

REPUBLIC OF KENYA



MINISTRY OF ENVIRONMENT AND FORESTRY

Taskforce Report on Forest Resources Management and Logging Activities in Kenya

April 2018

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TASKFORCE TO INQUIRE INTO FOREST RESOURCES MANAGEMENT AND LOGGING ACTIVITIES IN KENYA

The Cabinet Secretary
Ministry of Environment and Forestry
NIHF Building
12th Floor
NAIROBI

30th April 2018

Cabinet Secretary,

This Taskforce was appointed through Gazette Notice No. 28 dated 26 February 2018 to look into the Forest Resources Management and Logging Activities in Kenya. We were launched on 5th March 2018 by His Excellency the Deputy President, whereupon we embarked on our work immediately.

We have now completed our work and have the honour to present to you our Report, which contains our findings and recommendations on Sustainable Management of Forest Resources in Kenya.

We take this opportunity to thank you for the honour and trust you placed on us. We also wish to express our continued loyalty and highest esteem to the people and the Government of Kenya.

Yours

NAME	POSITION	SIGNATURE
1. Mrs Marion Wakanyi Kamau	Chairperson	
2. Ms Linda Chepkorir Ruto Munyao	Member	
3. Ms. Phyllis Wakiaga	Member	
4. Mr Christian Lambrecht	Member	
5. Dr Isaac P. Kalua, CBS	Member	
6. Mr Duncan M. Kimani	Member	
7. Mr Ernest Nakenya Nadome	Member	
8. Mr Adil Arshed Khawaja	Member	
9. Mr Gideon Solonka Kilakoi	Member	
10. Ms Faith Waguthi Waigwa	Member	
11. Mr Bernard M. Karicho	Member	
12. Mr Peter Kiria Mbugi	Member	
13. Mr Augustine K. Masinde, EBS	Member	
14. Mr David Tambo	Member	
15. Mr Julius Kamau	Co-opted Member	
16. Mr Robert Njue	Co-opted Member	
17. Ms Anne Cheruto Tek	Co-opted Member	
18. Mr Stephen M. King'uyu	Joint Secretary	
19. Ms Irene Kamunge	Joint Secretary	

TERMS OF REFERENCE

- a) To determine the scale of illegal logging, destruction, degradation and encroachment of public and community forests, water towers and other catchment areas, as well as the associated impacts.
- b) To review the procedures, qualification and conditions for licensing of saw millers to determine their adequacy, fairness and appropriateness.
- c) To review and determine the effectiveness of the monitoring and verification procedures to ensure compliance with the license conditions.
- d) To review the chain-of-custody system established by the Kenya Forest Service through which forest products from public, community and private forests are distributed, tracked and monitored from their origin in the forest to their end-use, and determine their adequacy and effectiveness.
- e) To review felling plans, and the associated programmes, including planting and replanting, to determine their adequacy and effectiveness.
- f) To determine the institutional and technical capacity of the Kenya Forest Service and other agencies involved in the management of forests to enforce compliance with forest laws and regulations.
- g) To determine the effectiveness and efficiency of inter and intra-agency collaboration amongst all agencies involved in the management of forests.
- h) To review and determine the effectiveness of participatory forest management programmes, including the operational and governance structures of Community Forest Associations.
- i) Review and analyse the valuation procedures and methods for forest stocks.
- j) Audit revenue generation from forests against the investment and operational costs.
- k) To review the Forest Act (No. 34 of 2016) and other related acts to enhance penalties for breach of the applicable laws and regulations.
- l) To review the laws and regulations governing charcoal burning and trade, and make recommendations on the need, or otherwise, to ban charcoal burning, trade and use.
- m) To make recommendations on short-term, medium-term, and long-term actions to ensure sustainable management, restoration and protection of forests and water catchment areas.

EXECUTIVE SUMMARY

The Forest Sector is key to Kenya's social and economic wellbeing as most of the country's economic sectors rely on environmental based resources for their sustenance. The Sector contributes about Kenya Shillings 7 billion to the economy and employs over 50,000 people directly and another 300,000 indirectly. Forest ecosystems also enhance landscape resilience to climate change. In the country's water towers, forests provide environmental services that include water quality and quantity, reduction of soil erosion, and creation of micro-climatic conditions that maintain or improve productivity. Forests are also known to be among the most effective sinks of greenhouse gases, which cause climate change, and hence they are important in contributing to climate change mitigation.

Kenya's forest cover is estimated to be about 7.4% of the total land area, which is a far cry from the recommended global minimum of 10%. On the other hand, Kenya's closed canopy forest cover currently stands at about 2% of the total land area, compared to the African average of 9.3% and a world average of 21.4 per cent. Most of the closed canopy forests in Kenya are *montane* forests that are also the nation's water towers.

In recent years, Kenya's forests have been depleted at an alarming rate of about 5,000 hectares per annum. This is estimated to lead to an annual reduction in water availability of approximately 62 million cubic metres, translating to an economic loss to the economy of over USD 19 million. The depletion has the potential to rollback strides towards the attainment of Vision 2030 and the Government's Big Four Agenda of food and nutritional security, affordable and decent housing, universal healthcare and manufacturing, if it is not urgently addressed.

It is against this background that the Cabinet Secretary for Environment and Forestry, constituted a Taskforce to inquire into forest resources management and illegal logging in the country, through Kenya Gazette Notice No. 28 dated 26th February 2018. The Taskforce was launched by the Deputy President on 5 March 2018, and immediately embarked on its work. The term of the Taskforce was initially thirty days, which was later extended to 30th April 2018.

The Taskforce used different methods to collect information. It collected information from primary and secondary sources. The Taskforce conducted desk review of documents and reports relevant to its terms of reference. In addition, the Taskforce conducted a series of in-depth interviews and group discussions, where appropriate, with selected key informants and stakeholders. These included Kenya Forest Service (KFS), saw millers, community groups, government agencies, development partners, private sector and other civil society organisations. The Taskforce conducted several public hearings in different parts of the country where it received representations, memoranda and petitions from the public. In addition, the Taskforce undertook field

visits, aerial and ground-based surveys and investigations to confirm and ascertain various stakeholders' submissions. The data was then analysed and synthesized to deduce findings and recommendations.

Some of the key findings of the Taskforce are summarized as follows:

- The Board and Management of the Kenya Forest Service has been unable to stem and in some instances have directly participated in, abated, and systemized rampant corruption and abuse of office. By so doing they have overseen wanton destruction of our forests, have systematically executed plunder and pillaging of our water towers and bear the responsibility for the bringing our environment to the precipice.
- The Kenya Forest Service has institutionalized corruption and the system is replete with deep-rooted corruptive practices, lack of accountability and unethical behaviour. However, the Taskforce found some instances of dedicated officers who have selflessly served the country in the face of the difficult environment they found themselves in. It was noted with concern that some of these diligent officers have borne the brunt of corruptive cartels through alleged victimization.
- Illegal logging of indigenous trees is a major threat to forests and is rampant in key forest areas. Cedar was found to be the most targeted tree species.
- Destruction of indigenous forest was observed in many critical forest areas due to illegal squatters, the changing lifestyle of forest dwelling communities, the abuse of PELIS, unclear forest zonation, the introduction of irregular settlements and large-scale public infrastructure developments.
- The limited capacity of Enforcement and Compliance Division of KFS and the lack of clear separation in the forest protection and forest exploitation functions of KFS have made law enforcement in the protection of forest resources ineffective.
- Commercial Forest Plantations managed by Kenya Forest Service are characterised by poor quality planting materials, delayed re-planting, poor silvicultural and management regime, inefficient harvesting operations, inaccurate forest stocks valuation and disposal process.
- KFS has contravened the law by not issuing a timber license to the selected saw millers as required by The Act. It instead issues an award letter/ letter of authority, which does not clearly stipulate any terms or condition as provided for.
- From 2017, the Kenya Forest Service has been using a direct allocation process to award forest materials to saw millers. Prior to that there was an open tendering process to select, award and grant saw millers timber-logging rights.

The direct allocation procedure being practiced by KFS is unfair, inadequate, and inappropriate; and the Taskforce uncovered incidences of its abuse.

- Inadequate coordination among the various agencies in the environment and forest sector has resulted in duplication of roles and inefficient management of forest resources.
- In spite of the prominence accorded to County Governments in assignment of the forest sector functions by the Constitution, it is noted that most Counties have NOT signed or operationalized the Transition Implementation Plans (TIPs) to facilitate the transfer of this function. There have been inadequate efforts to build capacity and allocate adequate resources to undertake this devolved mandate. It is also noted that there is lack of a clear framework for coordination between the 2 levels of government in management of this resource.

The key recommendations of the Taskforce are:

- The Cabinet Secretary for Forestry should expedite the process of constituting a new KFS Board. This will enable an immediate commencement of the administrative investigation process for the sixteen suspended officers of KFS, among other urgent matters.
- Urgent Constitution of an independent caretaker management team with special authority, and comprising of competent persons (who meet the criteria under Article 6 of the Constitution of Kenya) with mandate to manage the operations of the Service in the interim and assist the Government in carrying out the necessary institutional and other structural reforms of the Service during the transition phase.
- The Cabinet Secretary in charge of Forestry should establish an organ with powers to undertake:
 - a. Public vetting of serving KFS personnel with the aim of determining the suitability and culpability of officers of the service. This will help to eliminate malpractice by officers, instil an ethical culture within the service and restore public confidence in the Institution
 - b. Investigation and prosecution of any officers of the Kenya Forest Service against whom evidence of malpractices has been identified during the vetting
- The immediate commencement of investigations and possible prosecution of all criminal-related findings of the Taskforce that touch on former board members and staff of the Kenya Forest Service implicated in malpractices.
- The logging of cedar trees in all forests and the use of cedar products, such as fencing posts, must be banned.
- Forest zonation must be reviewed to establish a core conservation zone, surrounded by a multiple-uses buffer zone, the width of which should not exceed

500 metres. All forest plantations located inside the core conservation zone should be converted back to indigenous forest.

- Illegal squatters must be removed from the forests, through consultative processes involving key stakeholders. Forest dwelling communities must be resettled next to the forest.
- PELIS needs to be phased out progressively, to be replaced with the concessioning of forest plantations, with provision of a role for the community forest associations.
- Large-scale infrastructural developments must adhere to Kenyan policies and statutes, including the National Spatial Plan.
- Establish a clear coordination framework for the agencies working in the environmental and forestry sector to ensure that they (NEMA and the Kenya Water Towers Agency (KWTA) effectively deliver their mandate.
- Undertake a complete overhaul and paradigm shift in the way the commercial forest plantations are managed by KFS from plantations establishment, management, harvesting, valuation and disposal for optimal productivity and increased revenue generation.
- KFS should discontinue the 'Procedure for disposal of forest plantation material' that provides for direct allocation of forest stocks. In the meantime, KFS should strictly adhere to the current Forests (Participation in Sustainable Forest Management) Rules 2009 with respect to issuance of timber licenses.
- KFS should issue timber license as per the Act, clearly communicate the timber license terms and conditions to all saw millers upon issuance, and forest officers must be made aware of the same. KFS to further establish an elaborate framework and procedure to monitor, verify and audit the compliance with the licensing conditions by the saw millers.
- KFS is to effectively engage with the private landowners and state corporations with vast acreage of land to increase investment in private forest plantations to complement public plantations in meeting the ever-increasing wood demand in Kenya.
- County Governments should urgently in collaboration with the Ministry and KFS fast track the signing and operationalization of Transition Implementation Plans (TIPs), capacity building and resourcing for the efficient transfer and implementation of the devolved function. Further, a clear framework for collaboration in forestry functions between the National Government and County Government should be put in place.

The findings and recommendations of the Taskforce are elaborated in chapters 3, 4, and 5 of the report.

Some of the findings were of criminal nature and were submitted as a separate annex to the main report.

