1st May, 2001.¹⁶⁵ Both Acts provides for land tenure in Tanzania. The former applies to land other than village land and the later to the Village land. Village land is defined in section 2 of the land Act and village land Act respectively to mean the land declared to be the village land under the acts and includes any transfer land transferred to the village. Section 7 of the village land Act clarifies that village land is all the land within the boundaries of the village save for reserved land by authorities other than the village.

Land tenures are fundamental to the sustainable utilization of land resources, forest inclusive. Security of tenure and resources influences the level of investment on land and conservation of land based natural resources, thus natural resources conservation and management depends on land tenure.

¹⁶² Part X of the Forest Act, 2002

¹⁶³ Op cit (note 141) Part XI

¹⁶⁴ Section 321 of the Penal Code, Cap 16 of the Laws of Tanzania

¹⁶⁵ Liz A. Wile (2003) *Community-Based Land Tenure Management: Questions and Answers about Tanzania's New Village Land Act, 1999*, International Institute for Environment and Development, Available at <http://pubs.iied.org/pdfs/9295IIED.pdf>, accessed on 15 April 2012.

All land in Tanzania is a public land vested to the President as a trustee of land for present and future generations.¹⁶⁶ The commissioner of lands acts on behalf of the President to administer land.¹⁶⁷ Granted right of occupancy is the main form of tenure which is acquired through grant by Commissioner of lands and other forms of land tenure are customary right of occupancy and derivative right of occupancy.

The Land Act and the village Land Act provide the legal framework for the three categories of public land, namely; General land, reserved land and village land.¹⁶⁸ General land is a residual category which is unoccupied therefore available for other purposes. It includes all the land that is not reserved or village land. Reserved land denotes all land set aside for special purposes including forests reserves, game parks, game reserves and hazardous land. Village land constitutes all the land within the village boundaries.

The authority to demarcate and register village land lies with the commissioner for lands who issues certificate of village land. Most of the villages in Tanzania have been demarcated and registered. The large area of land in villages falls under general land and communal village land available for occupation and use to all community and public.¹⁶⁹

Therefore since there is no security in general land and communal village land the over exploitation of resources available therein forests in particular is obvious, thus deforestation. This insecurity cause deterioration of natural resources found therein as its control is not firm.¹⁷⁰ The lack of sustainable management of forests in this land makes the conservation and management of natural resources by combating deforestation very hard as no one is responsible to the protection of these areas.

¹⁶⁶ Section 4 of the Land Act, Cap 113 R.E 2002

¹⁶⁷ Ibid Part IV

¹⁶⁸ Ibid Section 4

¹⁶⁹ Section 7 of the Village Land Act

¹⁷⁰ MNRT; National Framework for REDD, September 2009 at p. 6.

4.2.3 The Land-Use Planning Act

The Land Use Planning Act was enacted in 2007 to provide procedures for the preparation, administration and enforcement of land use plans to administer land competing uses in Tanzania.¹⁷¹ It repeals the 1984 Land Planning Commission Act. The Act establishes the multi ministerial National Land Use Planning Commission with representatives of the ministries of lands and human settlement; agriculture and livestock; economic planning and development; environment, natural resources, fisheries, tourism and water.¹⁷² The Commission has the overall responsibility for land use plans in Tanzania.

All villages, districts and regions are required to have land use plans, which are registered with the Commission. The Land-Use Planning Act requires the designation of zones for cropland, rangeland, forest land, water sources, fisheries, farming, industry, and workshop land.¹⁷³ The plans apart from being approved by the commission and other relevant authorities depending on the type of land use they are enforced through by-laws made by villages.

Village and district councils are designated as planning authorities.¹⁷⁴ The law is therefore based on a bottom-up approach in decision making rather than the top-down approach allowing local communities to determine how their land should be utilized. Although this approach is commended, it should be noted that experience with the former Land Planning Commission Act of 1984 shows that preparation of land use plans is quite time- and money-consuming, which may be a challenge in funding constrained areas.¹⁷⁵

¹⁷¹ The Land use Planning Act, Act No. 6/2007

¹⁷² Ibid Section 6(1)

¹⁷³ Ibid Section 28 (1)

¹⁷⁴ Ibid Section 18 (1)

¹⁷⁵ FAO, (2009); *Case Studies on Bioenergy Policy and Law: Option for Sustainability*, Rome at p.

Designation of zones under this Act is of value to the conservation of natural resources as it regulates various human activities such as agriculture, grazing, settlements and other human activities that if not regulated affects natural resources, forests inclusive.

4.2.4 The Wildlife Conservation Acts

The wildlife protected areas in Tanzania are governed by three legislations. These are the Wildlife Conservation Act, Ngorongoro Conservation Area Act and Tanzania National Park Act.¹⁷⁶

The Wildlife Conservation Act, No. 5 of 2009 was enacted by the parliament of the United Republic of Tanzania in 2009 to provide for conservation, management, protection and sustainable utilization of wildlife and wild products.

