

**AN ASSESSMENT OF THE ADEQUACY OF THE MORATORIUM ON LOGGING AS
A SUSTAINABLE FOREST MANAGEMENT TOOL: A CASE STUDY OF EASTERN-
MAU FOREST RESERVE AREA**

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G62/11366/2018

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF THE DEGREE OF MASTER OF LAWS IN THE SCHOOL OF LAW OF
THE UNIVERSITY OF NAIROBI

2019

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DEDICATION

I dedicate this work first to God who has given me the strength and the wisdom to undertake this course and to my parents who have given me their utmost support and encouragement throughout the coursework.

ACKNOWLEDGEMENTS

I extend my most sincere gratitude to my supervisor Dr. Collins Odote who reviewed the various drafts of my research project at every stage and guided me throughout the project writing.

I am also grateful to my parents for their support and encouragement throughout the course. Most importantly, I am grateful to the Almighty God for enabling me to finish this course.

ABSTRACT

Sustainable forest management is a key concept of managing and using forest resources in a manner that sustains their biodiversity, fecundity, regeneration capability and their ability to attain current and future economic, social and ecological uses both nationally and worldwide.¹ Recognizing the need to curb deforestation, Kenya has put in place measures to protect, conserve and increase forest cover in a bid to ensure sustainable forest management. These measures include the recent institution of the moratorium on logging in public and community forests that began on February 2018 and was to end of November 2019.² According to reports the moratorium on logging has resulted in various socio-economic implications among timber producers and forest dependent communities³ posing some critical questions on whether the moratorium on logging is a sustainable forest management tool. This study assessed the adequacy of the moratorium on logging as a sustainable forest management tool using the East Mau Forest Reserve as the case study area and more particularly the Nessuit Forest Block. The key constituents of sustainable forest management that were examined in the study included public participation and involvement in environmental governance and decision making, the effect of government action on the ecological, social, economic, and cultural functions of the forest and the validity of the moratorium on logging as a legislative tool. Stratified random sampling and purposive sampling was used to select participants from the study area as well as key informants such as the Kenya Forest Service (KFS) Officers and the Chief Conservator of Forests. The study used interviews and questionnaires and reports from household heads and key informants as instruments for collection of data. The data collected was analyzed using percentages and frequencies. The results indicated that a considerable number of the public commended the moratorium on logging for its ecological benefits in terms of conserving the

¹ 'Sustainable Forest Management Implementation,' <<https://foresteurope.org/sustainable-forest-management-implementation/>> accessed 24 September 2019.

² James Kariuki, 'Government extends forest logging ban by one year,' (2018) Daily Nation <<https://www.nation.co.ke/news/Govt-extends-forest-logging-ban-by-a-year/1056-4855586-f9flxf/index.html>>accessed 23rd September 2019. A moratorium on logging has been in place in Kenya since February 2018 following a public outcry over illegal logging that was blamed for the reduction of water levels in the country's key rivers.

³ Sam Kisika, 'Kenya logging ban: Do Senator's claims about GDP and demand add up,' (2019), Africa Check <<https://www.polity.org.za/article/kenya-logging-ban-do-senators-claims-about-gdp-and-demand-add-up-2019-08-14>> accessed 21 November 2019.

environment. However, the results also indicated that the public resisted implementation of the moratorium on logging despite its benefit because of non-involvement in its formulation and its negative impact on the socio-economic and cultural functions of the forest. Additionally, through a review of various literature the study concluded that the moratorium on logging was inherently unconstitutional, having no legal backing and this hindered its effective implementation. The study concluded that the logging ban did not take into consideration the socio-economic and cultural needs of the present and future generation and therefore was not a sustainable forest management tool. The study recommends that the Cabinet Secretary of the Ministry of Environment and Forestry undertakes environmental impact assessments and involves communities reliant on forest resources in sustainable use and management prior to implementation of forest use regulations. The study further recommends that various Government officials should cease from instituting unconstitutional laws such as the moratorium. Further, the study proposes that research should be done on establishing the sustainability criteria to be used as a baseline for other forest management laws and regulations.

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LIST OF ABBREVIATIONS/ ACRONYMS

C & I	Criteria and Indicators
CIFOR	Center for International Forestry Research
CFA	Community Forestry Association
eKLR	electronic Kenya Law Report
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
KFS	Kenya Forest Service
KTDA	Kenya Tea Developers Association
OECD	Organization for Economic Cooperation and Development
SFM	Sustainable Forest Management
SPSS	Statistical Package for Social Sciences
TMA	Timber Manufacturers Association
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNFF	United Nations Forum on Forests
UNCED	United Nations Conference on Environment and Development
UNSPF	United Nations Strategic Plan for Forests

LIST OF STATUTES

The Constitution of Kenya 2010

Forest Act No. 7 of 2005 (now repealed)

Environment and Land Court Act 2011

Forest Conservation and Management Act 2016, *Kenya Gazette Supplement No. 155* (Acts No. 34)

National Forest Policy (2014).

Legal Notice No. 171 of 17th November 1999 on suspension of timber harvesting in Kenya (Kenya Gazette Supplement No. 49 of 26th November 1999)

Legal Notice Number 18, February 2000 on The Forests (Suspension of Timber Harvesting and Stone Quarrying Amendment Rules, 2000) (Gazette Supplement No. 18 of 11th February 2000)

Sessional Paper No. 9 of 2005 on the Forest Policy

Trust Land Act 2012, Chapter 288 Laws of Kenya

East Africa Forest Regulation 1902 (now repealed)

The Kenya Forest Act 1942, Chapter 385 Laws of Kenya (now repealed)

The Ukamba Woods and Forestry Regulations of 1897 (now repealed)

LIST OF CASES

In the Matter of Mui Coal Basin Local Community [2015] eKLR HC.

African Court on Human and People's Rights judgement on the Ogiek Case [2017].

Abdalla Rhova Hiribae & 3 Others v Attorney General and 7 Others (2013) Civil Case No. 14 of 2010, eKLR

Environment and Land Court Case No. 273 [2013] eKLR.

Ledidi Ole Tauta & Others v Attorney General and 2 Others [2015] eKLR, Constitutional Petition 47 of 2010

Kenya Association of Manufacturers & 3 Others v Cabinet Secretary, Ministry of Environment and Natural Resources and 3 Others [2018] eKLR

CHAPTER ONE

1.1 Background of the Study

According to Article 69 (1) (a) of the Constitution of Kenya, the State is under obligation to ensure that natural resources are sustainably used, managed and conserved.¹ Further, the Constitution provides the definition of natural resources to include forests.² The State is therefore under a constitutional obligation as stated in Article 69 to ensure sustainable forest management.

Sustainable forest management has emerged as a global forest management concept over the past century as a means to combat the fast decline of the world's mass covered by forests.³ According to the Food and Agriculture Organization (FAO) of the United Nations (UN), the first universal forest assessment carried out in 1948 estimated that the world forest area was about Three Billion, Nine Hundred and Seventy Eight Million (3,978,000,000) hectares.⁴ The publication detailing the results of the forest assessment emphasized the need for sustainable management of forest resources. With regard to Kenya, the tree cover was estimated at 1.8 million hectares of the country's land mass at the time of gaining independence, since then Kenya has been experiencing forest cover loss of approximately 1900 hectares per year.⁵ A 2018 report by the Global Forest Watch estimated the tree cover loss at 310 kilo hectares equivalent to a 9.8% yearly decrease between the years 2001 and 2017.⁶ The main drivers of change in forest cover as stated in a 2016 FAO report were listed as official and unofficial cutting of state forests,

¹ The Constitution of Kenya 2010, Article 69 (1) (a).

² The Constitution of Kenya, Article 260.

³ Jorge Garcia and Julio Diez, 'Sustainable Forest Management: An Introduction and Overview,' (2012) Sustainable Forest Management Sustainable Forest Management Research Institute, University of Valladolid, p. 3-6. <https://www.researchgate.net/publication/230710275_Sustainable_Forest_Management_An_Introduction_and_Overview> accessed 29 September 2019.

⁴ Monica Garzuglia, '1948-2018 Seventy years of FAO's Global Resource Assessment: Historical Review and future prospects.' (2018) ISBN 978-92-5-139962-6, Food and Agriculture Organisation of the United Nations <<http://www.fao.org/3/I8227EN/i8227en.pdf>> accessed on 1 February 2019. The First FAO world inventory was carried out in 1947-1948 under the recommendations of the FAO Conference 1945 and the results were published three years later in two issues of Unasylva titled Forest Resources of the World. Since 1948 FAO has been carrying out periodical Forest Resource Assessments on a global scale at intervals of five to ten years.

⁵ Central Bureau of Statistics Ministry of Planning and National Development, 'Economic Survey 2004,' (2004).

⁶ Global Forest Watch, 'Forest Change' (2018) <<https://www.globalforestwatch.org/dashboards/country/KEN?category=forest-change&economicImpact=eyJ5J5ZWFyIjoyMDAwfQ%3D%3D&treeLossTsc=eyJoaWdobGlnaHRIZCI6ZmFsc2V9>> accessed 1 February 2019.

conversion of state forests to farmland, and illegal logging.⁷ Further, the report also stated that the most prevalent cause for loss of forest cover in Kenya is the unsustainable exploitation of forest resources at a rate that does not allow for regeneration.⁸ The 2018 appointed to look into forest management in Kenya also provided other causes of loss of forest cover in Kenya to include; destruction of indigenous forests due to illegal squatters and unclear forest zoning and mismanagement of the Kenya Forest Service due to systemized and rampant corruption among other reasons.⁹

Indeed, taking into consideration the FAO Report and the 2018 Taskforce Report the main reasons for the diminishing forest cover in Kenya over the years as illustrated in the Global Forest Watch deforestation statistics¹⁰ can be largely attributed to human activities. These are activities that are geared towards meeting social, economic and cultural needs of individuals and communities. However, it should be noted that, in as much as the depletion of forest cover can be traced back to human actions, a large number of the people globally rely on forests for their daily sustenance.¹¹ According to a 2013 FAO Report, it was estimated that about 1.6 billion people heavily rely on forests for their sustenance and daily income.¹² Therefore, in reference to this report, human dependency on forest resources cannot therefore be entirely overlooked or done away with. Ultimately, proper ways of utilizing the forest resources should be put in place that do not lead to destruction or depletion of the forests in order to maintain the productive capacity

⁷ Edward Kilawe and Didier Habimana, 'Forestry Contribution to National Economy and Trade in Ethiopia, Kenya and Uganda,' (2016), FAO, Ethiopia <<http://www.fao.org/3/a-i5517e.pdf>> accessed 18 February 2019, Sec. 3.2 Status of Kenya's Forests, para 2.

⁸ Ibid n7.

⁹ Ministry of Environment and Forestry, 'Taskforce report on forest resource management and logging activities in Kenya,' (April 2018), p.6. <<http://www.environment.go.ke/wp-content/uploads/2018/05/Task-Force-Report.pdf>> accessed 19 February 2019.

¹⁰ Mongabay, 'Deforestation statistics for Kenya,' <<https://rainforests.mongabay.com/deforestation/archive/Kenya.htm>> accessed 3 September 2019. The primary tree cover loss from the year 2002 to 2018 was estimated to be 43,029 hectares.

¹¹ Sophie Chao, 'Forest Peoples: Numbers across the world,' (2012) Forest Peoples Programme. According to the World Commission on Forest and Sustainable Development, '350 million of the world's poorest people depend entirely for their subsistence and survival on forests. A further 1 billion poor people- about 20% of the world's population- depend on remnant woodlands, on homestead tree gardens and agro- forestry systems for their essential fuel wood, food and fodder systems.

See. Ajit Krishnaswamy & Arthur Hanson, 'Our Forests, our future summary report,' (1999), ISBN 0-9685191-0-5, World Commission on Forests and Sustainable Development, <<http://www.iisd.org/pdf/wcfsdsummary.pdf>> accessed 2 September 2019.

¹² FAO, 'Resilient Livelihoods,' disaster risk reduction for food and nutrition security (2013), Rome.

and ecological integrity of forests in the interest of the present and later generations..¹³ Such proper ways are otherwise known as sustainable forest management mechanisms also include institution of legislative measures..¹⁴

Kenya has put in place extensive legislative measures promoting sustainable forest management in a bid to reverse deforestation. These measures include constitution of taskforces to review forest management, enactment of legislation to protect and conserve forests as well as issuing moratoriums on logging activities in public and community land.¹⁵ Moratoriums on logging and prohibitions on forest use begun in the 1980s and more specifically 1983 with the prohibition of felling of live indigenous trees on gazetted forest lands.¹⁶ Thereafter, in 1986 Forest Grazing was prohibited under a Presidential moratorium which was enacted in the Local Authority Act.¹⁷

In reference to the moratoriums on logging , Lucy Emerton in her 1999 discussion paper stated that despite the legal monitoring and regulation of forest activities, utilization of forest resources continued, although illegally at the commercial and subsistence level leading to a harrowing degradation and decline in forest cover.¹⁸

Upon legalizing of the pre mentioned moratoriums on logging through legislative incorporation, the Government thereafter in 1999 pronounced the prohibition of timber garnering¹⁹ in government plantation forests for a period of ninety days the 120,000 hectares of government plantation forests.²⁰ In February 2000 the moratorium on timber harvesting was done away

¹³ Wiersum, K. F. *Planning agro forestry for sustainable land use.* (1990) Pages 18-32 in W. W. Budd, I. Duchhardt, L. H. Hardesty, and F. Steiner (eds.), *Planning for agro forestry.* Elsevier, Amsterdam. *Developments in landscape management and urban planning* No. 6C.

¹⁴ CIFOR, 'Rural Development Forestry Network: Criteria and Indicators for sustainable forest management: New Findings from CIFOR's Forest Management Unit Level Research' (1998) RDFN paper 23a, <<https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/1178.pdf>> accessed 2 September 2019.

¹⁵ Lillian Mutavi, 'Logging ban limited to public, community land,' (2018), *The Star* <https://www.the-star.co.ke/news/2018/04/18/logging-ban-limited-to-public-community-land-tobiko_c174600> accessed 1 February 2019.

¹⁶ Lucy Emerton, 'Mount Kenya: The Economics of Community Conservation,' (1999), *Evaluating Eden Series Discussion Paper No. 4*, p. 8 <https://pubs.iied.org/pdfs/7797IIED.pdf?origin=publication_detail> accessed 30 April 2019 'The Presidential Directive was implemented under the Chief's Authority Act of 1962, The Trust Land Act of 1962 and the Local Authority Act of 1986.

¹⁷ *Ibid* n 14 (p. 8).

¹⁸ *Ibid*, n14 (p. 8).

¹⁹ Legal Notice No. 171 of 17th November 1999 (Kenya Gazette Supplement No. 49 of 26th November 1999)

²⁰ Joram Kagombe, James Gitonga and Michael Gachanga, 'Management, socioeconomic impacts and implications of the ban on Timber Harvesting,' Policy Brief No.1 Kenya Forest Working Group, (2015) <https://www.researchgate.net/profile/Joram_Kagombe/publication/261360092_MANAGEMENT_SOCIOECONO

with,²¹ however, in March 2000, the moratorium on logging was extended indefinitely by a Presidential directive prohibiting harvesting of timber produce.²²

An assessment made in 2004 to evaluate the impact of the moratorium on logging revealed that there was a high number of over mature and mature plantations in Kenya.²³ Further, it was stated that most of these plantations were undergoing severe devalue and the assessors recommended the selling of the forest produce to enable the government to earn revenue and rehabilitation of the degraded forests through replanting.²⁴

The moratorium on logging was halted in 2008, however, in 2018 a moratorium on logging was imposed yet again as a result of a recommendation of a Taskforce appointed the Cabinet Secretary to look into forest management practices in Kenya.²⁵ The constitution of the taskforce came about as a result of a direction from the Deputy President to the Cabinet Secretary of the Ministry of Environment and Forestry, to mitigate the three year severe water shortage experienced in Kenya.²⁶ The Deputy President also imposed a moratorium on logging within government and community forests that was to last for three months.²⁷ The Moratorium on logging was to begin on March 2018 and end in May 2018, however, on the date the moratorium on logging was supposedly to be lifted, it was extended for six more months and thereafter for one more year.²⁸ This would mean that the moratorium on logging would end in November 2019

MIC_IMPACTS_AND_IMPLICATIONS_OF_THE_BAN_ON_TIMBER_HARVESTING/links/0a85e533f7e968a57f000000/MANAGEMENT-SOCIOECONOMIC-IMPACTS-AND-IMPLICATIONS-OF-THE-BAN-ON-TIMBER-HARVESTING.pdf> accessed 30 April 2019. ‘The aim of the ban was to allow auditing of the industrial forest plantations following concerns that harvesting and management practices were unsustainable.’

²¹ Legal Notice Number 18, February 2000 (Gazette Supplement No. 18 of 11th February 2000)

²² Supra n5.

²³ Supra n 5. The assessment done by the Central Bureau of Statistics Ministry of Planning and National Development estimated that there was about 38,792 hectares of over mature and mature plantations in Kenya.

²⁴ Supra n5. The assessors stated that most mature trees were undergoing devalue due to severe heart rot, windfalls and increases in instances of illegal logging with the use of non-silvicultural practices.

²⁵ Supra (n9), p7, para 10.

²⁶ Ministry of Environment and Forestry, ‘Government suspends logging as Country faces water crisis,’ (2018) < www.environment.go.ke/?p=4598> accessed 20 February 2019.

²⁷ Ibid n 26.

²⁸ ‘Official Hansard Report,’ Parliamentary Debate, 31 July 2018, < http://www.parliament.go.ke/sites/default/files/2018-08/Hansard_Report_-_Tuesday_31st_July_2018_P.pdf> accessed 30 April 2019.

to allow for restoration and rehabilitation of the degraded critical water catchment and natural forest areas.²⁹

The aim of the moratorium on logging was to enhance forest reforestation through plantation and natural regeneration of forests.³⁰

Indeed, as illustrated above the Government has continually issued moratoriums on logging as a method of managing forest activities in Kenya. However, the legality of these moratoriums on logging is highly questionable given that they have no legislative basis. The moratoriums on logging issued are frequently as a result of executive directions from senior government authorities such as the President and the Deputy President. The legality of such directions and executive orders is contentious given that the Constitution specifically provides for clear means through which laws should be passed within Parliament.³¹ Further, the functions of these executive state officials as provided by the Constitution does not extend to qualifying such declarations as law. Moreover, the Constitution provides principles of governance that state officials should abide while carrying out their functions and these include upholding the rule of law and ensuring inclusive decision making.³² Given the nature of executive orders and directions as road side declarations ordering that certain actions be taken without reference to relevant stakeholder's views, the state officials making such directives cannot be said to have exercised the stated principles of governance.

Additionally, Kenya's legislative framework governing sustainable forest management, does not specifically provide for the issuance of a government directive regulating forest activities such as the moratorium on logging. The legislative framework governing sustainable forest management is encapsulated in the Constitution of Kenya.³³ The same principles on sustainable use and management of forest resources are reiterated in the Forest Conservation and Management Act 2016.³⁴ Part Four of the Act provides for conservation and management of forests but does not

²⁹ Ministry of Environment and Forestry, 'Extension on the Moratorium on Public and Community Forests,' (2018) Press Statement, pg 7, para 10 <<http://www.environment.go.ke/wp-content/uploads/2018/11/4048264.pdf>> accessed 20 February 2019.

³⁰ Ibid n 20.

³¹ The Constitution of Kenya 2010, Article 116 (1).

³² The Constitution of Kenya 2010, Article 10 (2).

³³ The Constitution of Kenya [2010], Article 69 (1) (a).

³⁴ Forest Conservation and Management Act [2016].

list the moratorium on logging as a management mechanism.³⁵ Indeed, the question of the legality of these moratoriums on logging is quite prevalent.

Apart from the question on legality of the moratorium on logging, there is also the question on its impact on the socio-economic needs of forest dependent peoples. According to reports, the demand for wood has led to a shift from sourcing timber from public and community forests and now the prime focus is on private forests and other means of procuring energy leading to exploitation of private forests to meet the timber demand.³⁶

The ban has also led to increase in the cost of timber³⁷ and the reduction of Kenya Forest Service (KFS) Revenues.³⁸ According to a KFS official, various institutions have been affected by the moratorium on logging and these include learning institutions, the timber processing industries and the building industries.³⁹ On 25th March 2018 in an interview with Nation media journalists on the effects of the ban on logging on the construction sector, Charles Kimita, a TMA (Timber Manufacturers Association) official stated that some saw millers had been taken to court by clients due to non-delivery and failure to refund money paid for timber products.⁴⁰ Additionally, during an Ad hoc senate committee, sitting in Muranga on the 23rd of June 2018, the (Kenya Tea Developers Association) KTDA Zone 3 Board Member Francis Macharia informed the Senate

³⁵ Forest Conservation and Management Act, [2016], Part IV.

³⁶ 'Logging derails bid to increase forest cover,' (2018) Daily Nation Kenya <<https://www.pressreader.com/>> accessed 1 February 2019.

³⁷ Timothy Odinga, 'Wood products prices soar as logging ban cuts supplies,' (2018) Business daily, <<https://www.businessdailyafrica.com/datahub/Wood-product-prices-soar/3815418-4646598-yivst8/index.html>> accessed 1 February 2019. A quarterly Producer Price Index (PPI) by the Kenya National Bureau of Statistics (KNBS) showed that between March and June 2018, the producer prices for wood and affiliated products jumped 23 per cent to 155.82 from the previous quarter.

³⁸ Samwel Owino, 'MPs urge government to lift logging ban,' (2019) Business Daily, <<https://www.businessdailyafrica.com/economy/MPS-logging-ban/3946234-5155168-8gtort/index.html>> accessed 15 June 2019. A National Assembly Parliamentary Committee on Environment and Natural Resources chaired by Kareke Mbiuki stated that KFS is struggling financially since it can no longer sell mature trees within forests to earn revenue.

³⁹ Leonard Onyango, 'Saw Millers, schools hit hard as logging ban enters second month' Daily Nation (2018) <<https://www.nation.co.ke/news/Saw-millers--schools-and-KDF-pay-price-of-logging-ban/1056-4392630-u1fxv0/index.html>> accessed 1 February 2019.

⁴⁰ Peter Mburu. & James Kariuki, 'Logging ban bites construction sector,' Business Daily Kenya, Nation Media (2018) <<https://www.pressreader.com/>> accessed 2 February 2019.

that tea farmers earnings had reduced significantly at the factory level due to a shift towards using electricity in processing tea rather than timber.⁴¹

Taking into consideration the nature of the moratorium on logging without reference to the communities' needs it is questionable whether the community's needs were taken into consideration during its formulation.

Additionally, in reference to the communities' needs, the moratorium on logging extends to prohibition of logging activities in community forests. According to the Forest Conservation and Management Act 2016, such community forests are conferred upon specific communities for their use.⁴² The vesting of such community forests upon these communities bestows certain ownership and use rights upon the relevant communities. The prohibition of these rights through the moratorium on logging prompts the question on whether such rights have been infringed.

Certainly, the moratoriums on logging raise a number of questions on their validity and legality, Furthermore, the appraisals carried out in 2004 and 2018 on the impact of the 1999 and 2018 ban on logging respectively have elicited a number of negative impacts. As previously mentioned, these include, loss of employment, disruption of the timber industry, loss of revenue to the government, over exploitation of private forests due to high demand, increased illegal harvesting of timber using non-silvicultural methods.

1.2 Statement of the Research Problem

The Kenyan Government has put in place measures to protect, conserve and increase forest cover in Kenya. This is in recognition of forests as an important renewable natural resource whose multiple functions are highly essential therefore requiring the use of sustainable forest management measures in order to meet specific socio-economic, cultural and ecological objectives. These measures include constitution of Taskforces to investigate forest management activities in Kenya,⁴³ launching tree planting campaigns,⁴⁴ formulation of moratoriums on

⁴¹ Alice Waithera, 'Tea Farmers want factories allowed to use private forests for timber,' (2018) The Star <https://www.the-star.co.ke/news/2018/06/23/tea-farmers-want-factories-allowed-to-use-private-forests-for-timber_c1776640> accessed 27 February 2019.

⁴² Forest Conservation and Management Act 2016, Section 32 (1)

⁴³ Ministry of Environment and Forestry, 'Taskforce Report on Forest Resources Management and Logging Activities in Kenya,' (2018) p. 1 <<http://www.environment.go.ke/wp-content/uploads/2018/08/Forest-Report.pdf>>

logging⁴⁵ and enactment of sustainable forest management legislation.⁴⁶ Most recently in February 2018, the government instituted a moratorium on logging in all public and community forests in Kenya,⁴⁷ the moratorium on logging was extended by six months and came to an end on 24th May 2018⁴⁸ thereafter the government issued another notice for its extension throughout 2019.⁴⁹ The moratorium on logging as a sustainable forest management mechanism was instituted as a measure to ensure biodiversity productivity, increased forest regeneration and vitality. Although the government has instituted the moratorium on logging as a sustainable forest management measure to ensure protection and conservation of forests in the country, many people's livelihoods have been affected. It should be noted that as a result of the moratorium on logging there have been overreaching effects such as incurring of losses by timber producers who depended on logging, sawmilling and charcoal burning, the loss of jobs by the youth and their sources of income⁵⁰ and a number social-economic implications. While there are statistics to show the importance of forests to the contribution of Kenya's Gross Domestic Product (GDP) hence the need to adopt measures to reduce deforestation rates and increase rehabilitation,⁵¹ there

accessed 1 February 2019. 'The Taskforce was appointed through Gazette Notice No. 28 dated 26 February to look into Forest Resources Management and Logging Activities in Kenya.

⁴⁴ Ministry of Environment and Forestry and Ministry of Education, 'A Joint Programme: 2018 Short Rains Tree Planting Campaign October-December 2018; Theme: 'Panda Miti, Boresha Maisha' (2018)

<<http://www.environment.go.ke/wp-content/uploads/2018/10/37.-Updated-Schedule-2018-Short-Rains-From-SDCCF-FO-18-10-2018-Final.pdf>> accessed 1 February 2019.

⁴⁵ James Kariuki, 'Government extends forest logging ban by one year,' (2018) Daily Nation

<<https://www.nation.co.ke/news/Govt-extends-forest-logging-ban-by-a-year/1056-4855586-f9flxf/index.html>> accessed 1 February 2019.

A moratorium on logging has been in place in Kenya since February 2018 following a public outcry over illegal logging that was blamed for the reduction of water levels in the country's key rivers.

⁴⁶ Forest Conservation and Management Act [2016].

⁴⁷ Wahome Gitonga, 'Government Bans Logging,' (2018) Citizen Digital <<https://citizentv.co.ke/news/government-bans-logging-191860/>> accessed 1 February 2019.

⁴⁸ Vincent Kejitan, 'Logging Ban Extended by Six Months' (2018) Kenyans. Co.ke

<<https://www.kenyans.co.ke/news/29644-logging-ban-extended-6-months>> accessed 1 February 2019.

⁴⁹ Everlyne Judith Kwamboka, 'Government extends ban on logging by one year,' (2018) Standard Digital

<<https://www.standardmedia.co.ke/article/2001302981/state-extends-logging-ban-for-a-year>> accessed 1 February 2019.

⁵⁰ John Njoroge, 'Rift Residents, businesses, feel the pinch of logging ban,' (2018) Daily Nation

<<https://www.nation.co.ke/news/Rift-residents-feel-pinch-of-logging-ban/1056-4790322-138aalw/index.html>> accessed 1 February 2019.

⁵¹ FAO, 'Improving efficiency in Forest Operations and Forest Product Processing in Kenya: A Viable REDD+ Policy and measure?' (2016) Kenya Forest Service p.7. <file:///C:/Users/user/Desktop/kim/-

is the need to balance the conservatory and protection efforts with the need to meet the supply deficiency and maintenance of the needs of the communities who are reliant on forest products and resources.

Additionally, the legality and enforceability of these moratoriums on logging, is questionable given that they are often issued through directives and executive orders from the Deputy President and the President. This is because while the Constitution clearly provides for various legislative processes, issuing of executive directives is not mentioned within the Constitution as a method of legitimate law making. The non-binding nature of executive orders and directives and the manner in which such orders are meted that is without reference to the Constitutional principles of governance calls into question their constitutionality. .

Therefore, in as much as the moratorium on logging is a method of conserving the environment, based on the legal implications of the moratorium on logging and the socio--economic dilemma that has been brought about due to its institutions, this begs the question whether it is the most appropriate legal tool for sustainable forest management. This study, consequently sought to assess whether the moratorium on logging is a sustainable forest management tool.

1.3 Research Questions

This study sought to answer the following questions:

- 1) What are the challenges in implementation of the moratorium on logging?
- 2) To what extent did key stakeholders (or the community) participate in the introduction of the moratorium on logging?
- 3) How has the moratorium on logging influenced forest use rights?
- 4) What impact has the moratorium on logging had on the forest ecosystem?