LIST OF ACRONYMS

BTC	Bamboo Trading Company
CBO	Community Based Organization
CCF	Chief Conservator of Forests
CFA	Community Forest Association
CIFR	Centre for International Forestry Research
COG	Council of Governors
CSO	Community Society Organisation
DRSRS	Department of Resource Surveys and Remote Sensing
EC	Ecosystems Conservator
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Coordination Act, 1999
ENCOM	Enforcement and Compliance Division
FAO	Food and Agriculture Organization
FCMA	Forest Conservation and Management Act, 2016
GBM	Green Belt Movement
HR	Human Resource
ISL	Initiative for Sustainable Landscape
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Service
KTDA	Kenya Tea Development Authority
KTMA	Kenya Timber Manufacturers Association
KWS	Kenya Wildlife Service
KWTA	Kenya Water Towers Agency
LAPSSET	Lamu Port and Lamu-Southern Sudan-Ethiopia Transport Corridor
LPG	Liquefied petroleum gas
LPO	Local Purchase Order
MEF	Ministry of Environment and Forestry
MEICDP	Mount Elgon Integrated Conservation and Development Project
MENR	Ministry of Environment and Natural Resources
NECC	National Environmental Complaints Committee
NEMA	National Environment Management Authority

NLC	National Land Commission
NMK	National Museums of Kenya
PELIS	Plantation Establishment and Livelihood Improvement Scheme
PFM	Participatory Forest Management
TIPs	Transition Implementation Plans
TMA	Timber Manufacturers Association
ToR	Term of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WRA	Water Resources Authority

LIST OF STATUTES

Agriculture Food and Fisheries Act, 2013.

Climate Change Act, 2016.

Constitution of Kenya, 2010.

County Government Act, 2012.

Energy Act, 2006.

Environmental Management and Coordination Act, 1999.

Forest Act, 2005 (repealed)

Forest Conservation and Management Act, 2016.

Land Act, 2012.

Land Registration Act, 2012.

Mining Act, 2016.

Physical Planning Act, Cap, 286.

Public Procurement and Assets Disposal Act, 2015.

Science, Technology and Innovation Act, 2013.

Survey Act Cap, 295.

Water Act, 2016.

Wildlife Conservation and Management Act, 2016

National Land Commission Act, 2012.

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Chapter One

INTRODUCTION

1.1 Background

Kenya is endowed with a wide range of forest ecosystems ranging from *montane* rainforests, savannah woodlands, dry forests, coastal forests and mangroves¹. Forests play critical ecological, social, cultural, and economic functions. They are crucial in providing basic human needs and habitat for wildlife, biodiversity and soil conservation, regulating water flows and sequestering carbon dioxide².

Sustainable forest management is at the very core of Kenya's social and economic wellbeing as most of the country's economic sectors rely on environment based resources for their sustenance. Further, the forest sector is estimated to contribute about 7 billion Kenya Shillings to the economy and employ over 50,000 people directly and another 300,000 indirectly³. Forest ecosystems also enhance landscape resilience to climate change. In the country's water towers, for example, forests and trees provide environmental services that include water quality and quantity, reduction of soil erosion, and creation of micro-climatic conditions that maintain and/or improve productivity. From a climate change perspective, forests are known to be among the most effective sinks of greenhouse gases that cause climate change.

In addition, sustainable forest management promotes social resilience through diversification of revenue sources and product supplies, and capacity building of the relevant institutions. Forests are also known to play a key role as wind arresters, thereby cushioning both built and natural infrastructure, including agricultural crops, from any related damage.

The continued depletion of the country's forests will, in the medium to longer terms, exacerbate the country's water insecurity, which will impact adversely on national productivity. In the 10-year period of 2000-2010, for example, deforestation in country's water towers was estimated at 50,000 hectares, translating to a depletion rate of about 5,000 hectares per annum⁴. This translates to a reduction in water availability of approximately 62 million cubic metres per year, with a consequent yearly loss to the economy of over USD 19 million. This has the potential to rollback steps towards the attainment of Vision 2030 and the Government's Big Four Agenda of food and nutritional security, affordable and decent housing, universal healthcare and manufacturing. The problem is further exacerbated by the population explosion

¹KFS: <http://www.kenyaforestservice.org/>

² Smith *et al* (2011). Ecosystem Services as a Framework for Forest Stewardship [<https://www.fs.fed.us/>]

³KFS: <http://www.kenyaforestservice.org/>

⁴UN-Environment (2012). Deforestation Costing Kenyan Economy Millions of Dollars Each Year [<https://www.unenvironment.org/>]

and the need to convert more forestland into agricultural and human settlement areas.

Kenya's forest cover is estimated to be about 7.4% of the total land area, a far cry from the recommended global minimum of 10%. On the other hand, Kenya's closed canopy forest cover currently stands at about 2% of the total land area, compared to the African average of 9.3% and a world average of 21.4 per cent. Most of the closed canopy forests in Kenya are *montane* forests that are also the nation's water towers⁵. Further, the Constitution of Kenya requires a minimum tree cover of 10% of the total land area, a vision that is not likely to be attained if wanton illegal forest destruction is not urgently addressed.

To address this problem, the Government declared a moratorium on harvesting of timber on all public and community forests for 90 days with effect from 24 February 2018. The purpose of the moratorium was to allow for reassessment and rationalization of the entire forest sector in the country.

It is against this background that the Cabinet Secretary for Environment and Forestry constituted a Taskforce to propose recommendations to enhance sustainable forest resources management in the country, and address challenges besetting the sector. The Taskforce was established through the Kenya Gazette Notice No. 28 dated 26 February 2018 for a term of thirty days, and launched by the Deputy President on 5 March 2018. The term of the Taskforce was extended to 30 April 2018.

1.2 Taskforce members

The Cabinet Secretary appointed a Taskforce comprising of fifteen (15) members drawn from Government Ministries, Departments and Agencies and Non-State Actors; and two Joint Secretaries. The Taskforce was further enhanced through the co-option of three additional members, who were identified based on their individual and institutional expertise.

1.3 Mandate of Taskforce

The core mandate of the Taskforce was to inquire into forest resources management and logging activities in Kenya. The Taskforce, consequently, inquired into, among others, illegal logging; destruction, degradation and encroachment of public and community forests, water towers and other catchment areas; governance and finance; and issues of integrity. The Gazette Notice with the Terms of Reference of the Taskforce is appended to this report as Annex 1.

1.4 Public participation

Members of the public were given different options of making their submissions, including, face-to-face oral and written submissions, written representations,

⁵KFS: <http://www.kenyaforestservice.org/>

memoranda and petitions, and by email. The Taskforce also conducted several hearings in different parts of the country, where members of the public provided their views. The Taskforce publicised these hearings through advertisers' announcements in dailies with a wide circulations.

1.5 Challenges

One of the main challenges encountered by the Taskforce was the very short term within which to deliver on its mandate. The Taskforce is, therefore, grateful to the Appointing Authority for extending its term by about a month. Another challenge was the reliability of some of the information provided through different submissions. To address this challenge, institutions or persons in possession, custody or control of any relevant documents and information were summoned and/or invited to make submissions to the Taskforce.

1.6 Outline of the Report

This report comprises an Executive Summary, five main chapters, and concluding remarks. **Chapter 1** presents the background information; approach and methodology employed to deliver on the mandate of the Taskforce, and uncertainties and challenges encountered in the work of the Taskforce.

Chapter Two discusses the approaches and methodologies employed by the Taskforce to deliver on its mandate.

Chapters Three, Four, and Five each contains a chapter preamble; interpretation of the relevant Terms of Reference; Methodology; Key Findings and Recommendations with respect to Forest Conservation; Commercial operations; and Governance and Finance. Some of the findings were of criminal nature and were submitted as a separate annex to the main report.

The Report also contains annexes with information considered complimentary to the main report.

Chapter Two

METHODOLOGY

2.1 Introduction

In order to effectively deliver on its mandate as per the Terms of Reference (TORs), the Taskforce divided itself into three committees; namely, Forest Conservation; Commercial Operations; and Governance and Finance. Each committee was allocated a cluster of related TORs to guide its operations, as summarised in Table 1. The three committees inquired into matters within the scope of the relevant cluster of the TORs, and made recommendations related to the respective cluster of the TORs. The outcomes of the work of the three committees are the basis of chapters 3-5 of this Report.

Table 1: Terms of Reference examined by the three Committees

Committee	Terms of Reference
Forest Conservation	<p>a): Determine the scale of illegal logging, destruction, degradation and encroachment of public and community forest, water towers and other catchment area, as well as the associated impacts.</p> <p>f): Determine the institutional and technical capacity of KFS and other agencies involved in the management of the forest to enforce compliance with forest laws and regulations.</p> <p>g): Determine the effectiveness and efficiency of inter-agency and intra-agency collaboration of agencies involved in the management of forests</p>
Commercial Operations	<p>b): Review the procedures, qualification and conditions for licensing of saw millers to determine their adequacy, fairness and appropriateness.</p> <p>c): Review and determine the effectiveness of the monitoring and verification procedures to ensure compliance with license conditions.</p> <p>d): Review the chain of custody system established by the KFS through which forest products and public, community and private forests are distributed, tracked and monitored from their origin in the forest to their end use, and determine their adequacy and effectiveness.</p> <p>e): Review felling plans and associated programs including planting and replanting to determine their adequacy and effectiveness.</p> <p>i): Review and analyse the valuation procedures of methods for forest stocks</p>

Committee	Terms of Reference
Governance and Finance	<p>h: Review and determine the effectiveness of participatory forest management programmes including the operational and governance structures of community forest association (CFA).</p> <p>j: Audit revenue generation from forests against the investment and operational costs.</p> <p>k: Review the Forest Conservation and Management Act, 2016 and other related written laws to enhance penalties for contravening the provision of the Act and related written laws.</p> <p>l: Review the statutory and regulatory regime governing charcoal burning and trade, and make recommendations on the need, or otherwise, to ban charcoal burning, trade or use.</p>

2.2 Information gathering

The Taskforce used different methods to collect information, including literature review; summoning and receiving of representations, memoranda and petitions from the public; public hearings in different parts of the country; and requests and summons to different institutions and individuals to provide specified information of interest to the work of the Taskforce; among others.

Confidential sessions were arranged for members whose submissions were viewed as sensitive or in cases where providing such information in public could compromise the individual's security. In all such cases, the informants were also required to submit a written report for record. In addition, the Taskforce undertook aerial and ground-based surveys to verify some of the information received through submissions. This was achieved through sessions of the whole Taskforce or through Taskforce committees.

Aerial surveys and field visits were undertaken to several forests, including Maasai Mau, Transmara, South Western Mau, Northern Tinderet, Tinderet, Maji Mazuri, Mount Londiani, Eastern Mau, Ol-Pusimoru, Kakamega, Bunyala, Mt Elgon, Kitalale, Turbo, Mount Kenya, Aberdare, Marmanet, Ol-Arabel, Leroghi, Mathews Range, Chyullu, Loitokitok, Narok, Kericho, Nakuru, Maralal, Makueni, Marsabit and Mukogodo. The maps illustrating the route for the aerial surveys are contained in the Appendices 2 and 3 to this report.

There were also reviews of technical reports by members, which focused on illegal logging, the definition of forest, commercial operations, governance, finance, and forests and climate change. The reports are Annexures to this Report.

The key agencies and stakeholders interviewed included the Ministry of Environment and Forestry, Ministry of Lands and Physical Planning, Ministry of Interior and Coordination of National Government, National Land Commission, NEMA, KFS, KWS, Kenya Water Towers Agency (KWTA), Kenya Forestry Research Institute, National Environmental Complaints Committee (NECC), Council of Governors, Embassy of Finland, United Nations Development Programme, Centre for International Forestry Research, Initiative for Sustainable Landscape, Kenya Association of Manufacturers, Kenya Private Sector Alliance, Timber Manufacturers Association, Tea Sector representatives, and individual saw millers, Bamboo Trading Company, Woodfuel Suppliers Association, community groups, Government agencies, development partners, private sector, civil society organisations, Green Belt Movement, Kenya Forests Working Group, Green Africa Foundation, Kenya Climate Change Working Group, and Environment Institute of Kenya, among others.

Public hearings and submission of representations, memoranda and petitions were undertaken in Eldoret, Isiolo, Kisumu, Mombasa, Nairobi, Nyeri, Nakuru, Kericho, Maralal, Kakamega, Marsabit and Makueni. Honourable Yussuf Hajji, Senator for Garissa County, made a presentation during the public hearings in Nairobi. In addition, field visits were undertaken to Kilifi and Lamu counties to inquire on the status of Arabuko Sokoke Forest Reserve and mangrove forests; and Loita Hills in Narok to assess the status of the Loita Community Forest, and learn how the cultural practices of Maasai *Laibons* have over the years conserved forests for the general good of the community. Various cultural groups also made presentations to the Taskforce, among them, the Kaya Council of Elders, Urumwe Cultural Group from Kiambu, and the Ogiek Community.

The team also conducted aerial surveys and field visits to Chyullu, Loitokitok, Narok, Kericho, Nakuru, Maralal, Makueni and Marsabit to confirm and ascertain the various stakeholders' submissions. In addition the team also collated relevant data and information from the public hearing (verbal and written submissions) organised in Isiolo, Nyeri, Uasin Gishu, Mombasa, Kericho, Nairobi, Kisumu, Nakuru and Samburu counties which served as catchment for the surrounding counties.