The main objective of the Act is to protect and conserve wildlife resources and its habitats in game reserves, wetland reserves, game controlled areas and wildlife management areas by putting in a place appropriate infrastructure, sufficient personnel and equipments.¹⁷⁷ Wildlife is defined under the Act to mean any wild and indigenous animals and plants and their constituent habitats and ecosystem found on land.¹⁷⁸ Therefore the objective of the Wildlife Conservation Act implies among other things the conservation of natural resources by combating deforestation.

The Wildlife Conservation Act protects vegetations in game reserves and wetland reserves against fire, fell or cut or any remove and prohibits the grazing of livestock.¹⁷⁹ These activities are allowed on obtaining a written permit or license. Cultivation of crops and mining activities are also not allowed in reserves or controlled areas.¹⁸⁰

¹⁷⁶ Wildlife Conservation Act, No. 5 of 2009; Ngorongoro Conservation Area Act, Cap 284; Tanzania National Park Act, Cap 282

¹⁷⁷ Section 5 of the Wildlife Conservation Act, Act No. 5 of 2009

¹⁷⁸ Ibid Section 3

¹⁷⁹ Section 18 of WCA

¹⁸⁰ Section 20 and 21 of Wildlife Conservation Act

However where the prospecting or mining activities are of oil, gas or uranium they are allowed on the condition that EIA must be conducted according to EMA, payment of protection and concession fees. And that such undertaking must be undertaken by the government.¹⁸¹

The Wildlife Conservation Act requires all activities conducted in wildlife management areas to be in conformity with the Forests Act and EMA.¹⁸² Moreover EIA is mandatory requirement for every physical development in wildlife protected areas and wildlife management and related areas.¹⁸³ The developments include mining, road construction and pipeline laying and dam constructions, power stations and telecommunication installations. This shows where there is oil, gas and uranium in reserved areas, wildlife is the second on importance and value.

The Ngorongoro Conservation Area Act makes provision for the conservation and management of natural resources in the Ngorongoro Crater Highland areas.¹⁸⁴ Since there exist resources which have a bearing on combating deforestation activities in the Ngorongoro, then the call for the conservation of natural resources in this area also includes the wise use and management of forest coverage.

The National Parks Act provides for the establishment, management and control of national parks. As is the case with the Forest Act, all forest resources located in National Parks are conserved and managed under the National Parks Act by the Tanzania National Parks Authority (TANAPA).¹⁸⁵ In national parks, there is total conservation of natural resources found therein because there is no consumptive utilization of the resources, including those found in forest.

¹⁸¹ Loc cit (note 180)

¹⁸² Ibid Section 31

¹⁸³ Ibid Section 35

¹⁸⁴ LEAT, (2010); Legal and Institutional Framework Review in the Context of REDD Intervention, University of Dar es salaam, Tanzania at p. 50

¹⁸⁵ LEAT, Loc cit (note 142)

The National Parks Regulations of 1970, which were promulgated under section 18 of the National Parks Act, facilitate more effective management of National Parks and consequently the forest resources found in them.¹⁸⁶

Prohibition and restriction of access to reserved areas implies combating deforestation and therefore conserve natural resources and make their utilization sustainable. However there are some population leaving in these who are using these natural resources for energy and building materials.

4.2.5 The Local Government Authorities Acts

The local government authorities Acts specifically Local Government (District Authorities) Act, Local Government (Urban Authorities) Act and Local Government Finance Act gives authority to local governments to regulate matters traditionally of local nature.¹⁸⁷

The Local Government (District Authorities) Act regulates the activities of district and village councils. Through the Act the District and Village councils have among other powers the power to control and improve agriculture in the areas of their jurisdiction.¹⁸⁸

The Act stipulates the general functions and duties vested in the Authorities, provides for some of the powers that may be exercised in managing deforestation related activities.¹⁸⁹ This can be inferred from the powers to: take all necessary measures for the prevention of soil erosion and the protection of crops; regulate the use of agricultural land; and establish, preserve, maintain and improve the use of forests and forest produce.

¹⁸⁶ LEAT, Loc cit (note 142) at p. 23

¹⁸⁷ Local Government (District Authorities) Act, Cap. 287 R.E 2002; Local Government (Urban Authorities) Act, Cap 288 R.E 2002 and the Local Government Finance Act, cap 290 R.E 2002

¹⁸⁸ Section 116 of the Local Government (District Authorities) Act, Cap 287 R.E 2002

¹⁸⁹ Ibid Section 122

The Local Government (Urban Authorities) Act, 1982 applies to urban authorities these are;- city, municipal and town councils. Like the Local Government (District Authorities) Act, this Act also empowers urban Authorities to take necessary measures to protect and enhance protection of environment.¹⁹⁰ From this function combating deforestation may be inferred to be one of the measures to protect environment.

The Local Government Finances Act provides for sources of revenue and management of funds and resources of the local authorities. Through this Act LGA may impose charges, fees and levies in regards to various sources available in the LGA jurisdiction including forests.¹⁹¹ For purpose of increasing the revenue the LGA is likely prioritize the harvesting of forests produce to the conservation of the same, thus encouraging deforestation.