1.4 Research Objectives

Broad Objectives

The broad objective of this study was to investigate whether the moratorium on logging is an adequate tool for the achievement of sustainable forest management.

[improving_efficiency_in_forestry_operations_and_forest_product_processing_in_kenya_a_viable_a_redd_policy_a_nd_measure_-2016kenya_forest_product_ef.pdf](#)> accessed 1 February 2019.

Specific Objectives

- 1) To evaluate whether there are challenges in implementation of the moratorium on logging.
- 2) To determine the extent to which the key stakeholders (or the community) participated in the introduction of the moratorium on logging.
- 3) To evaluate whether the moratorium on logging has influenced forest use rights.
- 4) To determine the impact of the moratorium on logging on the forest ecosystem.

1.5 Justification of the Study

The importance of forests cannot be gainsaid as previously stated the whole ecosystem which includes plants, animals, humans and fungi rely heavily on forests for their survival.⁵² The high dependency levels on forests especially by the human population requires formulation and implementation of forest management methods that ensure social and economic benefits of forests are attained in a way that conserves and maintains the forest ecosystem. Currently, there are numerous methods of forest management that have been implemented to curb deforestation and conserve forests. There has also been lengthy discussions both internationally and nationally on sustainable management methods that are most effective and suitable. These discussions have led to the formulation of methods of determining whether sustainable forest management has been achieved.⁵³

Kenya has also participated in the formulation of these methods (criteria and indicators) with aim of sustainably managing forests in order to attain the ten percent minimum forest cover recommended by the UN to its member states. Kenya has also taken measures to inhibit forest depletion such as enactment of new legislation, instituting moratoriums on logging and launching forest campaigns. While this can be considered to be a step towards curbing deforestation and enhancing reforestation, there is the question whether these steps enhance the sustainable management of forests. This is mainly in reference to the most recent forest management measure which is the ban on logging. Indeed, there hasn't been much study on the impact of the ban on logging on realization of the social and economic functions of forests. It is

⁵² WWF, 'Forest Habitat: Overview,' < <https://www.worldwildlife.org/habitats/forest-habitat>> accessed 30 April 2019.

⁵³ Stork, Boyle, Dale, Eeley, Finegan, Lawes, Manokaran, Prabhu, Soberon, 'Criteria and Indicators for Assessing the Sustainability of Forest Management: Conservation of Biodiversity,' (1997) CIFOR, Working Paper No. 17, < http://www.cifor.org/publications/pdf_files/WPapers/WP-17.pdf> accessed 1 June 2019.

anticipated that the results from this study will show the extent of sufficiency of the moratorium as a method of sustainably managing forests. Further, it is also anticipated that the results of this study will aid in the formulation of further methods of measuring sustainability that can be instrumental in formulation of other forest management laws. Ultimately, it is anticipated that the methods used in reviewing the moratorium will be used in formulation of forest related laws that take into consideration sustainable forest management going forward. Additionally, it is anticipated that the results of this study will aid the United Nations Forum on Forests, (UNFF) in formulating a national structure for determining and keeping track of the movement towards achieving sustainability.

1.6 Limitations of the study

There were a number of limitations encountered in the study such as: financial challenges, this was countered through the use of cheaply printed questionnaires where the questions were printed on either side of each paper. Time restrictions this was addressed through formulation of a work plan to ensure the carrying out of research responsibilities in an orderly and time conscious manner. Additionally, there was the issue of conducting Focus Group Discussion in order to obtain qualitative data. The non-attendance of selected respondents in scheduled meetings severally resorted to the use of information provided through questionnaires filled out by Key Informants such as Kenya Forest Service Officers and the Chief Conservator of Forests to form the qualitative data.

1.7 Theoretical Framework

There are two distinct theories that have been formulated by environmental scholars on the modes of environmental regulation. These are command and control theory and the reflexive law construct theory.⁵⁴ In order to establish the ideal theoretical framework for sustainable environmental regulation, an analysis of each theory will be done on whether it meets the tenets of sustainable management of forests. The results of which will be used as the foundation of the assessment on whether the ban on logging is an adequate sustainable regulatory measure.

⁵⁴ Eric Orts, 'A reflexive model of environmental regulation,' (1995) *Business Ethics Quarterly*, Vol 5, No. 4, The Environment, p. 781.
<<https://www.law.uh.edu/faculty/thester/courses/Emerging%20Tech%202011/orts%20on%20reflexive%20environmental%20law.pdf>> accessed 27 May 2019.

The command and control theory is aimed at the preservation of the environment protect through ordering people to operate in a particular manner and also sets broadly defined standards for environmental protection that are expected to be achieved by environmental institutions.⁵⁵ The theory envisions the establishment of performance and technological standards administered through legislatures and agencies and does not allow for deviation in case of changing circumstances.⁵⁶ Critiques of the theory state that due to its rigid nature, the command and control theory is not economically efficient because it does not take into consideration the complexity of environmental problems emanating from dynamic changes within the social and economic contexts.⁵⁷

The Command and control theory does not allow for evaluation of goals to determine whether they are sustainably suitable for the fast changing social and environmental conditions.⁵⁸

The Theory of the reflexive law construct which expounds on law and development, on the other hand was put forward by a sociologist Günther Teubner.⁵⁹ The characteristics of the reflexive law construct as stated by Teubner are that ‘the law determines the results without deciding on the prior agreements.’⁶⁰ Reflexive law is not strictly bent on achieving certain results but focuses on ensuring proper laws that do not adversely affect the community are in place.’⁶¹ In essence, the theory puts into practice a regulatory method that is largely procedural⁶² which does not focus on the achievement of the goals set but one which focuses on the parties tasked with

⁵⁵ ‘ A ‘law of nature’ - The Command and Control Approach,’ Policy Brief No. 2002-2 SANREM-CRSP-SEA, <https://vtechworks.lib.vt.edu/bitstream/handle/10919/65228/21_LawNatureSEAPolBrief2002_2.pdf?sequence=1> accessed 2 June 2019.

⁵⁶ Daniel Farber *Environmental Protection as a learning experience* (Loyola of Los Angeles Law Review, p.791, vol 27 1994)

⁵⁷ Molly Walker Wilkinson, ‘A Behavioral Critique of Command and Control Environmental Regulation,’ Fordham Environmental Review, Vol 2, No.2, Article 3 <<http://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=1601&context=elr>> accessed 19 July 2019.

⁵⁸ Ibid (n 59).

⁵⁹ Gunther Teubner ‘Substantive and Reflexive Elements in Modern Law.’ (2006) *The Law and Society Canon*, Seron, ed., Ashgate, Aldershot, pp. 75-122; *Sociological Theories of Law*, Kahei Rokumoto, ed., Dartmouth, Aldershot, pp. 415-462, 1994; *Law and Society Review*, Vol. 17, pp. 239-285, 1983. Available at SSRN: <https://ssrn.com/abstract=896509>

⁶⁰ Ibid (n 61), p. 239.

⁶¹ Håkan Hydén, Samuel Pufendorf Professor in Sociology of Law, Lund University, Sweden, November 2011

⁶² Eric Orts, ‘Reflexive Environmental Law,’ (1994) *Northwestern University School of law Review* 89.

<<https://heinonline.org/HOL/Page?handle=hein.journals/illlr89&id=1247&collection=journals&index=>> accessed 25 May 2019.

achieving the goals adopting self –reflective measures that take into consideration the changing circumstances to inform the decisions made from time to time.

Reflexive law does not advocate for direct regulation rather it focuses on how law can structure processes both of the legal system and the society while taking into consideration the different complexities of the society.⁶³ According to Teubner, this involves the law taking up the role of channeling decision making processes and social communications.⁶⁴ Reflexive law involves adopting procedure that encourages thinking and change of behavior in the desired direction depending on the circumstances.⁶⁵

The theory on the reflexive law construct is effectively linked and can be said to have emanated from the sociological school of jurisprudence. The sociological school of thought looks at the takes into consideration the perceptions of the society on the law.⁶⁶ Proponents of the Sociological school of jurisprudence put forward the concept of the analysis of law in relation to the society.⁶⁷ In the same vein, the reflexive school of thought similarly focuses on the formulation of law processes in relation to the differentiations in society.

The reflexive law sociological construct has been used as a base ground in developing the concept of sustainable forest management and resultantly sustainable development. It puts forward a theoretical explanation of the foundation of sustainable development. The German sociology theory, ‘the reflexive law construct,’ expounds on the concept of sustainable development and the principle of desegregated decision making.⁶⁸ The reflexive law construct was expounded by the German sociologist Teubner, he talked of the coordination of social subsystems. Similarly the structural functionalist sociological school of thought supports the

⁶³ Ibid n 56, p 1262.

⁶⁴ Helmut Wilke, *Societal Governance through law?, in State Law and Economy as Autopoietic Systems: Regulation and Autonomy in a new Perspective*, (Giuffre 353, 1992).

⁶⁵ Supra (n 61).

⁶⁶ Elise Nalbadian, ‘Introductory concepts on sociological jurisprudence: Jhering, Durkheim, Ehrlich,’ (2010), Mizan Law Review <<https://www.ajol.info/index.php/mlr/article/viewFile/145480/135007>> accessed 25 May 2019.

⁶⁷ Ratnapala, ‘Sociological jurisprudence and sociology of law,’ p.188 <[https://doi.org/10.1017/CBO9781139168427.007](https://sci-hub.tw/https://doi.org/10.1017/CBO9781139168427.007)> accessed 26 May 2019.

⁶⁸ Daniel Esty, ‘A Term’s Limits,’ Foreign Policy, Sept-Oct at p. 75

same reflexive law concept by stating that the society's subsystems should work together to promote stability and solidarity.⁶⁹

The reflexive law concept as previously discussed does not focus on the end result of social processes stated by substantive law in legal systems but rather focuses on the procedural requirements of the stakeholders or those part of the problem.⁷⁰ Similarly, the same theoretical concept can expound further on managing forests sustainably which is also procedural based.⁷¹ The reflexive law concept envisions communication between different subsystems due to their autonomous nature.⁷² This means that while making forest management planning laws within the ambit of this theory, decision making must be supported by relevant data and procedures and consultation of various stakeholders.

The making of sustainable forest management laws was prompted by the need to form a sustainable legal system.

Drawing upon the concept of the reflexive law construct theory, various characteristics of sustainable laws can be extracted. These include, the aspect of self-reflective and self-critical processes as advocated by the reflexive law construct and non-employment of law directly in terms of giving orders and directions. Rather, through the establishment of incentives and procedures that allow for critical reflection on how particular activities influence the environment and employing activities that promote the integrated functionality of different social subsystems.⁷³ Therefore reflexive environmental law promotes prudent environmental

⁶⁹ Paolo De Nardis, 'Functionalism in Sociology,' (2013) Encyclopedia of Sciences and Religions, 900-908, <https://doi.org/10.1007/978-1-4020-8265-8_1644> accessed 15 June 2019.

⁷⁰ Ibid n 64.

⁷¹ Daniel Fiorino, 'Rethinking environmental regulation: perspective on law and governance.' (1999), Vol 23, Harvard Environmental Law Review, 23:441-469, <<http://law.uh.edu/faculty/thester/courses/Emerging%20Tech%202011/ELR-23-2-pages-fiorino.pdf>> accessed 25 September 2019.

⁷² Galf Peter Calliess, 'Lex mercatoria reflexive law guide to an autonomous legal system' (2001), Vol 2, No. 17, German Law Journal. <http://www.germanlawjournal.com/article.php?id=109> accessed 7 May 2019.

⁷³ Eric Orts, 'A Reflexive Model of Environmental Regulation,' (1995) Business Ethics Quarterly, Vol. 5 No. 4, The Environment, p.780. <<https://www.law.uh.edu/faculty/thester/courses/Emerging%20Tech%202011/orts%20on%20reflexive%20environmental%20law.pdf>> accessed 26 May 2019.

management through incentives and involvement of the relevant stakeholders in decision making.⁷⁴

In assessing whether the moratorium on logging as a regulatory measure is an adequate sustainable forest management tool, the characteristics of sustainable laws as espoused by the reflexive law construct must be apparent for the regulatory measure to be considered as an adequate sustainable forest management regulatory measure. This study therefore seeks to investigate whether the current ban is a goal oriented measure that focuses on control of the society's behavior or a process of self-reflection and evaluation that considers the integration of the different social subsystems of sustainability that is the economic, social, cultural and ecological tenets of sustainable forest management.

1.8 Conceptual Framework

The sustainable Forest Governance Framework comprises various elements that have been derived from the forest governance concepts developed by experts over time. The elements have been developed from forest governance indicators which focus on the influence of forest governance on poverty, economic development and forest as carbon sinks.⁷⁵

Based on literature on components that cover all the dimensions on forest governance categorized as Transparency, accountability and public participation, comprehensibility of forest legislation and, stability of forest institutions and conflict management systems and capacity for forest monitoring and evaluation. Figure 1 shows the conceptual framework that shall be used in guiding the research in explaining the interaction between independent and dependent variables in pictorial format.

⁷⁴ Philip Selznick, *The Moral Commonwealth: Social Theory and the Promise of Community*, (1st ed. p.236, 1994).

⁷⁵ International Bank for Reconstruction Development/ The World Bank, 'The World Bank Agriculture and Rural Development Department, Roots for Good Forest Outcomes: An Analytical Framework for Governance Reforms,' (2009) (Report No. 49572-GLB) Annex 2

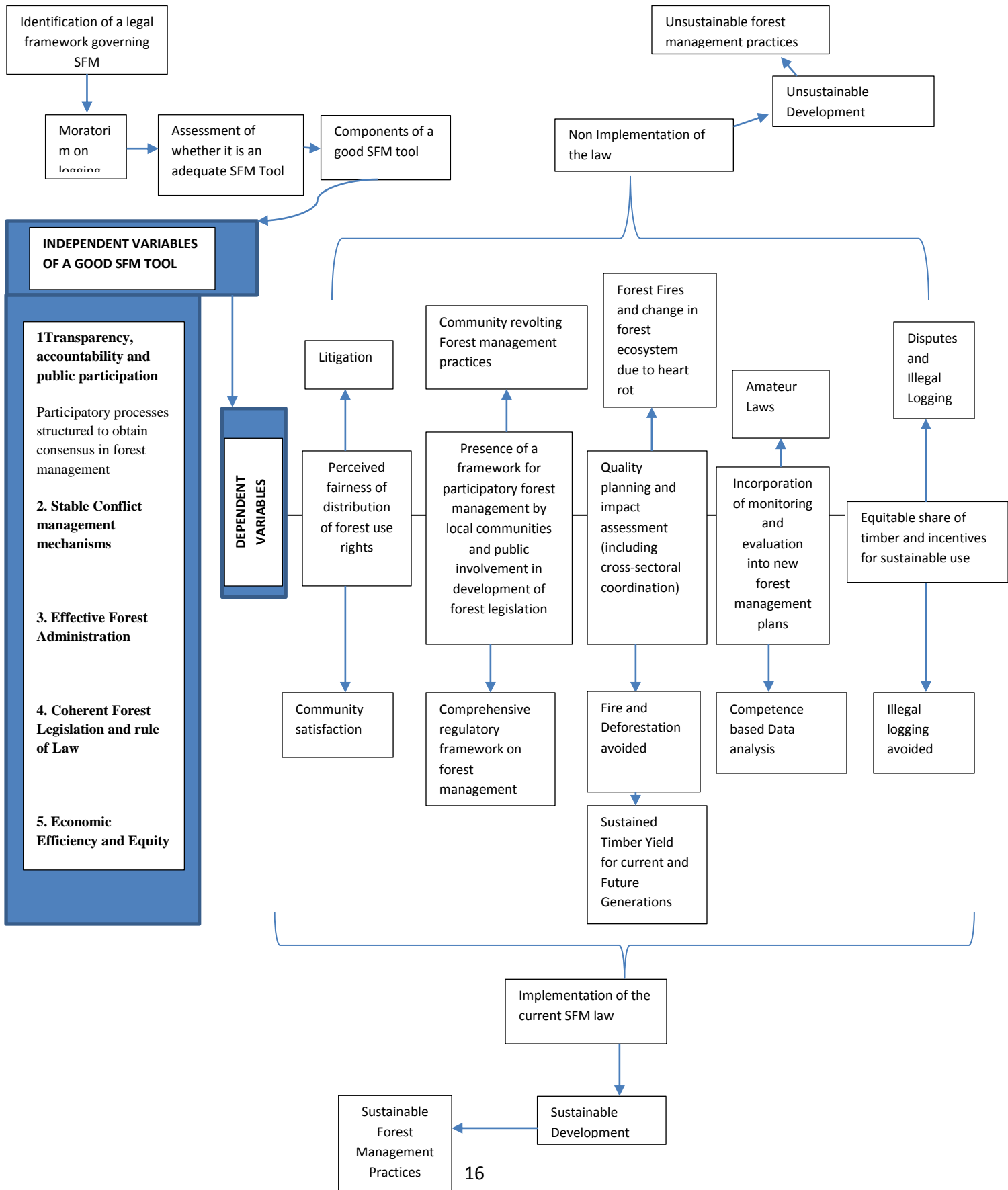


Figure 1: Conceptual framework

Source: Author, (2019)

1.9 Methodology

1.9.1 Research Design

The research design applied a descriptive cross sectional study design, which used qualitative and quantitative research techniques in the collection of data and information in assessing the adequacy of the moratorium on logging as a sustainable forest management tool. The research design also involved the formulation of a research problem and the research process followed by data analysis and presentation. In collecting the data a reconnaissance study of the target area was first done, to aid in the formulation of the research problem, research questions and objectives. Thereafter data was collected from both primary sources and secondary sources.

1.9.2 Data collection methods

A research permit was initially acquired from the National Commission for Science and Technology (NCST) and the data was thereafter collected using the methods listed below

1.9.2.1 Primary Data Collection Methods

- (i) Direct Field Observation;
- (ii) Personal Interview data collected through semi-structured questionnaires, distributed amongst respondents who include communities around the East Mau Forest Reserve, officials from the Kenya Forest Service and educated local residents. This information was returned for data analysis; and
- (iii) Focus group discussions and open discussions to determine the community's perception on the issue of the moratorium on logging.

1.9.2.2 Secondary Data Collection Methods

This included relevant information obtained from relevant literature such as records, publications, magazines, workshops, periodicals and documents from the Kenya Forest Services among others.

1.9.3 Study area

The location of the study was in particular gazetted Mau Forest and Donduri Forest areas which are about 0.09% of the county's land mass that is 679.6 km² within Nakuru County located in the South Rift Region between Latitudes 0° 13' N and 0° 10' and Longitudes 35° 28' W and 35° 36' E.⁷⁶The study was particularly focused on the Eastern Mau Forest Reserve covering an area of about 64,970.710km² about 50km South of Nakuru Town at 35° 58'00''E and 00° 32' 00'S and altitude range of 1200 and 2600m and more specifically the Nessuit Forest Block in Njoro Division within Njoro District .⁷⁷

The rationale for choosing the above stated geographical area is because Nakuru County was among the counties with the highest loss of tree cover in Kenya between 2001 and 2016, a loss of about 27,700 hectares according to forest assessment reports.⁷⁸This forest cover loss was among the factors considered in the decision leading up to the formulation of the moratorium on logging.

1.9.4 Study population

The study targeted particular groups of persons, these included 43,257 households living within and around East Mau Forest Reserve Area constituting about 169,226 people, 600 Kenya Forest Service Officers inclusive of Forest Rangers, the Kenya Forest Service, the Chief Conservator of Forests and 30 saw millers were the key respondents. This made the total population of the study to be 169, 856.

Table 3.1 Target Population

Target	Total Number	Percentage
East Mau Forest Reserve Residents	169,226	99.63%
Kenya Forest Service Officers	600	0.035%

⁷⁶ Ministry of Water, Environment, Energy and Natural Resources, 'Water & Environment: Nakuru County Environment Profile,' <<https://nakuru.go.ke/departments/water/>> accessed 20 May 2019.

⁷⁷ Langat Kipkurui, Maranga, Aboud and Cheboiwo, 'Role of Forest Resources to Local Livelihoods: The Case of the East Mau Forest Ecosystem, Kenya,' International Journal of Forestry Research, Volume 2016, Article ID 4537354, p. 1 <<http://dx.doi.org/10.1155/2016/4537354>> accessed 27 May 2019

⁷⁸ Oliver Mathenge, 'As government roars no one knows the extent of Kenya's Forest Cover,' (2018) The Star <<https://www.the-star.co.ke/news/2018-03-06-as-government-roars-nobody-knows-extent-of-kenyas-forest-cover/>> accessed 20 May 2019.

Saw millers	30	0.017%
Total	169,856	100%

Source: Author, (2019)

1.9.5 Sample Size sampling technique

The research utilized a combination of random and purposive sampling.

The households within and adjacent to the East Mau Forest totaled 43,257 households constituting the communities within the Forest and those neighboring the forest.⁷⁹ The last census recorded a total population of 1,603,325 people within 409,836 households in Nakuru County.⁸⁰ Based on this records, the number of people within East Mau Forest was estimated to be 169, 226 people. For the household populace, the respondents were chosen using stratified random sampling, where stratification was according to age of respondents that is (+18 years) and duration of residence, to ensure those interviewed have actually experienced challenges and impacts if any as a result of the moratorium on logging.

In order to ensure precision, the study used information from samples as a representation of the whole population with the use of Mugenda and Mugenda’s calculation on the preferred sample size, where the blow formula was used: w^{81} The accessible population in this study is 169,226 people.

$$nf = \frac{n}{1 + \frac{n}{N}}$$

According to the above formula:

⁷⁹ Ibid n79, p2.

⁸⁰ Kenya National Bureau of Statistics, ‘Population and Household Characteristics of Kenya, 2009’ <<http://kenya.opendataforafrica.org/jawneyf/population-and-household-characteristics-of-kenya-2009>> accessed 19 June 2019.

⁸¹ Mugenda, O., Mugenda, (2003) ‘*Research methods, quantitative and qualitative approaches,*’ 1st ed, Africa Center for Technology Studies.

Nf = desired sample size when the population is less than 10,000

n = desired sample size when the population is more than 10,000

N = estimate of the population size.

Using the above Formula sample size is:

$nf=384/(1+384/169226) = 383$ people cumulatively.

Only 195 people were reached out of the 383 people, this was because households were sparsely situated and only a few respondents consented to participate in the research.

The Key Informants such as the Forest officials were selected through purposive sampling and they gave direction to new respondents not previously selected, hence this process incorporated the snowball sampling technique.

The KFS provided three key informants and the Chief Conservator of the areas was interviewed as well. Additionally, Focus Group Discussions were arranged but intended participants did not attend during the scheduled meetings. The data collected from key informants was therefore used as part of the qualitative data.

1.9.6 Validity of the research instrument

In order to determine whether the questionnaire was suitable in collection of the required information in line with the objectives of the study in a manner that was comprehensible among the targeted population, the research engaged the opinion of experts. The supervisor was among the experts involved in determining the validity and capability of the instrument in addressing the research questions. Further, the sampling technique used ensured inclusivity since the respondents were selected randomly and therefore the responses were a representation of the larger sample's views.

1.9.7 Reliability of the research instrument

Reliability was ascertained through conducting a pilot study, where the questionnaire was first distributed randomly to about 10% of the sample population. Additionally, a training was conducted for the research assistants in order to ensure that they directed respondents in answering the questions appropriately.

1.9.8 Data analysis and presentation

Analysis of the information obtained was done with the use of qualitative and quantitative methods to reduce chances of biasness. Analyzing through quantitative methods was done through data editing to identify and remove all empty fields for complete accuracy, data coding by assigning values to responses within the research. The Data was thereafter transferred to Statistical Package for Social Sciences (SPSS) software version 20.0 for analysis and descriptive statistics through use of bar graphs and pie charts to summarize the data and identify patterns. The qualitative data analysis method focused on collection of content from specific sources such as interviews from respondents.

1.9.9 Chapter Outline

Chapter one forms the background of the study and briefly explains and establishes the research questions and objectives. It sets out the research problem, justification of the study, the conceptual and theoretical framework.

Chapter Two on Literature Review sought to review previous writer's opinions on the main questions that this research seeks to answer. This was with the aim of establishing the available literature with regards to the study and the gaps in the current literature that this research sought to fill.

Chapter three focused on the sustainable forest management mechanisms implemented by Kenya within the legal and policy framework. The chapter set out the events leading up to formulation of the ban, it sought to establish why the ban was necessary and other legal and regulatory methods used in ensuring sustainable forest management.

Chapter four focused on collection of data based on the research questions set out in chapter one. The chapter sought to provide a detailed breakdown of the data collected and a comprehensive discussion of the findings by reference to decided cases, scholarly writings and a comparison of the findings with past researches with a view to determining the implications of the findings to the overall research question.

Chapter five made reference to the data analyzed in chapter four and made recommendations based on the results. It also made general conclusion on the research, stating whether the ban on logging is a sustainable forest management tool.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

For the proper contextualization of the study, this literature review seeks to place the research on the moratorium on logging as a sustainable forest management tool in the larger area of study and to critically analyze existing literature in a bid to identify various authors' take on the subject and to identify any gaps in the existing literature that this study seeks to fill. The process involves reviewing literature that addresses the key concepts of the study which will ultimately aid in the evaluation on whether the moratorium on logging is an appropriate sustainable forest management tool as the broader concept.

The chapter presents the results of the review and gives a summary of the key arguments from legal scholars and in the process shows their relevance to the present study. The literature is subdivided into several ranges of extensive categories. These include literature on: the status of forests in Kenya, the approaches to forest management and the challenges facing forest management. Additionally, the utilization of forest resources is discussed which includes and involvement of the community and relevant stakeholders in formulation and implementation of the moratorium on logging and its influence on forest user rights, forest ecosystem and forest ecosystem services and the impact of the moratorium on logging.

2.1 Status of forest in Kenya

Data on the status and trends of forest is important in informing decisions on the use of forests and the progress of attaining sustainability in managing the natural resource. In Kenya the forest cover was recently estimated to be 4.18 million hectares which represents about 7.4 % of Kenya's total land area as stated in the last comprehensive National Forest Resources Assessment report.¹ The report was released in 2013, following a geospatial assessment by Kenya Forest Service (KFS) and the Kenya Forestry Research Institute.² For the purpose of

¹ Ministry of Environment and Forestry, 'National Strategy for achieving and maintaining over 10% Tree Cover by 2022,' (May 2019) Extent of National Forest Cover <www.environment.go.ke/wp-content/uploads/2019/08/Strategy-for-10-Tree-Cover-23-5-19-FINAL.pdf> accessed 4 September 2019.

² Geospatial World, 'Kenya's Forest Cover is 7% reveals study,' (2013) <www.environment.go.ke/wp-content/uploads/2019/08/Strategy-for-10-Tree-Cover-23-5-19-FINAL.pdf> accessed 4 September 2019.

clarity the assessment used the new definition of forest cover as provided by the Forest Conservation and Management Act 2016. The Act defines forests as land registered as a forest in an area of 0.5 hectares.³ Given the obscurity of the definition, this has paved the way for different inferences and has paved way for the KFS interpretation of forest as land covered by trees of over two meters and spanning 0.5 hectares with a canopy cover of more than 15%.⁴ This definition was put in place ahead of the REDD+ Initiative and starkly contrasted the previously used FAO definition which provided the definition of forests as land with trees of a height of more than five meters covering an area of more than 0.5 hectares and with a canopy cover of more than 10%.⁵ The percentage of forest cover in Kenya has been changing over the years due to the revised percentage of canopy cover. In 1990, Kenya's forest cover was estimated at 1.7% due to the recommended United Nations Environmental Programme (UNEP) definition of forests as land with 40% forest cover, the forest cover was later revised to 6.4% after the adoption of FAO's definition of forest as one with a canopy cover of 10%.⁶ Currently the forest cover is estimated at 7.4% with the adoption of the KFS definition.⁷ However, this percentage is still below the global recommended minimum standard of 10% forest cover of the country's total land mass.⁸ Despite the land mass covered by forests in Kenya being significantly low, the available forested areas are considered to be an important natural resource and have greatly contributed to the country's social and economic wellbeing.⁹ According to Lucy Emerton, these forests provide basic subsistence to a large number of the population.¹⁰ The sector has not only contributed to Kenya's socio-economic status but has also influenced the ecosystem's resilience to climate change.¹¹

³ Forest Conservation and Management Act, Cap 34 of 2016, Section 2.

⁴ 'Forest degradation status,' (2018) Taskforce Report on Forest Management and Logging Activities in Kenya <<http://www.environment.go.ke/wp-content/uploads/2018/08/Forest-Report.pdf>> accessed 22 November 2019.

⁵ Forest Resource Assessment Working Paper 180, FAO, December 2012.

⁶ Global Forest Resources Assessment 2005, FAO Forestry Paper 147, 2005.