The data was then analysed and synthesized to deduce findings and recommendations.

Chapter Three

FOREST CONSERVATION

3.1 Preamble

Over the years, the forest resources, including wildlife and water, in public and community forests (the “Forests”) have faced numerous threats arising from human activities, including charcoal burning, illegal logging, overgrazing and encroachment of forests. These activities are a major threat to water resources, biological diversity, and livelihoods of forest dependent communities, leading to conflicts over resources and land. They are attributed to political interference, inadequate governance systems, and weak law enforcement and management capacities of mandated institutions, coupled with a high dependence on the forest resources by the adjacent communities.

In order to stop any further degradation in the Forests, the Taskforce was mandated to determine the scale of the destruction, degradation, and encroachment of public and community forests. The key findings and recommendations of the Taskforce are presented below. They are based on the broad range of expertise existing among the members of the Taskforce, literature review, field visits, analysis of the legal framework, interviews with stakeholders including County Governments and several public hearings (Appendices 4 and 5).

Aerial reconnaissance flights were carried out over the Forests to identify the status of the destruction, degradation, and encroachment on the ground (Appendices 2 and 3).

3.2 Scale of Illegal logging, destruction, degradation and encroachment

The interpretation of this ToR by the Taskforce was that the ToR requires undertaking an extensive review of recent illegal logging activities, their location and targeted tree species in order to make relevant recommendations to address these issues. As no comprehensive assessment of the state of forests and forest resources has yet been undertaken as provided under section 6 (4) (a) of the Forest Conservation and Management Act, 2016 (FCMA), the Taskforce was then to collect relevant reports from KFS, other government agencies and stakeholders to build an necessary understanding of the current illegal logging activities in the country. The same applies for the assessment of the scale of destruction, degradation and encroachment of public and community forests.

3.2.1 Summary of key findings

The key findings are organized along the following main subject areas:

- a) Definitions and monitoring of forest;
- b) Illegal logging;
- c) Forest plantations versus indigenous forests;
- d) Plantation Establishment and Livelihood Improvement Scheme (PELIS);
- e) Destruction, degradation and encroachment in public and community forests; and,
- f) Associated impact of illegal logging, destruction and degradation on forest resources.

As forest conservation achievements are usually measured in terms of the forest cover, it is important to understand what constitutes a forest, i.e., the criteria for determining that an area is a forest. The definition of forest in Kenya was therefore reviewed.

3.2.1.1 Definitions and Monitoring of Forest

The Forest Conservation and Management Act, 2016 (FCMA) defines a forest as *land which is declared or registered as a **forest**, or woody vegetation growing in close proximity in an area of over 0.5 of a hectares including a forest in the process of establishment, woodlands, thickets.*⁶ This definition is vague, and subject to various interpretations. This definition has enabled the KFS to further define forest as land with trees capable of occupying a minimum area of 0.5 hectares and trees likely to grow over 2 metres and with a minimum of 15% of canopy cover.⁷ The revision of the definition was undertaken to help the country prepare for the REDD+ initiative.

This definition differs significantly from previously used definition in the country, in particular, the definition of Food and Agriculture Organization (FAO) which is the lead United Nations agency in forestry matters, which defines forest as land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 per cent⁸.

As a consequence of changing the minimum height threshold value from 5 metres to 2 metres under the definition adopted by KFS, closed thicket for example in Ijara, Garissa County, are now placed in the same category as the closed canopy forest in Mount Kenya.

⁶Forest Conservation and Management Act, Cap 34 of 2016, Section 2

⁷Forest degradation status, Interview with J. Ndambiri, Head of Forest Information System, KFS, March 2018

⁸Forest Resources Assessment Working Paper 180, FAO, December 2012

In the late 1990s, the forest cover of Kenya was reported to be 1.7%. This was based on a forest definition with a minimum canopy cover of 40% used by the United Nations Environment Programme⁹. Later, the forest definition of the FAO with a minimum canopy cover of 10% was largely used, leading to an upward revision of the forest cover to 6.2%¹⁰. With the new definition adopted by KFS, the forest cover in the country was further revised upwards to 7.4%. In the meanwhile, there have been numerous reports of forest destruction in the country.

Section 69 (1) (b) of the Constitution of Kenya, 2010, sets the target to *achieve and maintain a tree cover of at least ten per cent of the land area of Kenya*. KFS assesses forest cover and not tree cover, while NEMA relies on KFS data to prepare its State of the Environment Report. There is, therefore, no systemic data collection to assess the tree cover in the country and monitor the country's performance towards achieving the target set by the Constitution.

It must be noted that the lack of clear definition in the current legislation affects other key terms, such as rational utilisation, forest resources or sustainable management. These definitions are necessary in guiding forest conservation. As a consequence, this gap has created ambiguity in enforcement and has contributed to the failure in placing restrictions on the use of forest resources. Accordingly, the principle of sustainable management and rational utilization of forest resources cannot be effectively enforced unless they are defined.

Monitoring of forests

Currently KFS is the lead agency in the assessment and monitoring the state of forests and forest resources in Kenya. As KFS is also the lead agency in the management of protected forests, this situation is prone to conflict of interest.

To avoid such conflicts of interest, the assessment of monitoring of the state of forests and forest resources in Kenya should be carried out by an institution that is not directly involved in the management of forests. This is the practice in other countries, such as Brazil and India. In Brazil, forests are managed by the Brazilian Forest Service, but monitored by the Ministry of Science and Technology. In India, forests are managed by state departments, but monitored at federal level by the Forest Survey of India.

In 2008, the Director-General of the Forest Survey of India undertook a scoping mission in Kenya at the request of the United Nations Environment Programme (UNEP) to advise on the preparation of a comprehensive State of Forests Report in Kenya. In his report, the Director-General recommended that the Department of Resource Surveys and Remote Sensing (DRSRS) be the lead agency in the preparation

⁹An Assessment of the Status of the World's Remaining Closed Forests, United Nations Environment Programme, 1995

¹⁰ Global Forest Resources Assessment 2005, FAO Forestry Paper 147, 2005

of such report, in light of the expertise of that department and the fact that it is not directly involved in the management of forest.

It must be noted that the preparation of the state of the forests and forest resources is a requirement under section 6 (4) (b) of the FCMA.

3.2.1.2 Illegal Logging

The key findings of the Taskforce regarding the scale of illegal logging are:

- a) **Past and recent past:** Although exploitation of indigenous tree species was banned in 1986, illegal harvesting of these tree species continues, affecting most forests, particularly the mountain forests that are the Water Towers of Kenya. In this regard, it is worth noting the outcome of four aerial surveys conducted above two of the largest mountain forests of Kenya, namely Mt Kenya and the Aberdares in 1999 and 2003 respectively, Leroghi Forest Reserve in 2005 and Maasai Mau forest in 2005:
 - (i) An aerial survey of Mt Kenya forests¹¹ conducted in 1999 showed that 13,513 indigenous trees had been freshly illegally logged. In addition, 8042 hectares of indigenous forest were so heavily impacted by logging that the count of individual logged trees was not possible;
 - (ii) An aerial survey of the Aberdare forests¹² conducted in 2003 showed that 9,425 indigenous trees had been freshly illegally logged;
 - (iii) An aerial survey of Leroghi Forest Reserve¹³ conducted in 2005 identified 318 freshly logged indigenous trees, most of them being cedar trees; and,
 - (iv) An aerial survey of the Maasai Mau forest¹⁴ conducted in 2005 counted 2,343 recently logged indigenous trees, in addition there were 578 hectares where heavy logging made it impractical to count felled trees individually. Most of the trees felled were cedar trees.
- b) **Currently:** the indigenous forests are over-exploited by selective logging of important timber trees, which has greatly reduced the canopy cover, modified the forest composition, and undermined the regenerative capacity of the

¹¹ Aerial Survey of the Destruction of Mt Kenya, Imenti and Ngare Ndare Forest Reserves, Report by the KWS, 1999.

¹² Aerial Survey of the Destruction of the Aberdare Range Forests, Report by the United Nations Environment Programme, KWS, Rhino Ark Kenya Charitable Trust, Kenya Forest Working Group, April 2003

¹³ Aerial Survey of the Threats to Leroghi Forest Reserve, Survey carried out by the United Nations Environment Programme and KWS with support from the Wilderness Foundation UK and the Kenya Forests Working Group, March 2005

¹⁴Maasai Mau Forest Status Report, Report by Ewaso Ngiro South Development Authority, United Nations Environment Programme, United Nations Environment Programme, Kenya Forest Working Group and KWS, 2005

forests. Cedar (*Juniperus procera*) appears to be the single most targeted tree species, mostly for making fencing posts, but also for construction:

- (i) A recent elephant census and forest health survey conducted in 2016 across the entire Mau Forest Complex showed a high level of illegal logging of indigenous trees of which 79% were cedar (*Juniperus procera*). Logging was by far most intense in Maasai Mau forest followed by Ol Pusimoru Forest Reserve, Lembus FR, Mount Londiani FR, South Western Mau FR, Western Mau FR and Tinderet FR.¹⁵ (Annex 4);
 - (ii) Periodic surveillance flights conducted since 2013 above the Aberdare Range and Mt Kenya by the Rhino Ark Kenya Charitable Trust, KFS, KWS and other partners, including the Mount Kenya Trust, also indicate that cedar (*Juniperus Procera*) is the most targeted tree species in the Aberdare forests and one of the most targeted tree species in Mt Kenya forests¹⁶;
 - (iii) During the reconnaissance flights conducted by the Taskforce on 10th and 11th March 2018, it was noted that illegal logging of cedar trees was also prevalent in Marmanet Forest Reserve (Laikipia County), Ol Arabel Forest Reserve (Laikipia County) and Leroghi Forest Reserve (Samburu County);
 - (iv) A 2018 elephant census and forest health survey conducted across the entire Loita Hills showed illegal logging of indigenous trees of which 67% were cedar (*Juniperus procera*)¹⁷; and,
 - (v) A report submitted to the Taskforce by KFS on illegal logging hotspot areas highlights that the logging of cedar as the most prevalent illegal logging activity.
- c) Illegal logging of Sandalwood is prevalent in the Mathews Range (Samburu County), Marsabit (Marsabit County), Chyullu Hills (Makueni/Kajiado County), and Loita Hills (Narok County) ecosystems, based on submissions by stakeholders.
- d) The high dependency on the biomass energy is exerting high pressure on the remaining indigenous forests. A study by Info Track indicated that as at

¹⁵ Elephant Survey, Mau Forests Complex, Report by Wildlife Conservation Society, KWS, Rhino Ark Kenya Charitable Trust, December 2016

¹⁶ Surveillance flights conducted above the Aberdare forests on 18 November 2013, 24 March 2014, 8 August 2014, 17 October 2014, 23 April 2015, 14 July 2016, 9 September 2016, 21 November 2016 and 5 September 2017; Surveillance flights conducted above Mt Kenya forest on 03 July 2013, 15 October 2013, 8 July 2014, 14 October 2014, 14 January 2015, 19 August 2015, 17 September 2015, 19 January 2016, 13 August 2016 and 11 May 2017

¹⁷ Elephant Survey, Loita Hills, Report by Wildlife Conservation Society, Report in print

January 2017, 57% of Kenyans had no access to electricity and 81% use biomass (wood and charcoal) for cooking.¹⁸

3.2.1.3 Forest plantations vs. Indigenous forests

The key findings of the Taskforce in regard to the forest plantations in the gazetted forests are as follows.

a) Plantations

There is currently approximately 135,567 hectares¹⁹ of forest plantation areas in the gazetted forest reserves of Kenya. Most of the forest plantations are located in the five major Water Towers of Kenya: Mount Kenya, Aberdares, Mau Forest Complex, Cherangani Hills and Mount Elgon.

The observations made by the Taskforce during two reconnaissance flights (Annexes 2 and 3), are as follows:

- a) Most forest plantation areas are located in critical water catchment areas;
- b) Some forest plantations are located deep inside the indigenous forests in high altitude areas;
- c) The zonation between the indigenous forests and forest plantation areas is not clear;
- d) Many forest plantation compartments are not planted with trees; it was reported that some of the harvested compartments have not been replanted with trees for the last 20 years; and,
- e) There is residential cultivation with semi-permanent settlements in some plantation areas.

The 400 km long fence in the Aberdare ecosystem completed in 2009 was aligned in such a way as to create a zonation separating the conservation area to be comprised of indigenous forests from the multiple-uses buffer zone to include all the forest plantations. The understanding was that any isolated forest plantation remaining inside the fence would then be converted to indigenous forest, once harvested. However, this understanding is not followed by KFS and harvested plantations inside the fence are replaced with exotic trees.