In implementing the LGA functions the authorities may make by-laws on conservation of natural resources, combating certain activities such as deforestation. Generally the authorities have powers to regulate agriculture activities however the contents of the bylaw-s may differ from one local authority to another. In Handeni District Council has made by-laws in respects of natural resources, these are “*Sheria Ndogo za Upandaji Miti na Kuhifadhi Misitu za Halmashauri ya wilaya ya Handeni, 1998*” (GN No. 180 of 1/10/1999, Handeni District Council (Forest Produce cess) By laws, 1998 (GN No. 281) of 1/10/1999. The former by-laws provide among other things the regulation of agricultural activities in relation to forests and the later for fees and charges payable on forests produces.

Most of the by-laws focus on revenue collection for the local government authorities except for the few by-laws which focus on combating activities which are likely to affect natural resources.

¹⁹⁰ Section 60 (1) (d) of the Local Government (Urban Authorities) Act, Cap 288 R.E 2002

¹⁹¹ Section 6, 7, 8 and 9 of the Local Government Finances Act, Cap 290 R.E 2002

Moreover the by-laws violations creates criminal offences and the local government authorities do not have powers to prosecute such offences thus fails to criminally prosecute offenders.

4.2.6 The Environment Management Act (EMA)

The EMA was enacted by the National Assembly in 2004 and entered into force in 2005.¹⁹² The Act repealed and replaced the National Environment Management Act, 1983, Act No. 19/1983. The Act forms the pivot of legal framework as it governs environmental aspects, forests inclusive in Tanzania. EMA provides for legal and institutional framework for sustainable management of environments by outlining principles for management environmental quality standards, compliance and enforcement and the basis for implementation of international instruments on environments.¹⁹³

Though the Act repealed National Environment Management Act (NEMA) of 1983, it provides for continued existence of NEMC and National Environmental Regulatory Body (ERB) which oversees environmental units (EUs) at district and sector levels. The ERB and EU are responsible for screening projects and the review of EIA.¹⁹⁴

Local authorities have a great role to play as executive agencies in environmental aspects regulations but they are weak and coordination with central government is lacking. Local authorities and institutions dealing with natural resources, forest in particular have often very few resources including funds and staffs.¹⁹⁵

Under the Act there are several principles which directly or indirectly aim at combating deforestation therefore conserve and manage natural resources. These include protection principle through EIA and Sustainable development through the use of economic instruments.

¹⁹² Environmental Management Act, Act No. 20 of 2004

¹⁹³ Ibid Part II, X, XVI and XV respectively

¹⁹⁴ Loc cit (note 119) at p. 35

¹⁹⁵ Ibid

The Act requires EIA to be undertaken for all proposed activities that are likely to have significant adverse impacts on the environment.¹⁹⁶ The objective of the EIA is to allow maximization of long term benefits of development while maintaining the natural resource base. From its objective EIA seems to be broader as it seeks to protect the environment in the wide sense and not just natural resources.

The regulation made under EMA named the EIA and Audit regulations, 2005 provides detailed procedures for EIA processes. Of all details in the regulation, first schedule is of interest to natural resources conservation. The schedule lists projects which before its execution require mandatory EIA. The projects includes large scale agriculture, large scale livestock movements, timber logging and processing, commercial charcoal production, firewood and forest harvest operations, tobacco processing and rehabilitation and expansion of new truck roads.¹⁹⁷

From the projects which require mandatory EIA are the activities which have major causes of deforestation in Tanzania, therefore through this process deforestation can be combated. While the government through the slogan “*Kilimo Kwanza*” encourages mechanized commercial farming which mostly requires large area of cultivation, EMA restricts such expansion. These are two confliction focuses which need to be jointly harmonized.

4.3 Environmental Management Institutions

The Environmental Management Act places overall supervisory functions of environment aspects to the Vice Presidents office, Ministry of Environment by introducing several structure; these are the national Advisory Committee, the Directorate of Environment and NEMC. Local Government authorities are also given responsibilities on environmental management.¹⁹⁸

¹⁹⁶ Section 81 of EMA

¹⁹⁷ The EIA and Audit regulations, 2005

¹⁹⁸ B. Walmsley and K. E. Tshipala (2007); *Handbook on Environmental Assessment Legislation in the SADC Region*, Development Bank of Southern Africa and the Southern African Institute for Environmental Assessment. Midrand at p. 348 available at http://www.saiea.com/dbsa_book/citation.pdf accessed on 23/05/2012 at 2300hrs

The Minister of environment has the overall responsibilities for all matters relating to environment and for protection and sustainable management of resources available in the environments of Tanzania.¹⁹⁹ Moreover the Ministry of Natural Resource and Tourism specifically Tanzania Forests Services is responsible for protection and sustainable management of forests reserves.²⁰⁰

4.3.1 The National Environment Advisory Committee

The National Environmental Advisory Committee is established vide section 11 of EMA, Act No. 20 of 2004. This is an advisory body for the minister on all matters relating to the protection and management of the environmental degradation. The committee is composed of members with various expertises on environment from public and private sectors.²⁰¹