⁷ FAO, 'Global Forest Resources Assessment,' (2015) Kenya Country Report, Rome 2014.

⁸ Ibid 59, p 7, para 4.

⁹ Ministry of Environment and Forestry, 'Taskforce Report on Forest Resources Management and Logging Activities in Kenya,' Executive Summary (2018) <<http://www.environment.go.ke/wp-content/uploads/2018/08/Forest-Report.pdf>> accessed 3 September 2019.

¹⁰ Lucy Emerton, 'Why Forest Values are important to East Africa Innovation,' (2001) Special Issue on Valuation of Forest Resources in East Africa 5, <https://www.researchgate.net/publication/284696575_Why_forest_values_are_important_to_East_Africa> accessed 3 September 2019.

¹¹ Ibid n 60.

However, the importance of these forests continues to be undervalued as stated by Emerton and Karanja since forest resources tend to be over exploited and poorly managed leading to loss in forest cover.¹² A World Wide Fund (WWF) Kenya 2015 report, stated that there has been a constant decline of forest cover by 25% that is (824,115 hectares) from 1990 as the baseline year to 2015.¹³ The current Global Forest Watch deforestation statistics estimate a tree cover loss of 2,649 hectares in the year 2018.¹⁴ Lambrechts, Gachanja and Woodley in their 2015 Maasai Mau Forest Status Report state that the main drivers of loss of forest cover in Kenya are caused by human activities.¹⁵ These include, settlement within the forested areas, unsustainable extraction of forest resources as well as corruption among others.¹⁶ In a bid to address these changes in forest decline, the government has put in place various forest management practices to reverse the debilitating state of forests in Kenya.¹⁷

2.2 Approaches to Forest Management

Forests have long been recognized as an important natural resource benefitting both man and the ecosystem. However, certain practices such as over extraction of wood resources and clearing of forests land for agricultural practices and human settlement endanger the resource. In order to establish a balance between the preservation of the resource and its use there is need for proper management of the forests.¹⁸

Forest management thus involves taking the appropriate administrative, economic, legal and social measures in the protection and utilization of the natural resource.¹⁹ There are different

¹² Lucy Emerton and Francis Karanja., 'Valuation of Forest Resources in East Africa,' (2001) Africa Centre for Technology Studies (ACTS) and the World Conservation Union (IUCN), Eastern Africa Regional Office (EARO).

¹³ WWF, 'Keep Kenya Breathing,' (2015)

https://www.wwfkenya.org/keep_kenya_breathing_/state_of_forest_in_kenya/ accessed 4 September 2019.

¹⁴ Mongabay, 'Deforestation statistics for Kenya,' Tree Cover Loss: Hansen/UMD/NASA via Global Forest Watch <<https://rainforests.mongabay.com/deforestation/archive/Kenya.htm>> accessed 4 September 2019.

¹⁵ Christian Lambrechts, Michael Gachanja and Bongo Woodley, 'Maasai Mau Forest Status Report,' (2015) Ewaso Ngiro South Development Authority (2015) <http://www.iapad.org/wp-content/uploads/2016/01/maasai_mau_report-1.pdf> accessed 4 September 2019.

¹⁶ Ibid n 13 p 5 para 2.

¹⁷ Donald Kipruto Kimutai and Teiji Watanabe, 'Forest Cover Change and Participatory Forest Management of the Lembus Forest, Kenya,' (2016) Graduate School of Environmental Science, Hokkaido University, Sapporo, Hokkaido, 060-0810, Japan.

https://www.researchgate.net/publication/305678235_Forest_cover_Change_and_Participatory_Forest_Management_of_the_Lembus_Forest_Kenya? Accessed 4 September 2019.

¹⁸ FAO, 'Chapter IV: The Concept of Forest Management – Evolution, Principles and Technical Requirements,' <<http://www.fao.org/3/W4442E/w4442e07.htm>> accessed 5 September 2019.

¹⁹ FAO, 'Trends in forest management and utilization' <<http://www.fao.org/3/w4345e04.htm>> accessed 5 September 2019.

methods of managing forests given the immense variety of forests and inherent diversity within their ecosystem.²⁰ Oakerson states that the different management approaches vary along the lines of stakeholders responsible for management in order to assign responsibility and the intended conservation outcomes.²¹ With regards to the stakeholders responsible for management, Mburu and Berner, provide for forest management approaches that may be centralized where the state takes on the role of managing the forest or decentralized where local communities and individuals are involved or co- management where the state and individuals cooperate in management.²²

Forest management approaches may also differ based on the intended conservation outcome. According to Guthiga and Mburu, the approaches depend on whether extraction of resources is prohibited entirely i.e. strict protectionist conservation or whether conservation is pursued alongside limited extraction.²³

While the outcome of forest management may vary widely, the primary objective has often been maintenance of the economic capacity of the forest through the sustained yield of forest products.²⁴ However, according to Sandstrom, this concept in management has been changing over the decades and there has been a transition from development of legislation based on sustaining yield to one that focuses on protection and preservation of biodiversity.²⁵ Additionally, according to a 2015 FAO report, the shift in forest management have focused on the ensuring the multiple functions of forests are enhanced through involvement of the public

²⁰ Francis Putz., 'Approaches to Sustainable Forest Management,' (1994) CIFOR, Working Paper No. 4 <www.cifor.org/publications/pdf_files/WPapers/WP-04n.pdf> accessed 5 September 2019.

²¹ Oakerson, R.J. *Making Commons Work: Theory, Practice and Policy*, Bromely DW (P41-59, 1992).

²² John Mburu and Regina Birner 'Emergence, adoption and implementation of collaborative wildlife management or wildlife partnerships in Kenya: A look at conditions for success,' (2007) *Society and Natural Resources* 20:379-395.

²³ Paul Guthiga, John Mburu., and Holm Mueller Karin, *Factors influencing Local Communities' Satisfaction Levels with Different Forest Management Approaches of Kakamega Forest, Kenya*, (2008) *Environmental Management* (2008) 41:696-706 <erepository.uonbi.ac.ke/bitstream/handle/11295/17264/Guthiga%20et%20al_Factors%20Influencing%20Local%20Communities%20Satisfaction;sequence=1> accessed 5 September 2019.

²⁴ FAO, 'Trends in forest management and utilization,' *Status and trends in forest management* (2015) <<http://www.fao.org/3/w4345e04.htm>> accessed 5 September 2019.

²⁵ Camilla Sandström and Anna Stens, 'Dilemmas in forest policy development—the Swedish forestry model under pressure.' (2015) In: Westholm, E., Lindahl, K.B., Kraxner, F. (Eds.), *The Future Use of Nordic Forests*. Springer International Publishing, pp. 145–158. [http:// dx.doi.org/10.1007/978-3-319-14218-0_10](http://dx.doi.org/10.1007/978-3-319-14218-0_10).

is environmental decision making processes thus constituting ‘sustainable forest management’.²⁶ A forest management approach balancing environmental, socio-economic and cultural objectives²⁷

This shift towards sustainable forest management begun to emerge during the years between 1980 and 1990 as new forest management methods.²⁸

According to Wang, the emerging field of sustainable forest management was founded upon the concept of sustainable development as espoused in the Brundtland Report (World Commission on Environment and Development 1987).²⁹ The concept contrasts with Sustainable yield as a forest management method in that it presents two innovative aspects. According to Luckert and Williamson, these aspects include: First it aims to realize simultaneously social, environmental and economic functions and second, it ‘places great emphasis on considering resources beyond timber and tradeoffs between timber and non-timber values,’³⁰

While there are no permanent standards by which to measure sustainable forest management since the nature of the social, environmental and economic functions that sustainable forest management seeks to realize varies there are however, certain tools used to measure whether sustainable forest management has been achieved.³¹ These tools for defining, assessing and monitoring whether certain practices can lead to achieving sustainable forest management have been formulated by countries over the years.³² A 2001 report on methods of monitoring,

²⁶ FAO, ‘Trends in forest management and utilization,’ Status and trends in forest management <<http://www.fao.org/3/w4345e04.htm>> accessed 5 September 2019

²⁷ Mette Loyche Wilkie, Peter Holmgren and Froylan Castaneda, ‘Sustainable Forest Management and the Ecosystem Approach,’ FAO (2005), Forest Management Working Paper FM 25 (2003) <http://www.fao.org/forestry/6417-0905522127db12a324c6991d0a53571fa.pdf> accessed 5 September 2019.

²⁸ Marty Luckert & Williamson, T., ‘Should sustained yield be part of sustainable forest management?’ Canadian Journal of Forest Research (2005) p.356 <http://www.cfs.nrcan.gc.ca/bookstore_pdfs/26944.pdf> accessed 6 September 2019.

²⁹ Sen Wang, *One Hundred Faces of Sustainable Forest Management* (Forest Policy and Economics, 6 (3-4), p.206 2004) <<https://doi.org/10.1016/j.forpol.2004.03.004>> accessed 6 September 2019.

³⁰ Ibid n 26.

³¹ Retno Kuswandari, ‘Assessment of different methods for measuring the sustainability of forest management,’ International Institute for Geo-Information Science and Earth Observation: Thesis submitted in partial fulfillment of the degree of Master of Science in Geo-Information Science and Earth Observation Planning and Coordination in Natural Resources Management (2004) <https://webapps.itc.utwente.nl/librarywww/papers_2004/msc/nrm/kuswandari.PDF> accessed 6 September 2019.

³² Castaneda, F., ‘Criteria and indicators for sustainable forest management: International processes, current status and the way ahead,’ (2000) *Unasylva* 203, Vol. 51 <<http://www.fao.org/tempref/docrep/fao/x8080e/x8080e06.pdf>> accessed 6 September 2019.

assessing and reporting on progress towards sustainable management of forests listed some elements for testing sustainability, they include: the status of forest cover, the ecosystem, the ability of the forest to perform various functions and the strength of the legal, institutional and policy framework in ensuring protection of the forest.³³

According To Castaneda, there is universal consensus that measurement of these are the elements that need to be considered when assessing whether certain forest management practices are sustainable.³⁴ Kenya has participated in the development of criteria and indicators for tools of sustainable forest management, it is currently party to the Dry Zone Africa process which developed seven criteria and forty seven indicators to be applied nationally in determining whether a certain practice or law is an appropriate sustainable forest management tool.³⁵

Currently the forest management practices in Kenya are majorly grounded on the Forest Conservation and Management Act 2016.³⁶ The purpose for the formation of the Act as provided in its Preamble was to enable forest resources to be managed sustainably.³⁷ In terms of sustainability the Act provides for involvement of the community in forest management in various ways such as through formation of Community Forest Associations.³⁸ However, the Act does not specifically provide for the moratorium on logging as forest management practice. According to Mwangi, presidential directives such as the ban on logging have often been used to regulate forest activities in Kenya over the years but with no specific legal backing.³⁹ Evaluations of the effectiveness of these presidential directives as sustainable forest management

³³ FAO, 'Use of Criteria and Indicators for Monitoring Assessment and Reporting Progress Toward Sustainable Forest Management in the United Nations Forum on Forests,' Report prepared for the International Expert Meeting on Monitoring, Assessment and Reporting on Progress toward Sustainable Forest Management, Yokohama, Japan, 5-8 November 2001, <<http://www.rinya.maff.go.jp/mar/Ms.%20Susan%20Paper.pdf>> accessed 6 September 2019.

³⁴ Ibid n 30.

³⁵ Supra n 30, p 36, para 6.

³⁶ Jane Mutheu, 'Policy Brief: Replenish Millions of Kenyan Households Granaries through Forest Restoration,' (2018), Wangaru Maathai Institute of Peace and Environmental Studies, University of Nairobi. <<https://www.slu.se/globalassets/ew/org/andra-enh/uadm/global/agrifose/outputs/briefs/ilri/dr.-jane-mutheu-mutune-brief-october-2018.pdf>> accessed 6 September 2019.

³⁷ The Forest Conservation and Management Act 2016.

³⁸ Jane Mutune, Christian Hansen, Raphael Wahome and David Mungai, 'What Rights and Benefits? The Implementation of Participatory Forestry Management in Kenya: The Case of Eastern Mau Forest Reserve,' (2017) *Journal of Sustainable Forestry*, Vol 36 (230-249).

³⁹ Esther Mwangi, 'Colonialism, Self Governance and Forestry in Kenya: Policy, Practice and Outcomes,' (1998), <<http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/5706/Colonialism%20self%20governance%20and%20forestry%20in%20Kenya.pdf?sequence=1>> accessed 6 September 2019.

tools have not also been carried out. There is therefore need to determine the adequacy and effectiveness of the ban on logging as a sustainable forest management tool.

2.3 Challenges in implementation of the moratorium on logging

Sustainability regulations have been developed over the years at both the global and national level.⁴⁰ Governments worldwide have purposed to formulate policies which promote sustainability and this has led to formulation of a range of sustainable oriented environmental laws. Despite, the enactment of these laws, scientific monitoring has indicated that the environmental sustainability is far from being achieved. This can be attributed to law implementation failure in some respects. Michael and Howes in their article on Environmental Sustainability: A case of Implementation Failure, published on 24th January 2017 stated that economic, political and communication factors are major contributors to environmental policy implementation failure.⁴¹

In order to discuss the reasons for policy implementation failure in the environmental field, it is important to first elaborate on the meaning of implementation and the constituent components of implementation.

Various scholars have come up with different interpretations of what constitutes implementation, however, for the purpose of this study, a few shall be highlighted in order to come up with a general understanding. Van Meter and Van Horn, in their book, the Policy Implementation Process, provide the definition of policy implementation as the carrying out various activities by state officials and private persons with the aim of attaining policy goals.⁴² Mazmanian and Sabatier, on the other hand provide their interpretation of implementation as steps that are carried out after issuing policies.⁴³ They also elaborate on the types of policies that are implemented such as those incorporated in statute or court decisions. Further, they state that the policies should clearly state the issue, the specific goals to be attained and the structure of the

⁴⁰ Michael James Howes, Liana Wortley, Ruth Potts, Aysin. Dedekorku, 'Environmental Sustainability: A case of Policy Implementation Failure,'(2017) MDPI <<https://www.mdpi.com/2071-1050/9/2/165/pdf>> accessed 24 June 2019.

⁴¹ Ibid.

⁴² Van, M. Donald, S. Carle. E, Van. H, *The Policy Implementation Process* (Administration and Society, 1975, 6(4): 445-88, 1975)

⁴³ Mazmanian, Daniel and Paul *Implementation and Public Policy* (Chicago,, Scot Foresman & Co 1983)

implementation process.’⁴⁴Implementation thus involves, first the enactment of policy and thereafter efforts by implementers to ensure the policy goals are achieved.

The successful implementation of policies depends on a number of factors, as stated by Enock Mukwindidza, these key factors affecting successful implementation of laws include: presence of clearly formulated objectives dedicated to the implementation process; the communities’ participation in the implementation process and support of implementation of the law and the presence of legitimate structures of implementation;⁴⁵

Enock states that lack of effective methods to implement the law hinders successful implementation.⁴⁶ One of the effective methods for implementation is the coherent structuring of the implementation process by the law. According to Howes and Nunn, the absence of a coherent structure of carrying out implementation is a cause of implementation failure.⁴⁷ In their analysis of 94 articles on the causes of implementation failure in environmental sustainability, they stated that 34% of the authors established that the lack of appropriate and specific laws causes implementation failure. This is because environmental regulations formed without a coherent structure run the possibility of having implementation gaps. Althaus, Bridgman and Davis provide these gaps to include lack of clear goals, lack of consultation and involvement of relevant stakeholders that are likely to be affected by the regulation and inconsistency with existing laws.⁴⁸ In reference to the moratorium on logging, the current forest legislation in Kenya does not specifically provide for a coherent process for implementation. Additionally the moratoriums on logging issued over the years have been as a result of directives from the executive arm of the government, directives which are often meted out without specific procedural structures of implementation.

The structure includes monitoring and evaluation methods used in determining the effectiveness of the law. Odendaal in a study guide titled, ‘Public Administration: Public Policy Department of Public Administration’ states that successful implementation of laws can only be achieved if

⁴⁴ Ibid n 41, p.20-21.

⁴⁵ Enock Mukwindidza. ‘The Implementation of Environmental Legislation in the Mutasa District of Zimbabwe,’ (MPA University of South Africa, 2008), <<https://core.ac.uk/download/pdf/43165760.pdf>> accessed 25 June 2019.

⁴⁶ Ibid n 43, p 25.

⁴⁷ Michael Howes and Patrick Nunn, ‘Environmental Sustainability: A case of implementation failure?’ (2017) MDPI.

⁴⁸ Althaus, Bridgman and Davis, *The Australian Policy Handbook*, 5th ed; Allen and Unwin: Sydney 2012.

there is evaluation of the effect of the law.⁴⁹ Effective evaluation enables implementers to detect intervening circumstances that may lead to deviation of the law and to devise methods of ensuring implementation even if this may mean change of law.⁵⁰

Monitoring and evaluation also allows implementers to realize the impact of implementation in order to establish its effectiveness and appropriateness. This aids in the determination of the likelihood of resistance of the law. Interestingly, the current moratorium on logging lists monitoring and evaluation as one of the objectives and reasons for its formulation. However, the moratorium on logging covers the monitoring of other areas such as establishment on whether the licensing conditions are being met by the saw millers, it does not speak to monitoring and evaluating to establish the effectiveness of the moratorium on logging or its impact on the environment and people tasked with complying with the moratorium on logging. Simply, there are no evaluation methods proposed by the moratorium on logging to determine whether the moratorium on logging will have an impact on the social, economic, cultural and ecological structures.

Enock states that evaluation should not only be carried out after implementation has been done but should form part of the implementation process at every stage.⁵¹ According to Odendaal, evaluation of the laws leads to establishment of results which are then given to the law makers who after consideration of the results could either terminate the law, maintain the law or amend the law with innovative solutions.⁵² Monitoring and evaluation has been used as method of assessing sustainable forest management practices and has been widely accepted to be a tool for establishing sustainable forest management. Gordon and John state that monitoring is a key factor in realizing forest management in a sustainable manner.⁵³ According to Hickey monitoring can be used in determining whether certain forest management plans are in line with sustainability objectives.⁵⁴

⁴⁹ Odendaal, M. *Public Administration: Public Policy Department of Public Administration* (Study Guide for PUB303-G (2004), Pretoria: University of South Africa 2004)

⁵⁰ Ibid n 45.

⁵¹ Ibid n 43, p 27.

⁵² Ibid n 45.

⁵³ Gordon Hickey and John Innes *Monitoring Sustainable Forest Management in Different Jurisdictions*, (2005) *Environmental Monitoring and Assessment* 108: 241-260 <10.1007/s10661-005-4329-y> accessed 26 June 2019.

⁵⁴ Gordon Hickey, *Regulatory approaches to monitoring sustainable forest management*, (*International Forestry Review*, Vol 6 No 2, pp. 89-98 2004) <<https://doi.org/10.1505/ifer.6.2.89.38394>> accessed 26 June 2019.

Despite the advantages of monitoring and evaluation in ensuring successful implementation as mentioned above, there are scholars who oppose these method of implementation. As stated by Hickey, this opposition stems from law makers perception of monitoring and evaluation as a lengthy and costly process.⁵⁵ In spite of numerous literature promoting monitoring and evaluation, little has been said on the obstacles that may hinder monitoring and evaluation emanating from rigidity of lawmakers. There is also a dearth of research that this research seeks to fill on whether monitoring and evaluation can be bypassed in implementation process without affecting the probability of success in implementation.

As previously mentioned a coherent and legitimate structure of implementation clearly detailing the implementation process is essential for successful implementation of laws. Sabatier and Mazmanian, state that the provision of financial resources is one of the essential components within the implementation process.⁵⁶ Indeed, without adequate funding, various steps in the implementation process cannot be achieved such as monitoring and evaluation. The United Nations Development Program (UNDP) in a 2006, Millennium Development Goals Report also states that funding should not be assumed to be an additional cost but should be provided at the onset of implementation so as to enable effective and quality monitoring and evaluation.⁵⁷ Inadequate financial resources can thus pose a challenge in implementation of laws, the moratorium on logging inclusive. Determination of the amount to be set aside for the achievement of the laws and legitimate distribution of these resources poses even a greater challenge. In reference to the moratorium on logging, the Ministry set aside a Budget estimated at 18 Billion for a five year implementation period of objectives of the Ministry.⁵⁸

Bryon states that one of the triggers for policy change in forest governance is implementation failures.⁵⁹ When it comes to moratoriums on logging, Boyer states that such forest regulation

⁵⁵ Ibid n 49.

⁵⁶ Paul Sabatier & Daniel Mazmanian. 'The Implementation of Public Policy: A Framework of Analysis,' (1980) Policy Studies Journal, 8 (4) 538-560. <<https://doi.org/10.1111/j.1541-0072.1980.tb01266.x>> accessed 26 June 2019.

⁵⁷ UNDP, 'Handbook on Monitoring and Evaluation for Results,' (2009) UN Millennium Goals Development Report (2).

⁵⁸ James Kariuki, 'Government extends forest logging ban by a year,' (2018) Daily Nation, <<https://www.nation.co.ke/news/Govt-extends-forest-logging-ban-by-a-year/1056-4855586-f9flxf/index.html>> accessed 27 June 2019.

⁵⁹ Byron, 'Challenges in defining, implementing and renewing forest policies,' (2006) Expert Consultation on establishing a Regional Forest Policy Network for Asia and the Pacific, held by the FAO Asia- Pacific Forestry Commission, Manila, Philippines.

measures have been instituted worldwide. However, these moratoriums on logging often fail to prevent forest depletion.⁶⁰ Some of the reasons causing challenges to its implementation include lack of political support or ability to prevent further logging to community backlash and lack of clear objectives and monitoring mechanisms of the moratoriums on logging.⁶¹

This research will identify the challenges to successful implementation of the moratorium on logging as guided by the above researchers' indicators of various elements of successful implementation.

2.4 Involvement of the community and relevant stakeholders in the formulation of the moratorium on logging

According to Teng and Gu, successful policy implementation has been linked to involvement of the local level participants and relevant stakeholders in the process of developing laws.⁶² Additionally, Parsons also states participation should not only involve communities but should extend to political leaders, influential individuals and interest groups who are relevant stakeholders.⁶³

Public participation and in this case community and relevant stakeholder participation in formulation of environmental governance laws has increasingly become a key attribute within environmental regulatory systems worldwide over the past years.⁶⁴ According to Robert Dahl, community participation in environmental governance is often considered a condition for the democratic legitimacy for decision making.⁶⁵ Further, it has often been established that involvement of the community in decision making increases the likelihood of acceptance of such

⁶⁰ Christopher Boyer, 'Conservation by Fiat: Mexican Forests and the Politics of Logging Bans 1926-1979,' 2016 https://www.researchgate.net/publication/306227966_Conservation_by_Fiat_Mexican_Forests_and_the_Politics_of_Logging_Bans_1926-1979 accessed 8 September 2019.

⁶¹ Ibid n 56.

⁶² Fei Teng and Alun Gu. 'Climate Change: National and Local policy opportunities in China,' (2008) Environmental Sciences, Vol 4, Issue 3 <<http://www.feem.it/Feem/Pub/Publications/WPapers/default.htm>> accessed 24 June 2019.

⁶³ Parsons, *Public Policy* (Vermont, 2005, Elgar).

⁶⁴ Benjamin Richardson, and Jona Razzaque., 'Public Participation in Environmental Decision making,' University of the West of England, Bristol (2006) <https://www.researchgate.net/publication/228305864_Public_Participation_in_Environmental_Decision_Making> accessed 25 June 2019.

⁶⁵ Robert Dahl, *Polyarchy: Participation and Opposition*' (Yale UP 1971).

laws.⁶⁶ Martin and Sherington also state that stakeholder participation creates public trust in decisions⁶⁷ and Richards further adds that it may increase the likelihood of environmental decisions being perceived as holistic and fair.⁶⁸ David Ngonge, in his thesis, 'Evaluation of public participation in environmental impact assessment of the southern bypass road in Nairobi,' also states that public participation aids in conflict management as contentious issues arising with regards to environmental management are ironed out in the public debate.⁶⁹

Additionally, James Meadowcroft states that the involvement of the public in determination on the use of environmental resources is a key governance feature of sustainable development.⁷⁰ Further, according to Organization for Economic Cooperation and Development (OECD), with regard to sustainable development, emphasis is often placed on better decisional outputs based on informed decision makers and increased community and stakeholder participation.⁷¹

Different models of participation have been preferred in analyzing the modes of participation. These include: Arnstein proposal of a 'Ladder of participation' system, where the spectrum starts with notification then consultation and finally a joint decision making system, where at the highest level the public is allowed to veto decisions.⁷² Secondly, there is the top-down and bottom up approach that involves public consultation by the government. Thereafter the public informs the government on what changes they would like implemented. Despite the worldwide acknowledgement of the integral part played by the community and stakeholders in environmental decision making, there is non-involvement of these parties to a large extent. As noted by Brianne Wayne, from the law maker's perspective the opportunity for participation is

⁶⁶ Nancy Perkins Spyke, 'Public Participation in Environmental Decision Making at the New Millennium Structuring New Spheres of Public Influence,' (1999) Boston College Env'tl Affairs 1999, I, Rev 263, 267, 70.

⁶⁷ Adrienne Martin and John Sherington. 'Participatory Research Methods: Implementation effectiveness and institutional context.' *Agricultural Systems* (1997) 55, 195-216.

⁶⁸ Caspian Richards, Kirsty Blackstock. and Claudia Carter, 'Practical Approaches to Participation, SERG Policy Brief No 1 (2004), Macauley Land Use Research Institute, Aberdeen.

⁶⁹ David Ngoge., 'Evaluation of Public Participation in Environmental Impact Assessment of the Southern Bypass Road in Nairobi, Kenya,' University of Nairobi (2015)

<repository.uonbi.ac.ke/bitstream/handle/11295/93987/Ngonge_Evaluation%20Of%20Public%20Participation%20In%20Environmental%20Impact.pdf?sequence=4&isAllowed=y> accessed 26 June 2019.

⁷⁰ James Meadowcroft, 'Participation and sustainable development: modes of citizen, community and organizational involvement,' W. Lafferty (ed), *Governance for sustainable development: The Challenge of adopting Form to Function* (Edward Elgar, 2004), p 162-190 <<https://www.researchgate.net/publication/289574366>> accessed 26 June 2019.

⁷¹ OECD, *Sustainable Development: Critical Issues*, Paris: OECD (2001).

⁷² Sherry Arnstein, 'A Ladder of Citizen Participation,' (1969) *Journal of the American Institute of Planning* 35 94_

disregarded since it is considered a costly affair and the community's input is nullified due to the notion of their lack of expertise and understanding.⁷³ On the other hand as stated by Burton, the community participants themselves may be reluctant to engage in the participation processes where they feel that their input may have little impact in influencing the decisions made.⁷⁴ Indeed, as stated by Kariuki and Francis in their article, 'Towards Environmental Justice in Kenya,' public participation should be meaningful in order for the public to feel that their concerns are being addressed.⁷⁵

Ultimately according to Matland, if the community is not involved in the law making and implementation process then it is highly likely that implementation will fail due to resistance.⁷⁶

In what ways then can the community and relevant stakeholders participate in the decision making processes? Various authors have proposed different methods. In an article, 'Top Down and Bottom up approaches within Implementation,' the author describes, the best design for conducting community participation processes and he lists them as, consultation of the target group through focus groups or random sampling, prediction of cost benefit analysis based on citizen participation, organizing a method of measuring the impact of the policy before and after formulation of the policy and allowing for evolving solutions.⁷⁷

Reiterating the above sentiments on the best design for conducting community participation, Mazmanian and a number of other scholars propose that implementation of the participatory process should involve stakeholder participation from the outset.⁷⁸ Additionally, engagement of stakeholders in the decision making processes should be present during the entire law making

⁷³ Brian, 'May the Sheep Safely Graze? A Reflexive View of the Expert-Lay Public Divide,' (2004) Scott Lash, Sage 2004.

⁷⁴ Paul Burton, Robina Goodlad, Jacqui Croft, Joanne Abbot., Annette Hastings and Geraldine MacDonald, *What works in Community Involvement in Area-Based Initiatives? A Systematic Review of the Literature* (University of Bristol and University of Glasgow, London 2004).

⁷⁵ Kariuki Muigua & Francis Kariuki, 'Towards Environmental Justice in Kenya,' (2018) <https://profiles.uonbi.ac.ke/kariuki_muigua/files/towards_environmental_justice_in_kenya_kariuki_muigua_francis_kariuki.pdf> accessed 24 June 2019.

⁷⁶ Richard E. Matland, 'Synthesizing the Implementation Literature,' *The Ambiguity- Conflict Model of Policy Implementation*, (1995) *Journal of Public Administration Research and Theory*, Vol 5, No. 2 p 145-174.