In a 2018 study²⁰ on the valuation of ecosystem services in the Mau Forests Complex, Cherangani Hills and Mt Elgon, the annual contribution of the plantations to the

¹⁸Brief Report on the Current State of our Forests and Recommendations, Save Mt Kenya campaign and SaveOurForestKE, March 2018, Page 7

¹⁹ Meeting the wood supply challenge: The need for commercial forestry in Kenya, Discussion Paper, PricewaterhouseCoopers, May 2014

²⁰The Value of Ecosystem Services of Mau Forest Complex, Cherangany Hills, and Mt Elgon Ecosystems, Report by the Kenya Forestry Research Institute (KEFRI), United States Forest Service, International Programs-USFS, IP, 2018

national economy were estimated at KES 10.7 billion against a total economic value of the three water tower ecosystems estimated to be KES 339 billion. In another study conducted in 2011 in the Aberdare forest, the annual contribution to the national economy of the ecosystem services provided by that mountain forest ecosystem was estimated at KES 59 billion.²¹

Sixty-eight (68) Kenya Tea Development Agency (KTDA) tea factories utilise approximately one million cubic metres of well-seasoned firewood per year equivalent to 5,700,000 number of eucalyptus trees or 3,600 hectares of high quality commercial tree plantations. Approximately 50% of this wood is sourced from government commercial plantations, mainly through third parties licensed by KFS. The balance of 50% is sourced from own factory plantations, community plantations and farmers smallholder trees/forests.

It must, however, be noted that the Wood fuel Suppliers Association of Kenya, indicated that some of the community suppliers are sourcing the fuel wood from indigenous forests.

Recent studies on levels of demand and supply establishes that Kenya currently faces an annual sustainable wood supply deficit of approximately 16 million m³. This is projected to rise to approximately 34.4 million m³ by 2030²². This deficit is exerting high pressure on the remaining indigenous forests.

However, Kenya has the potential to expand its commercial forestry sector, not only to address its wood supply deficit, but also to contribute significantly to the realization of Kenya's Green Growth Objectives by 2030²³ by:

- i) Doubling the contribution of the sector to the GDP;
- ii) Doubling the number of jobs in the sector to over 2 million people;
- iii) Tripling the rural income from the sector;
- iv) Increasing by 50% the direct tax revenue from the sector; and
- v) Reducing by 50% Kenya's national carbon emissions.

This expansion should be delivered by the private sector on private land due to the limited geographical area of the existing gazetted plantation forests.

During the public participation hearings organised by the Taskforce, it was reported that:

²¹ Environmental, social and economic assessment of the fencing of the Aberdare Conservation Area, KWS, KFS, Kenya Forests Working Group, United Nations Environment Programme and Rhino Ark Kenya Charitable Trust, September 2011

²² The Potential of Public Private Partnerships for Sustainable Forest Management, Memorandum by Tree Biotechnology Programme Trust (TBPT) Submission to the Taskforce on Forest Management in Kenya, March 2018, Page 1

²³ Meeting the wood supply challenge: The need for commercial forestry in Kenya – Discussion paper by Gatsby and PricewaterhouseCoopers, May 2014

- a) The government, communities and the general public must now accept the fact that the few gazetted forests and national parks in this country can no longer carry the burden of sustainable supply of wood products through cutting and other extraction methods.²⁴
- b) The only Forest Management Plans available are “Participatory Forest Management Plans” prepared by CFAs through support by development partners and civil society organisations (CSOs). These plans are not detailed and do not have clear management actions for sustainable management of particular forest blocks. This results in KFS relying on short term felling programs with no clear replanting and management of young plantations.
- c) Data available on forest resource management is not reliable for holistic determination of current stocks and annual allowable harvesting.
- d) KFS irregularly allocates trees to certain saw millers. For example, Buffalok Limited and Mawaka Limited receive allocations from KFS on a regular basis. At block 1B in Malagat, Buffalok Limited was allocated over 2,600 trees in September 2017 against 80 trees for small millers. In November, hardly two months after, Buffalok Limited was allocated again over 3,000 trees in block 13F in Makutano.
- e) Poor record keeping and allocation of forest blocks in certain cases resulting in double allocation of trees by KFS. For example, in block 5A in Kuresoi, one can easily be allocated trees, which are non-existent as they have already been allocated to someone else.
- f) There is undervaluing of trees in Kinale area (Aberdares) such that the government does not get the true value from the plantations. It was also reported that saw millers harvest more trees than what has been allocated to them by KFS.
- g) This was also reported in Elgeyo Forest Station where KFS staff colluded with saw millers as follows:
 - i) Compartment 4C: 221 trees declared at KES 6,090 per tree for total value of KES 1,345,890. However, the actual number was 1400 trees valued at KES 8,526,000. This represents a loss in revenue for the Government of KES 7,180,110;
 - ii) Compartment 10A: 3,000 trees declared at KES 10,017 per tree, for total value of KES 30,051,000. However, the actual number was 9,475 trees valued at KES 94,911,075. This represents a loss in revenue for the Government of 64,860,075;

²⁴ Memorandum on Better Forest Conservation and management in Kenya submitted by the National Alliance of Community Forest Association (NACOFA) on 17 March 2018, page 2.

- iii) Compartment 10H: 7,800 trees declared at KES 8,500 per tree, for total value of KES 66,300,000. However, the actual number was 14,700 trees valued at KES 124,950,000. This represents a loss in revenue for the Government of KES 58,650,000;
- iv) Compartment 5A: 2,200 trees declared at KES 13,485 per tree, for total value of KES 29,667,000. However, the actual number was 5,200 trees valued at KES 70,122,000. This represents a loss in revenue for the Government of KES 67,155,300. This amounts to a total loss of KES 197,845,485 in four forest plantation compartments alone.
 - (i) Felling plans are not availed to the public for scrutiny, accordingly there is lack of transparency and accountability. For example, in Kisumu there were reports of biased allocation of plantations for harvesting – some millers were allocated parcels with less or without trees during the bidding process. In other instances, trees were harvested without felling plans or without adherence to the felling plans; and,
 - (ii) There is a lack of an effective monitoring and verification procedure to ensure compliance with licence conditions for saw millers.

3.2.1.4 Plantation Establishment and Livelihood Improvement Scheme

The Plantation Establishment and Livelihood Improvement Scheme (PELIS) is a system in which KFS allows forest adjacent communities, through CFAs the right to cultivate agricultural crops during the early stages of forest plantation establishment. Cultivation is allowed to continue for 3 years until tree canopy closes. The PELIS scheme was meant to improve economic gains of participating farmers while ensuring success of planted trees. The PELIS scheme has, instead, led to considerable abuse and loss of forestland. Many other illegal practices are camouflaged under its umbrella, including agricultural encroachment into the indigenous forest via plantations.

PELIS mostly leads to the establishment of low standard forest plantations compared to best practices.

PELIS provides access to land, leading to illegal conversion of indigenous forests into plantations. During the reconnaissance flight, the Taskforce landed in two areas on Mount Kenya and the Aberdares where indigenous vegetation has been recently destroyed to pave way to the PELIS system.

Some of the PELIS areas are located deep inside the forest, creating resident farmers who are entirely dependent on forest resources. The PELIS also leads to the depletion of wildlife and human-wildlife conflict in cases where plantations are bordered by indigenous forests. There is encroachment of indigenous forests through the PELIS system.

In a 2018 study²⁵ on the valuation of ecosystem services in the Mau Forests Complex, Cherangani Hills and Mt Elgon, the contribution of the PELIS to the national economy were estimated at KES 0.635 billion against a total economic value of the three water tower ecosystems estimated to be KES 339 billion.

During the public participation hearings organised by the Taskforce, it was alleged that:

- i) Mount Elgon Integrated Conservation and Development Project (MEICDP) established that the shamba-system in Mount Elgon Sub-County and Trans Nzoia County has resulted in the wanton destruction of the Mount Elgon ecosystem. Areas such as Kopsiro, Kaboywo, Chesito, Kipsagam, Teldet, Kiborowo and Suam were still forested as late as 1972 but as of 2018 they are entirely stripped of the indigenous trees;
- ii) PELIS is abused especially in Cheptais Division and specifically in Chebombai. In areas adjacent to Chepyuk division, in Panantega and Sosapleel, in contravention of the law, KFS personnel have allocated themselves farms in forests. In Sosapleel, the farms were introduced by forest guards in Kipsikrok and they invited those adjacent to the forest to extend their farms 200 metres into the forest and keep paying them a fee;
- iii) Politicians are also to blame in Mt Elgon as they encourage citizens to clear indigenous forests so that the said areas can be converted into farms for their own benefit;
- iv) PELIS was observed to be abused in areas like Loitokitok Forest (Kajiado County) and Mt Elgon Forest, where CFA members were subletting their allocated plots to non-citizens from neighbouring states; and,
- v) In the Aberdares, KFS staff has misused PELIS by allowing the CFA leaders to demarcate plots in the sloped areas, natural forest, firebreaks and at the riverbanks and water sources. These plots are 'sold' to individuals at KES 15,000 –20,000. In one portion of Ragia forest compartment 5F, they demarcated 307 plots, which they shared between the CFA leaders and the KFS staff without giving the CFA members a portion. They also offered bribes to those who wanted to blow the whistle.

3.2.1.5 Destruction, Degradation, and Encroachment

The key findings of the Taskforce with regard to the destruction, degradation, and encroachment of the public and community forests, water towers and other catchment areas as well as associated areas are presented below.

²⁵The Value of Ecosystem Services of Mau Forest Complex, Cherangany Hills, and Mt Elgon Ecosystems, Kenya Forestry Research Institute (KEFRI), United States Forest Service, International Programs-USFS, IP, 2018

a) Destruction, degradation and encroachment of public forests (gazetted forests)

Over the past 25 years there has been massive destruction of forests due to excision, settlements established without following due process, encroachment, illegal logging and unsustainable grazing. The **Mau Forests Complex** has been particularly hard hit by forest excisions, illegal settlements, and intense illegal abstraction of forests resources²⁶:

- i) Forest excisions in 2001 alone amounted to 61,587 hectares, affecting in particular Eastern Mau Forest Reserve (35,301 hectares), South Western Mau Forest Reserve (23,296 hectares), Molo Forest Reserve (901 hectares);
- ii) At least 2,436 hectares was illegally allocated to public utilities, such as schools and police stations, as well as for private development like churches. The land allocated for these public utilities and private developments is still gazetted as forest reserve. Allocations were often being decided upon by leaders or Government officers who have no authority on such matters, in violation of the applicable laws, and/or for supporting private interests. In addition, the size of the land requested for public facilities is too often well in excess of what is actually required, providing opportunities for land grabbing. For example, the forestland allocated to Arama Secondary School in Lembus Forest Reserve is as large as 80 football pitches. Large allocations were made for private development, such as Kiptagich Tea Estate (937 hectares) and Sambut Tea Ltd (202 hectares).
- iii) In addition, 20,155 hectares of Ol Pusimoru Forest Reserve was adjudicated; and
- iv) The main illegal activities that are carried out in the Mau Forests Complex are logging, targeting mostly cedar trees, charcoal production, and unauthorised livestock grazing.

Mount Elgon has been heavily impacted by the creation of settlements, the expansion and failure of the PELIS system, the permitted logging of hardwood indigenous tree species and the presence of forest-dwelling communities of which many of their livelihood activities are not compatible with forest conservation:

- i) The poorly planned Chebyuk excision with an original extent of 3,686 hectares more than doubled to 8,700 hectares due to encroachment that were subsequently formalized as Chebyuk II and Chebyuk III settlements. Further encroachments are now forcing the Government to create Chebyuk IV settlement;
- ii) The poor planning of the Chebyuk excision has led to continued insecurity and conflicts in the settlements and the surrounding areas;

²⁶Report of the Government Taskforce on the conservation of the Mau Forests Complex, March 2009

- iii) From 1960s to 1999 indigenous forest cover declined by a third from 53,281 hectares (49% of the protected area) to 35,140 hectares (33% of the protected area). In the same period, the forest area under the shamba-system (now PELIS) increased from 0 to 9,582 hectares²⁷;
- iv) Despite the presidential ban on felling or logging of indigenous trees decreed in 1986, the Forestry Department issued licenses to RaiPly to log hardwood tree species in Kaberwa Forest Station. The company had been active in Mount Elgon since the beginning of the 1980s but major activities started in 1994. The main targeted tree species was Elgon teak (*Olea capensis welwitschii*) to make plywood and veneer. Other logged tree species included Red stinkwood (*Prunus africana*) and Muna (*Pouteria adolfi-friedericii*); and,
- v) Ogiek, a traditional forest dwelling community, and Sabaot are residing in the protected area where they grow food crops, keep livestock, hunt for wild animals, and build temporary shelters. The impact, in terms of degradation, is felt not only in the forest belt but also in the moorland area (Chepkitale), which is an important vegetation zone from a conservation perspective.