4.3.2 Directorate of Environment

Part III (c) of EMA sets out the roles and responsibilities for the directorate within the ministry. Among its responsibilities is to coordinates various environmental management activities by liaising with sector ministry relating to forests, land, agriculture, livestock, mining and many other ministries. Inter-sectoral link is achieved through the establishment of an environmental section in each line ministry, headed by a Sector Environmental Coordinator.²⁰²

Each Environmental Section is responsible for ensuring compliance by the line ministry with the EMA; ensuring all environmental matters contained in other laws falling under the jurisdiction of the sector Ministry are implemented and reported to the Directorate and liaising with NEMC on all environmental matters requiring EIA.²⁰³

¹⁹⁹ Loc cit (note 192)

²⁰⁰ Tanzania forest Services is a semi-autonomous government Executive agency established under the Executive Agencies Act, Cap 245 R.E 2009 to take some function of the division of forests and beekeeping in the MNRT

²⁰¹ Loc cit (note 177) at p. 348

²⁰² Section 32 and 33 of Environment Management Act, 2004

²⁰³ Ibid

Directorate also provide advice to the government on legislative and other measures for the management of environments or the implementation relevant to international agreements relating to environment. It also prepares state reports on environment.²⁰⁴

4.3.3 National Environment Management Council (NEMC)

NEMC is one of the environmental regulatory bodies promulgated by EMA. It is a corporate body with all the legal powers.²⁰⁵ Its objectives are to undertake the enforcement, compliance, review and monitoring of Environmental Impact; to facilitate public participation in environmental decision making; and to supervise and coordinate overall matters relating to environment.²⁰⁶

4.3.4 Local Government Authorities

The EMA aims to ensure that environmental management is devolved down to the regional, town, district and village levels of government through the creation of administrative structures responsible for the environment in each tier of government.²⁰⁷ The regional secretariats are responsible for the coordination of all advice on environmental management in their respective regions. The tasks of the Regional Secretariat are performed by the Regional Environmental Management Expert, who acts as the link person between the region and the Directorate of Environment.

The EMA specifies that each city, municipality, district, and town council must appoint an Environmental Management Committee and an Environmental Management Officer who will be responsible for the: enforcement of the EMA in his/her area of responsibility; promotion of environmental awareness regarding the conservation and utilization of natural resources; gathering and managing environmental information; preparing state of environment reports; and monitoring the preparation, review and approval of EIA.²⁰⁸

²⁰⁴ Loc cit (note 197) Section 15

²⁰⁵ Ibid Part III (d)

²⁰⁶ Ibid

²⁰⁷ Sect 33(1) of Environment Management Act, 2004

²⁰⁸ Ibid Section 36(1)

Most of local authorities are understaffed and lack expertise on environment and they lack facilities such transport therefore may not be realistic in the implementation of functions as stipulated by EMA.

The EMA also allows for the establishment of township, ward, village, *mtaa* and *kitongoji* development committees and officers to manage the natural resources of their areas and to ensure compliance with the EMA. However, these lower tier government committees do not have expertise in technical environmental aspects and have no any responsibility for the EIA process.

The Act further provides that where the provision of EMA conflicts or is inconsistency to other written laws on environmental matters the provision of EMA prevails to such inconsistency.²⁰⁹ This provision gives the EMA dominance over other legislations pertaining to environmental aspects.

4.3.5 Tanzania Forest Services

Tanzania Forest Services is a semi-autonomous government executive agency formed out of the Forestry and Beekeeping Division of the Ministry of Natural Resources and Tourism.²¹⁰ It has taken over some of the roles and functions of Forestry and Beekeeping Division and is responsible for the management of national forest reserves (natural and plantations), bee reserves and forest and bee resources on general lands. The agency is further responsible for enforcing forests and beekeeping legislation in areas of its jurisdiction and developing TFS human resources.²¹¹ By examining TFS responsibilities it is clear that it is established to enforce the Tanzania Forests Act and other legislation related to protection and management of forests sustainable use therefore combating deforestation.

²⁰⁹ Section 233 of the EMA

²¹⁰ TFS establishment was published under Government Notice 269 of 30th July, 2010

²¹¹ Tanzania Forest Services (TFS) available at

http://www.mnrt.go.tz/index.php?option=com_content&view=article&id=215:wakala-wa-huduma-za-misitu-tanzania&catid=60:agencies&Itemid=163 accessed on 13/09/2012 at 23.03hrs

4.4 Conclusion

Tanzania legislation, some above discussed ranging from specific and general legislation on forests conservation and management implies its relevance to combating deforestation. They directly and indirectly promote the conservation, management and sustainable utilization of natural resources, forests for the purpose of this study. However there are some critics resulting either from the contents of the legislation or the reality of its implementation.

CHAPTER FIVE

FINDINGS

5.1 Introduction

In this chapter the researcher presents information and data collected from various sources; the information were collected from library, Ministry of Natural Resources and Tourism, Bagamoyo-Pwani, Handeni-Tanga and some villages from both Tanga and Pwani on the legal framework on conservation and management of natural resources by combating deforestation; a critical analysis.

This chapter will codify, tabulate analyse and present data collected through interview and observation. Lastly the hypotheses of this study that combating deforestation is not adequately addressed by Tanzania legislations and institutions set up therefore results into persistence of the problem of deforestation at alarming rate will be tested.