⁷⁷ 'Top down and Bottom up approaches within Implementation,' (2013) *Political Pipeline* <<https://politicalpipeline.wordpress.com/2013/02/21/top-down-and-bottom-up-approaches-within-implementation/>> accessed 24 June 2019.

⁷⁸ *Ibid* n 52.

and implementation process.⁷⁹ Moreover, FAO states that the community can through prior informed consent choose their representatives to make decisions on their behalf.⁸⁰

As previously stated despite the growing awareness worldwide on the need for community and stakeholder participation in environmental decision making, communities still remain uninvolved. According to John Kakonge, the key factors affecting community participation include lack of consultation, lack of dissemination of information and lack of ability by the government to foster participation.⁸¹

In Kenya, as stated by Kameri Mbote, there has been lack of public involvement by the government in monitoring and evaluation the impact of environmental laws in the country.⁸² Okello, provides solutions for enhancing public involvement in environmental regulation. He states that local participation may be enhanced by distributing information in accessible ways such as radio and indigenous languages. Other tactics could involve providing incentives for participation and holding meetings in convenient locations.⁸³

As illustrated above engaging public involvement in environmental policy making process is a key feature of sustainable forest management. Various authors have listed the advantages of engaging the community and the methods through which participation can be accomplished. Methods which are quite integral in conducting this research.

⁷⁹ Mark S. Reed, 'Stakeholder participation for environmental management: A literature Review,' (2008) *Biological Conservation*, Vol 141 (10), p 2422 <<https://sci-hub.se/https://doi.org/10.1016/j.biocon.2008.07.014>> accessed 26 June 2019.

⁸⁰ FAO, 'Respecting free, prior and informed consent: 'Practical Guidelines for governments, companies, NGOs, indigenous peoples and local communities in relation to land acquisition.' (2014) *Governance of Tenure Technical Guide*, p. 4.

⁸¹ John Kakonge, 'Problems with Public Participation in the EIA Process: Examples from Sub-Saharan Africa,' (2012) *Impact Assessment*, 14 3, 309-312 <<https://doi.org/10.1080/07349165.1996.9725906>> accessed 26 June 2019.

⁸² Vivianne Otieno, Evaristus Irandu, and Dr. J Moronge, 'Public Involvement in Environmental decision making in Nairobi County, Kenya,' (2017) *International Journal of Education and Research*, Vol 5, No 10, <<https://www.ijern.com/journal/2017/October-2017/17.pdf>> accessed 26 June 2019, see Kameri-Mbote, P. 'Strategic planning and Implementation Policies involved in Environmental decision making as they relate to Environmental Assessment in Kenya,' IELRC Working Paper (2000).

⁸³ Nick Okello, Lindsay Beeveres, Wim Douven and Jan Leentvaar, 'The Doing and Un doing of Public Participation during Environmental Impact Assessment in Kenya,' (2012) *Impact Assessment and Project Appraisal*, 27 (3) 217-226.

2.5 Moratorium on logging and its influence on forest use rights

Moser and Norton, define rights as a claim to a benefit that States have agreed to recognize and endorse.⁸⁴ According to Ostrom and Ess in their book, ‘Private and Common Property Rights,’ they define forest user rights which they term as forest tenure arrangements are, ‘the enforceable authorization to undertake particular actions in a specific domain which in this case is the forest.’⁸⁵

Forest use rights have emerged as very important factors to take into consideration while undertaking sustainable forest management. As stated by Bromley, Ostrom and Wade with regards to environmental management, rights are considered to greatly determine how environmental resources are managed and conserved.⁸⁶ Similarly Eliasch notes that long term investments in sustainable management can only be realized upon procuring and protecting property rights.⁸⁷

The use of forest resources has long been recognized as a right in various countries and although a large portion of forests universally are owned by the public, there is a wide concession and recognition that communities have the right to utilize forest resources.⁸⁸ In Kenya, the Constitution provides for the right to use natural resources such as forest resources sustainably as stated in Article 69 (1).⁸⁹ The right to use forest resources is not only provided in legislation but is also enforced by the courts. In the Civil Case No 14 of 2010, the judge stated that the State has

⁸⁴ Caroline Moser and Andy Norton, ‘*To claim our rights: livelihood, security, human rights and sustainable development*,’ (2001) Overseas Development Institute (2001).

⁸⁵ Jacek Siry, Kathleen, McGinley, Frederick Cabbage and Peter Bettinger, ‘Forest Tenure and Sustainable Forest Management,’ (2015) Open Journal of Forestry, Vol 5, p 526-545 <<http://dx.doi.org/10.4236/ojf.2015.55046>> accessed 27 June 2019. See Ostrom, E., and Hess, C., ‘*Private and Common Property Rights*,’ Bloomington, IN: Social Science Electronic Publishing Inc. (2007).

⁸⁶ Craig Johnson and Tim Forsyth., ‘In the Eyes of the State: Negotiating a ‘Rights-Based Approach’ to Forest Conservation in Thailand,’ *World Development* (2002), 30 (9), 1591-1605 <[https://doi.org/10.1016/S0305-750X\(02\)00057-8](https://doi.org/10.1016/S0305-750X(02)00057-8)> accessed 27 June 2019. See, Bromley, D., ‘*Making the Commons Work: Theory, Practice and Policy*,’ San Francisco Institute for Contemporary Studies (1992) et al (Eds) p.4-12. Wade, R., ‘*Village Republics: Economic Conditions for Collective Action in South India*,’ San Francisco Institute for Contemporary Studies (1888) p. 183-184. Ostrom, E., ‘*Governing the Commons: the evolution of institutions for Collective Action*,’ (1990) Cambridge University Press p.30.

⁸⁷ Angelsen, A. Brockhaus, M., Kanninen, M., Sills, E., Sunderlin, W.D., & Wertz, K., ‘Realizing REDD+: National Strategy and policy options,’ (2009) Center For International Forestry Research (CIFOR).

⁸⁸ FAO, ‘Forest Tenure: Why assessing Forest ownership is important.’ (2019) <<http://www.fao.org/forestry/tenure/en/>> accessed 7 September 2019.

⁸⁹ The Constitution of Kenya, 2010, Article 69 (1).

an obligation to ensure full enjoyment of the rights appurtenant to the land and the environment.⁹⁰

The concept of tenure in forests lands is also key to the use of forest resources. Tenure is a term that describes the certainty of rights. It is important to define the tenure system in a particular area in order to determine the rights to the use of natural resources.⁹¹ With regard to forest tenure rights, the Forest Conservation and Management Act 2016 provides for three distinctive classes based on the right of ownership of the land. The Act provides that it shall apply to three categories of forests, those on private, public and community land.⁹² Additionally, the Act provides that management of these forests is dependent on the entity or individual tasked with managing the land according to the law. Therefore in reference to the aforementioned categories of forests, public forests are managed by the State, private forests are managed by private individuals, institutions and body corporates⁹³ and community forests are managed by specific communities.⁹⁴

Taking the above into consideration on the communities' right to exploit forest resources in private and community forests, the legality of the moratorium on logging is questionable, given that it also prohibits utilization of the same. It should be noted that the right to use forest resources is also regarded as an important sustainable forest management consideration without which sustainable forest management would be entirely ineffective. This is because societies and individuals are dependent on forest resources either directly or indirectly and inhibiting their right to access or use such resources is fundamentally futile.⁹⁵

White and Martin, have stated that unclear and insecure resource rights have often led to lack of proper forest management resulting in forest decline and degradation.⁹⁶ Further, they have also stated that where forest rights are unenforced, overlap or withdrawn, forest users or those who

⁹⁰ Abdalla Rhova Hiribae & 3 Others v Attorney General and 7 Others (2013) Civil Case No. 14 of 2010, EKLR.

⁹¹ Article 63 (2) (d) of the Constitution.

⁹² Forest Conservation and Management Act 2016, Section 3.

⁹³ Forest Conservation and Management Act 2016, Section 30 (4)

⁹⁴ Forest Conservation and Management Act 2016, Section 30 (3).

⁹⁵ Ibid n 87.

⁹⁶ Andy White., and Alejandra Martin, 'Who owns the World's Forest? Forest Tenure and Public Forest in Transition.' (2002) Washington D.C. Forest Trends <
http://www.cifor.org/publications/pdf_files/reports/tenurereport_whoowns.pdf> accessed 4 June 2019.

hold those rights consequently have low morale and resort to improperly managing and conserving these resources leading to unsustainability.⁹⁷

Enforcement, upholding and regulation of these forest use rights is often concretized through enactment of legislation. According to FAO, these legislation should enforce and enable forest use rights.⁹⁸ Geist and Lambin state that policies enacted should be cross-sectoral with the aim of enhancing development of markets and trade of forest products.⁹⁹

According to Molnar, the probability of communities complying with forest laws is significantly reduced where there is a perception of interference with their livelihoods.¹⁰⁰

Further, Molnar advocates for appropriate policy reforms that acknowledge tenure rights and involvement of the community in the environmental to avoid conflicts in conservation.¹⁰¹

2.6 The Impact of the moratorium on logging as an Sustainable Forest Management tool

Measuring the impacts of forest governance interventions such as the moratorium on logging in forest management is inherently challenging especially with regards to management of forests sustainability since different elements have to be assessed. Kimmins in his article, 'Balancing act: environmental issues in forestry,' states that assessment of the extent of sustainability of various forest practices is difficult because of the different types of forest resources and the realization of the impacts of various forest management mechanisms over time.¹⁰² Despite these challenges, there is still need to measure the impact of various sustainable forest management strategies. Philipp and Heinrich state that in order to formulate methods for sustainable forest

⁹⁷ Ibid n 85, p 2.

⁹⁸ Food and Agriculture Organization of the United Nations (FAO), 'Reforming Forest Tenure: Issues, Principles and Process,' (2011) FAO Forestry Paper 165, Rome: Food and Agriculture Organization of the United Nations.

⁹⁹ Helmut Geist & Eric Lambin., 'Proximate causes and Underlying Forces of Tropical Deforestation,' (2002) Bioscience, Vol 52, Issue 2 p. 143-150.

¹⁰⁰ Augusta Molnar, Andy White and Arvinde Khare 'Forest rights and asset based livelihoods: catalyzing rural economies and Forest Conservation through Policy Reform and Collective Action,' (2005) Forest Trends and the Rights and Resource Institute, Arusha Conference, New Frontiers of Social Policy <amolnar@forest-trends.org> accessed 27 June 2019.

¹⁰¹ Supra n 43 p. 1.

¹⁰² Hamish Kimmins, 'Balancing act: environmental issues in forestry,' (1992) UBC Press Vancouver British Columbia, Canada.

management, there is the need to forecast the impact of different forest practices on the forest's capability to continue to offer ecosystem services and goods.¹⁰³

Various researchers have formulated methods of evaluating the impact of forest governance interventions. Bell and Morse suggest the use of indicators in providing the trajectory of a system.¹⁰⁴ Ferraro states that one of the best ways to use indicators is identifying and compiling data on the indicators at the beginning even before implementing the intervention.¹⁰⁵ Miller and Benson state that while collection of information of identified indicators is prevalent at the beginning and the end of the interventions, few studies are directed to assessment of the period after the intervention ceases.¹⁰⁶

According to Karvonen and Leskinen the gauges for investigating whether sustainability has been achieved include assessing the range of biodiversity.¹⁰⁷ However, they caution that assessment of biodiversity can produce varied results due to the different considerations on what constitutes ample biodiversity. Other methods of measuring the impact include, trade related statistics which examine the economic forest output and social indicators such as the influence on employment, extent of participation and trust in the practice.¹⁰⁸

Other methods of impact evaluation on forest related interventions that have come up include, evidence based conservation, first formulated by Pullin and Sutherland¹⁰⁹

¹⁰³ Philipp S Duncker, Karsten, Raulund Rasmussen, Per Gundersen, Klaus Katzensteiner, Johnny De Jong, Hans Peter Ravn, Mike Smith, Otto Eckmullner and Heinrich Spiecker, 'How Forest Management affects Ecosystem Services including Timber Production and Economic Return: Synergies and Trade-offs,' (2012), *Ecology and Society* 17 (4): 50 <http://dx.doi.org/10.5751/ES-05066-170450> accessed 28 June 2019.

¹⁰⁴ Bell Simon & Stephen Morse, '*Sustainability indicators: Measuring the immeasurable?*' London (2008) Earthscan.

¹⁰⁵ Ferraro, P.J., 'Counterfactual Thinking and Impact Evaluation in Environmental Policy,' (2009) *Environmental Program and Policy Evaluation: New Directions for Evaluation* 7 (122): 75-84.

¹⁰⁶ Miller, Rana & Benson, '*A Crystal Ball for Forests? Analyzing the Socio-Ecological Impacts of Forest Conservation and Management over the Long Term.*' *Environment and Society* (2017) < 10.3167/ares.2017.080103> accessed 7 September 2019.

¹⁰⁷ Jaakko Karvonen, Pradipter Halder, Jyrk Kangas & Pekka Leskinen, 'Indicators and tools for assessing sustainability impacts of the forest bioeconomy,' (2017), for *Ecosyst*, < <https://doi.org/10.1186/s40663-017-0089-8>> accessed 29 Jun 2019.

¹⁰⁸ Ibid n 96.

¹⁰⁹ Andrew S Pullin & Teri M Knight., 'Support for Decision Making in Conservation Practice: An Evidence- Based Approach,' (2003) *Journal for Nature Conservation* 11 (2): 83-90 <doi:10.1078/1617- 1381-00040> accessed 7 September 2019.

Various other researchers have assessed the impact of the moratorium on logging as a sustainable forest management governance intervention in particular areas, for example, Jinzhou and Weiguo's evaluation of a logging ban's impact on China's Forest Biodiversity.¹¹⁰ The article titled, 'A review on Forest resources and Forest Biodiversity System in China,' stated that there were less incidences of over logging as a result of the moratorium on logging but the timber supply could not meet the timber demand. This led to increased timber importation and artificial plantation.¹¹¹ Leonida Bugayong, also states that there has been a significant impact of the moratorium on logging on the forest industry, the forest dependent communities and the public. These include, reduced domestic wood supply, increased prices in wood supply and loss of income.¹¹²

The impacts of various forest governance interventions varies amongst various countries. Nevertheless the above mentioned impacts can guide this study in identification of potential impacts of the moratorium on logging within Kenya.

2.7 Gaps identified in previous studies

There is very little literature on the moratorium on logging as a law regulating forest management practice and its relation to sustainable forest management. However, there is ample literature globally, on how to determine the extent of sustainability of forest management practices through their impacts on the tripartite tenets of sustainability that is the economy, the ecology and socially.

Even though scholars have proposed criteria on assessing the impact of forest management practices, these practices are not specifically mentioned in Kenyan forest governance legislation. There is also little literature providing data on evaluation indicator systems to determine the impact of forest governance interventions such as the moratorium on logging. This research attempts to offer suggestions on the possible impacts of the moratorium on logging if any as well

¹¹⁰ Jinzhuo Wu, Wenshu Lin, Xuanyi Peng, & Weiguo Liu, 'A review of forest resources and forest biodiversity evaluation system in China,' (2013) International Journal of Forestry Research Vol, Article ID 396345. <<http://dx.doi.org/10.1155/2013/396345>> accessed 7 September 2019.

¹¹¹ Ibid n 101.

¹¹² Leonida Bugayong, 'Effectiveness of Logging Ban Policies in Protecting the remaining natural forests of the Philippines,' (2004) Berlin Conference <http://userpage.fu-berlin.de/~ffu/akumwelt/bc2006/papers/Bugayong_06BerlinConference.pdf> accessed 7 September 2019.

as provide indicators to guide towards identification of the impacts which are provided in the questionnaires. These indicators include the state of the ecosystem, the social and economic state post implementation of the moratorium on logging among others.

With regards to the moratorium on logging and forest use rights, much of literature discusses on the need to have laws which promote forest user rights, little has been said on which laws are appropriate to uphold and enforce these rights. In seeking to fill that gap, this research will investigate the extent of the promotion of forest user rights through the moratorium on logging as a legal framework stipulating use of forests, thus providing a framework for assessing whether other laws enacted or to be enacted in future promote and protect forest user rights. Additionally, there is a contradiction between the existing laws and the moratorium on logging with regard to the use of forest resources in community and private forests, this research will seek to investigate whether the moratorium had any impact in the exercise of the communities' rights with regards to these categories of forests.

According to the above literature review, a number of gaps have been identified. The available research agrees that there is need for sustainable forest management but the methods and indicators showing achievement of sustainable forest management are quite scanty in the reviewed literature. Additionally, Kenyan based literature on sustainable forest management is quite little. This research offers guidelines on how to measure progress towards sustainable forest management and criteria of sustainable forest management mechanisms through a proper analysis of the moratorium on logging.

CHAPTER THREE

3.0 LEGAL AND POLICY FRAMEWORK FOR SUSTAINABLE FOREST MANAGEMENT IN KENYA

3.1 Introduction

This chapter presents a discussion on the legal and policy framework for sustainable forest management and the moratorium on logging internationally and locally. The discussion begins with an evaluation of international and regional regulatory framework on sustainable forest management. Subsequently, the chapter analyzes the legal and policy framework in Kenya on sustainable forest management. This also includes an analysis on the inclusion of the moratorium on logging within the legal and policy framework as a sustainable forest management tool and its successes and failures over time.

The Constitution of Kenya under Article 2 (5) and (6) recognizes ratified international treaties, conventions and generally recognized principles as part of the law in Kenya.¹

3.2 International and Regional Regulatory Framework on Sustainable Forest Management

Management of forests sustainably is a global concern that is recognized by various international and regional instruments such as conventions, protocols and soft law regulations.² The roadmap to universal regulation of managing forests sustainably began with the Stockholm Declaration of 1972 which recognized the need to protect the environment for the benefit of current and future generations.³

The World Charter for Nature and Principles of Sustainable Development of 1982 marked the international endorsement of sustainable development of natural resources as an aspect of universal significance.⁴

¹ The Constitution of Kenya [2010].

² Emmanuel Kasimbazi, 'An International Legal Framework for Forest Management and Sustainable Development,' (1995) Annual Survey of International & Comparative Law, Volume 2, Article 6, <<https://digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?article=1013&context=annlsurvey>> accessed 29 September 2019.

³ Stockholm Declaration 1972 of the United Nations Conference on the Human Environment, United Nations Environmental Programme.

⁴ Ibid n 2.

Thereafter, in 1992, the concept of sustainable forest management was further elucidated upon albeit in rather loose terms during the Rio UN Conference on Environment and Development (UNCED) also known as the Earth Summit.⁵

3.2.1 United Nations Conference on Environment and Development (UNCED)

The United Nations Conference on Environment and Development also known as the Rio Declaration recognized the substantive requirements for development and procedural prerequisites for conservation of the environment.⁶ Principle 4 of the Rio Declaration provides that the protection of the environment is a key component of sustainable development.⁷ This essentially meant that environmental conservation and sustainable development are integrated and not severable.

It is during this Conference that a persuasive proclamation of the Principles for Universal Consensus on Conservation, Management and Sustainable Development of all kinds of Forests (the “Forest Principles”) was formed under Agenda 21.⁸ These Principles tried to bring out a common understanding among states on what constitutes management of forests sustainably. Principle 2 of these Principles gave an explicit description of the term sustainable management of forests. It stated that there should be sustainable management of forests and their resources in order to attain the economic, cultural social and ecological demands of the current generation and subsequent generations.⁹ The non-binding forest principles adopted during the Rio Declaration also advocated for effective actions that ought to be adopted in order to prevent

⁵ Bart Muys and Holvoet, ‘Sustainable forest management worldwide: a comparative assessment of standards,’ (2004) *International Forestry Review* 6 (2) <https://www.researchgate.net/publication/249923394_Sustainable_Forest_Management_Worldwide_A_Comparative_Assessment_of_Standards> accessed 29 September 2019.

⁶ Rio Declaration on Environment and Development, United Nations Conference on Environment and Development, U.N. Doc. A/CONF. 151/15/Rev.1(1992), reprinted in 31 *International Legal Materials* 874 (1993).

⁷ *Ibid* (n. 4) Principle 4.

⁸ General Assembly, ‘ Non-legally binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests,’ (Rio De Janeiro 3-14 June 1992).

⁹ Stephanie Meakin, ‘The Rio Earth Summit: Summary of the United Nations Conference on Environment and Development,’ (1992) Science and Technology Division, BP-317E. <<http://publications.gc.ca/Collection-R/LoPBdP/BP/bp317-e.htm>> accessed 29 September 2019.

adverse outcomes of pollution on forests such as airborne pollution to enhance their full optimal significance.¹⁰

However, the Agenda 21 definition of sustainable forest management was considered too broad since it did not provide standards to measure whether sustainable forest management had been achieved in particular regions.¹¹ Therefore, there arose a necessity to revamp the definition of sustainable management of forests and establish standards which may be utilized in assessing the economic, social and ecological sustainability of forest management.¹²

Although the international debate on sustainable forest management has progressed since 1992, it has not culminated in an international treaty owing to disagreements among states on forest regime objectives.¹³

3.2.2 The Intergovernmental Panel on Forests

An ad hoc Intergovernmental Panel of Forests (IPF) was constituted as a result of a Commission for Sustainable Development recommendation to the United Nations Economic and Social Council (ECOSOC).¹⁴ Formation of the IPF allowed for reasoned dialogue on forest management in a polarized and highly charged political environment.¹⁵ In reference to managing of forests sustainably, the IPF was to promote multidisciplinary action in formulation of forest guidelines compatible to Agenda 21 and the Rio Principles.¹⁶

¹⁰ State of the World's Forests, 'Management, conservation and sustainable development of forests,' (2005) <<http://www.fao.org/3/y5574e/y5574e05.pdf>> accessed 25 February 2019 pg 21 para 2

¹¹ Zhu Chunquan, Zhang Shougong, Shi Zuomin and Jiang Zeping, 'Criteria and Indicators for Sustainable Forest Management in Bhutan, Mongolia,' FAO <<http://www.fao.org/3/x6895e/x6895e05.htm>> accessed 29 September 2019.

¹² Ravi Prabhu, Carol Colfer and Gill Shepherd, 'Criteria and Indicators for Sustainable Forest Management: New Findings from CIFOR's Forest Management Unite Level Research (1998) network paper 23a <<https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/1178.pdf>> accessed 26 February 2019.

¹³ Mackenzie, 'Future prospects of international forest law,' (2012) The International Forestry Review, Vol 14, No. 2, <https://www.jstor.org/stable/24310684?read-now=1&seq=1#page_scan_tab_contents> accessed 29 September 2019.

¹⁴ Beatrice Chaytor, 'The Development of Global Forest Policy: An Overview of Legal and Institutional Frameworks,' (2001) Mining, Minerals and Sustainable Development, No. 3. <<https://pubs.iied.org/pdfs/G00926.pdf>> accessed 29 September 2019.

¹⁵ Tarasofsky, R., The International Forest Regime: Legal and Policy Issues, IUCN/WWF, (1995), p.1.

¹⁶ Ibid n 12.

3.2.3 The International Tropical Timber Agreement

The sole universal convention on tropical deforestation is the 1985 International Tropical Timber Agreement.¹⁷ It established the International Tropical Timber Organization which was the initial body formulating mechanisms known as Criteria and Indicators that establish whether forests are being managed sustainably.¹⁸ In 1992, it established the principles of managing tropical forests sustainably and provided nine standards of evaluating whether the tropical forests are being managed.¹⁹ These Criteria were to be realized through indicators prevalent within specific countries. The Criteria included:

- i. *“The State having explicit policies on sustainable exploitation of forests;*
- ii. *Existence of an institution as aimed at attaining the goals of sustainable management of forests;*
- iii. *Provision of necessary means by the Government for managing the forests sustainably;*
- iv. *The national financial strategies promote the feasibility of forest related businesses which also includes not unnecessarily wilfully preventing the activities of forest enterprises;*
- v. *Effective observation and assessment of application of forest regulation while taking into consideration conservation of the ecosystem, the social functions and production;*
- vi. *Sustainable yield and quality of wood products; and*
- vii. *Involvement of the communities in forest management.”*²⁰

Since these C & I were formed, a number of countries have come up with several other Criteria and have been testing to establish whether these criteria suit their purposes and their unique circumstances. As a result, in 1994 thirty eight European countries became signatories to the

¹⁷ Supra n 12.

¹⁸ IISD, ‘A Brief to global Forest Policy,’ < http://enb.iisd.org/process/forest_desertification_land-forestintro.htm> accessed 29 September 2019.

¹⁹ Food and Agriculture Organization of the United Nations, ‘Use of Criteria and Indicators for Monitoring, Assessment and Reporting on Progress toward Sustainable Forest Management in the United Nations Forum on Forests: International Process on Criteria and Indicators for Sustainable Forest Management,’ (Yokohama Japan 5-8 November 2001) <<http://www.rinya.maff.go.jp/mar/Ms.%20Susan%20Paper.pdf>> accessed 25 February 2019.

²⁰ FAO ‘ATO/ITTO principles, criteria and indicators for the sustainable management of African natural tropical forests’ (2003) ITTO Policy Development Series No 14. <https://www.itto.int/direct/topics/topics_pdf_download/topics_id=1550000&no=1&disp=inline> accessed 26 February 2019.

Helsinki process and later on twelve other non-European countries have developed processes aimed at generating C & I at the national levels.²¹

Kenya also joined the C & I movement and in 1995 through its partner organization, the Intergovernmental Authority on Development (IGAD). Kenya is also party to the Dry Zone Africa Process on Criteria and Indicators for Sustainable Forest Management.²² The Criteria stated were listed as:

- a. *“Maintenance and improvement of forest cycles with a recognition of their significance in the universal regulation of carbon emissions;*
- b. *Preservation and promotion of biological variance within forests;*
- c. *Sustaining vibrant forest vegetation;*
- d. *Sustenance of diverse forest uses;*
- e. *Sustenance and promotion of protective roles of managing forests;*
- f. *Sustenance of socio-economic advantages of; and*
- g. *Existence of adequate legal forest regulations for SFM.”*²³

The Dry Zone Africa Process on Criteria and Indicators for sustainable management was developed for use by FAO coordinated country groups. However, they remain dormant since the country groups rarely meet.²⁴

3.3 Regulatory Framework of SFM in Kenya

Kenya has formulated multiple legislation and policies aimed at guarding and preserving the environment and by extension managing forests sustainably the years.

3.3.1 Background of Forest Management Legal Regulation in Kenya

Forests management in Kenya has experienced different management practices during different ruling regimes, the colonial, post-colonial and the self-governance periods. According to Esther

²¹ Ibid (n 18).

²² FAO ‘The Dry Zone Africa Process on Criteria and Indicators for Sustainable Forest Management,’ <<http://www.fao.org/3/AC135E/ac135e05.htm#bm05.2>> accessed 26 February 2019.

²³ FAO, ‘Proposed Criteria and Indicators at the regional scale,’ <<http://www.fao.org/3/W0741E/w0741e09.htm#TopOfPage>> accessed 26 February 2019.

²⁴ Stephanie Linser, Bernhard Wolfslehner, Fady Asmar, Simon Bridge, David Gritten, Vicente Guadalupe, Mostafa Jafari, Steven Johnson, Pablo Laclau and Guy Robertson, ‘25 Years of Criteria and Indicators for Sustainable Forest Management: Why Some Intergovernmental C&I Processes Flourished While Others Faded’ (2018) MDPI.

Mwangi, the management practices evolved over the years depending on the national status of the economy, political and social spheres.²⁵

3.3.1.1 Ukamba Woods and Forestry Regulations (1897)

Ukamba Woods and Forest regulations of 1897 was the earliest form of forest regulation in the country.²⁶The regulations mainly provided for the conservation of forests within five miles of Nairobi County and two miles off the railroad.²⁷ The railway administration who were mainly the ruling Briton were tasked with guarding the aforementioned demarcated areas.²⁸The restriction of the demarcated area to the control of the railway administration was mainly with the aim of ensuring constant supply of fuel from wood products upon completion of the railway.²⁹ The regulations mainly emphasized on timber production rather than ecological protection of forests.

The regulations did not prevent rampant deforestation caused by the rise of British settlement and the high rate of industrialization and technical development³⁰ prompting the appointment of C.F. Elliot a former official of the Indian Forest Service, as the ‘Conservator of Forests.’³¹ In 1902, C.F. Elliot founded a Department of Forests with the support of the colonial administration, the Forest Department was incorporated in the East Africa Forestry Regulations.³²

3.3.1.2 East Africa Forestry Regulations (1902)

The regulations introduced key forest management practices such as: requirement of a permit for cutting, grazing or trespassing through established forest reserves, provision of forest offences

²⁵ Esther Mwangi, ‘Colonialism, Self Governance and Forestry in Kenya: Policy Matters and Outcomes,’ 6 May 1998.