Kakamega Forest is impacted by encroachments, irregular excisions, and to a lesser extent by illegal logging and charcoal making:

- i) There are two major irregular excisions with settlements covering a total of approximately 573 hectares. The larger of the two areas covered 443 hectares for Shikuza Prison, comprising of small built-up areas surrounded by extensive cultivation of crops. The other area, located in the southern part of the forest, covered an estimated 130 hectares. It appeared to coincide with the proposed Ishiru excision (Boundary Plan 180/215) that has never been formalized;
- ii) Small settlements encroaching into the forest were found in six locations²⁸; and,
- iii) Some of the harvested plantation areas have not been replanted.

In the **northern forest reserves**, pastoral communities have established *bomas* and *manyattas* and settled inside the forest:

- i) In Leroghi Forest Reserve (Samburu County), over 600 households have established manyattas and settled in the forest, leading to extensive forest degradation and soil erosion. From presentations made during the public hearing held on 13 April 2018, it appeared that the local elected leaders have encouraged the squatters to stay inside the forest

²⁷ Based on an aerial photography of the 215,570 hectares of the Mount Elgon Integrated Conservation and Development Project (MEICDP) commissioned by the MEICDP in March 1999

²⁸ Aerial Monitoring of Forest Boundaries, A joint KFS and KWS Programme supported by the United Nations Environment Programme, Volume 1, July 2007

- ii) In the Ndotos Forest Reserve (Samburu County), pastoralists have also settled near the top of the mountain forests, leading to forest degradation and soil erosion; and,
- iii) The same applies to Mt Nyiru Forest Reserve (Samburu County) and Mt Kulal Forest (Marsabit County), which is not gazetted but managed as a UNESCO Man and Biosphere Reserve.

Although **Arabuko Sokoke** covers only 7,621.8 hectares, it ranks as the second most important for threatened bird conservation in sub-Saharan Africa. The forest holds a very high diversity in terms of habitats, fauna and flora. However, the forest is threatened by:

- i) Illegal logging of indigenous trees through collusion with KFS officers; and
- ii) Illegal logging for charcoal making and wood carving by the neighbouring communities.

Mangrove forests in Kenya face a number of threats mainly arising from unsustainable exploitation, tourism development and large-scale infrastructure:

- i) Mangrove harvesting is controlled by KFS through licensing procedures and recommendation of mangrove poles to be harvested. However, these recommendations are based on wood demand rather than the actual resource base²⁹;
- ii) Between 1985 and 2009, the country lost about 20% of its mangrove cover, translating to about 450 ha of mangrove area per year;
- iii) In addition, at least 40% of mangroves across the coast are degraded;
- iv) Losses of mangroves are disproportionately higher in urban centres than in rural areas. In Mombasa County, for instance, the loss of mangroves is reported to exceed 80% in the last decade³⁰; and
- v) In Lamu County, where a significant proportion of the mangroves is found, it was found that the local communities are sustainably managing the mangroves as a key source of livelihood. However, the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSSET) project threatens the mangrove ecosystem.

Some forests exist only on paper, like the case of:

- i) Kitalale Forest (1,860 hectares) which is still gazetted as Forest Reserve but is entirely settled³¹;

²⁹Abuodha, P. and Kairo, J. G. (2001), Human-induced stresses on mangrove swamps along Kenya coast. *Hydrobiologia*. **458**: 255-265.

³⁰ National Mangrove Ecosystem Management Plan, Summary for Policy Makers, 2017-2027

³¹ Aerial Monitoring of Forest Boundaries, A joint KFS and KWS Programme supported by the United Nations Environment Programme, Volume 1, July 2007

- ii) The same apply to the Manzoni and Mautuma blocks (totalling 2,862 hectares) of the Turbo Forest Reserve³²;
- iii) In Ol Pusimoru Forest Reserve, approximately 20,155 hectares have been adjudicated, settled and title deeds issued³³.

There are traditional **forest-dwelling communities** in three of the five main water towers of Kenya. There are: Ogiek (Mt Elgon and Mau Forests Complex) and the Sengwer (Cherangani Hills). Over time, their traditional way of life has changed. Their livelihood activities now include livestock grazing and food crop production that are not compatible with forest conservation. These livelihood activities have compromised the integrity of ecosystems and the services they provide, such as water, to the communities in the lower catchment. However, some of their livelihoods activities are still dependent on forest, such as bee keeping.

During the public participation hearings organised by the Taskforce, it was also reported that:

- i) **Enosupukia** Forest was 7,941 hectares in the 1980s and has lost 98% of forest cover due to encroachment and agricultural expansion. The current forest cover stands at 183 hectares³⁴;
- ii) **Marmanet** forest was 30,488 hectares in 1990. By 2010, the forest had lost 12,459 hectares of its cover³⁵.

Based on information submitted by the “Laikipia County Forum”, the forest loss is mainly as a result of encroachment, excisions and settlements. In early 2000, part of the forest was excised without being degazetted, to form Uaso-Narok Scheme and 900 families were to be settled. The provincial administration then hived off an extra part of the forest and sold parcels of 2.5 acres of lands to business people while some senior civil servants were allocated huge chunks of forestland. The said provincial administration officers, public servants and political operatives have made it difficult for the demarcation of boundaries between degazetted parts of the forest, settlement area and encroached sections. In 2009, KFS attempted on several occasions to evict illegal settlers but the security team was always faced by hostile groups some armed. Part of Marmanet Forest and Ol Arabel Forest were hived off to create Mochongoi settlement and the area transferred administratively to Baringo County. The “Laikipia County Forum” further reported of large-scale mechanised farming in Marmanet Forest by individuals under the guise of PELIS.

³²*ibid*

³³Report of the Government Taskforce on the conservation of the Mau Forests Complex, March 2009

³⁴Submissions by Kenya Water Towers Agency to the Taskforce on the inquiry into Forest Resources Management and Logging Activities in Kenya – Forest Conservation Sub-Committee

³⁵*ibid*

- iii) **Kiambu:** Destruction of Kiambu Forest was observed from Githaraini River to Tharaini River. It was alleged that an organization called Agropack Limited intends to subdivide the Kiambu Forest into 100 by 100 plots without NEMA approval; and
- iv) **Nyangweta:** Kisii County Government is in the process of alienating part of Nyangweta Forest, which accounts for almost half (104 hectares) of the total forest cover (228 hectares) in Kisii County in order to construct a sugar factory contrary to the National Environment Policy of 2014³⁶.

b) Destruction, degradation and encroachment of community forests

Maasai Mau (Narok County) and Mt Kulal (Marsabit County) are two large community forests. They cover approximately 45,800 hectares and 45,763 hectares, respectively, based on surveys conducted by KFS.

Maasai Mau is one of the 22 forest blocks forming the Mau Forests Complex. The forest has been extensively impacted by illegal settlements, deriving from the ballooning of five adjacent group ranches during the sub-division of their land. Based on the interpretation of satellite images, it is estimated that 13,281 hectares have been destroyed between 1973 and 2014 for illegal settlements in the Maasai Mau forest. In a detailed report produced by the Interim Coordination Secretariat in 2011³⁷, it is indicated that:

- a) 7,864 families have settled inside the Maasai Mau forest;
- b) Of these families, only 421 have title deeds; and,
- c) During the subdivision and ballooning of the five adjacent group ranches, 4,242 hectares were allocated to 13 companies and business names, and that among the beneficiary companies, five have no record in the Registrar of Companies.

In addition, massive illegal logging of cedar trees was observed during the reconnaissance flight undertaken by the Taskforce on 10th March 2018 over the Maasai Mau in the unsettled area of the forest, as well as large herds of livestock.

Mt Kulal was designated as a UNESCO Man and Biosphere Reserve in 1978. The montane and sub-montane forests of Mt Kulal are subject to logging by pastoralists for fuel wood, building materials and for the construction of livestock enclosures. Forest regeneration is being reduced by the removal of the understorey in several areas. Grass fires, lit by pastoralists, erode the forest edge³⁸.

³⁶ Presentation on the Proposed Construction of a Sugar Factory on Nyangweta Forest, Statos Enterprises Limited, March 2018

³⁷ Analysis of Land Ownership in the Extension of Five Group Ranches beyond their Adjudicated Boundaries into the Maasai Mau Forest, Interim Coordinating Secretariat, Office of the Prime Minister, June 2011

³⁸ www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=KEN+02, 21 April 2018

3.2.1.6 Impact of illegal logging, destruction and degradation on forest resources

There is a wide range of adverse impacts ranging from loss of wildlife, reduction of forest cover, degradation of water catchment and depletion of water resources.

a) Impact on wildlife

In the Mau Forest Complex, a 2016 intensive ground survey revealed that there is **no sign of large mammals** in 17 of 22 forest blocks. With regard to the **critically endangered mountain bongo antelope**, of which there are less than 100 individuals in the world and all of them in Kenya, of the six remaining groups, two have disappeared over the past two years.

The wrong citing of forest plantation inside the forest have impacted **wildlife corridors** and movement, for example the Muchene corridor linking Mount Kenya and the Imenti forest is now under PELIS which has forced the elephants to exit the forest, thereby increasing human wildlife conflict around the forest. Over the past two years, 10 farmers have been killed by elephants around the Imenti forest.

b) Impact on water resources

An adverse impact is the drying up of rivers and streams. The flow of the Sondu River, for example, has become more irregular making the Sondu-Miriu hydro power plant running at lower capacity in the dry season. Another example is the Mara River of which the level is very low in the dry season threatening the river dependent wildlife as well as the associated tourism in the Maasai Mara and Serengeti ecosystems. In other cases, streams have dried up during most parts of the year such as in the Njoro area, where 13 of the 32 streams have dried up signalling a major threat to the Njoro River they feed³⁹.

Other major impacts are flooding and flash floods as the degraded upper catchment areas have less capacity to absorb rainwater. Soil erosion and siltation of water bodies are also major consequences. It has been estimated that the Masinga Dam has lost 23% of its capacity over a 25 years period due to siltation⁴⁰.

The role of wetlands in retaining water has been interfered with and ground and surface water resources are being depleted.

c) Impact on security

Proceeds from illegal logging have been used to fund illegal activities such as in Boni Forest where the proceeds have been used to fund terrorism activities. Terrorists use proceeds from charcoal burning to buy food, water and other basic goods for the militants.

³⁹Report of the Government Taskforce on the conservation of the Mau Forests Complex, March 2009

⁴⁰ Rehabilitation / Upgrading of Hydro Power Stations, Tana Catchment Rehabilitation Report, KENGEN, May 2005

Illegal logging and forest destruction contribute to the drying of rivers, escalating to conflicts over scarce water resources. The destruction of forests impacts on the microclimate conditions that in turn affect food security. It also increases the vulnerability of the livelihoods of many Kenyans to climate change.

3.2.2 Recommendations

Below are the recommendations of the Taskforce in regard to illegal logging, destruction, degradation and encroachment of public and community forests:

3.2.2.1 Short-term recommendations

Definitions and monitoring of forests

1. The definition of forest should be reviewed to capture the various types of forest in Kenya and avoid amalgamating together very contrasting types of forest, such as closed-canopy mountain forest with dense lowland bush land, as it is the case currently. The definitions of forests using multiple classes developed by the Forest Survey of India may be a good example to follow. Their definition uses a minimum area of 0.5 hectare, a minimum tree height of 5 metres and several classes of forests based on their canopy cover as follows:
 - a) Open forest: 10-40 per cent of canopy cover;
 - b) Moderately dense forest: 40-70 per cent of canopy cover;
 - c) Very dense forest: more than 70 per cent of canopy cover.
2. The concepts of 'rational utilisation' and 'sustainable management' of forest resources need to be defined in the Forest Policy, based on international best practices.
3. The assessment of state of forests and forest resources in Kenya should be carried out by an institution that is not directly involved in the management of forests to avoid conflict of interest. The Department of Resources Surveys and Remote Sensing should be mandated to undertake the assessment of state of forests and forest resources every two years.

Logging activities

4. A total ban on the logging of cedar trees on public, private and community lands and a total ban on cedar products should be imposed immediately. A multi-agencies approach, including County Governments, should be applied to ensure total enforcement of the ban.
5. KFS, KWS, National Security agencies, County Governments, and the relevant conservancies should develop and implement a joint law enforcement approach to combat the illegal logging of sandalwood.