Other than library research some authorities at national, regional, district and village levels as enunciated in the first chapter were visited. The answer to the hypothesis is that Tanzania legislations and institutions set up do not adequately combat deforestation. There are shortfalls and weaknesses which lead to ineffective mechanism for combating deforestation.

It is argued by the respondents that Tanzania legal framework is weak to combat deforestation due to lack of legislations directly and adequately addressing the problem and lack of coordination between multi institution designed to conserve and manage natural resources.

5.2 Analysis of legislative framework

The analysis of the legal framework findings on combating deforestation in this dissertation is divided into four categories. The categories are analysis of the community awareness of the laws; analysis of the principle legislations; analysis of the by-laws and analysis of institutions set up.

5.2.1 Analysis of the awareness of the Laws

The findings reveal that awareness of the existence of laws providing for natural resources conservation is minimal. The laws are mostly known to the government officials because they easily mention the Forest Act, Land Act and Environment Management Act. In interviewing the Tanzania Forest Service forest officers and legal officers, the researcher noted that they are conversant with the laws on forests especially the Forests Act and The Environment Management Act, the Acts of which they mostly enforce. They are also aware of the Tanzania National Parks Act, Ngorongoro Conservation Area Act and Wildlife Conservation Act. The District Council Forests Officers are also aware of the existence and contents of these legislations.

The officers responsible for land and agriculture in the district are aware as to the existence of the forest Act and EMA however not very familiar to its contents and scope of its application. Mr. Amon Nzalalila, Land Officer Handeni District Council explained that although forest and land division are in one department each do its responsibilities in its own therefore he could not be much conversant with forests related legislation other than the Land Acts.

The Village Council members and the Village Executive Officer at Gole village Handeni District and Kibindu village Bagamoyo District assumes the existence of laws on forests matters as they observed some persons being arrested on the ground of illegally harvesting forests produce. They further argue that to their knowledge the law exists only when the forest is being reserved. Otherwise the harvesting of forests is free provided one get permit and pay forest cess. The charcoal producers and transporters also support the argument of the villagers and they add that laws if any intents to enhance government revenues and not to combat deforestation.

As far as the awareness of the institutions responsible for natural resources conservation are concerned only forests officers and legal officers are familiar with. Land and agriculture officers know the Forest Division in the department of Land, Natural Resources and Environment, Forest Officers from Tanzania Forest Services allocated in the district and the NEMC.

Table 1; Analysis of the awareness of laws

Institution	Awareness of the laws	Awareness of the Institutions	Awareness of the Contents of the laws
MNRT (TFS)			
Forest	1	1	1
Legal	1	1	1
Bagamoyo District Council			
Forest	1	1	1
agriculture	2	2	3
Land	2	2	3
Legal	1	1	2
Handeni District Council			
Forest	1	1	1
Agriculture	2	2	2
Land	2	3	3
Legal	1	1	1
Others			
Charcoal producers	2	3	3
Villagers	3	3	3

Key: 1=good; 2 = satisfactory; 3 = poor

From these findings the researcher concludes that the awareness of the existence, contents of the laws and institutions on natural resources conservation by combating deforestation is with some government officials. The rest of the community is not aware; the awareness if any is only to the existence of the laws but not to its contents.

5.2.2 Assessment of the Principal Legislations

Regardless of the existence of principal legislations providing for natural resources conservation and management the problem of deforestation still persists in an alarming rate.

The Forest Act, 2002 creates offences in relation to violation of laws used to protect forest reserves. To mention some, it is an offence for a person to enter forest reserves without permit and it prohibits activities which destructs trees and whoever contravenes these conditions is guilty of an offence on being liable shall pay fine of between thirty thousand and one million shillings or imprisonment to the term not exceeding two years.²¹² Forest officers and agricultural officers are of the view that these fines are very minimal and do not discourage deforestation.

²¹² Section 84 of the Forest Act

They further explain that for the tree to be tenable for use as timber or charcoal production it takes about seven to fifteen years. That one million is not enough to keep a tree to ripe for its use.

However the Forest Act gives the court discretion to make additional orders to the penalty imposed. The orders includes cancellation of permit provided, forfeiture of tools used to commit offences such vehicles, chainsaw and axes; payment of compensation by person found guilty of offence to the tune of destructed properties and reimbursement of costs used to seize or arrest, storage, maintenance or removal of any forest produce or any forfeited articles.²¹³ District Forest Officers and Legal officers argue on this position that the orders in addition to penalties imposed against persons found guilty are discretionary therefore can be given or not depending on the court views. They suggest that these should have been the main penalties and the fine and imprisonment be additional. They argue that most of the additional orders intend to reform the forest by getting the cost of reservation and economically disabling forest criminals.

Under the Forest Act, 2002 the community through participatory forest management (PFM) especially Community Based Forest Management have successfully identified and established forests reserves. This mechanism of forest management makes utilization of forest to be sustainable.²¹⁴ The researcher observed Mazingara village forest reserve at Handeni and Kibindu village forest reserve at Bagamoyo which have been identified through PFM. There are problems of land grabbing, encroachment of forest due to immigrants from neighbouring villages who are not involved in PFM and prefer agriculture than forestry. They argue that punishment for violation of forest law or land law and by-laws is very low compared to the regeneration of the destructed forest.