²⁶ Thomas, ‘Kenya Forestry under British Colonial Administration,’ Oxford University Press on behalf of Forest History Society and American Society for Environmental History, (Journal of Forest History, Vol. 28, No. 3 (Jul., 1984), pp. 138) <<https://www.jstor.org/stable/4004697>> accessed 09 May 2019.

²⁷Ibid n 23.

²⁸ Dian, M., ‘History of Forestry legislation in Kenya,’ Kenyatta University, Thesis (2018) <<https://www.coursehero.com/file/p57argv/In-1897-Ukamba-Woods-Regulation-was-the-first-forestry-legislation-in-Kenya/>> accessed 18 September 2019.

²⁹ Logie, J.P.W and Dyson, W.G., ‘*Forestry in Kenya: a historical account of the development of forest management in the colony*,’ (1962), Government Printer, Nairobi.

³⁰ Nicholson, *The Future of Forestry in Kenya*, ‘Nairobi, Government Printer p.21.

³¹ Ibid n 23. P.138, para 4.

³² Gregory Allen Barton, ‘*Empire Forestry and the Origins of Environmentalism*,’ Cambridge University Press (2004).

and sanctions, rules for gazettelement and de-gazettelement of forests.³³ The regulations provided for appropriation of community forests to government forests leading to vacation of forest communities from their lands.³⁴ This curtailed the rights of the communities to derive their livelihoods from the forest.

According to Esther Mwangi, the 1902 regulations were later amended by the Forest Ordinances of 1911, 1915 and 1916.³⁵ The Ordinances which were further revised in 1941 provided for the creation of nature reserves which barred any form of utilization of the forests products in the demarcated areas.³⁶

As Moses Imo notes, the forest management paradigm in the colonial years and specifically, between the years 1897-1932 was mainly administrative characterized by the creation of administrative posts which included the Forest Conservator, forest guards and advisory committees.³⁷ The legal framework was thus a reflection of the concepts of forest policy as the administrators understood then.³⁸ From the perspective of managing the forests sustainably, they did not offer an equilibrium between ecological conservation and economic and social advancement rather they were largely aimed at regulating timber production and curtailing consumption of forest products.³⁹

The shift towards endorsement of actions that promoted management of forests sustainably emerged between the years 1932 to 1947 upon the revision of the first draft of the Forest Act 1932 in 1947 to include recognition of forest protective functions for instance water and soil preservation.⁴⁰

³³ Ibid n 30.

³⁴ Sessional Paper No. 3 of 2009 (n4), 48-49.

³⁵ Supra n 23, p. 5, para 2.

³⁶ Kamau Francis Kariuki, 'Securing Land Rights in Community Forests: Assessment of Article 63 (2) (d) of the Constitution,' LLM, University of Nairobi, 2013 < <https://suplus.strathmore.edu/bitstream/handle/11071/3865/Securing%20land%20rights.pdf?sequence=1&isAllowed=y>> accessed 29 September 2019.

³⁷ Moses Imo, 'Forest degradation in Kenya: Impacts of Social, Economic and Political Transitions,' University of Eldoret (2012), <<https://www.researchgate.net/publication/257869577>> accessed 18 September 2019.

³⁸ Ibid n 37.

³⁹ Supra n 37.

⁴⁰ Hezron Mogaka, Gacheke Simons, Jane Turpie, Lucy Emerton, & Francis Karanja, 'Economic aspects of Community Involvement in Sustainable Forest Management in Eastern and Southern Africa,' (2001), IUCN Eastern Africa Programme, Forest and Social Perspectives in Conservation No. 8.

3.3.1.3 Forest Policy 1957

In 1957 the colonial government issued a white paper setting out reforestation goals which included the creation of forest reserves in order to adequately cater for the timber and other forest product demands.⁴¹ In 1957, the white paper culminated in the formation of the first policy on regulation in Kenya⁴² The 1957 policy focused on preservation and regulation of forest products in government land. However, it did not recognize the role, responsibilities and rights of communities living adjacent and dependent on the use of the forest.⁴³

3.3.1.4 Presidential directives

In 1979, following the revelation of forest management abuses by the Forest Department in corrupt allocation of areas of forests, the president imposed the first moratorium on logging which was aimed at preventing the encroachment of the shamba system in the indigenous forests.⁴⁴ This marked the beginning of the imposition of moratoriums on logging.

In 1986, the shamba system came to an abrupt halt after a Presidential directive was issued prohibiting the system and directing the resettlement of communities outside the gazetted forests.⁴⁵ The President also directed the establishment of the Nyayo Tea Zones Development Corporation through act of Parliament enacted in 1988 as a physical barrier between agricultural zones and state forests.⁴⁶ The tea zone areas were to be excised from gazetted forested areas and were a means for providing employment opportunities to local communities.⁴⁷

The 1986 moratorium on logging led to loss of sources of income and livelihood for the people once employed under the shamba system and eviction notices were issued and those who did not comply to leave as per the eviction notices were classified as illegal squatters.⁴⁸

⁴¹ Supra n 25.

⁴² Supra.

⁴³ Kenya Forest Service, 'Forest Law Enforcement and Governance in Kenya,' (2003) A paper prepared for the East African Community-led regional process in the framework of the Ministerial Declaration, Yaoundé, Cameroon, October 16, 2003 on the Africa Forest Law Enforcement and Governance (AFLEG) <https://theredddesk.org/sites/default/files/resources/pdf/2012/kfs_2007_forest_law_enforcement_and_governance_in_kenya.pdf> accessed 29 September 2019.

⁴⁴ Supra n 28.

⁴⁵ Supra n 28.

⁴⁶ Wass Peter, '*Kenya's indigenous forests: Status, management and conservation*,' (1995) IUCN Forest Conservation Program with the Overseas Development Administration

⁴⁷ Ibid n 46.

⁴⁸ Supra n 37.

Communities decried foul over the loss of their source of income and land and this resulted in the establishment of the 1994 Kenya Forest Master Plan.⁴⁹ The Forest Program was to focus on participation of the community, preservation and guarding of forests through the Non-Resident Program which re-introduced the shamba system to enhance forest plantation cultivation.⁵⁰ The Kenya Forest Master Plan recommended a complete overhaul of the earlier Forest policy and Act to conform to the current realities in forest management and to increase involvement of the community in managing the forests.⁵¹ As a result the Non Resident cultivation shamba system was established which recommended the establishment of incentives to encourage sustainable forest management.⁵² However, this forest management practice soon failed due to illegal allocation of the forest plantations and the government banned the shamba system in 2004.

It should be noted that the mismanagement of government plantations due to political influence and lack of transparency in allocation of licenses led to the imposition of another Government moratorium on logging activities in nationally owned plantations in 1999.⁵³ The purpose of the moratorium on logging was to allow for the Forest Department to replenish plantations, take stock inventories and develop new regulatory plans.⁵⁴ The moratorium on logging was meant to last for 90 days, however, after the 90th day, the objectives of the Forest Departments were not achieved and this led to an extension of the moratorium on logging for a year and for reasons which remain uncertain, a further extension throughout the years 2000 to 2011 where in

⁴⁹ Ministry of Environment and Natural Resources, 1994. *The Kenya Forestry Master Plan: Development Programs*, Government of Kenya, Nairobi, p. 422.

⁵⁰ *Supra* n 23.

⁵¹ *Supra* n 23.

⁵² The World Bank, 'Strategic Environmental Assessment of the Kenya Forest Act 2005,' (2007) The World Bank Agriculture and Rural Development Department, <<http://siteresources.worldbank.org/INTRANET/ENVIRONMENT/Resources/244351-1222272730742/KenyaForestESWFullReportWeb.pdf>> accessed 18 September 2019.

⁵³ 'Strategic Environmental Assessment of the Kenya Forests Act 2005,' World Bank (2007) Washington DC. 'By the mid-1990s the management of forests suffered from increasing economic deficiency, lack of transparency in licensing and political interference.' There was the emergence of the 'briefcase saw millers,' these were unlicensed operators presented by political networks. Many of these operators received contracts with favorable terms but did not make royalty payments to the Forest Department. Government revenue from forests decreased from K.Shs. 240 million to K. Shs. 135 million from 1995 to 1999. By the year 1999, 75% of all the timber licenses were given to unregistered operators. The same recorded an outstanding amount of about K.Shs. 93 million of royalty fees that had not been collected by the Forest Department.

⁵⁴ *Ibid* n 52.

November 2011, the moratorium on logging was partially lifted.⁵⁵ It is important to note that the moratorium on logging was not formally gazetted but was referred to as ‘informal’⁵⁶

The problems experienced in the governance of forests prior to the mid-2000s necessitated the need for reform in the management of forests.⁵⁷ Additionally, the constant drought that was thought to have been caused by the drying up of the water towers due to deforestation prompted the need for reform.⁵⁸

3.3.1.5 The Forest Act 2005

In 2007, the Forest Act was enacted and led to changes in the governance and management structure. The Act, according to Section 27, responded to the illegal allocation of forest land by establishing parliamentary oversight on the delimitations of the national forests⁵⁹

Other transformative management practices that the Act introduced include the establishment of the Kenya Forest Service to replace the Forest Department and the provision for involvement of the public in management.⁶⁰ According to Michael Gachanja, the Forest Act largely decentralized the management of forests with the implementation of participatory forest management where there was the formation of Community Forestry Associations (CFAs).⁶¹ The CFAs were self-governed community based groups formed to aid in the management of public forests alongside KFS and other government agencies.⁶² According to Matiku, communities that were part of the Community Forest Associations could be able to form and carry out forest resource use schemes that were compatible with their customary rights.’⁶³

⁵⁵ Supra n 52.

⁵⁶ Supra 26.

⁵⁷ Supra n 37.

⁵⁸ Ministry of Environment and Mineral Resources, ‘Master plan for the conservation and sustainable management of water catchment areas in Kenya,’ (2012) <https://www.preventionweb.net/files/34692_conservationmasterplanfinal.pdf> accessed 29 September 2019.

⁵⁹ Forest Act [2005], s 27.

⁶⁰ Forest Act [2005], s 3.

⁶¹ Andre Standing and Michael Gachanja, ‘The Political Economy of REDD+ in Kenya: Identifying and responding to corruption challenges,’ (2014) Anti-Corruption Resource Center, No.3 p.9, para 4 <<https://www.u4.no/publications/the-political-economy-of-redd-in-kenya-identifying-and-responding-to-corruption-challenges.pdf>> accessed 29 May 2019.

⁶² Forest Act [2005].

⁶³ Matiku, ‘*The impact of participatory natural resources management on forest integrity and livelihood systems in the Arabuko-Sokoke Forests, Kenya*’ Ph.D. thesis, Kenyatta University, Nairobi, Kenya (2012).

Apart from the CFAs, the Act also established Forest Conservation Committees to assist the local communities to benefit from utilization of forest resources.⁶⁴ Additionally, in 2008 pursuant to the Forest Act 2005, there was the reintroduction of the shamba system through the establishment of the Plantation Establishment and Livelihood Improvement Scheme (PELIS).⁶⁵

With regard to management of forests sustainably, the 2005 Forest Act mainly promoted participatory forest management through the formation of Community Forest Associations. Forest Service.⁶⁶ Additionally, the Forest Act 2005 also provides for the Forest (Participation in Sustainable Forest Management) Rules, 2009.⁶⁷ The rules governed the involvement of the public which included private persons in regulating forest resource use in state forests.⁶⁸

3.3.2 Current Forestry Legislation

3.3.2.1 The Constitution of Kenya 2010

Article 69 of the Constitution 2010, obligates the state to ensure sustainable management and conservation of natural resources and environment.⁶⁹ The Constitution provides certain rules with regard to management of forests sustainably such as: ensuring sustainable utilization, exploitation, involvement of the community and protection of genetic resources and biodiversity among others.⁷⁰

The sustainable forest management guidelines provided within the Constitution have been used in the formulation of other forestry laws and have increasingly been referenced in case law. In the Case, *Joseph Leboo & 2 Others v Director Kenya Forest Service & Another*, the Learned Justice Munyao stated that public participation provided in Article 69 (1) (d) of the Constitution is an important component of environment management.⁷¹ Additionally, Constitutional Petition No 47 of 2010, the judges invoked Article 69 (1) to deny the alienation of parts of Ngong Forest

⁶⁴ Forest Act [2005], Section 13 (2)

⁶⁵ Joram Kagombe, 'Contribution of PELIS in increasing tree cover and community livelihoods in Kenya,' (2014), KEFRI <<https://kefri.org/wp-content/uploads/PDF/CONTRIBUTION%20OF%20PELIS%20IN%20INCREASING%20TREE%20COVER%20AND%20COMMUNITY.pdf>> accessed 29 September 2019.

⁶⁶ Kenya Forest Act [2005], Section 46.

⁶⁷ The Forest (Participation in Sustainable Forest Management), Rules 2009

⁶⁸ Ibid n 67.

⁶⁹ The Constitution of Kenya [2010], Article 69 (1).

⁷⁰ The Constitution of Kenya [2010], Article 69 (1) (a), (b), (c), (d), (e), (f) (g) (h).

⁷¹ Environment and Land Court Case No. 273 [2013] Eklr.

to the petitioners.⁷² The Environment and Land Court oversees settlement of cases with regards to natural resource use including forest resource use. The Court is recognizes the tenets of sustainable development as provided within Section 6 of the Environment and Land Court Act.⁷³

3.3.2.2 The Forest Policy, 2014

The Policy was adopted to address the inherent gaps in the Forest Act, 2005.⁷⁴ It provides a structure and guidelines to address issues on forest resource regulation and allocation to enable the forest sector achieve sustainable development.⁷⁵ The main features of sustainable management of forests as stated within the policy include;

- (a) *“The involvement of the public and relevant stakeholders in managing of forest resources;*
- (b) *The establishment of plans to attain 10% forest cover and the monitoring and evaluation of forest resources to track progress towards achieving the recommended minimum forest cover;*
- (c) *The Integration of the different tenets of sustainability in managing forests i.e. socio-economic, cultural and ecological factors;*
- (d) *Setting of national strategies to support the public and relevant stakeholders in planting of trees in their lands; and*
- (e) *Setting up of monitoring systems to investigate on whether persons engaging in the sale of wood products have legal permits.”⁷⁶*

3.3.2.3 The Forest Conservation and Management Act 2016

In 2016, the Forest Conservation and Management Act was out in place to ensure forest laws are aligned to the newly enacted Constitution.

According to the Draft National Forest Policy, there was need to enact supporting legislation to the promulgated Constitution which provided new requirements for natural resource

⁷² *Ledidi Ole Tauta & Others v Attorney General and 2 Others* [2015] Eklr, Constitutional Petition 47 of 2010.

⁷³ Environment and Land Court Act, Section 6.

⁷⁴ The London School of Economics and Political Science, ‘Forest Policy 2014,’ (2014) Grantham Research Institute on Climate Change and Environment < <http://www.lse.ac.uk/GranthamInstitute/law/forest-policy-2014/>> accessed 28 September 2019.

⁷⁵ *Ibid* n 75.

⁷⁶ Ministry Of Environment, Water and Natural Resources, ‘Forest Policy 2014,’ (2014) p.i.

management.⁷⁷ These included: involvement of the public and relevant stakeholders in natural resource management, natural resource sharing and achievement of 10% tree cover.

With regard to managing forests sustainably, The Forest Conservation and Management Act 2016 states in its long title that it was formed in order to aid in the realization of Article 69 of the Constitution.⁷⁸ The Kenya Forest Service (KFS) is also established in the Act⁷⁹, and its functions in reference to managing forests sustainably is the development and execution of forest management plans within public forests.⁸⁰ Additionally, in collaboration with communities⁸¹ and private forest owners, the KFS also prepares and implements forest management plans if requested to do so.⁸² The Act also provides for the development of a National forest policy for the sustainable management of forests as well.⁸³ However, the 2014 National Forest Policy is yet to be revised to conform to the new Act. The Act further provides for the management of indigenous and plantation forests in a sustainable manner to promote sustained yield of timber and non-wood forest resources.⁸⁴

While the Act provides for establishment of forest management plans for the management of forests sustainably, the criteria for establishing whether the practices specified under the plans are sustainable is not mentioned within the Act.

3.3.2.3 Moratorium on logging activities in public and community forests (2018)

Apart from the Forest Conservation and Management Act 2016, the government has most recently issued directives on management of forest resources. On 24th February 2018, the Government issued a moratorium on logging to permit for the reevaluation of the entire forestry sector. Further, this moratorium was issued as a result of a Taskforce report appointed by the

⁷⁷ ‘Draft National Policy 2015,’ Ministry of Environment, Water and Natural Resources 23 March 2015 <https://www.kenyaforests.org/resources/Forests_Conservation_and_Management_Policy_2015.pdf> accessed 29 May 2019.

⁷⁸ Long Title, Forest Conservation and Management Act [2016]

⁷⁹ Forest Conservation and Management Act [2016], Sec 7.

⁸⁰ Section 8 (b)

⁸¹ Section 49 (1) (e).

⁸² Section 8.

⁸³ Section 5 (1)

⁸⁴ Section 42 (1)(e) and Section 43 (1)

Government to analyze the reasons for Kenya's current forest cover at 7.4% which is beneath the recommended universal minimum limit of forest cover at 10%.⁸⁵

On 16th November 2018, the Ministry of Environment and Natural Resources through its Cabinet Secretary extended the moratorium on logging on public and community forests which had earlier been extended for six months ending on 24th November 2018, for a further a year to enable full implementation of the Taskforce's immediate and short term proposal and the National Assembly Committee on Environment, Land and Natural Resources.⁸⁶ These proposals by the Taskforce Force and National Assembly included enforcement of sustainable practices which include afforestation, use of tracking systems to establish progress of interventions and other sustainable forest management practices.⁸⁷

3.4 Conclusion

Kenya's forest law and policies are scattered in different laws from the Constitution as the supreme law to master plans, statute and even presidential directives. The forestry legal framework has transitioned over time from a largely exclusionist approach to a participatory and holistic approach characterized by community-based natural resource management. However, although the laws are based on enhancing sustainable forest management, the sustainability criteria of most of these laws is questionable given that Kenya is yet to achieve the 10% minimum forest cover and the communities remain to be disgruntled.

In as much as Kenyan legislation alludes to sustainable management of forests, the existing legislation is inadequate prompting the government to adopt adverse forest management practices such as the moratorium on logging whose sustainability criteria has not been proven.

⁸⁵ Ministry of Environment and Forestry, 'Taskforce Report on Forest Resources Management and Logging Activities in Kenya,' April 2018, <<http://www.environment.go.ke/wp-content/uploads/2018/05/Task-Force-Report.pdf>> accessed 29 May 2019.

⁸⁶ Cabinet Secretary of the Ministry of Environment and Natural Resources, 'Extension of the Moratorium on Logging Activities in Public and Community Forests,' Press Statement (16 November 2018) <<http://www.environment.go.ke/wp-content/uploads/2018/11/4048264.pdf>> accessed 29 May 2019.

⁸⁷ The Ministry of Environment and Forestry, 'Taskforce Report on Forest Resources Management and Logging Activities in Kenya,' (2018) <<http://www.environment.go.ke/wp-content/uploads/2018/05/Task-Force-Report.pdf>> accessed 29 May 2019.

CHAPTER FOUR

CRITIQUE OF THE IMPLEMENTATION OF THE MORATORIUM ON LOGGING: RESULTS FROM FIELD DISCUSSIONS

4.1 Introduction

The chapter sets out the results obtained during the analysis of the data and gives a discussion of the same. The discussion entails explanation of the results, implications of the findings by reference to decided cases, legal provisions and scholarly writings to support or compare the findings and their implications.

4.2 Results and discussions

4.2.1 General information of the respondents

The general information captured includes; sex, age, marital status, occupation, religion and highest level of education. The demographic data on gender showed that majority of the respondents 66.4% were male while 33.6% were female respondents. The low participation of women can be linked to lack of empowerment and poverty. According to a study done in 2012 it was illustrated that women participate less in surveys and environmental impact assessment because of less empowerment, low access to information, poverty and illiteracy.¹ Among the population sampled, most of the respondents were below 45 years of age (78.4%). They were mainly married people (65.9%) and were Christians (88.5%). Concerning the highest education levels, majority of the people (77.3%) had obtained secondary education or had above secondary level of education as shown in table 4.1 below.

Table 4.1: Bio-data of the respondents

Bio data	Frequency (N = 195)	Percent
Sex		
Male	130	66.4

¹ Esther Duflo, 'Women's Empowerment and Economic Development,' (2012), Journal of Economic Literature, 50 (4), 1051-79, < <https://economics.mit.edu/files/7417>> accessed 25 September 2019.

Female	65	33.6
<hr/>		
Age (years)		
18 – 30	88	45.3
30 – 45	64	33.1
45 – 60	28	14.8
60 – 75	9	4.7
75 – 90	2	1.0
90 – 105	1	0.5
Non-committal	1	0.5
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Marital status		
Never married	49	25.3
Married	128	65.9
Separated	11	5.7
Widowed	3	1.6
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Occupation		
Student/ unemployed	41	21.4
Casual labourer	50	26.0
Business person	82	42.7
Salaried employment	12	6.0
Others	6	2.9
Non-committal	2	1.0
<hr/>		
Religion		
Christian	173	88.5
Muslim	9	4.7
Traditional	2	1.0
No religion	7	3.6
Non-committal	4	2.1
<hr/>		
Highest level of education		
Informal education	6	3.1
Primary education	37	19.0
Secondary education	92	47.1

Tertiary education	59	30.2
Non-committal	1	0.5

Source: Author, (2019)

4.2.2 Main occupation of the respondents

With regards to the occupation of the respondents, (6.0%) were on salaried employment while majority 42.7% were business persons and 26.0% were casual laborers. Additionally, majority of the respondents (Business persons and casual laborers) (69.3%) earned Ksh. 0 – 15000 per month from their main occupation. The highest earners getting between Kshs. 60,001- Ksh. 100000 per month being 1.6% of the respondents as depicted in table 4.2. The high level of participation of business persons and casual laborers in the study may be an indication that the respondents' occupation may be related to trading of forest products. Indeed, it has been stated in previous studies that one of the factors influencing public participation in various studies is the influence of the study on the socio-economic concerns of the community.² For instance, a research was done to evaluate the participation level of residents in Eburru area on the Environmental Impact Assessment of the Eburu Geothermal power project in Naivasha Kenya.³ The results of the study showed that residents were concerned about the benefits they would obtain from the project. Similarly, in this study, it can be construed that most residents of East Mau Area who participated in the study were concerned about the socio-economic influence of the moratorium on logging given that their mode of occupation is related to forest products.

A separate study showed that having a varied distribution of respondents by occupation ensures that concerns about the study that affect all sectors of the economy in the study area are addressed in each employment sector.⁴ Diversity of persons according to their occupation and income earned in this study therefore guarantees inclusivity.

Table 4.2: Monthly Income earned by the respondents from the main occupation

² Gabriel Wetangula., 'Public Participation in Environmental and Socioeconomic Considerations for proposed 2.5 MW Pilot Eburru Geothermal Power Project, Kenya,' (2010) Proceedings World Geothermal Congress 25-29, < <https://www.geothermal-energy.org/pdf/IGAstandard/WGC/2010/0208.pdf>> accessed 23 September 2019.

³ Ibid n 2.

⁴ David Njagi Ngonge, 'Evaluation of Public Participation in Environmental Impact Assessment of the Southern Bypass Road in Nairobi, Kenya,' (Degree of Master of Arts in Environmental Law, University of Nairobi, 2015).

Monthly income (Ksh)	Frequency	Percent
0 – 15000	135	69.3
Ksh 15001 - 20000	23	12.0
Ksh. 20001 – 60000	15	7.8
Ksh 60001 – 100000	5	2.6
Ksh more than 100000	3	1.6
Non –committal	13	6.8

Source: Author, (2019)

4.2.3 Duration of residence in the area of study

With regards to duration of residents in the area of study, the result showed that 68.2% of the respondents had resided in the area for over 5 years. Only 7.8% of them had lived in the area for less than a year. The length of residence of the respondents is important in determining whether the respondents noted any socio-economic or environmental changes after the institution of the moratorium on logging. According to a study done in 2014, respondents who have lived in the area of study are more likely to have experienced and understood factors that may have influenced conservation of the environment.⁵ The results show that 68.2% of the respondents have been residents in the area for over 5 years, this is indicative that a large number of the respondents gave accurate responses on the state of the forest and their environment prior and after the institution of the moratorium on logging. Additionally, they are best placed to state whether the moratorium on logging has had any effect on the economic, social, and ecological status in the area.

Table 4.3: Duration of residence in the area

Duration	Frequency (N = 195)	Percent
Less than a year	15	7.8
Between One to Two years	13	6.8
Between Two to Five years	32	16.7

⁵ Sally Burer, 'Influence of Environmental Education on Conserving the Environment in Kenya, case study Moiben Constituency, Uasin Gishu County,' (Master of Arts in Project Planning and Management, University of Nairobi, 2014).

Over Five years	131	68.2
Non-committal	1	0.5

Source: Author, (2019)

4.2.4 Distance of the household to the nearest forest

The distance between the respondents' households and the forests varied as illustrated in Figure 4.1. Majority of the respondents (53.6%) lived 10 km away from the forest. According to a 2008 research, one of the methods of assessing accessibility to the forest is the distance of the forest to respondent's households.⁶ In instances where households are located considerably far from the forest it may be an indicator of lack of access to the forest leading to lack of participation in forest management which is one of the principles of managing forests sustainably. Chhetri states in his 2009 thesis that the distance of the household from the forest has an inverse relationship with the degree of involvement of the community and relevant stakeholders in forest management.⁷ This study indicates that up to 53.6% of the respondents interviewed live about 10 to 20 km away from the forests. This means that most households may not necessarily have access to the forest because of the distance between their households and the forest.

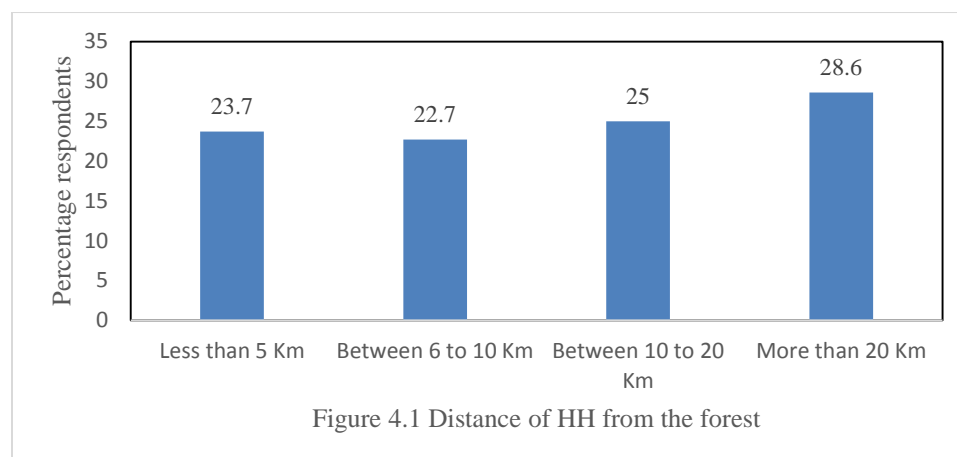


Figure 4.1: Distance of the household from the forest

Source: Author, (2019)

⁶ Milcah Asamba, 'an assessment of the Impact of Forest Management Systems on Households: A Case Study of the Kakamega Rain Forest,' (Master of Arts in Development Studies, University of Nairobi, 2008).

⁷ Chettri, K.B., 'Community Forestry program in the hills of Nepal: determinants of user participation and household dependency,' (Masters thesis in Management of Natural Resources and Sustainable Agriculture, Norwegian University of Life Sciences, 2005).

4.3 Evaluation of the challenges in implementation of the moratorium on logging

According to FAO, good forest governance is defined by the following factors: enhancing accountability and anti-corruption practices, involvement of the community in forest management; a coherent set of laws and regulation and proper implementation of laws.⁸ Good forest governance that incorporates the aforementioned elements strengthens implementation of practices that enhance management of forests sustainably by forest managers.⁹ The Forest Conservation and Management Act (2016) provides the bodies that are tasked with the implementation of forest laws within the forests they manage. These include: the Community Forest Associations (CFAs), the Kenya Forest Service (KFS) officers and Individuals.¹⁰ This study therefore, sought to evaluate whether there were challenges faced in implementation of the moratorium on logging by these bodies.

4.3.1 Challenges in implementation of the moratorium on logging by CFAs

The Forest Conservation and Management Act (2016) advocates for the involvement of the locals in managing the forests near them.¹¹ The Act provides for the creation of institutions like the Community Forest Associations (CFAs) to promote the community participation in forest management.¹² According to the Forest Conservation and Management Act 2016, CFAs are defined as

“a group of local persons who have registered as an association or other organization established to engage in forest management and conservation.”¹³

The CFAs are to co-manage the forest resources with the Kenya Forest Service, they are also tasked with implementing forest laws and regulations within the areas of the forests that they manage.