6. Tariffs and duties on imported timber and timber products should temporarily be lowered to reduce the pressure on the forest cover, while the local wood supply deficit is being addressed.

Forest degradation

7. The PELIS should be progressively phased out over a four-year period. No further PELIS area should be opened. In parallel to the phase out of the PELIS, concessions of forest plantations should be established that provide a role for the CFA members in the establishment of plantations.
8. All harvested forest plantations located inside the electric fence of the Aberdare ecosystem should be reverted to indigenous forest.
9. Illegal settlers in all public and community forests should be evicted through a process that involves all key stakeholders, in particular the local leaders and the various relevant arms of Government; and the forestland secured.
10. The Ministry of Lands and Physical Planning, National Land Commission, and KFS should resolve conflicts over boundaries, such as conflicts in Leroghi Forest Reserve and Mt Marsabit Forest Reserve, through a process that involves all key stakeholders, in particular local leaders and the various relevant arms of Government.
11. The Ministry of Lands and Physical Planning, National Land Commission, and KFS should undertake surveys, inventory, document, and issue titles for all public and community forestland.
12. The Ministry in charge of Forestry should develop regulations on Mangrove harvesting.

Promoting tree growing outside protected areas

13. The requirement for all farmland to have a 10% tree cover should be enforced as per the existing law.
14. A mandatory requirement should be made for all national and county government bodies to participate in the national tree-planting week provided in section 55 of the FCMA, with a particular target to be met. All corporations and Kenyans should be encouraged to participate in the same.

Management of forest plantations

15. Forest management plans should be developed in line with the existing Guidelines and the Law; and review the existing plans to ensure compliance with the Guidelines and Law.

3.2.2.2 Medium-term recommendations

Logging activities

1. The penalties established under the FCMA should be enhanced.

2. The Government should subsidise and lower the cost of LPG to ease pressure on forests.

Forest degradation

3. Forest zonation should be reviewed to establish a multiple-uses buffer zone inside the forest along the forest boundary. The width of the buffer zone should not exceed 500 metres. All forest plantations located outside the buffer zone should be converted back to indigenous forest.
4. The Cabinet Secretary should engage the relevant county governments to declare threatened community or private forests, in particular the Maasai Mau and Mt Kulal, as provisional forests.
5. No forest plantations should be established on riparian reserves. Existing plantations along riparian reserves should be reverted to indigenous forests.
6. Where a forest is under dual gazettement, a multi-agency committee, comprising of Ministries responsible for forestry, wildlife, water and lands; and the National Land Commission, should be established to interrogate the matter of due gazettement and make remedial recommendations.
7. Indigenous forest areas that host critically endangered species, such as the mountain bongo, should be properly demarcated and gazetted as nature reserves.
8. Any community residing in the forest or carrying out activities that do not align with forest conservation should be evacuated from the forest. In case of forest-dwelling communities who have traditionally lived in the forest, they should be resettled in areas adjacent to the forest.
9. Valuation of ecosystem goods and services provided by forests should be carried out to guide the budgetary allocations as provided for under the Law. Whereas financial support can be secured from development partners, private sector and civil society organizations, the Government should take the lead as an investor in the conservation of the Forests. Adequate budgetary allocations should be made for forest management, commensurate with the contributions of forests - currently grossly undervalued – to the national economy.
10. The obligation of the conservation agencies to fund their conservation activities from commercial operations should be minimized.

Promoting tree growing outside protected areas

11. KFS should establish a division to promote the establishment of professional commercial forests on private and public land. Critical barriers currently holding back the development of the forestry sector from a grower's perspective should be addressed by this new division. These barriers include⁴¹:

⁴¹ Meeting the wood supply challenge: The need for commercial forestry in Kenya – Discussion paper by Gatsby and PricewaterhouseCoopers, May 2014

- (i) Lack of guidelines on best practice silviculture and environmental safeguards;
- (ii) Lack of organization and capacity of growers to understand and access markets effectively;
- (iii) Lack of access to high quality inputs which can improve the economic returns of tree growing;
- (iv) Lack of incentives to encourage development of forests and woodlots on private land; and
- (v) Lack of effective forest extension services. These should be upgraded to the same level as crop-agriculture and livestock extension services.

12. The Ministry responsible for Forestry should develop policies and programmes for the diversification of fast growing tree species and bamboo.

3.2.2.3 Long-term recommendations

1. The Government should identify, map out and restore critical catchment areas, including hilltops, wetlands, riparian areas along rivers, lakes and other water bodies, steep slopes, and natural springs.
2. WRA should audit and rationalize water intakes in water sources to eliminate over-abstraction of water.
3. The incentives established in the FCMA for individuals or entities that grow forest on private land should be operationalized.

3.3 Institutional and technical capacity of Kenya Forest Service

The interpretation of this ToR by the Taskforce was that it requires undertaking an in-depth assessment and critical analysis of the forest protection and security setup of KFS in terms of structure, number and deployment of personnel and equipment, including vehicles, to protect effectively all gazetted forests in Kenya.

The forest protection and security functions of KFS are vested in its Enforcement and Compliance Division (ENCOM), which has the following mandate:

- a) Forest protection and security;
- b) Enforcement and compliance of the FCMA;
- c) Investigations and prosecution;
- d) Intelligence;
- e) Security operations;
- f) Fire/disaster preparedness and suppression;
- g) Staff welfare and capacity building of ENCOM staff; and

- h) Inter-agency collaborations with other state security agencies.

3.3.1 Summary of Key Findings

The key findings of the Taskforce regarding the institutional and technical capacity of the KFS in the management of forests to enforce compliance with forest laws are:

1. KFS organisational structure heavily relies on the trustworthiness of the forest manager, who may have a conflict as his role involves protection and conservation of forests, as well as extraction of forest resources.
2. There are inadequate modalities to monitor the actions and effectiveness of forest officers. Forest rangers are under the command of the forest managers and therefore cannot freely monitor what is happening within the forest station. Forest rangers are also under-equipped, with most resources controlled by the forest managers or their senior technical officers.
3. KFS is understaffed. The internationally recommended ratio is 1 ranger per 400 hectares (where rangers have access to a vehicle). However, each ranger at KFS covers 972 hectares (often on foot). Consequently, KFS is overburdened with enforcement of conservation measures and are struggling to tackle forest crimes, such as illegal logging of cedar trees and the illegal production of charcoal.
4. In addition, KFS rangers are unequally distributed. KFS rangers are mostly concentrated on the areas that generate the most income, namely the forest plantation areas. This means that large tracts of land with indigenous forest cover are un-manned:
 - i) In the Aberdares, for example, there are 12 forest stations in the southern half of the ecosystem where all the forest plantations are located, against 3 in the northern half of the ecosystem which is under indigenous cover; and
 - ii) In the northern forest reserves, KFS rangers are low in number and ill equipped to deal with pastoralists who have weapons and are many in number. For example, in Leroghi Forest Reserve (approx. 91,400 hectares) KFS has only 9 personnel, and in the Mathews Range Forest Reserve (approx. 93,700 hectares), KFS has only 7 personnel. For these two areas combined, KFS has only one vehicle.
5. The ENCOM has only 30 vehicles, which are far below the required number of 237.
6. KFS has insufficient equipment to deal with forest fires. It has only one aircraft to help combat forest fires but has no pilot with training in fighting forest fires.
7. KFS receives insufficient financial resources from the Government to adequately protect forests.

8. During the public participation hearings organised by the Taskforce, it was reported that:

- i) KFS is established more as an extractive-focused entity in forestry with little focus on conservation and management;
- ii) The institutional and technical capacity of KFS is limited;
- iii) KFS has yet to submit the forest status and forest resource report required under FCMA⁴²;
- iv) KFS has not effected its mandate under the FCMA to approve the provision of credit facilities and technical training for community-based forest industries and provide incentives to persons for sustainable utilisation of wood and non-wood forest products;⁴³
- v) The KFS Strategic Plan of 2018 - 2022 shows a shortfall of 56.4% (156,000) of 350,000 hectares in restoring degraded forest areas in the water towers⁴⁴;
- vi) There is conflict of interest between KFS, saw millers and the CFAs on the ground;
- vii) KFS as the sole regulator of the National Forest Programme, a major producer of forest products, and the sole authority to determine quantity and prices of products has abused its authority in deliberately underestimating the quantity and quality of plantation stock earmarked for sale, resulting in loss and theft of revenue. The undisclosed revenue which can be more than 50%, is then shared between by KFS staff and other parties⁴⁵;
- viii) KFS and the Baringo County Government has allegedly failed to comply with and implement the orders issued by Case no. 273 of 2013 and the requests by the Lembus Advocacy and Welfare, and Lembus Council of Elders to dissolve all eight CFAs since they are corrupt⁴⁶;
- ix) There is a need to review and determine the efficiency of the chain of custody system established by KFS through which forests products from public, community and private forests are distributed from their point of origin to their end-use due to the following reasons:
 - The documents provided along the chain of custody are not verifiable;

⁴²Forest Resource Management and Conservation challenges, R. Rutto, March 2018

⁴³*Ibid*

⁴⁴ Brief Report on the Current state of our forests and recommendations, Save Mt Kenya campaign and SaveOurForestKE, March 2018, Page 5

⁴⁵ Memorandum on the Status of Forest Valuation and Sale of Forest Plantations in Kenya, M. N. Muchiri, March 2018, Page 4,

⁴⁶ Memorandum on Lembus Forest (Baringo County), Lembus Advocacy and Welfare, March 2018

- There is limited capacity for verification before movement permits are issued; and
 - The mandatory requirement to provide a certificate of origin is not paid attention to;⁴⁷
- x) KFS has failed to comply with harvesting rules and procedures, instead it is alleged they rely on nepotism and tribalism in allocating plantations for harvesting;
- xi) KFS has not established a national nursery programme. As a result, the management of tree seedling is not regulated and it is alleged KFS officials sell seedlings separately and pocket the money earned;
- xii) It is alleged that KFS management colludes internally to fraudulently under-declare the service's revenue either from field activities allocations or through sale of plantation trees to saw miller cartels. The Forestry Inventory Department who value or do sales inventory sell a proportion of the allocated plantation for KFS and then sell another proportion for their personal benefit. This is usually at a ratio of 6:4; and
- xiii) It is alleged that the Chief Conservator of Forests (CCF), the former Chair of the Human Resources Committee of the Board and the former Head of Eastern Conservancy, have been colluding in the allocation of trees to a sawmilling company belonging to the CCF of KFS and in allocating a tourist site to a relative of the Chair of the HR Committee of the Board.

3.3.2 Recommendations

The recommendations of the Taskforce are:

1. KFS internal structure should be re-organized to separate the dual roles of conservation and commercial plantations management. The management of the two should be independent of each other, with their heads reporting directly to the KFS Board.
2. The capacity of ENCOM should be strengthened in terms of number of rangers and equipment.
3. No KFS staff should remain in the same duty station for more than 3 years.
4. An investigation should be instituted into the compliance of harvesting rules and procedures by KFS and non-compliant officers should be prosecuted and surcharged for failing to conserve and protect forests.

⁴⁷ Brief on the forestry challenges and recommendations, C. Muchiri, March 2018, Page 2

3.4 Institutional and technical capacity of other forest management agencies

3.4.1 Summary of Key Findings

The key findings of the Taskforce regarding the institutional and technical capacity of other agencies involved in the management of forests to enforce compliance with forest laws and regulations are:

3.4.1.1 Kenya Water Towers Agency

1. The mandate of KWTa is “to coordinate and oversee the protection, rehabilitation, conservation and sustainable management of all the critical water towers⁴⁸”.
2. Whilst the KWTa’s core mandate is to coordinate and oversee the conservation of the water towers and the forests therein, it has not:
 - i) Conducted systematic field investigation to oversee the status of the water towers and the forest therein;
 - ii) Worked with the other agencies in order to identify points of collaboration; and
 - iii) Implemented efforts towards fulfilling their role as coordinators.