²¹³ Section 97 of the Forest Act

²¹⁴ Part III of the Forest Act

As far as prosecution of forest criminal offences is concerned it has been found that the forest officers are neither professional nor experts on prosecution of criminal cases. The legal officers in Local Government authorities are not allowed by the law to prosecute criminal offences.²¹⁵ The institutions responsible thereto, police force have less experience on forests matters thus, in most of the cases brought before the court the offenders of forests laws have been always found not guilty. Out of five cases brought before Handeni District Court on violations of forest law three cases found suspected offenders not guilty. To get away with this problem most of the Forest officer exercises their powers of compounding offences.²¹⁶ The researcher observed the compounded timber counting 400 pieces and 15 forfeited bicycles at Handeni forest offices.

Moreover there is an observation that deforestation can be done on the ground of farming activities. This was witnessed by the researcher at Gole village Handeni where a farmer owning 70 acres was found cleared 11 acres for timber and charcoal production. When interviewed he said that he was clearing his farm for cultivation. The charcoal and timber production was just incidental but his intention was agriculture. The researcher noted that no any EIA had been done before execution of the farm expansion. District Forest Officer argued that provided that the farmer has all documents of farm ownership no limits as to the methods or purpose of farm clearance.

5.2.3 Assessment of By-laws

Bagamoyo and Handeni District Councils have made and published in the government gazette various by-laws related to conservation of forests by combating deforestation. However it is noted that the by-laws do not adequately support the process of combating deforestation, they are revenue oriented rather than conserving forests. Some of the by-laws in force both at Bagamoyo and Handeni District were availed to the researcher. To mention some are:-

²¹⁵ Section 90 of the Criminal Procedure Act, cap 20 R.E 2002

²¹⁶ Section 95 of the Forest Act

In Bagamoyo four by-laws were found relevant to combat deforestation, these are; *Halmashauri ya Wilaya ya Bagamoyo (Sheria Ndogo za Kilimo na Mazao) 1994 (GN. 421/1995)*. This by-law obliges farmers to prevent environment degradation caused by uncontrolled fires and cultivation that causes soil erosion. *Halmashauri ya Wilaya ya Bagamoyo (Sheria Ndogo ya Uthibiti na Utunzaji wa Mifugo) 1994, (GN. 422/1995)* is another by-law. It prohibits overgrazing by restricting the movement of cattle by identifying cattle routes within its jurisdiction.

Other by-laws are, the Bagamoyo District Council (Fees and Charges) by-laws, 2001 (GN. 258/2001) provides for rates to be charged on forest products such as charcoal, *fito* and firewood harvested within its jurisdiction. *Sheria Ndogo (Kilimo Kwanza na Usalama wa Chakula) Halmashauri ya Wilaya ya Bagamoyo, 2012* has been made but not yet approved by the Minister responsible for Local Governments. The by-laws have never been effectively implemented in the district therefore forests continue to be subjected to deforestation.

Handeni District Council has also made some by-laws in relation to combating deforestation. These are; *Sheria Ndogo za Upandaji Miti na Kuhifadhi Misititu za Halmashauri ya Wilaya ya Handeni, 1998 (GN. 280/1999)*. Under this by-law the district council and village governments are empowered to identify forest reserves of their own in which access therein is restricted.²¹⁷ The by-law further requires each household to plant 10 trees in its surrounding and 25 trees for each institution. The Handeni District Council (Forest Produce cess), By-laws, 1998 (GN. 282/1999) is another by-law on forests but this does not provide for conservation of forests rather it makes rates that are charged in respect of forest cess.

As far as by-laws implementation is concerned the Handeni Legal officer, Mohamed Msemu argued that of the mentioned by-laws, only one by-law regarding revenue is effectively implemented. This position was confirmed by an employee of a company named ADOSTA investment Company Limited which is working as an agent of Bagamoyo District Council in collection of forest cess.

²¹⁷ Section 4 of the *Sheria Ndogo za Upandaji wa Miti na Kuhifadhi Misititu*, 1998 GN 280/1990

He emphasized that as agents they focus on revenue collection not conservation of forests. More production of forest products more cess to the company and the principal as well.

As far as villages in Bagamoyo and Handeni are concerned through land use plans they have addressed the problem of deforestation. In their land use plans they have planed areas for extraction of firewood, grazing, cultivations and settlement. The plan is supervised by village council. To make sure that the land use plan is effective villages through village assembly have made by-laws which most of them have been approved by district or Urban Council meeting.

In Bagamoyo district, 35 villages out of 97 (36%) and Handeni, 7 out of 112 equals to (6.3%) underwent land use plan and have approved by-laws for implementation of the same. The by-laws impose penalties of fines or imprisonment to the violators of the by-law. The fine does not exceed fifty thousand or maximum of two years imprisonment regardless of the extent of destruction of forests. The land officers are of the view that the fine and imprisonment are less, therefore can not deter violation of the by-laws. They suggest the punishment to be severe so that people may be discouraged to violating the by-laws.