⁸ FAO, 'Forest Governance,' (2018) < <http://www.fao.org/sustainable-forest-management/toolbox/modules/forest-governance/basic-knowledge/en/?type=111>> accessed 26 September 2019.

⁹ Ibid.

¹⁰ Forest Conservation and Management Act [2016], sec 2.

¹¹ Koech, C.K., Ongugo, P.O., Mbuvi, M.T.E., & Maua, J.O., 'Community Forest Associations in Kenya: challenges and opportunities,' Kenya Forestry Research Institute (2016), <https://www.fornis.net/sites/default/files/documents/Community%20Forest%20Associations%20in%20Kenya%20challenges%20and%20oppo-205_0.pdf> accessed 9 September 2019.

¹² Ibid n 4.

¹³ Forest Conservation and Management Act 2016, *Kenya Gazette Supplement No. 155* (Acts No. 34)

In establishing whether there was challenge in implementation of the moratorium on logging by CFAs, this study first examined whether the community was aware of the existence of CFAs.

4.3.2 Awareness level of the community of Community Forest Associations

Upon conducting research on the communities' awareness of the existence of CFAs and their membership within these associations, the following results were revealed; 23.4% of the residents in the area were aware of CFAs and 70.8% were not aware. Figure 4.2 illustrates the results.

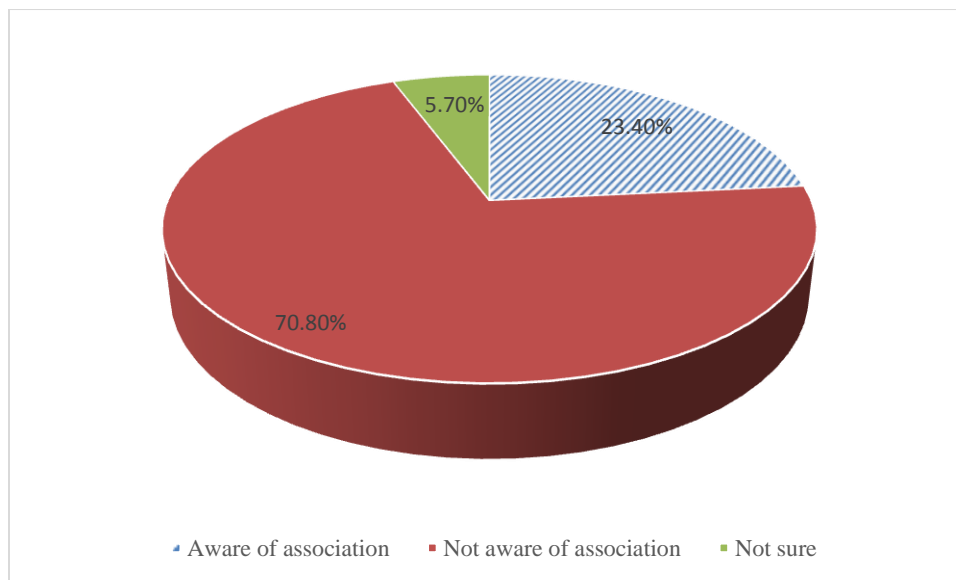


Figure 4.2: Respondents awareness of Community forest associations

Source: Author, (2019)

In reference to CFAs membership, most respondents (59.4%) were not members of any association, 33.9% were non-committal and had no idea what Community Forest Associations are and only 6.8% had membership status. There was a significant correlation between the awareness of the existence of the Community Forest Associations and membership within the CFAs. Unaware respondents of CFAs were not members of the CFAs as well. In a 2012 study, it was noted that CFA membership increased participation and involvement in forest

conservation.¹⁴ In this study, a large number of respondents who were not CFA members also stated that they were not involved in forest management. This agrees with the 2012 study that CFA membership has a positive association with involvement in management and preservation of forests. The non-involvement of a significant number of respondents in management of forest resources and in turn implementation of forest laws such as the moratorium on logging has a negative impact in ensuring effective implementation of the laws.

Sustainable Forest Management also requires involvement of the community in forest governance as stated by Macharia in her thesis.¹⁵ Additionally, the government is tasked with conveying relevant information to the public of the means through which they can participate in managing the forests and engage in implementation of forest conservation laws.¹⁶ The communities' lack of awareness resulting in lack of participation in forest management poses a challenge to effective implementation of laws as illustrated in this study.

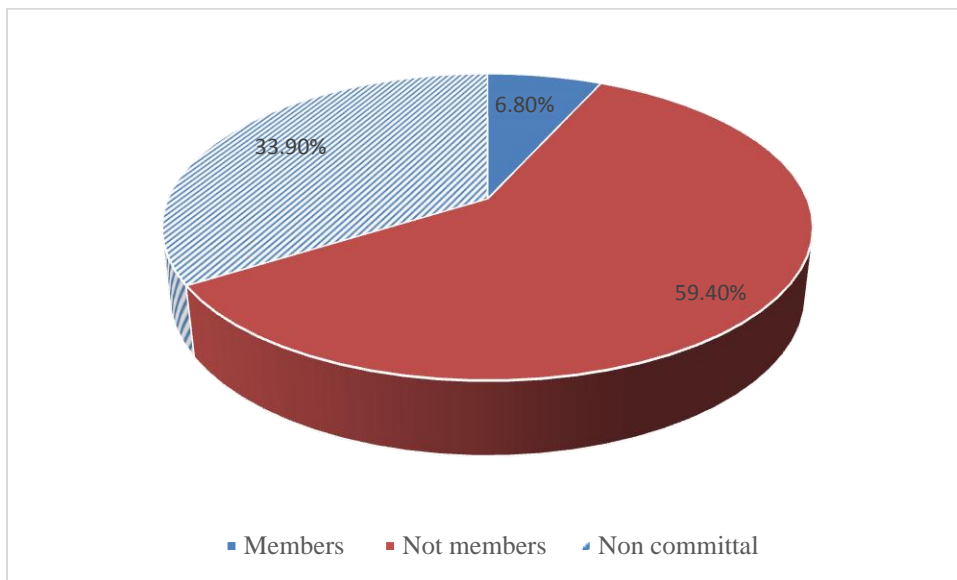


Figure 4.3: Members of Community forest associations

¹⁴ Josephine Kamene Musyoki, Jayne Mugwe, Kennedy Mutundu and Mbae Muchiri, ‘Determinants of Household Decisions to join Community Forest Associations: A Case Study of Kenya,’ (2012), Volume 2013, Article ID 902325, <<http://dx.doi.org/10.1155/2013/902325>> accessed 21 September 2019.

¹⁵ Beth Wanjira Macharia., ‘Factors influencing community participation in forestry conservation projects: a case of Kithoka-Twajai Forest Community Based Organization, Meru County Kenya,’ (Master of Arts in Project Planning and Management, University of Nairobi, 2015) <http://erepository.uonbi.ac.ke/bitstream/handle/11295/90116/Macharia_Factors%20influencing%20community%20participation%20in%20forestry%20conservation%20projects%3A%20a%20case%20of%20Kithoka-Twajai%20forest%20.pdf?sequence=1&isAllowed=y> accessed 9 September 2019.

¹⁶ The Constitution of Kenya [2010], Article 35.

Source: Author, (2019)

4.3.3 Effect of the moratorium on logging on implementation of sustainable forest programs formulated by CFAs

The effect of the moratorium on logging on successful implementation of sustainable forest programs formulated by the community forest associations was noted by 38.3% of the respondents who were aware of CFAs. The effect was not felt by 20.6% of the respondents while 41.2% had no idea about the effects of moratorium on logging on such programs. Based on the research results, most of the respondents who were members of CFAs were not aware of the effect of the moratorium on logging on implementation of sustainable forest programs. While the second larger group stated that the moratorium on logging had affected successful implementation of sustainable forest programs. A number of respondents stated that under the sustainable forest programs, members of the CFAs were allowed to harvest twigs and branches from the forest for household use. However, since the institution of the moratorium on logging, they were no longer allowed to harvest such forest products and many of them had been prevented from exiting the forest with wood even for subsistence use. It is essential that further government regulation such as the moratorium on logging does not starkly contrast with existing sustainable forest management measures such as the sustainable forest programs so as not to adversely affect the key stakeholders.

According to Belbase and Thapa, conflicting cross sectoral forest policies and regulation mechanisms leads to challenges in implementation.¹⁷ Sustainable forest management requires laws to be consistent with other existing regulatory instruments. In this case, since the moratorium on logging poses a challenge in implementation of the CFAs' sustainable forest programs, it therefore proves to be not consistent with existing regulatory frameworks and therefore cannot be said to have upheld the sustainability criteria. Additionally, lack of consistency between forest regulatory mechanisms is an indication of lack of consultation by the government with the relevant stakeholders prior to implementation of further laws. It also shows lack of consideration of the communities' views on forest management.

¹⁷ Ram Chaudhary, Yadav Upetry and Sagar Kumar Rimal, 'Deforestation in Nepal: Causes, Consequences and Responses,' (2016) *Biological and Environmental Hazards, Risks and Disasters* p.335-372, <<https://doi.org/10.1016/B978-0-12-394847-2.00020-6>> accessed 21 September 2019.

According to FAO, forest managers should be involved in dialogues with legislators on forest governance frameworks in order to prevent implementation of contradictory laws and to enable sustainable management of forests.¹⁸ This is because, these forest managers possess important information on forest users and uses that can inform the development of coherent and non-contradictory laws.¹⁹

Table 4.4: Effect of the moratorium on logging on successful implementation of sustainable forest programs formulated by the community forest association

Opinion	Frequency (N = 45)	Percent
Moratorium on logging affected successful implementation	17	38.3
Not affected successful implementation	10	20.6
No idea	18	41.2

Source: Author, (2019)

4.3.4 Effect of the moratorium on logging on implementation of management agreements between the KFS and Community forest association

Under Participatory Forest Management, Community Forest Associations can engage with the Kenya Forest Service to formulate agreements which prescribe the mode of managing and controlling public forests.²⁰ As previously stated, it is essential that cross-sectoral forest regulatory measures do not conflict to prevent lack of implementation of laws due to inconsistency.²¹ Management agreements are also forest regulation mechanisms and this research sought to investigate whether the moratorium on logging conflicts with existing management agreements between CFAs and KFS. The findings illustrated that 38.8% of the interviewees who were aware of CFAs stated that the moratorium on logging had affected the management agreements between KFS and CFAs. This meant that CFAs were no longer able to effectively control and manage their designated areas of the forests to their benefit. The conflict between the

¹⁸ Ibid n 8.

¹⁹ Ibid n 8.

²⁰ Forest Conservation and Management Act 2016 (FCMA 2016), s 45.

²¹ Ibid n 16.

two regulatory mechanisms had resulted in implementation failure as it was reported that illegal logging had now increased in certain areas of the forest especially in areas where the management agreement applied.²² The results agree with a FAO study which stated that resource conflicts emerge when emerging policies or laws fail to consider local situations leading to implementation failure due to resistance and non-compliance by communities affected.²³

Table 4.5: Effect of the moratorium on logging on management agreement between KFS and community forest association

Opinion	Frequency (N = 45)	Percent
Moratorium on logging affected the management	17	38.8
Not affected the management	7	15.6
No idea	21	45.6

Source: Author, (2019)

4.3.5 Effective implementation of the moratorium on logging by KFS

In a study done in 2014, certain factors were stated as constituting effective strategy implementation practices by KFS. These include, conducting research before embarking on newly endorsed management practices, monitoring the implementation process and ensuring achievement of the goals, the legislation or regulation seeks to fulfill, securing compliance, involvement of all concerned stakeholders.²⁴ This study therefore evaluated whether KFS undertook the above mentioned practices in order to determine whether there was effective implementation of the moratorium on logging.

The research noted that 30.2% of the respondents had stated that there had been effective implementation of the moratorium on logging by KFS. However, 46.3% of the respondents had

²² Interview with Kenya Forest Service Officer, East Mau Forest Reserve.

²³ Violet Matiru, 'Conflict and Natural Resource Management,' (2000), FAO, < www.fao.org/forestry/21572-0d9d4b43a56ac49880557f4ebaa3534e3.pdf> accessed 26 September 2019.

²⁴ Margaret Wanjiru King'ori, 'Challenges faced by Kenya Forest Service in Strategy Implementation,' (Masters of Business Administration, University of Nairobi, 2014) <http://erepository.uonbi.ac.ke/bitstream/handle/11295/95443/King%27ori%20Margaret%20Wanjiru_Challenges%20Faced%20by%20Kenya%20Forest> accessed 21 September 2019.

no idea and 23.4% were of a contrary opinion and felt that there wasn't effective implementation of the moratorium on logging by KFS. The 30.2% largely stated that there was effective implementation because there was limited access to the forest since the institution of the moratorium on logging and observable change in the ecosystem. In contrast, the 23.4% stated that there wasn't effective implementation because though there was limited access to the forest, illegal logging was still taking place. Figure 4.6 illustrates the respondent's opinions on effective implementation of the moratorium on logging by KFS.

Table 4.6: Respondents opinion on effective implementation of the moratorium on logging by the KFS

Opinion	Frequency (N = 195)	Percent
There are effective implementation	59	30.2
Not There are effective implementation	46	23.4
No idea	90	46.3

Source: Author, (2019)

As previously stated, past research has shown that effective implementation of forest laws by forest officers is characterized primarily by achievement of the goals the regulations sought to fulfill.²⁵ This is also one of the strategy implementation practices of the KFS to ensure effective implementation as stated above. The current moratorium on logging as a regulation sought to allow the restoration and rehabilitation of the degraded water catchment area and to enable replanting of the backlog clear fell plantation areas with indigenous tree species.²⁶ The study reveals that 47.9% of the interviewees had observed changes in vegetation in the forest ecosystem such as increase in vegetation, rise in the forest's river levels and increased frequency of rainfall around the area. The results are as shown in table 4.7. As illustrated, 52% percent of the interviewees stated that they had noticed an increase in the water mass of the Njoro and Enderit Rivers since the institution of the moratorium on logging. However, the study also showed that there were no scientific measures implemented by KFS to monitor and provide accurate data on

²⁵ Constance McDermott, Benjamin Cashore and Peter Kanowski, *Global Environmental Policies: An International Comparison*, (2010) Earthscan

<https://books.google.co.ke/books?hl=en&lr=&id=TXRCIDfqSksC&oi=fnd&pg=PR5&ots=4oEzndlq-p&sig=V7utsc-2o_lv9Jvi6z5V0_oA0zY&redir_esc=y#v=onepage&q&f=false> accessed 21 September 2019.

²⁶ Keriako Tobiko, 'Extension of the moratorium of the ban on logging,' (2018) Press Statement

<<http://www.environment.go.ke/wp-content/uploads/2018/11/4048264.pdf>> accessed 22 September 2019.

the changes within the ecosystem. The Chief Conservator of forests stated that the current mechanisms used by KFS to monitor change in the ecosystem was conducting tree census which was inadequate.

Table 4.7: Changes in vegetation in the forest eco-system after institution of the moratorium on logging

Changes in vegetation affected	Frequency (N = 195)	Percent
Noticed changes in vegetation	93	47.9
Never noticed any changes in vegetation	49	25.3
Do not know	53	26.9

Source: Author, (2019)

Another goal that the moratorium on logging sought to achieve was to enable the implementation of the Task Force's²⁷ recommendations to KFS with regards to the moratorium which include: eviction of all illegal settlers in community and public forests as well prevention of timber harvesting in public and community forests.

The results showed that among the 30.2% of the respondents who had stated that KFS had effectively implemented the moratorium on logging about 15% of them had been evicted from the forest.

The 30.2% of the respondents interviewed also stated that KFS were more vigilant in monitoring activities in the forest and a number of them had been arrested for cutting down trees for domestic use. However, the respondents stated that the frequent arrests did not result in proper convictions. This is because those arrested would be released upon giving bribes to the KFS officers and as a result the moratorium on logging had increased corruption within the area.

A KFS officer stated that since the institution of the moratorium on logging there had been 112 arrests due to illegal logging. However, records at the nearest police station showed that only 23 reports had been made, that is 20% of the arrests reported by KFS since the date of institution of the moratorium on logging. A KFS officer also noted that there was increased incidences of corruption among fellow officers who often received bribes to permit loggers to cut down trees.

²⁷ Ministry of Environment and Forestry, 'A report on Forest Resources Management and Logging Activities in Kenya: Findings and Recommendations,' (2018) < http://www.friendsofkarura.org/wp-content/uploads/2018/05/Final-Report_29Apr2018_17h.pdf> accessed 22 September 2019.

The study noted a significant association between lack of proper enforcement of laws and increasingly low compliance.

This agrees with a 2012 study where it was noted that the one of the factors influencing forest law compliance behavior was the belief that there were punitive sanctions, the actual institution of these sanctions and the existence of an integrous enforcement team.²⁸

According to Murphy in his 2004 Working Technical Paper, effective implementation does not only seek to fulfill the regulation goals but also focuses on responsive regulation.²⁹ This entails implementers taking into consideration graduated responses through stakeholders participation in the process of implementation. This can be hierarchical where the regulatory approach begins with cooperation and persuasion, where this fails it then graduates to tougher sanctions depending on the extent of non-compliance. The study showed that there was increased lack of support from neighboring communities. A KFS officer stated that community members who depended on the forest for household fuel from the twigs and branches, were now prevented from harvesting the forest products and this had led to increased confrontation between the forest officers and the community members.³⁰ Additionally, this had led to difficulties in implementing the moratorium on logging due to the community members perceiving the moratorium on logging as discriminative and unfair. A 2012 study noted that the way regulations are perceived by community members and where the regulations do not take into consideration the normative forest uses of the community there is a high likelihood of non-compliance.³¹

The lack of adequate monitoring mechanisms, weak enforcement mechanism that is corruption riddled and increased frequency of non-compliance is an indication of inherent challenges in the implementation of moratorium on logging.

²⁸ Sabaheta Ramcilovic-Suominen, 'Forest law compliance in the High-Forest Zone of Ghana: an analysis of forest farmer's livelihoods, their forest values and the factors affecting law compliance behavior,' (School of Forest Sciences, University of Eastern Finland, 2012) <
https://www.researchgate.net/publication/263962823_Forest_law_compliance_in_the_High-Forest_Zone_of_Ghana_an_analysis_of_forest_farmers'_livelihoods_their_forest_values_and_the_factors_affecting_law_compliance_behaviour> accessed 26 September 2019.

²⁹ Kristina Murphy, 'Moving Towards a more effective model of regulatory enforcement in the Australian Taxation Office,' (2004) Working Technical Paper, ANU Research Publications, <http://hdl.handle.net/1885/43169> accessed 21 September 2019.

³⁰ Interview with Kenya Forest Service Officer, East Mau Forest Reserve (East Mau, 3 July 2019).

³¹ Ibid n 28.

4.4 Determining the extent of involvement of the community and relevant stakeholders in formulation of the moratorium on logging.

4.4.1 Awareness of the moratorium on logging

As previously stated involvement of the community and relevant stakeholders in forest governance decision making is a key component of managing forests sustainably.³² Effective involvement of the community and relevant stakeholders in forest governance involves a public participation process which comprehensively educates the public.³³ The information availed to the public should include any data that may influence the decision of the public.³⁴ It is therefore imperative that such information should be availed to the public as a right guaranteed by the Constitution of Kenya.³⁵ According to Isaac Wekesa, communities that have access to information on their resources tend to participate in managing the forests.³⁶ In determining whether the community was involved in managing the forests this study first evaluated the communities' awareness level of the government's directive of the moratorium on logging among community members. The findings demonstrated showed that 78.9% of the interviewees were aware of the moratorium on logging while 21.1% of the respondents were not aware.

³² Ibid n 15

³³ Tracey Morin Dalton, 'Beyond Biography: a framework for involving the public in planning of U.S marine protected areas,' (2005), *Conservation Biology* 19 (6), 1392-1402.

³⁴ David Njagi Ngonge, 'Evaluation of Public Participation in Environmental Impact Assessment of the Southern Bypass Road in Nairobi, Kenya,' (2015) Master of Arts in Environmental Law, University of Nairobi, <<https://pdfs.semanticscholar.org/e56c/ce483f74a687592ba23f7b1bda9e09f10777.pdf>> accessed 22 September 2019.

³⁵ The Constitution of Kenya, 2010, Article 35 (1)

³⁶ Isaac Wanyonyi Wekesa, 'Examining the role of community participation in forest management and conservation in Kimothon Forest, Trans Nzoia County Kenya,' (Masters Degree in Public Administration, University of Nairobi (2017), <<http://erepository.uonbi.ac.ke/bitstream/handle/11295/101783/ISAAC%20WANYONYI%20WEKESA1.pdf?sequence=1&isAllowed=y>> accessed 9 September 2019.

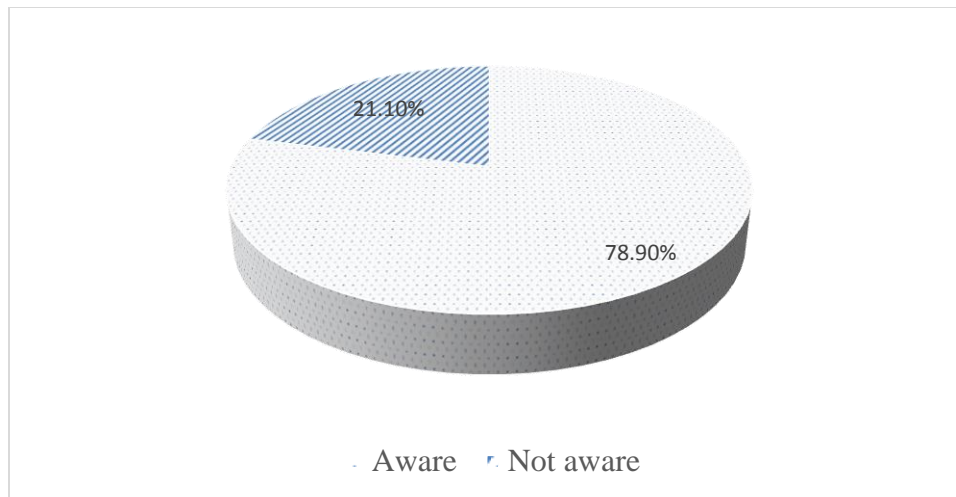


Figure 4.4: Respondents awareness of the moratorium on logging

Source: Author, (2019)

4.4.2 Understanding of the term “Ban on logging” as per the current moratorium

The results illustrated that 29.4% of the respondents stated that the moratorium on logging meant the restriction from cutting down of trees in public and community forests. This is consistent with the moratorium imposed by the Government banning logging in all public and community forests.³⁷ However, 38.8% of the respondents stated that the moratorium on logging meant the restriction of cutting of trees in public and community forests unless one is in possession of a licence while 29.4% stated that it was generally an order by the government to stop the cutting down of trees. The results as illustrated in Table 4.8 showed that 68.2% of the respondents did not have accurate information on what the moratorium on logging entails and the lack of understanding could lead to non-meaningful participation of the public in forest management. Marzuki states that significant involvement of the public in management of forests can only occur if members of the public are aware and the public can only be apprised by the Government.³⁸ Therefore, effectiveness of involvement of the public can only be attained

³⁷ Cabinet Secretary of the Ministry of Environment and Natural Resources, ‘Extension of the Moratorium on Logging Activities in Public and Community Forests,’ Press Statement (16 November 2018) <<http://www.environment.go.ke/wp-content/uploads/2018/11/4048264.pdf>> accessed 29 May 2019.

³⁸ Azizan Marzuki, ‘A review on public participation in Environmental Impact Assessment in Malaysia,’ (2009) *Theoretical and Empirical Research in Urban Management* 3 (12), 126-136.

through adequate dissemination of quality information by the State.³⁹ The lack of awareness of a large number of the respondents on what the moratorium on logging entails is indicative of lack of adequate dissemination of information by the government on forest governance.

Table 4.8: Respondents understanding of the term “moratorium on logging”

Understanding of the term	Frequency (N = 195)	Percent
An order by the government to stop the cutting down of trees	57	29.4
To stop the cutting down of trees in public & community forest	57	29.4
To restrict cutting of trees in public and community forest unless one is in possession of a licence	75	38.8
No idea	6	2.3

Source: Author, (2019)

4.4.3 Involvement in public participation forums during the formulation of the moratorium on logging

As stated by Edmond Pamba, public participation in forest governance is a fundamental tenet of any democratic dispensation.⁴⁰ The Constitution of Kenya (2010) also clearly cedes sovereignty to the people of Kenya and provides for involvement of the public in decision making as a tenet of good governance.⁴¹ With regard to forest governance, Article 69 (1) of the Constitution also provides for involvement of the community and relevant stakeholders in the conservation, protection and management of the environment.⁴² Taking into consideration the importance of public participation as stated above, this research was geared towards establishing the extent of participation of the public and relevant stakeholders i.e. the community in formulation and institution of the moratorium on logging.

It was noted that, 65.1% were unaware of any public participation forums during formulation of the moratorium on logging. Additionally, 33.6% of the respondents stated that they were

³⁹ Ibid n 38.

⁴⁰ Edmond Pamba, ‘Lack of Public Policy impedes effective policy making and decision making in Kenya,’ (2018), International Institute for Strategic Studies, < <https://horninstitute.org/lack-of-public-participation-impedes-effective-policy-making-and-implementation-in-kenya/>> accessed 5 September 2019.

⁴¹ The Constitution of Kenya [2010], Article 10.

⁴² The Constitution of Kenya [2010], Article 69 (1).

knowledgeable of such forums. The findings are as illustrated in figure 4.5. This outcome agrees with the observation of the Institute of Economic Affairs which stated that the awareness level among Kenyans on public participation is very low.⁴³

The lack of awareness on public participation forums among a large number of respondents, is an indication of lack of dissemination of information to the public by the government. This is against Article 35 of the Constitution 2010⁴⁴, where the State is obligated to facilitate the access to information to every citizen. Sustainable forest management also provides for access to information to the public as one of the tenets of the public participation process. Therefore, the lack of awareness of public participation forums among the respondents shows lack of sustainable forest management.

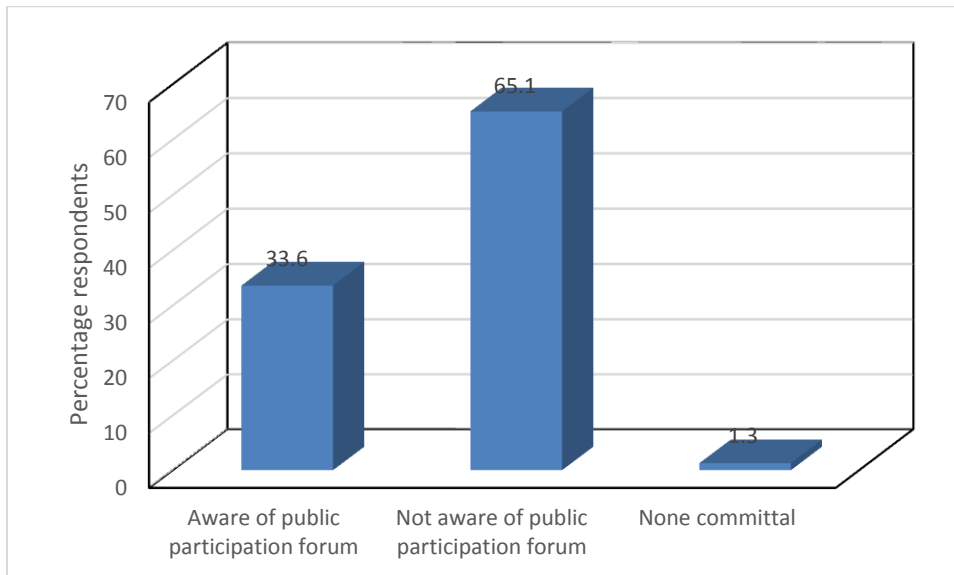


Figure 4.5: Awareness of public participation forums

Source: Author, (2019)

As stated by the Institute of Economic Affairs, lack of awareness among Kenyans on public participation results in low participation.⁴⁵ The findings of this research concur with the Institute

⁴³ Institute of Economic Affairs, 'Review of the status of public participation and County Information Dissemination Frameworks: A Case study of Isiolo, Kisumu, Makueni and Turkana Counties,' (2015), Institute of Economic Affairs, Nairobi, Kenya.

⁴⁴ The Constitution of Kenya 2010, Article 35 (1).

⁴⁵ Ibid n 44.

of Economic Affairs’ study’s outcomes where 50.4% of those who were aware of the public participation forums did not attend the forums and hence did not participate.