3.4.1.2 National Environment Management Authority

1. NEMA does not conduct systematic field visits on the ground to ensure that environmental laws are complied with as part of its compliance mechanism and is unable to do continuous monitoring due to its limited workforce. For example, NEMA does not inspect forest plantation areas to confirm that their management is in line with the conditions of the environmental impact assessment (EIA) license.
2. Whilst public participation occurred as part of the EIA process, it is too often not to the expected level. For example, the Forest Manager and the forest-adjacent communities reported that they were not consulted during the EIA process for the proposed Marania Dam on Ruguthu River inside Marania Forest Station, Mt Kenya Forest Reserve.
3. NEMA issues EIA licences for developments that does not conform to the National Environment Policy, the National Land Use Policy, the National Spatial Plan or the principles of good environmental stewardship. For example:

⁴⁸ Submission to the Taskforce on the role of Kenya Water Towers Agency on management of water towers and forest resources, KWTa, March 2018, Page 2

- (i) NEMA issued a EIA license in September 2017 to the National Water Conservation and Pipeline Corporation for the construction of Bosto Dam inside the South Western Mau Forest Reserve, despite the fact that this forest is part of the Mau Forests Complex water tower; the National Spatial Plan clearly stipulates that “development is not permitted in these areas [water towers] except for the purpose of eco-tourism and research”; the forest is a critical catchment area; and the forest is habitat to threatened wildlife species, such as the critically endangered mountain bongo antelope and the vulnerable African elephant.
 - (ii) NEMA also issued a license for the construction of a sugar factory in the County of Kisii that will amount to the destruction of 104 hectares of Nyangweta Forest.
4. NEMA has a broad mandate, posing the danger of NEMA overstepping or clashing with other lead agencies. At the same time, it creates high expectations on NEMA.
 5. NEMA is grossly under-funded, rendering the institution unable to undertake its mandate effectively.
 6. NEMA is understaffed and has approximately 400 personnel. The workload analysis shows a need for 1200 personnel.
 7. NEMA does not conduct field studies to assess or confirm reports submitted with respect to environmental impact assessment reports regarding the management of forest plantations.
 8. NEMA does not conduct environmental inspections after it issues EIA licences.

3.4.2 Recommendations

In consideration of these findings, the Taskforce recommendations include:

- a) KWTA should:
 - i) Be established by an Act of Parliament;
 - ii) Be enabled with the necessary financial and technical capacities;
 - iii) Be enabled with the requisite institutional capacity;
 - iv) Facilitate ecosystem-level water tower conservation committees to enhance collaboration and accountability; and
 - v) Facilitate joint ecosystem-level surveillance flights to monitor the status of the forests in the water towers.
- b) NEMA:
 - i) NEMA should conduct physical inspections and environmental audits on licences it has issued. EIA licence renewals should be tied to compliance.

- ii) There should be an intra-agency accountability mechanism introduced, with respect to environmental audits by KFS. NEMA should verify the environmental audits by KFS.

3.5 Inter-agency and intra-agency collaboration of forest management agencies

The interpretation of this ToR by the Taskforce was that the ToR requires undertaking an in-depth assessment and critical analysis of the collaboration between KFS and other conservation agencies in the protection of forests, as well as internal collaboration among the different sections of KFS.

3.5.1 Summary of Key Findings

The key findings of the Taskforce with regard to the effectiveness and efficiency of inter-agency and intra-agency collaboration of agencies involved in the management of forests include:

1. Coordination with other agencies is a challenge, as there is no framework for collaboration between KFS and other conservation agencies and key stakeholders at forest station level and county level. As a consequence, activities undertaken by various conservation agencies and stakeholders are not streamlined and in cases may negate each other. For examples:
 - i) CFAs are obtaining permits from KFS to graze in forest areas that are habitats to endangered wildlife, such as the critical endangered mountain bongo antelope, which are protected by KWS.
 - ii) The licensing of water intake inside protected areas by WRA is done without consultation with KFS or KWS.
2. The mandate of the agencies involved in the management of natural resources is not adequately communicated to the public, creating confusion on who is in charge of what, in particular with regard to NEMA and KWTA.
3. During the public participation hearings organised by the Taskforce, it was reported that:
 - i) There is lack of co-operation between KFS and CFAs. This leads to victimization for reporting on the destruction of the forest and as a result compromises the transparency and accountability of forest resources and the safety of CFAs.
 - ii) There is a perceived overlap between the roles of coordination and oversight roles of KWTA and NEMA. Each body's mandate should be clearly defined to avoid overlap.

- iii) NEMA does not conduct field studies to assess or confirm reports submitted by KFS with respect to environmental impact assessment regarding the management of forest plantations.

3.5.2 Recommendations

In consideration of these findings, the recommendations of the Taskforce are:

1. Conservation and sound management of the forests cannot be achieved by one agency alone. All forest conservation agencies (including NEMA, KFS, KWS, KWTA), the Kenya Police Service and the Ministries of Interior must come together to formulate an interagency plan of action to enhance synergy, and highlight areas of collaboration and coordination.
2. A County Forest Conservation and Management Committee should be established in each county, comprising of the respective county government, conservation agencies and key stakeholders to enhance coordination and accountability in the conservation and management of forests in the county.
3. Each forest station should have a “Forest Conservation and Management Committee” which comprises of the Forest Manager and representatives from the key conservation agencies and stakeholders, including the forest dependent communities and marginalised groups.
4. The coordination and oversight roles of KWTA and NEMA should be clearly defined to avoid overlap and communicated.

Chapter 4

COMMERCIAL OPERATIONS

4.1 Preamble

Kenya is endowed with a wide range of forest ecosystems ranging from montane rainforest, savannah woodlands, dry land forests, coastal forests and mangroves. According to the latest wall-to-wall mapping undertaken through the land restoration programme in 2016, forests cover in Kenya has improved from 6.99% in 2013 to 7.4% by 2016. Of the total 2.3 million ha managed by KFS commercial forest plantations only constitute 135,000 ha (KFS Strategic Plan). Additional 95,000 ha of forest plantations are privately owned especially by the large tea companies.

According to the Green Economy Strategy and Implementation Plan 2015 (GoK, 2015a), the natural resource-related sectors contribute about 42% of Kenya's GDP and 70% of overall employment. These natural resources related sectors includes; agriculture, mining, forestry, fishing, tourism, water supply and energy. FAO's State of the World's Forest report (2014), estimates that Kenya's forestry sector contributes 3.6% of the GDP but this estimate excludes forestry's contribution to household wood energy, non-timber products and the vast value of ecosystem services.

Commercial forest plantations are critical in contributing to economic growth, supply of forest products that also support forest industries and job creation as envisaged by the vision 2030. For instance, among manufacturing industries in Kenya, the forest industry is a significant employer. According to the KNBS Statistical Abstract (KNBS, 2014), the total wage employment includes; 26,371 persons in the sawmilling industry; 10,188 persons in furniture manufacturing and 56,980 persons in the pulp and paper industry. It is estimated that the formal forest sector employs 18,000–50,000 people directly and 300,000–600,000 indirectly, particularly in the rural areas (FAO, 2014; KFS, 2015b). The potential to increase jobs through enhancing commercial forestry value chains is substantial.

With population growth, urbanization and economic development, consumption of forest products will continue to increase considerably; thus demand for all timber products continues to rise, resulting in significant increase in timber prices. One beneficial side effect has been the stimulation of farm forestry (World Bank, 2006). Projections by the then Ministry of Environment and Natural Resources (MENR, 1994) indicate a growth in timber demand. Under this projection, the population growth is projected at 52 million people in 2020. Fuel wood demand was projected to grow from 20.1 million m³ (1995) to 40.1 million m³ in 2020. Under the same period, demand for industrial round wood and poles was projected to grow from 2.3 million m³ to 4.7 million m³, sawn wood demand from 212,000 m³ to 539 m³, plywood and

other wood panels from 50,000 to 134,000 m³, and paper and paper boards from 143 000 tonnes to 389,000 tonnes.

The 135,000 ha managed by KFS only produce approximately 1 million m³ of sawn wood, which is far much below the country demand. As such commercial forest plantations from the public forests, community forests and private farms will continue to play a critical role in meeting this demand including supporting the government development agenda with regards to manufacturing and housing. This would require innovative, modern, efficient and effective methods of forest plantations establishment, management, harvesting and valuation of the KFS plantations and those in community forests. However, the greatest opportunity to increase land under forest plantations lies in enhancing forest investment in private farms supported by an appropriate enabling environment by the government including but not limited to policy, legal and institutional framework, financing, technical support and incentives.

Commercial forest plantations are faced with many challenges that have compromised their sustainability and subsequently the critical social-economic role they are supposed to play. These challenges range from poor germplasm; poor land preparation; delayed re-establishment; inadequate and/or absence of silvicultural operations (beating up, thinning, and pruning); under stocking; absence of routine mensuration and inventory necessary for making appropriate management decisions and objective valuation; inadequate surveillance leading to major losses through illegal cutting, grazing, fires and inefficient harvesting operations.

The 13-year logging ban instituted between 1999 and 2012 and which was meant to be a total ban to address these challenges compounded the issue as it was selective and allowed some large companies to continue harvesting of the plantations without commensurate silvicultural regime and re-planting leading to a huge un-stocked land and poor quality forest stands.

Commercial forest plantations are high value resource as such its management and utilisation have not been without corruption, patronage and political influence, which has in a great way compromised its sustainable management.

However, during the period of the logging ban the forest policy and regulatory framework was improved to enable sustainable forest management in Kenya. This ranged from the formulation of the Forest Act, 2005, which provided for institutional reforms from the highly centralized forest department to KFS improved forest governance, framework for enhanced public participation and private sector engagement.

The Constitution of Kenya 2010 highly profiles the Forest Sector by making a provision of 10% tree cover but the devolved governance system presents both opportunities and challenges to the sector. The Forest Act, 2005 has since been repealed by Forest Conservation and Management Act, 2016 (FCMA) to align the sector with the provisions of the Constitution.

In deed Kenya is among few countries in the world that have developed a National Forest Programme (2016-2030) which is a cross sectoral and multi-stakeholder national framework for developing and coordinating forest development aimed at meeting the needs of Kenyans in the next 15 years. The ministry of Environment and Forestry is in fact in the process of developing an Action Plan to implement the programme. This programme aims at sustainable forest management and its goal is to develop and sustainably manage, conserve, restore and utilise forests and allied resources for social economic growth and climate resilience. One of its strategic objective is to enhance forest-based economic, social and environmental benefits.

FCMA needs review, and development of subsidiary regulations to operationalize it, supported by political goodwill; institutional culture change; good governance; adequate financing; enhanced technical capacity and more importantly strict compliance with and enforcement of the law.

As such there is need for a strategic rethink and paradigm shift on how commercial plantations forests are managed and utilised in Kenya for optimal social-economic and ecological benefits. Therefore the findings and recommendations of this chapter provide a pathway for this paradigm shift in managing the commercial forest plantations in public, community and private lands.

4.2 Interpretation of the Terms of Reference

4.2.1 Procedures, qualification and conditions for licensing of saw millers

The interpretation of this ToR by the Taskforce was that it required an in depth assessment and critical analysis of procedures, qualifications and conditions put in place by KFS in licensing of the saw millers. In particular this required an assessment and interrogation of the procurement and disposal process used by KFS in prequalifying of saw millers and subsequent award of the forest stocks. It also called for the assessment of the compliance of such licensing procedures with the policy and legal framework that governs forest management and conservation in Kenya, especially FCMA, Public Procurement and Assets Disposal Act, 2015, The Forests (Participation in Sustainable Forest Management) Rules, 2009, and The Forests (Harvesting) Rules, 2009 among others. Based on the aforementioned assessment, the Taskforce made a determination as to whether or not the saw millers licensing procedures are adequate, fair and appropriate; and consequently made appropriate recommendations.

4.2.2 Effectiveness of the monitoring and verification procedures for compliance with license conditions

The interpretation of this ToR by the Taskforce was that the TOR required a critical review of the procedures put in place by both the KFS and saw millers for monitoring and verifying compliance with the terms and conditions of licenses for the movement of timber and wood products. This required an in depth investigation of the nature of the license, the license terms and conditions and their compliance with the FCMA and regulations governing the licensing of saw millers.

Based on the aforementioned assessment, the Taskforce determined the effectiveness of the monitoring and verification procedures and level of compliance; and subsequently deduced appropriate recommendations.

4.2.3 Adequacy and effectiveness of the Chain-of-Custody System

The ToR was interpreted to mean critically reviewing the chain-of-custody system established by KFS on how forest products are moved, tracked and monitored from their various origins (community, public and private forest/farms) to end use. This would entail seeking a full understanding of the various forest product chain-of-custody including sawn wood logs mainly from pine and cypress, transmission poles and posts mainly from eucalyptus, and firewood from the aforementioned tree species from public, community and private forests.

This TOR also required a review of all the documentation and permits that are issued and the person issuing, to govern the movement and tracking of the various forest products from the forest to end-use.

It further required the assessment of the level of compliance to the FCMA, 2016 and the laid out procedures and systems by the KFS, County government and other Agencies.