The Bagamoyo and Handeni district and village by-laws imposes penalty to the violators of bylaws not exceeding fifty thousand shillings or imprisonment of not more that twelve months, viz *“Sheria Ndogo za Upandaji Miti na Kuhifadhi Misitua za Halmashauri ya wilaya ya Handeni, 1998”* (GN. 280/1999) by-law 13 provides as follows;-

“13. Mtu yeyote atakayeshindwa kutekeleza au atakayevunja sheria ndogo hizi atakuwa ametenda kosa na akifikishwa mahakamani na kupatikana na hatia adhabu yake itakuwa faini isiyoziidi shilingi 10,000/= au kifungo jela kisichozidi miezi kumi na mbili au vyote faini na kifungo jela kwa pamoja.”

That whoever contravenes the implementation of the by-law on forest reserves and afforestation is guilty of offence and the penalty shall be fine not exceeding 10,000/= or imprisonment for a term not exceeding 12 months or both fine and imprisonment

(the translation is mine). It is observed that most of the by-laws are outdated and were made before the enactment of the forest Act, 2002.

From the findings neither principal legislation nor by-laws have shown to have adequately addressed the problem of deforestation.

Table 2: Whether Tanzania legislations adequately conserve natural resources by combating deforestation

Response	Number of Respondents	Percentage
Adequate	5	28%
Inadequate	13	72%
Total.	18	100%

5.3 Analysis of Institutional framework

There are two institutional framework pertaining to conservation of forests, these are; general environment management and the forestry management structure. However it is observed in review of legislations that the Vice President's Office (VPO) plays an overall supervisory power in environmental and natural resources management aspects, forests inclusive.

5.2.1 General Environment Management Structure

The institutional set-up for regulating environmental and natural resources issues; at the top there is a Division of Environment (DoE) which is under the Vice President's Office (VPO) manned by the Minister of the Environment.²¹⁸ The Minister is responsible for making policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania. The Minister has power to issue guidelines to the ministries, government department, local government authorities and other bodies engaged in environmental management as a cross-cutting issue.²¹⁹

²¹⁸ Section 13 Environment Management Act, 2004

²¹⁹ Ibid Section 7 (4)

Specifically Minister has control on regulating forests, the powers which are also vested to the Tanzania Forest Service formerly Forestry and Beekeeping Division in MNRT under the Forest Act but no any cross reference between the two.²²⁰

NEMC is an authority under the EMA mandated to undertake enforcement, compliance, review and monitoring of environmental impact assessment, manage and conserve the environment in Tanzania. It exercises general supervision and coordination over all matters relating to the environment, EIA inclusive.²²¹ The agricultural and land officers explained that EIA needs expertise and funds. Currently EIA is done by Consultants to be appointed from a list of Consultants provided by NEMC. It is very expensive to find a consultant to do EIA and there are no NEMC officers available at districts level. Therefore, many people execute their activities such as expansion of farms without EIA regardless of the facts that these activities have impacts to forests and environments in general.

Under the EMA each city, municipality, district, and town council must appoint and Environment Management Committee and Environment Management Officer who will be responsible for among other things promotion regarding conservation of natural resources, forests inclusive.²²² Forest Officers argue against this position that, it is a duplication of efforts. The function of the Environmental Management Officer activities can be done by the forest officers.

Moreover it is very hard to separate the mandates of environment officers and that of forests officers especially in district councils. Furthermore, Environmental officer for Handeni, Nony Jabir argues that the title of environmental officer is not existing in the local government staff structure therefore it is very had to get staff benefits such as promotions.

²²⁰ Section 7 (4) Of the EMA

²²¹ Loc cit (note 213) Section 16 and 17

²²² Ibid Section 36 (1)

As between EMA and Forest Act there is a coordination framework. That EMA provides that all forests shall be managed in accordance with the provisions of Forest Act, 2002 and matters relating to environment by EMA. However in case of inconsistency EMA shall prevail to the extent of such inconsistency.²²³

5.2.2 Forestry Management Structure

The forest Act establishes a forestry management structure in which at the top there is Ministry of Natural Resources and Tourism, division of forestry, now Tanzania Forests Services a semi-autonomous government. The key function of this division is management of forests reserves and forest in general land. In relation to general environmental management structure this is a sector ministry responsible for conservation and management of forests.

At the district level there are Forest Officers employed by Tanzania forest Services agency and others by local government authorities. Forest officers under both institutions deal with forests in general land. District Forest Officers argue that this parallel structure and sparse distribution of efforts has been an obstacle toward conservation of natural resources forests in particular.

However it was noted that there are three years agreements between TFS and LGA's titled "Cooperation and Mutual Support in Management and Conservation of Forests of Tanzania Mainland" aimed to enhancing conservation of forests. In these agreements the LGAs have duty to provide staff while TFS provide material support and expertise. Both Handeni and Bagamoyo District Councils have signed the agreements. District Legal Officers argue that the collaboration is temporary as it lapses with agreement duration. They suggest that the collaboration should be mandated by the legislation.