Table 4.9: Involvement of the respondents in public participation forums on formulation of the moratorium on logging

	Involved in the forum	Not involved in the forum
Aware of public participation forum	64 (80.0%)	65 (41.1%)
Not aware of public participation forum	16 (20.0%)	93 (58.9%)
Total	80 (100%)	158 (100%)

Source: Author, (2019)

The lack of access to information that could aid in decision making in any policy formulation process resulting to lack of awareness translates to low levels of public participation.⁴⁶ As previously stated public awareness is one of the driving forces of public participation. The public can only actively take part in forest governance if they have access to information. According to Omollo, this means that they must be aware of their rights and the means of exercising them.⁴⁷ The right of the public to participate in policy and legislation formulation is guaranteed in Article 10 of the Constitution⁴⁸ as an important principle of governance and is more specifically stated with regards to environmental governance in Article 69 (1) (d) of the Constitution.⁴⁹ Participation of the public is also provided in Principle 10 of the Rio Declaration on Environment and Development which states.

“Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to

⁴⁶ Ibid n 44.

⁴⁷ Omollo, A., ‘Policy Proposals on Citizen Participation in Devolved Governance in Kenya,’ (2010), The Institute for Social Accountability (TISA), Nairobi, Kenya.

⁴⁸ The Constitution of Kenya [2010], Article 10.

⁴⁹ The Constitution of Kenya [2010], Article 69 (1) (d). ‘The State shall – (d) encourage public participation in the management, protection and conservation of the environment;

information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available”⁵⁰

The results showed that the respondents who did not get involved in the public participation forums gave the main reasons for non-involvement in the forums as lack of information from the Government. Non-dissemination of information and the consequent non-participation is a violation of the constitutionally guaranteed rights and renders the public participation exercise carried out ineffective. As stated in the Matter of the Mui Coal Basin Local Community, a public participation programme would be rendered ineffective where those whose interests are largely influenced by the laws or regulations adopted do not have a bigger say and their views are not deliberately sought or taken into account.⁵¹

Additionally, sustainable forest management requires involvement of relevant stakeholders in forest related planning and decision making for good forest governance.⁵² The lack of awareness of the public participation forums as a result of inadequate sensitization by the government meant that there was little involvement of the relevant stakeholders in the formation of the moratorium on logging contrary to sustainable forest management guidelines.

4.5 Evaluation of whether the moratorium on logging has influenced forest use rights

Use of forest resources has been explicitly provided in Article 69 (1) of the Constitution where the Government is obligated to guarantee sustainable use of natural resources and equitable sharing of the accruing benefits.⁵³ According to Curtin Martins, since there is a considerably high dependency on forests products, people cannot therefore be entirely excluded from forest resources rather they are to be allowed access to these forest for use in a sustainable manner.⁵⁴

⁵⁰ United Nations Environmental Program, ‘Report of the United Nations Conference on Environment and Development,’ (2000), Policy Report, Rio de Janeiro, United Nations Environmental Program.

⁵¹ In the Matter of Mui Coal Basin Local Community [2015] Eklr HC.

⁵² Ibid n 8

⁵³ The Constitution of Kenya 2010, Article 69 (1).

⁵⁴ Curtin Martins, ‘Access and use of forest resources: Evidence from common property forest management in Swaziland,’ (2014) African Journal of Estate and Property Management Vol. 1 (1), pp. 008-017, <https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/9785/Access-and-use-of-forest-resources_-Evidence-from-common-property-forest-management-in-Swaziland.pdf?sequence=1&isAllowed=y> accessed 5 September 2019.

According to the Forest Conservation and Management Act 2016, all forests apart from private and community forests are entrusted to the State to controlled KFS subject to the right of use of any citizen.⁵⁵ Management of public forests can be extended to any person, institution or organization through entering into management agreements with KFS.⁵⁶ However, such management agreements do not transfer the right of ownership of the public land but only vests management and control.⁵⁷

Tenure rights over forests have often described conditions under which access to forest resources is acquired.⁵⁸ The equitable utilization of forest resources is determined by the manner of interpretation and allocation of property rights. For instance, while private land tenure prohibits access and use rights to other users, communal tenure is inclusive and advocates for the involvement of the community in its.⁵⁹ On the other hand public forests are considered a public resource and therefore decisions pertaining to their management are for the benefit of the public good for the use of such resources.⁶⁰

Forest user rights have been provided in different legislation, Sessional Paper No. 9 of 2005 on Forest policy recognizes community forest use rights where the community derive spiritual and material benefits from the forest.⁶¹ The 2014 Forest Policy also recognizes the use of forest wood products for socio-economic advancement via employment creation, industrial and household use.⁶² Given the importance of forest use rights this research sought to determine whether the rights to use forest resources were being upheld. The research first evaluated whether respondents had access to the East Mau Reserve Forest, whether they were aware of their rights to use forest resources and whether these rights had been impeded in any way as a result of the institution of the moratorium on logging.

⁵⁵ Forest Conservation and Management Act (2016), Section 31 (1).

⁵⁶ Forest Conservation and Management Act [2016], Section 45 (1).

⁵⁷ Forest Conservation and Management Act [2016], Section 45 (3).

⁵⁸ Koech Robert Kipkemoi, 'Effects of Forest Resource Use Conflicts on Conservation Efforts in Enderit Forest Block in Mau Forest Complex, Kenya,' (Master of Arts in Environmental Planning and Management in the Department of Geography and Environment Studies, University of Nairobi, 2015)

⁵⁹ Keith D. Wiebe, K.D. & Ruth Meinzen-Dick, 'Property rights as policy tools for sustainable development,' (1998), *Land Use Policy*, 15 (3), 203-215.

⁶⁰ Jafari Ramadhani Kideghesho, 'Wildlife Conservation and local land use conflicts in Western Serengeti Corridor,' (Doctoral Dissertation, Norwegian University of Science and Technology, Trondheim, 2006)

⁶¹ Sessional Paper No. 9 of 2005 on Forest Policy, Policy Statement 4.3.1,4.3.3 ad 4.3.4.

⁶² Forest Policy (2014), part 5.

4.5.1 Influence of the moratorium on logging on the rate of Access to the forest

Regarding the influence of the moratorium on logging on the ability to access the forest, the results showed that 62 % of the respondents stated that they were not able to access the forest since the institution of the moratorium on logging as indicated in Figure 4.6

Access to forest allows for utilization of forest resources. Where communities are not able to access the forest resources then it is highly likely that they are not able to use the resources available within the forest.

The respondents also stated that since the institution of the moratorium on logging they were required to pay K.Shs 200 per month as permit fee to be able to access the forest to collect wood products for subsistence use. Given that fuelwood is the leading energy source for most households in Kenya, according to a 2012 research,⁶³ the respondents were obligated to pay the amount in order to meet their fuel needs. One of the respondents stated that the fee was hefty for him since he did not earn much, however, he was still obligated to pay since this was the only way he could ensure his family's energy needs were met.

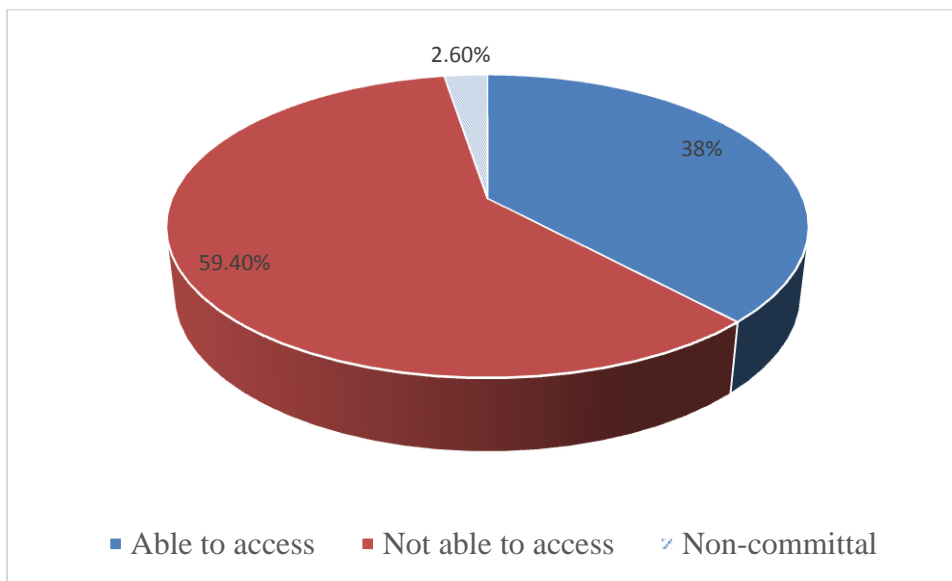


Figure 4.6: Ability to access the forest since the institution of the moratorium on logging

⁶³ Geophrey Sikei, John Mburu, Job Lagat, 'Rural Household response to Fuelwood scarcity around Kakamega Forest, Western Kenya,' (2011), Handbook on Agroforestry: Management Practices and Environmental Impact, <https://www.researchgate.net/publication/237544989_Rural_households'_response_to_Fuelwood_scarcity_around_Kakamega_Forest_Western_Kenya/citation/download> accessed 26 September 2019.

Source: Author, (2019)

The main reason given by the respondents for being not able to access the forest was prohibition by the KFS officers as a result of the moratorium on logging. Access to the forest is fundamental to actual utilization of forest resources and is among the factors constituting management of forests sustainably. Where the moratorium on logging prohibits utilization of forest resources, it can be considered a non-sustainable forest management practice. Prohibition of access to the forest thus hampering the use of forest resources is a violation of the constitutionally guaranteed right to sustainable use and exploitation of the forest resources.⁶⁴

4.5.2 Awareness of the right to use forest resources

In order to assess whether the respondent's right to use the forest was only curtailed by the institution of the moratorium on logging, the study sought to first establish whether the respondents were well aware of their right to use forest resources. The results showed that 74.2% of the respondents were aware of their right to use forest resources while 23.7% were not aware.

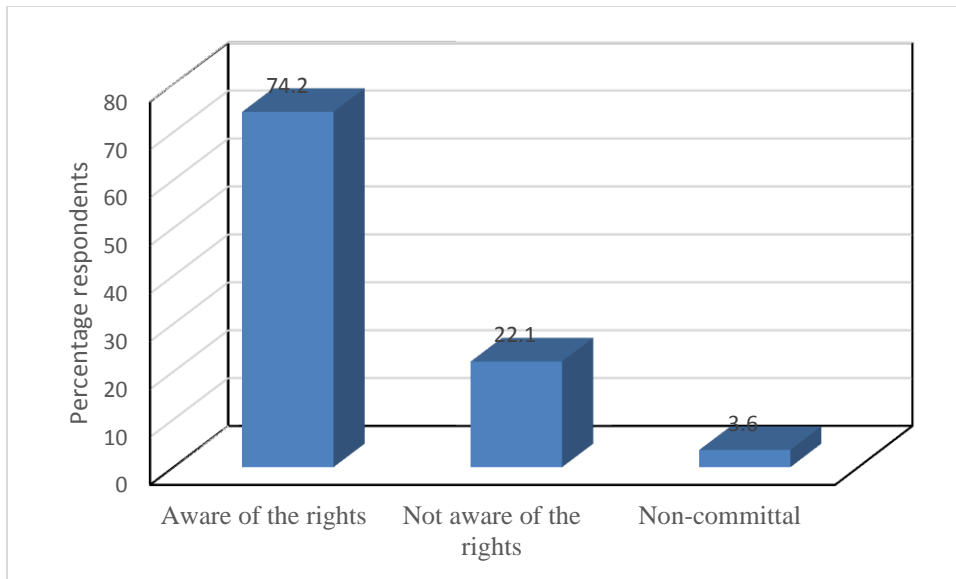


Figure 4.7: Respondents' awareness of the rights to use forest

Source: Author, (2019)

⁶⁴ See The Constitution of Kenya [2010], Article 69 (1).

In order to assess whether the right to use forest resources was influenced mainly by the institution of the moratorium on logging and not the educational background of the respondents, the study assessed the association between the education levels of the respondents and their responses. The results showed that those who were aware of their rights to use the forest were mainly those who had secondary education and college/university education (49.8%) as shown in the table 4.9. Using a chi-square test of association, the result showed that there was a significant association between awareness of the residents' right to the forest and their the education levels ($\chi^2 = 10.584$, $P = 0.014$).

Table 4.10: A cross tabulation table on the residents' awareness of their rights to use forest and the education levels

	Informal education	Primary education	Secondary	College/university	Total
Aware of the right	4 (1.4%)	57 (20.0%)	142 (49.8%)	82 (28.8%)	285
Not aware of the right	6 (7.2%)	16 (19.3%)	32 (38.6%)	29 (34.9%)	83
χ^2 –value			10.584		
P – value			0.014		

Source: Author, (2019)

4.5.3 Economic Forest Use Rights

A study by Langat and Cheboiwo done in 2016, showed that forest resources contribute to household income in the East Mau Area.⁶⁵ The results agree with this study, where 73.4% of the respondents stated that they used the forest resources for selling and obtaining monetary benefit and 23.4% of these respondents stating that their employment is directly connected to the forest.

Table 4.11: Ways the residents use the forest to earn an income

⁶⁵ David Langat, Elias Maranga, Aboud, A.A., & Cheboiwo, J.K., 'Role of Forest Resources to Local Livelihoods: The Case of the East Mau Forest Ecosystem, Kenya,' (2016), International Journal of Forestry Research, Vol 2016, Article ID 4537357, < <http://dx.doi.org/10.1155/2016/4537354>> accessed 23 September 2019.

Use of the forest	Frequency (N = 195)	Percent
Obtaining wood products and selling	68	34.9
Obtaining non-wood products and selling	15	7.8
My employment is connected to the forest	45	23.4
Others	12	7.3
I don't use the forest to earn an income	51	26.6

Source: Author, (2019)

Most of the respondents, (71%) benefitted economically from the forest by obtaining multiple products from the forest for sale. The results are consistent with a study done in 2019 in Embobut Forest, Cherangani hills where it was stated that most communities living adjacent or within forest depend on forest for their economic livelihoods.⁶⁶ Langat conducted a similar study in Mau Kenya and reported a primary dependence by communities on forest resources for subsistence and occasionally for sale with, fuel wood being the highest contributor to household income.⁶⁷ These results agree with the study which showed that most of the respondents indicated that they collected firewood for sale, herbal medicine and stones (which was mentioned by three respondents) for sale.

4.5.4 Social forest use rights

Recreation, tourism and education are examples of some of the social functions played by forests which are regarded as rights to be enjoyed by citizens.⁶⁸ The major social benefits as indicated in this study was recreation as stated by 38.8% of the respondents. This was followed by human habitation (24.0%). See Figure 4.8.

⁶⁶ Brian Rotich, 'Forest Conservation and Utilization in Embobut Cherangani Hills, Kenya,' 2019 International Journal of Natural Resource Ecology and Management. Vol. 4, No. 1, 2019, pp. 7-13. doi: 10.11648/j.ijnrem.20190401.1 accessed 23 September 2019.

⁶⁷ Ibid n 55.

⁶⁸ FAO, 'Global Forest Resource Assessment: Progress towards sustainable forest management,' (2015), Chapter 7 Socio-economic functions, p.124-126.

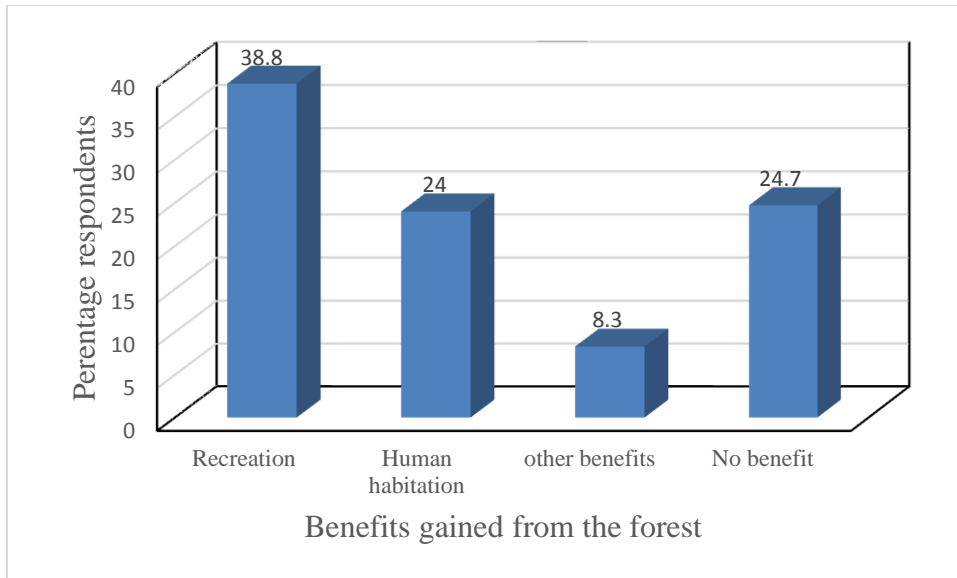


Figure 4.8: Social benefits gained from the forest by the community

Source: Author, (2019)

While 24% of respondents interviewed stated that they enjoyed the right to habitate within the forest, the KFS officers interviewed stated that this right would soon be curtailed. The Conservator of Forests stated that one of the key recommendations from the Taskforce was for the KFS to evict all illegal squatters from public and community forests. The eviction of all such persons from the forest was therefore underway. This meant that the social right to habitate within the forest regardless of sustainable management and conservation of the forest would nevertheless be curtailed due to the government directive on the moratorium on logging.

4.5.5 Cultural forest use rights

Some of the cultural rights practiced in the forest as stated by some of the respondents included; medicinal use and use of sacred areas for ceremonial activities. Out of the total 195 respondents, 45.6% stated that they gained cultural benefits from the forest by use of medicinal plants. However, 13% stated that they used the forest sacred areas. See Table 4.12. The respondents who stated that they use sacred areas within the forests, further elaborated stating that there were particular sites demarcated for traditional circumcision ceremonies and shrines for offering sacrifices to ancestors. However, a group of elders interviewed on the use of the sacred sites for cultural ceremonies stated that they had been prohibited from accessing these sites by KFS

officers. Further, they also stated that a number of them had been arrested within the year by KFS officers severally for using branches in their traditional ceremonies. They did not however, associate the arrests to the moratorium on logging, but stated that the KFS officers would often demand for bribes under the guise of prohibition of harvesting wood products under the moratorium on logging.

Table 4.12: Cultural rights practiced in the forest by the community

Cultural rights	Frequency (n = 195)	Percent
Use of sacred areas	25	13.0
Medicinal	89	45.6
Others	5	2.6
None of the above	76	38.8

Source: Author, (2019)

4.5.6 Sources of information on rights to use forest resources

As previously stated, Articles 10 and 35 of the Constitution guarantees the right to access to information and Article 69 of the Constitution also guarantees the right to utilization of natural resources. It is based upon this Articles that the community members have the right to access to information on how to utilize forest resources. This study therefore sought to investigate whether the Government had informed the community members sufficiently on their rights to use forests. The results showed that 50.8 % of the respondents became aware of their rights to use forest resources at school. Other respondents stated that they were made aware through civil society organizations, government “barazas” and/or after reading the law. See Table 4.13. This meant that most respondents were aware of their constitutionally guaranteed right to use the forest and therefore were more likely to give accurate results on whether their rights to use the forest had been infringed upon by the moratorium on logging or not.

Table 4.13: Sources of information on the rights to use the forest

Sources of information on rights	Frequency (N = 195)	Percent
From the school	99	50.8
New source	26	13.3

Reading	9	4.7
Government “barazas”	16	8.1
Civil society	18	9.1
Others	7	3.4
Non-committal	20	10.7

Source: Author, (2019)

4.6 Determining the extent of the impact of the moratorium on logging.

4.6.1 Effect of the moratorium on logging on the residents sources of Income

The results showed that the moratorium on logging had affected the income of the 61.7% of the residents. 16 saw millers out of the 30 interviewed stated that their business were running on losses. The permits for logging concessions were no longer being issued and many of those who had existing permits were cancelled. The key informants also stated that the moratorium on logging had affected the livelihoods of the people dependent on the forests leading to increased instances of illegal logging. This is because people who were once dependent on the forest resources for their subsistence and economic livelihood no longer had access to the resources. These findings agree with a 2016 study by Langat, where it was stated that there is a high dependency on forest resources by most households in Kenya.⁶⁹ Given the economic importance of forests it is therefore important that economic implications of policies, legislation or actions be examined before enactment to avoid significantly hampering forest dependent communities from meeting their needs. The results thus indicate that this was not taken into account during the formulation of the moratorium on logging.

⁶⁹ Ibid n 63.

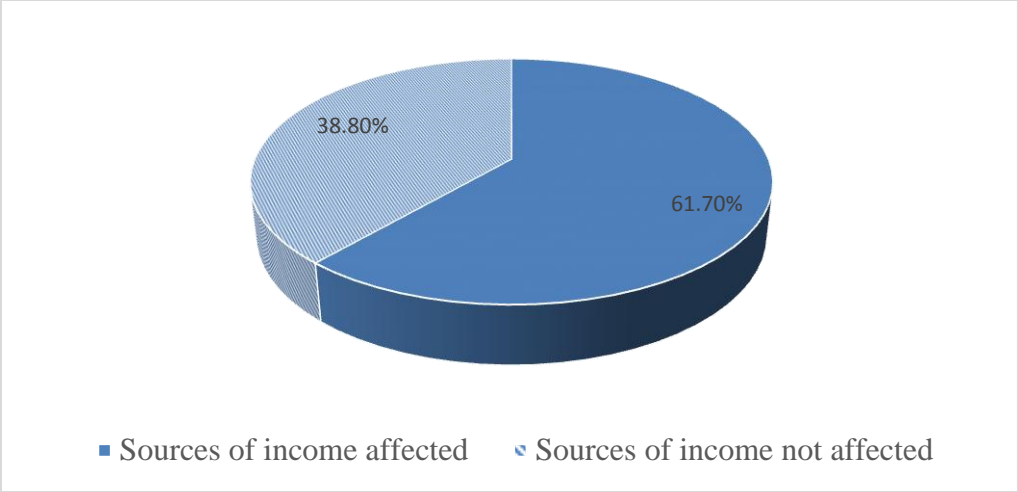


Figure 4.9: Respondents whose sources of income has been affected by the moratorium on logging.

Source: Author, (2019)

4.6.3 Effect of the moratorium on logging on the rights to access the forest

Figure 4.10 shows the moratorium on logging had affected the rights of the residents to access the forest as shown by 57.3% of the respondents. The remaining 42.7% of the respondent did not find their rights affected.

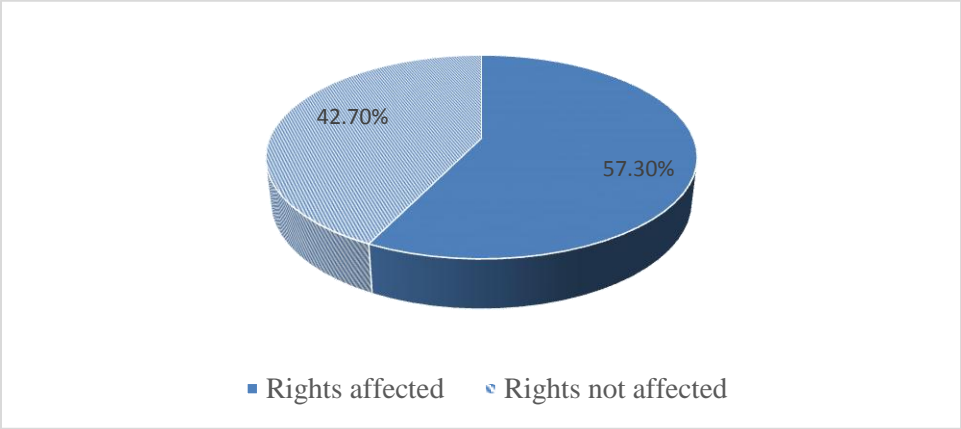


Figure 4.10: Respondents whose rights to access the forest was affected by the moratorium on logging

Source: Author, (2019)

The respondent's access to the forest was closely linked to the rate of eviction from forest. 22.9 % of the respondents who stated that they could no longer access the forest also stated that they had been evicted from the forest. The respondents further stated that their right to habitate within the forest as forest dwellers had significantly been curtailed. Several respondents who claimed to be Ogiek also stated that their eviction was against the ruling on non-eviction of indigenous communities from ancestral lands.⁷⁰ One KFS officer suggested that rather than evicting communities from forests, the government should enquire and adopt indigenous forest management practices and streamline policies and laws to incorporate such practices.

The eviction of such indigenous peoples and other forest dwelling communities without prior consultation on whether their activities affect conservation of the forest is not a sustainable forest management practice. In a study done in 2016, on evaluation of eviction of the Karen people's from the protected forest areas of Thailand for sustainable forest management, the communities protested eviction. The study noted that eviction was not sustainable as it led to illegal practices such a logging and unnecessary harm to the dignity of the Karen people. The Thailand government thus decided that the community should adopt a sustainable land and forest use planning system.⁷¹ The eviction of some of the respondents from the East Mau Forest Reserve area indicates the denial of the residents' social right to habitate within the forest. Furthermore, the resort to such top-down approaches in forest governance does not allow the engagement of relevant stakeholders in deliberations on how best to sustainably manage the forest where indigenous sustainable forest management approaches would have been considered without resulting to harsh regulations such as the moratorium on logging.

⁷⁰ African Court on Human and People's Rights judgement on the Ogiek Case [2017].

⁷¹ 'Sustainable Forest management ties indigenous group together against eviction threats,' (2016), International Land Coalition: United for Land Rights, <https://www.landcoalition.org/sites/default/files/documents/resources/case_study_0049_thailand_en.pdf> accessed 23 September 2019.

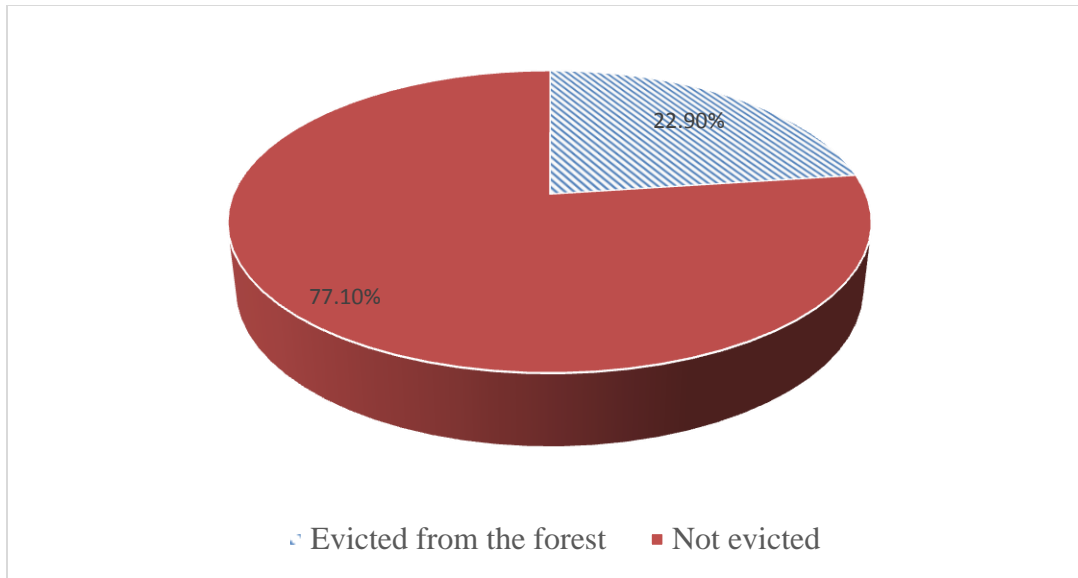


Figure 4.11: Respondents evicted from the forest as a result of the moratorium on logging

Source: Author, (2019)

4.6.4 Effect of moratorium on logging on vegetation

The current trajectories towards the SFM vision varies considerably with the different societal and ecological settings.⁷² However, in as much as there are these differences in societal and ecological settings, SFM still involves the maintenance of the three pillars of sustainability which include protection and conservation of the ecosystem.

Therefore, one of the methods of establishing sustainability criteria of a forest governance intervention is evaluating the state of the ecosystem and whether the intervention has had any impact on the ecosystem.

Upon interviewing the respondents and key informants it was noted by 47.9% of the respondents that the moratorium on logging had indeed created changes in vegetation in the forest eco-system as indicated in table 4.14. The changes mentioned mostly was increase in the eco-biodiversity of the forest.

Table 4.14: Changes in vegetation in the forest eco-system after institution of the moratorium on logging

⁷² Per Angelstam, Reidar Persson, & Rodolphe Schlaepfer, 'The sustainable forest management vision and biodiversity- barriers and bridges for implementation in actual landscapes,' (2004) Ecological Bulletins, No. 51, Targets and tools for Maintenance of Forest Biodiversity, p29.