At district level there is a District Forest Officer under the department of Lands, Natural Resources and Environment. The main function of District Forest officer is to oversee and manage district forest reserves and advise the District Executive

²²³ Ibid Section 63 (1)

Director on matters related to district council forest reserves. Village forest reserves are managed by the village natural resources committees assisted by Ward Forest Officer. This structure reveals the existence of parallel structures on management of forest in which at every level there is mandate of its own. The lack of mandate coordination to these structures can lead to persistent problem of deforestation.

At the village level there is a number of committees which deals with matters relating to environment and natural resources, these are; village environment management committee, village natural resources committee and village land use committee. The issue is which of this committee has mandate to coordinate and oversee natural resources conservation in the village? The Handeni District Forest Officer revealed that in most villages a villager may be member in all three committees.

The researcher found that courts of law and police are institutions which take part in the enforcement of forest conservation related legislations and by-laws. This is due the facts that forest legislations and by-laws create criminal offences which are prosecuted by police in the court of laws. Moreover police may be used to arrest the suspects of forests law violation. However it was further found that neither police officers nor court of law is referred in the forest Acts. These institutions, court and police are not conversant with laws regulating forest conservation and management.

Table 3: Whether Tanzania institutional structure adequately manage natural resources by combating deforestation

Response	Number of Respondents.	Percentage.
Adequate.	8	44.5%
Inadequate.	10	55.5%
Total.	18	100%

According to the respondents, if the legislation framework and institution structure are adequately address deforestation, it would have not be persisting in alarming rate as recently. This proposition may not be realistic due to the fact that implementation depends on availability or resources, personnel and funds.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

In conclusion international legal framework extensively provides for the conservation and management of natural resources by combating deforestation as directly addressed in the Rio's forest principles and agenda 21 chapter 11. The conservation is further impliedly provided by many conventions. Tanzania has signed and ratified various international conventions providing for conservation of natural resources. It is therefore legally bound to adhere to its obligations.

In compliance Tanzania has enacted legislations to provide for the same. Like in the international instruments the conservation of forests by combating deforestation is impliedly in many legislation above discussed. Being not directly addressed by legislations the problem of deforestation has been persisting in an alarming rate. Moreover by-laws which are enacted by local government authorities are outdated and most of them focus on revenue collection. This position hinders the conservation of forests. Lesser penalties to the forest laws violators also is the weakness of the most legislations and by-laws.

In so far as institutions which are responsible for management of forests, they are not well coordinated. There are parallel structures especially at local authorities' level which needs to be addressed as most of the forests subjected to deforestation are located at district and village level. The existence of forest officers at district level dealing with forests at general land receiving uncoordinated mandates from two different institutions is an obstacle to the conservation of natural resources, forests in particular.

Generally though Tanzania has made a lot effort to combat deforestation and therefore conserve and manage natural resources and the problem is not adequately addressed therefore it continues at an alarming rate. Therefore the legal framework needs to be reviewed as recommended herein below.

6.2 Recommendations

To adequately address the problem of deforestation the researcher recommends amendments of the existing Tanzania legal framework on conservation and management of natural resources as follows;-

Firstly, amendment of the forests Act in so far as the making of by-laws by the Local governments authorities is of importance. That section 31 and 37 which requires Local authorities to submit by-laws to the Director of Forestry contradicts the existing procedure of making by-laws stipulated by legislations establishing these entities, the Local Government Authorities Acts. Therefore for efficiency the amendment should focus on harmonizing this contradiction.

Secondly, principal and subsidiary legislations should be amended so that the penalties provided in case of violation should be proportional to the restoration of forests damaged. Imprisonment and fine penalties should also be severe to deter commission of forest related offences. The fines of two hundred thousands or one million can not be sufficient to restore species of forests which grow to its utilisation up to fifty years. In case of the Forest Act, additional penalties provided for under section 97 should be firstly considered by the court and fines and imprisonment be the additional. Section 97 gives the court power to issues order of forfeiture of tools of the forests offenders and payment of compensation to the tune of forests destruction.

Thirdly the structure used to generally manage natural resources needs to be harmonized with other legislations including Public Service Act, 2002. The EMA creates a structure which goes down to Local Authorities level. It requires local authorities to appoint environmental officer, the post which is not accommodated by Local Government Authorities structure. Therefore officers appointed to this post lack public service privileges such as increments and promotions, thus they can not be committed to perform well in the post.

Moreover the existence of structures in the management of forests with commands of their own needs to be coordinated. The structure involves the one at ministry level managing forest reserved, district or urban managing district or urban forest reserves and villages managing village forests. The coordination will enable easy flow of commands. The amendment should also consider harmonization of the three village committees related to natural resources at village level, these are;- village natural resources management committee, village environment management committee and village land use committee.

Fourthly, Local Government Authorities by-laws need to be up-dated as most of them are outdated. Most of the by-laws were made between 1990's and 2001 therefore have not accommodated the changes which occurred in principal legislations such as the Forest Act, 2002 and Environmental Management Act, 2004.

Fifthly, the by-laws should be amended to change their focus from revenue oriented to natural resources conservation forests. The forests harvesting should be sustainable regardless of the revenue collected.

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