Changes in vegetation affected	Frequency (N = 195)	Percent
Noticed changes in vegetation	93	47.9
Never noticed any changes in vegetation	49	25.3
Do not know	53	26.9

Source: Author, (2019)

The forest officers and the chief noted the change in the forest ecosystem as recently sprouting seedlings. The ecological changes were attributed to the moratorium on logging by 53.6% of the respondents. However, 35.4% of the respondents did not attribute the ecological changes to the moratorium on logging. This was about 50 respondents out of the 195 interviewed which is a significantly low number. The results agree with a study done in 2016 on logging bans in Asia and Pacific, where it was noted that logging bans do not necessarily translate to immediate changes in the ecosystem.⁷³

The 2016 study, recommends that policies, legislations and government actions should have qualitative assessments of indicating changes in ecosystem health in order to establish the effectiveness of the policies and actions.⁷⁴ However, in this study it was noted that the only monitoring mechanism used by KFS at the moment to establish differences in ecosystem health was ‘tree census’ which is not sufficiently adequate in monitoring ecosystem health. Additionally, the moratorium on logging does not recommend specific measurable actions to establish the effectiveness in conservation of the ecosystem within the forest. The lack of adequate mechanisms for monitoring and evaluating the impact of the moratorium on logging on the ecosystem illustrates the non –reflexivity of the moratorium on logging as a sustainable forest management tool. It is important to note that evaluation of ecosystem services is a key feature of sustainable forest management.

⁷³ Thomas Waggener, ‘Logging bans in Asia and the Pacific: An overview,’ (2016) FAO, <www.fao.org/3/X6967E/x6967e04.htm> accessed 23 September 2019.

⁷⁴ Ibid n 72.

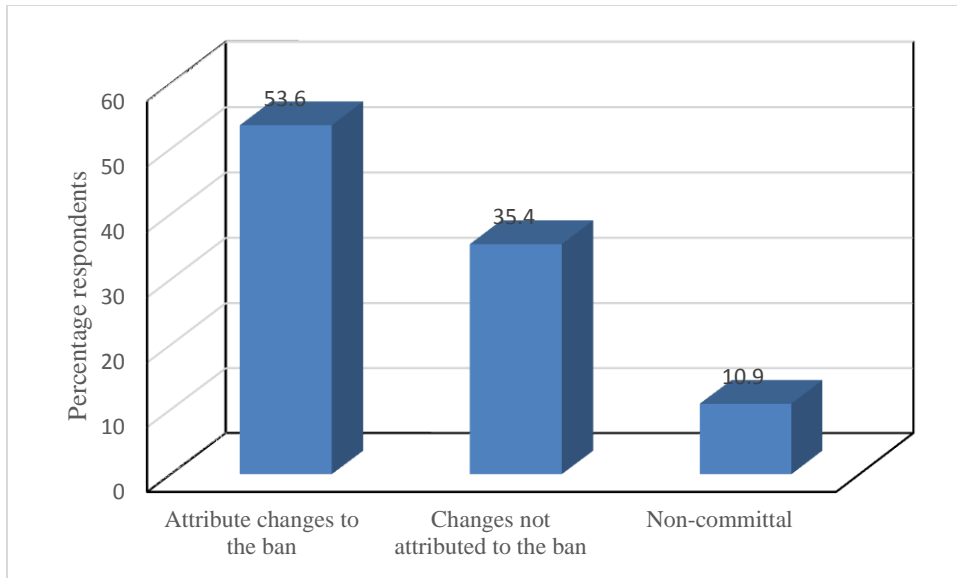


Figure 4.12: Respondents attributing the changes in vegetation on the moratorium on logging
 Source: Author, (2019)

4.7 Whether the moratorium on logging is the most effective tool for achieving sustainable forest management.

As previously noted, community participation in forest governance decision making is an essential element of SFM. Indeed, over the last two decades community participation in the management of forests has become a theme in policy making in attempts to enhance sustainable forest management.⁷⁵ Given the importance of involving the community as an indicator of an appropriate SFM tool it is therefore important to examine the suitability of the moratorium on logging as an SFM tool through the community and relevant stakeholder’s lens.

Upon interviewing the respondents it was noted by 59.1% that the moratorium on logging was the most effective SFM tool while 34.9% of the respondents stated that it was not the most effective tool. The results are as shown in figure 4.13.

⁷⁵ Leonard Chirenje, Giliba Richard, Musamba Emmanuel, ‘Local communities’ participation in decision making processes through planning and budgeting in African countries,’ *Chinese Journal of Population Resources and Environment* (2013), Vol 11, Issue 1, <https://doi.org/10.1080/10042857.2013.777198> accessed 6 September 2019.

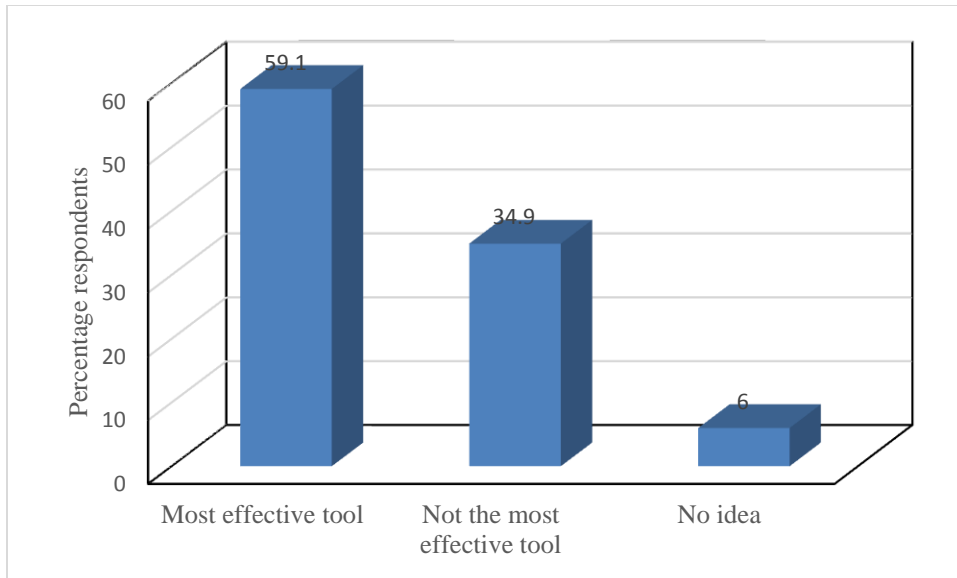


Figure 4.13: Respondents opinion whether the moratorium on logging is the most effective tool for sustainable forest management

Source: Author, (2019)

The reasons given by most respondents for considering the moratorium on logging as the most effective tool for SFM include; increase in vegetation, protection of water sources, frequency of rainfall and good roads as a result of lack of transportation of logs by heavy trucks.

It is important to note that 60% of the respondents interviewed who depended on wood and non-wood products for their source of income noted that the moratorium on logging was an effective SFM tool generally even though their economic livelihoods were affected by the moratorium on logging.

However, the respondents stated that one of the reasons for the adamant rejection of the moratorium on logging by most members of the community despite general consensus on its benefit was due to the government not consulting with relevant stakeholders. This is consistent with a 2017 study which stated that unless state programs, legislation or actions become integrated with diverse local practices and support local livelihoods stated by the community then the programs will remain isolated efforts.⁷⁶ Additionally, if the programs do not take into

⁷⁶ Moira Moeliono, Pham Thu Thuy, Indah Waty Bong, Grace Yee Wong and Maria Brockhaus, 'Social Forestry, why and for whom? A comparison of policies in Vietnam and Indonesia,' (2017), *Forest and Society*, Vol 1 (2), ISSN:2549-4724, E-ISSN:2549-4333, < ifor.org/publications/pdf_files/articles/AMoeliono1702.pdf> accessed 23 September 2019.

consideration the economic and social good of the community and the rights of local users then they fail from their inception and implementation will be quite difficult given the resistance from the communities affected.⁷⁷ Furthermore, various key informants stated that given the moratorium on logging was founded upon existing forest legislation, then its legality is highly questionable.

Indeed recent research has shown that the most effective tools of sustainable forest management are characterized by: a conducive policy, planning and institutional framework; maintenance of the integrity of the ecosystem⁷⁸; and maintenance and enhancement of fair intergenerational access to resources and economic benefit.⁷⁹ While the moratorium on logging may have fulfilled the requirement on maintaining the integrity of the ecosystem it still falls short of the other two requirements.

4.8 Other tools recommended for ensuring sustainable forest management

Whilst some respondents recommended the moratorium on logging as the most efficient sustainable forest management tool, some did not quite agree. Other tools for ensuring sustainable forest management over and above the moratorium on logging were recommended by the respondents. These were; provision of accessibility to the forest and engaging in the shamba system; and permitting harvesting of mature trees by registered sawmillers. As illustrated above sustainable forestry management efforts need to focus on ensuring the income and livelihoods of populations dependent on forests are not unnecessarily hindered by punitive legislation and policies. There is therefore need to incorporate sustainable use practices in environmental governance policies lest the communities affected resist implementation of beneficial forest management practices.

As illustrated above, the results therefore show that there was not sufficient involvement of the community in formulation of the moratorium on logging and therefore the concerns of the

⁷⁷ Ibid n 74.

⁷⁸ Boyle, T.J.B., Lawes, M., Manokaran, N., Prabhu, R., Ghazoul, J., Sastrapadja, S., Thang, H.-C., Dale, V., Eeley, H., Finegan, B., Soberon, J. & Stork, N.E. (1998) Criteria and Indicators for Assessing the Sustainability of Forest Management: A Practical Approach to Assessment of Biodiversity. Unpublished paper, CIFOR, Bogor.

⁷⁹ Colfer, C.J.P., Brocklesby, M.A., Diaw, C., Etuge, P., Guenter, M., Harwell, E., McDougall, C., Porro, N. M., Porro, R., Prabhu, R., Salim, A., Sardjono, M.A., Tiani, A.M., Tchikangwa, B., Wadley, R. & Woelfel, J. (1998a) The Bag (Basic Assessment Guide for Human Well-Being). Draft of January 1998, CIFOR, Bogor.

community were not taken into account. However, in as much as most of the respondents regard the moratorium on logging as beneficial, they are quite resistant to its implementation due to its impact on their social, economic and cultural rights.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the conclusions and recommendations arising from the findings of this study.

5.2 Conclusion

The study assessed the adequacy of the moratorium on logging as a sustainable forest management tool through an analysis of the implementation of the moratorium on logging in the East Mau Forest reserve area and more specifically the Nessuit Forest Block.

The study revealed the necessary information required for assessing the sustainability criteria of the moratorium on logging with regard to forest management through an analysis of the research objectives.

On the issue of involvement of the relevant stakeholders (community members) in the formulation of the moratorium on logging, the study established that the stakeholders were not adequately involved. There was lack of adequate dissemination of information regarding the moratorium on logging by the government to the public. It was also established that majority of the relevant stakeholders were not aware of the public participation forums and consequently their views were not taken into account during the formulation of the moratorium on logging.

Regarding the challenges of implementation of the moratorium on logging, the study revealed that the moratorium on logging did not have legislative backing and thus lacked legitimacy making it unconstitutional. Additionally, the study revealed that there was lack of proper enforcement of the moratorium on logging by KFS officials. This is because, although KFS officials were able to monitor activities within the forests, this did not result in substantive convictions of arrested persons due to increased corruption among the KFS officials.

The taking of bribes by the KFS officers to overlook illegal logging is a violation of Article 10 (2) (c) of the Constitution on the national principles of governance and integrity. It also goes against the prescribed functions of the KFS under the Forest Conservation and Management Act

2016 to wit the consideration and giving of licences and permits in relations to forest resources under Section 8.

Consequently violation of the above provisions has led to more activities of illegal logging. The illegal logging has resulted in significant deterioration of the ecosystem since the loggers used non-silvicultural practices without regard to the neighboring environs of the trees harvested. This significantly affected KFS objective under the moratorium to ensure effective rehabilitation and restoration of forests.

The study also noted that there was laxity on the part of KFS to authorize and deploy the use of effective and suitable technology to aid in monitoring, surveillance and tracking interventions of sustainable forest management such as the moratorium on logging. The equipment such as GPS and drones were to be used in monitoring changes in the ecosystem and instances of illegal logging. However, what was currently in use was the ‘tree census’ system where rangers would be sent out to count trees which was ineffective and inadequate.

Additionally, the study established that there was a high level of non-compliance with the moratorium on logging occasioned by contradicting sustainable forest management laws. This is because while the moratorium on logging completely prohibits harvesting of forest products from public and community forests, the existing CFA-KFS management agreements and sustainable forest programs allow the use of forest resources in a sustainable manner.

While there have been notable challenges in the implementation of the moratorium on logging, the study also unveiled a perceived degree of effective implementation. Some of the respondents observed that there was increased vegetation cover and a rise in river water levels as well as improved environmental atmosphere following the moratorium on logging. They also noted that the strict moratorium on logging on access and use of the forest was also an indicator of effective implementation of the moratorium on logging. However, the study noted that there were no scientific measures used by the respondents or KFS officials to ascertain whether there were any constructive changes to the forest ecosystem.

With regards to forest use rights, the study demonstrated that the moratorium on logging had adversely affected the economic status of the communities around the forest. Majority of the respondents stated that although they were aware of their right to use forest resources, they were

not allowed to access the forest without paying hefty permit fees. Most forest resource related trading centers such as shops and sawmillers were closed down within the area. Respondents affiliated to the saw mill industry also stated that they were increasingly receiving low quality timber as a result of poor harvesting practices resorting to expensive imports of wood products.

The moratorium on logging had also affected the social conditions of communities in the area since a number of households and individuals were evicted from the forest. The moratorium on logging also affected the cultural use rights of the communities around the areas. Some of the respondents stated that performing cultural ceremonies such as circumcision within the forest was becoming a nearly impossible task since the KFS officers would ask for hefty compensation for the use of branches within the forest while performing the ceremonies. Additionally, the study noted that the implementation of the moratorium on logging as perceived by the KFS officers was for its uniform application within public and community forests despite the difference in tenure systems and in disregard of the existing laws with regards to distinction in ownership and management rights.

The study established that the moratorium on logging had allowed for considerable restoration and rehabilitation of the degraded vegetation in parts of the forest as noted by many of the respondents. It was also revealed that the public viewed the moratorium on logging as an important element in conserving the forest ecosystem. However, the negative impact of the moratorium on logging on the economic and social livelihoods of the participants was stated as one of the main disconcerting factors of the moratorium on logging.

It is also conclusive that the majority of the participants were agreeable to the conservation and preservation of forest resources, the taking of regulatory measures by the Government to ensure the protection of forests and the tree planting exercises by the Government to increase forest cover. However, it was established that they were dissatisfied with the moratorium on logging as the Government's last resort in protection of forests because of lack of consultation and participation in the formulation of the moratorium on logging contravening Article 10 of the Constitution.

The study revealed that the moratorium on logging can be rendered unconstitutional as the Kenyan Government apparently contravened Article 69 (1) of the Constitution and Article 10 of

the Constitution. This is because the moratorium on logging effectively prohibits the enjoyment of these rights by the citizens since they are not given a chance to utilize the resources in a manner agreed to be sustainable. Further, they have not been provided the opportunity to determine suitable sustainable forest management practices through engaging them in meaningful public participation forums.

5.3 Recommendations

5.3.1 Stakeholder (community) participation in formulation of forest management laws.

The study recommends that the Government of Kenya should adhere to and enforce the provisions on sustainability within the Constitution of Kenya 2010 as well as the Forest Conservation and Management Act 2016 when managing forest resources. The Government should ensure involvement of relevant stakeholders and the most affected communities in the legislative processes with regards to management of the resources they heavily rely upon. The involvement of the relevant stakeholders can only be realized if public participation is done at the initial stages of policy or government directive consideration. This will ensure that the community's views are taken into consideration and influence the natural resource management decision making process.

The Government can also undertake grass root sensitization programs to inform the public on the forest management laws and the means through which they can take advantage of these laws for their benefit. One of the barriers identified to lack of compliance with laws and public participation is lack of awareness of the public. Communities should be informed on how they can form or join Community Forest Associations to aid in management of the community forests for their benefits. Individuals should also be informed that they can enter into management agreements with KFS in order to manage public forests to their benefit and to the communities' benefit as well.

The Government should not endorse or implement orders, directives, actions, legislation or policy with regards to forest resource management before engaging the relevant members of the public. This ensures that concerns raised by the relevant stakeholders are addressed comprehensively and increases compliance due to awareness and acceptability of laws.

This study also proposes that the Government should recognize existing sustainable forest management practices adopted by communities and relevant stakeholders such as CFA-KFS management agreement and sustainable forest programs. This will ensure enactment of complementary and non-contradictory legislation that is communally acceptable hence easy to implement.

5.3.2 Recognition of socio-economic user rights by the Government

The study proposes that the government should conduct comprehensive task force investigations and analysis to establish the possible effects of proposed laws on socio-economic rights of forest dependent communities. Proper forest management laws, regulations or directives should integrate four types of information: social, economic, cultural and ecological factors. The laws should also contain forest resource harvesting plans and incentives for protection of the resources through permitting harvesting of forest resources by individuals or saw millers who incorporate silvi-cultural practices when harvesting mature trees.

The study also proposes that the government informs and engages the forest dependent communities on other alternative revenue generating means to reduce high dependency on forest resources.

5.3.3 Enforcement of good governance practices

The study proposes that there should be strict regulation put in place prescribing harsh punishment for corrupt KFS officials found to have taken bribes. This will enhance strong enforcement of forest laws and ensure compliance. The study also recommends that anti-corruption bodies should cooperate with environmental authorities in legislation development to prescribe harsh penalties for persons who cause environmental damage through their corrupt acts. The police can also strengthen enforcement by monitoring the timber and wood products sold to establish whether there were permits obtained prior to harvesting in order to detect illegally harvested wood products.

5.3.4 Review of regulations on moratoriums on logging

In addition, to the Forest Conservation and Management Act, supplementary regulations should be put in place detailing circumstances when moratoriums on logging should be put in place in

order to give legislative backing and legal legitimacy to the moratorium on logging. Additionally, the specific duration of the moratoriums on logging, evaluating mechanisms establishing whether the moratorium on logging are succeeding in restoration of debilitated forests. Additionally, the moratoriums on logging should be delimited to specific areas where research has shown that the forests have been degraded to a large extent rather than a countrywide moratorium on logging.

5.3.5 Implementation of non-contradictory forest regulations

The study recommends that the Cabinet Secretary of the Ministry of Environment and Forestry should ensure that environment regulation measures put in place do not conflict with existing forest legislation. For example, the existing contradiction between the moratorium on logging and the Forest Conservation Act on management of community forests. Where the moratorium on logging provides for prohibition of logging activities in community forests thus denying the communities' rights to manage and use forest resources as provided in the Forest Conservation and Management Act.**5.3.6 Use of Interactive web based near real time forest monitoring system**

The study recommends that the government should adopt a community based scientific monitoring mechanisms to monitor any changes within the ecosystem as a result of implementation of forest management laws and directives. For example, the interactive web-based near real time forest monitoring system.¹ The system entails acquisition of continuous data from satellites and community based monitoring of the state of the forest using mobile devices.² The community on the ground provides real time data on any activities taking place within the forest and in the event of illegal activity, the community can inform the relevant authorities using a social media platform. The information is then verified through the use of satellite equipment and enforcement authorities are then dispatched to curtail any illegal activity. A research undertaken in 2016 in Southwestern Ethiopia demonstrated that the Interactive web based near real time forest monitoring system empowered local community participation in forest management and provided up to date accurate information on forest change.³

¹ Arun Kumar Pratihast, Ben Devries and Also Bergsma, 'Design and Implementation of an Interactive Web-Based Near Real-Time Forest Monitoring System,' (2016) Vol 11(3); e 0150935.

² Ibid n 1.

³ Ibid n 1, p 26.

5.3.6 Recommendations for Further studies

Further studies should be undertaken to establish baseline sustainability criteria for forest management laws having regard to the different social, economic, ecological and cultural factors. Further studies should also be undertaken to evaluate the sustainability criteria of the moratoriums on logging in Kenya given that there is a dearth of research in this area to establish whether the results will mirror the findings in this study. Additional research should also be undertaken to establish other sustainable forest management mechanism that immediately curb deforestation but at the same time ensure the social, economic and cultural functions of the forest are maintained for the benefit of the present and future generations.

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APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION



UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF LAW, PARKLANDS CAMPUS
OFFICE OF THE DEAN

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P.O Box 30197
00100 G.P.O.
Nairobi,
Kenya.

2nd July, 2019

National Commission for Science,
Technology & Innovation
P.O. Box 30623
Nairobi

Dear Sir/Madam

RE: KERAKA JEAN NYABOKE- G62/11366/2018

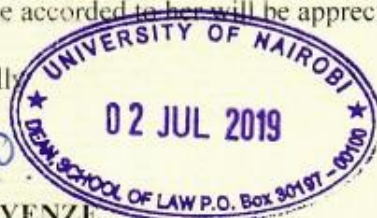
This is to confirm that the above named is a bonafide student at the University of Nairobi School of Law. She is undertaking studies leading to the award of Master of Laws degree (LL.M).

Ms Nyaboke is in the process of writing a Project Paper as partial fulfilment for Master of Laws degree programme. She would like to obtain a permit in order to collect data for her Project Paper. The title of her Project Paper is "*AN ASSESMENT OF ADEQUACY OF THE MORATORIUM ON LOGGING AS A SUSTAINABLE FORESTMANAGEMENT TOOL*".

Any assistance accorded to her will be appreciated.

Yours faithfully

NOEL MANYENZILE
ASSISTANT REGISTRAR
SCHOOL OF LAW



APPENDIX 2: QUESTIONNAIRES FOR THE RESPONDENTS

(To be administered in English)

Filling instructions. This questionnaire is for data collection assessing the ban on logging as a sustainable management tool. Honesty and completeness in responding to these questions will be appreciated and treated with strict confidentiality. Please tick (√) or cross (×) or write in the provided spaces. Thank you for your understanding and cooperation.

Form Serial Number	
Date of completion of the instrument	dd-mm-year
Has informed consent been obtained?	Yes
	No, if NO END
	Yes
	No, if NO END

PART ONE: SOCIO DEMOGRAPHIC INFORMATION

Q1. . For how long have you been a resident in your area of living?

Less than 1 year [1]

Between 1 to 2 years [2]

Between 2 to 5 years [3]

Over 5 years [4]

Q2. What is your Sex?

Male [1]

Female [2]

Q3. Age in complete years

Q4. What is the highest level of education that you have attained?

Informal education	[1]
Primary	[2]
Secondary	[3]
College/university	[4]

Q5. What is your marital status?

Never married/cohabiting	[1]
Married	[2]
Separated/divorced	[3]
Widowed	[4]

Q6. What is your MAIN occupation?

Student/Unemployed	[1]
Casual labourer	[2]
Business-person	[3]
Salaried employment	[4]
Others (Specify)	[5]

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Q7. How much income do you earn per month from your main occupation?

- a) 0-K.Shs.15,000
- b) K.Shs. 15,001- K.Shs. 20,000
- c) K.Shs. 20,001- K.Shs.60,000
- d) K.Shs. 60,001- K. Shs.100,000
- e) More than K. Shs. 100,000

Q8. What is your religion?

- | | | | |
|-----------|-----|----------------|-----|
| Christian | [1] | Traditional | [4] |
| Muslim | [2] | No religion | [5] |
| Buddhist | [3] | Other, specify | [6] |
-
-

Q9. What is the distance from your household to the nearest forest?

- | | |
|---------------------|-----|
| Less than 5 Km | [1] |
| Between 6 to 10 km | [2] |
| Between 10 to 20 km | [3] |
| More than 20km | [4] |

SECTION B: Community and relevant stakeholders' participation and involvement in formation and institution on the ban on logging;

Q10 Are you aware of the ban on logging?

- a) Yes or
- b) No

Q11 According to you what do you understand by the term the ban on logging?

- a) An order by the government to stop the cutting down of trees
- b) An order by the government to stop the cutting down of trees in public and community forests
- c) An order by the government to restrict cutting of trees in public and community forests unless you are in possession of a licence.
- d) If other specify

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.....

Q12. Were you aware of public participation forums during the formulation of the ban on logging?

- a) Yes
- b) No

Q13. If the answer to Q12 is yes, were you involved?

- a) Yes
- b) No

Q14. If the answer in Q13 is No Give reasons why you were not involved?

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.....

Section C: Ban on logging and forest use rights

Q15. Are you able to access the Forest?

- a) Yes
- b) No

If the Answer is No, Specify

.....
.....

Q16. Are you aware of the right to use the forest?

- a) Yes
- b) No

Q17. If Yes, What are the rights are you are aware of?

- a) Economic rights
- b) Social rights
- c) Cultural rights
- d) All the above
- e) None

Q18. How do you use the forests to earn an income?

- a) Obtaining Wood products and selling
- b) Obtaining Non wood products and selling
- c) My employment is connected with the forest
- d) Any Other. Specify.

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Q19. What is the social benefit you gain from the forest?

- a) Recreational use
- b) Human habitation
- c) Other, specify

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Q20. Name cultural forest use rights

- a) Use of Sacred areas
- b) Medicinal use
- c) If others, specify

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Q21. How did you know about your rights to use the forest?

- a) From School
- b) From a News source
- c) From interaction with the community
- d) If other specify

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Q22. What rights to use the forest has been affected by the ban on logging?

- a) Economic rights
- b) Social rights
- c) Cultural rights
- d) None

SECTION D Challenges in implementation of the ban on logging.

Q23. Have you cut a tree in the forest since December 2018?

- a. Yes
- b. No

Q24. If yes to Q23

- a) To sell forest products for income
- b) To clear forest for farming
- c) To clear forest for habitation
- d) If Other specify

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Q25. If No to Q23 Give reasons

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SECTION E: Impact of the ban on logging

Q26. Has the ban on logging affected your source of income?

- i. Yes
- ii. No

If the answer to Q.26 is Yes, please specify

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.....

REPORTING RESEARCHER

First name _____

Surname _____

E-mail _____

Address _____

Date completed _____

****End of questionnaire****

Thank you completing this form and for your kind cooperation

(To be administered in English)

Filling instructions. This questionnaire is for data collection assessing the ban on logging as a sustainable management tool. Honesty and completeness in responding to these questions will be

appreciated and treated with strict confidentiality. Please tick (√) or cross (×) or write in the provided spaces. Thank you for your understanding and cooperation.

Form Serial Number	
Date of completion of the instrument	dd-mm-year
Has informed consent been obtained?	Yes
	No, if NO END
	Yes
	No, if NO END

KEY INFORMANT INTERVIEWS WITH THE KENYA FOREST SERVICE

OFFICERS

Serial Number..... Sex..... Age.....

Q1. How long have you worked in the Kenya Forest Service? (Answer in Years).....

Q2. What is your work position?
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Q3. What are your responsibilities in relation to forest management within the Kenya Forest Service?
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Q4. What challenges do you face as you perform your roles in forest management?

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SECTION B: Relevant stakeholders' participation and involvement in formation and institution on the ban on logging;

Q5. Are you aware of the ban on logging issued by the Government?

- (a) Yes
- (b) No

Q6. Were you aware of public participation forums during the formulation of the ban on logging?

- c) Yes
- d) No

Q7. If the answer to Q6 is yes, were you involved?

- c) Yes
- d) No

Q8. If the answer in Q7. is No Give reasons why you were not involved?

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SECTION C Challenges in implementation of the ban on logging.

Q9. Have you participated in enforcement of the ban on logging?

- (a) Yes
- (b) No

Q10. If Yes, what challenges have you faced in enforcing the ban on logging?

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Q11. Are there mechanisms used to monitor and evaluate the ban on logging?

- (a) Yes
- (b) No

Q12. If Yes to Q.11, please specify.

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Q13. What is the rate of illegal logging since the formulation of the ban on logging as compared to before the ban?

- (a) High
- (b) Low
- (c) Same
- (d) I don't know

Q.14 What is the rate of arrests due to illegal logging since the formulation of the ban on logging?

- (a) High
- (b) Low
- (c) I don't know

Q15. Have there been any prosecutions due to illegal logging

- (a) Yes
- (b) No

Section D: Ban on logging and forest use rights

Q16. Are you aware on whether the community has the right to use forest resources?

- (a) Yes
- (b) No

Q17. If Yes what rights are you aware of?

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.....

Q18. In your opinion, do you think that the ban on logging has affected the rights of communities to use the forest resources?

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SECTION D Impact of the ban on logging

Q19. Has there been any change in the forest ecosystem as a result of the ban?

- (a) Yes
- (b) No
- (c) I don't know

Q20. If Yes to Q19, please explain

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Q.21 What are the advantages and disadvantages of the ban on logging?

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Q22. In your opinion is there effective implementation of the ban on logging?

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.....
.....

REPORTING RESEARCHER

First name _____

Surname _____

E-mail _____

Address _____

Date completed _____

****End of questionnaire****

Thank you completing this form and for your kind cooperation