Based on this assessment, the Taskforce determined the adequacy and effectiveness of the chain of custody system, and made the necessary recommendation to address any identified inadequacy or inefficacy.

4.2.4 Adequacy and effectiveness of Felling plans and associated programmes

This was interpreted to mean critically reviewing felling plans and the planting programmes developed by KFS, including their development process, approval and execution; and an assessment of the monitoring and evaluation systems put in place to ensure that any non-compliance in their implementation is detected and responded to.

It also required an in-depth review of what informs the felling plan, the types of the felling plans, their duration and procedures put in place by KFS to ensure that they meet the principles of sustainable forest plantation management and are adhered to.

On planting and re-planting programmes, the TOR required a critical analysis of what informed the re-planting programmes, duration, development, approval and execution. It also required an assessment of the monitoring and evaluation system put in place by KFS to ensure that the replanting programme meets the principles of sustainable forest plantation management and are adhered to. It also entailed analysing the role of other players such as saw millers and CFAs in the re-planting of harvested blocks and the framework of engagement used.

Based on the aforementioned assessment, the Taskforce made a determination as to whether or not the felling and re-planting programmes are adequate and effective; and consequently, make the appropriate recommendations.

4.2.5 Valuation and analysis of procedures and methods for forest stocks

This TOR was interpreted to entail a review and analyses of the methods and procedures used by KFS to value forest stocks (logs, poles and firewood) before disposal. This required seeking an in-depth understanding of the sale inventory process from methods used for data collection in the field, data transmission, and data entry to volume computation for different tree species.

It also entailed the assessment of the adherence to the volume computation methods stipulated in the Technical Orders, accuracy and safeguards put in place by KFS to ensure that the process is not compromised or manipulated.

The TOR further required a review of the process KFS use in forest stock price determination and its effectiveness in determining the stumpage price for the standing forest stocks before sale.

Based on the review, the Taskforce made a determination on the accuracy and effectiveness of the valuation procedures and methods; and made the necessary recommendations.

4.3 Key Findings

4.3.1 Procedures, qualification and conditions for licensing of saw millers

Prior to 2015/2016, KFS used open tendering process as per the bidding procedures prescribed in the Forests (Participation in Sustainable Forest Management) Rules, 2009 to select, award and grant saw millers “timber logging licenses”.

This process involved development of the prequalification criteria by the plantations department, which was then sent to the procurement and supply chain department for advertisement in the daily press. This prequalification was also complemented by due diligence to verify that the sawmills had the necessary financial, human and technological capacity to harvest and process the logs. All prequalified saw millers paid a license fee of KES 30,000- 80,000 depending on their sawmill category upon receiving a notification of prequalification by KFS.

This processes resulted to the prequalification of 850 saw millers who were then clustered per county. Based on the availability of forest stock ready for harvesting a request for quotation was sent to a specific county prequalified saw millers to bid. The county team composed of Ecosystems Conservator (EC), Procurement and Accounts personnel would evaluate all the bids, rank and make recommendations to the Tender Committee based at the KFS headquarters for the final award.

In 2017, this disposal process was changed through a communication by the KFS Board of Management titled 'Procedure for disposal of forest plantation material', dated 13th March 2017. KFS indicated that this decision was made after consultation with the Public Procurement Regulatory Authority, however this was not supported by any documentary evidence. These procedures prescribe direct allocation of the forest stocks, in which case the Ecosystem Conservator (EC) issues a notice to pre-qualified saw millers, of the intention for sale at the County level and then channels his/her recommendation on who to be allocated to the CCF through the Head of Conservancy. The valuation of the forest stocks on the stand earmarked for felling was done and then allocated to the recommended saw miller. The CCF has the prerogative of adopting the recommendations of the EC or making alterations. Incidentally, the procurement and supply chain department of KFS is not involved in this direct allocation process.

The direct allocation process is prone to abuse and several 'saw millers' have already been brought on board or added into the prequalification list without following any due diligence to ensure that they have adequate legal, technical, technological, financial and human capacity. By July 2016, the prequalified saw millers were 850 (731 small scale, 116 medium scale and 3 large scale) after due diligence. This number has since increased to the current 898 saw millers (34 large scale, 171 medium and 693 small scale). Kenya Timber Manufacturers Association (KTMA) raised concern that due diligence was not followed before 'saw millers' were administratively added into the prequalified list. This addition with no due diligence have resulted to allocation of forest stocks to saw millers using wasteful technologies such as circular saw bench and tractor driven bench saws.

Furthermore, the letters issued by KFS to saw millers who did not qualify for prequalification, indicated that they can be reconsidered if they demonstrated to have invested in enhancing the technological capacity of their saw mills to the required

standards. This provision could have been exploited unfairly to bring on board additional saw millers.

With over 1,000 sawmills in Kenya mainly competing for approximately 1 million cubic metres from KFS plantations every year, this competition for prequalification will continue unless something is done. KTMA was of the view that its recognition by the FCMA as the umbrella body for all saw millers in Kenya would strengthen governance and self-regulation of the saw-milling sector. Indeed, KTMA proposes that KTMA membership or clearance letter should be made a mandatory requirement for any saw miller to be prequalified by KFS.

The administrative inclusion of additional saw millers in to the prequalified list does not create fairness as the previously approved saw millers were subjected to a more rigorous and due diligence process. Therefore the direct allocation procedure being practiced by KFS is unfair, inadequate and inappropriate and incidences of its abuse are evident.

This review also established that KFS does not issue a timber license or permit to the selected saw millers as required by The Forests (Participation in Sustainable Forest Management) Rules, 2009 under the Forest Act 2005 (repealed) or FCMA, but instead issues an award letter/ letter of authority. This is in contravention of the Act.

It is instructive to note that notwithstanding the repeal of the Forest Act 2005, pursuant to section 77(e) of the FCMA, the Forest Rules 2009 shall remain in force until they are revoked in accordance with the provisions of FCMA.

4.3.2 Effectiveness of the monitoring and verification procedures to ensure compliance with license conditions

Allocation of plantations for felling is done at the KFS Headquarters, and then communicated to the Forest Manager in charge of a forest station. The Forest Manager then identifies the plantation, apportions it and set the boundaries for clear fell. For thinning allocations the Forest Manager identifies the trees to be thinned, mark them accompanied by a Forest Ranger, who then supervises to ensure that the right hammer marking is done and the right materials are removed. For fire wood removal, the Forest Ranger uses the receipt for movement controls.

The Forest (Participation in Sustainable Forest Management) Rules 2009 prescribes the terms and conditions to be complied with by the saw millers who are allocated forest stands for harvesting. KFS issues a letter of authority granting the saw miller access to forest stocks. KFS does not give the saw millers timber harvesting license nor terms and conditions to govern their operations as required by law.

The Taskforce established that the Forest Rangers who are supposed to check compliance do not seem to be aware of such terms and conditions. This lacuna makes

it difficult for the Forest Rangers to enforce the terms and conditions and for the saw millers themselves to develop their internal capacity to ensure compliance.

Even though the Forests (Participation in Sustainable Forest Management) Rules, 2009, contains a timber license template and prescribes the terms and conditions thereof, KFS on the contrary issues a letter of authority to the selected saw millers and do not have a framework, procedures or system in place to monitor or verify the compliance of the license terms by the saw millers.

Saw millers, on the other hand, do not have any mechanisms in place nor procedures to monitor and verify their compliance with the license conditions, perhaps due to the fact that they are never issued with a timber license and terms and conditions thereof.

4.3.3 Adequacy and effectiveness of the Chain-of-Custody System

With regards to the commercial forest plantations, KFS has a chain-of-custody for clear fell and thinning. These include logs, poles and firewood. According to KFS, for clear fell logs, a hammer mark is made on all logs to ensure identification and tracking of the movement of the logs from the forest to the saw mill. The hammer mark is specific to each forest station as prescribed in the Harvesting Rules 2009 and General Orders.

The thinnings are also stamped with a revenue hammer mark to ensure tracking of their movement from the forest station to the sawmill. However, a visit to sawmills in Nakuru confirmed that not all logs from the public forest plantations bear the hammer mark as required.

However, firewood and poles bear no identification mark and the only proof for their exit from the forest station is the receipt.

The movement of sawn timber or forest products from the sawmill to their end use is governed by a movement permit even though the permit is not anchored on the General Orders but only instituted by a circular.

The movement of forest products from the private farms is governed by a certificate of origin generated by the Forester at the Forest Station based on which the Ecosystem Conservator issues a movement permit. It was established that no hammer mark is being made on forest products from the private farms and therefore there is a loophole where illegally sourced forest products from the public plantations or indigenous forest can be camouflaged to be from private farms and subsequently issued with a certificate of origin and movement permit. The Forest (Harvesting) Rules, 2009 under Rule 10 on Timber Marking provides for all logs from private farms to bear an identification mark assigned by the Director (now Chief Conservator of Forests) for such forest. For instance, it was observed that harvesting of indigenous trees specifically within Kaberwa forest are being transported without the legal required hammer mark.

As per Schedule 4 of the Constitution and as per the TIPS, the role of tracking and monitoring movement of all forest products from the community forests and private farms is vested in the County Government. However, many County Governments have not developed regulatory framework nor do they have adequate capacity to manage this process and in some instances KFS is still doing it, creating room for exploitation that could facilitates illegal movement of forest product thus making tracking and traceability impossible.

Additionally, Kenya Police and KWS are involved in enforcement and monitoring the movement of forest products from source to the end use. However, the effectiveness of the aforementioned agencies is wanting due to collusions between themselves, corruption and lack of an integrated approach, supported by a legal framework

4.3.4 Felling plans and associated programmes

4.3.4.1 *Felling plans*

KFS has two types of felling plans, 5 years and one (1) year. The felling plans are derived from the 10 years forest plantations management plans and indicate the annual allowable cut. In principle, the felling plan is used as a tool to ensure that in every particular year there is forest stock available having attained its rotational age to be felled, a key indicator of sustainable forest management.

However, it was noted that whereas the one year felling plan should strictly be adhered to, there are many instances where KFS fell more forest stocks than provided for in the plan, which compromises the principle of sustainable forest management and contribute to increased acreage of un-stocked areas. The deviation from the felling plan was noted to be from increased pressure from saw millers to fell more, in some cases driven by political interests.

An effective felling plan is informed by routine or annual inventory as is the forest management practice. However, KFS last inventory was in 2010 supported by donor funding and therefore the data that is supposed to inform the felling planning process is not there or is out-dated thus compromising the integrity of the felling plan. The annual forest plantation mensuration and inventory monitors the survival, stem population and growth which are important in informing management decisions including determining the optimal rotation age. KFS cited lack of funding to support annual forest plantation mensuration and inventory a key plantations growth monitoring and management tool.

Some of the forest plantations are situated in critical water catchment or biodiversity hotspot areas such as the Aberdares. KFS carried out a zoning process to identify such plantation in some areas such Muranga and Kirinyaga.

KFS also conducts environmental and social impact assessments of the various forest ecosystems, which covers the felling operations and instituted a process of conducting

annual environment audit as per the Environmental Management and Coordination Act (EMCA). However, the follow up to ensure implementation of the environmental management plan is inadequate perhaps due to the fact that there is no environmental unit in KFS.

4.3.4.2 *Planting programmes*

Just like the felling plans, KFS prepares two (2) planting programs; 5 years and one (1) year. These programmes are derived from the 10 years forest plantations management plans. Planting program prescribes the areas that will be established, the number and the species of tree seedlings needed. The one-year planting programme is also used to inform the budgetary process for its implementation.

According to KFS, the current un-stocked forest plantation area is estimated at 13,000 ha part of which is the backlog arising from the 13 years logging ban, even though there was no documentation in support of the same. Annually, KFS targets to plant 8,000 ha, but the limited budget provision only allows for 2,000 ha and the rest is expected to be done by the CFAs through PELIS or by the saw millers. It costs KFS approximately KES 50,000 to establish one hectare, but through PELIS it costs approximately KES 15, 000.

Delayed planting also result from cases where the saw millers delay in harvesting and removing logs at the stipulated time, with some saw millers holding on to the forest stocks for as long as 4 year, for instance in Loitokitok forest and Kabaru Forest. There are also other incidences where, the Forest Manager delays in opening up the cleared stand for replanting by CFAs via PELIS and saw millers. For instance, for Muileshi CFA, PELIS operations have registered success in three regions, namely, Kakamega, Ileo and Shinyalu. The CFA has a management plan and an agreement with KFS to guide their operations. The CFA has so far planted 490 acres of trees with a success growth rate of 80%. They also engage in maintaining the firebreaks to control fire outbreak and spread of the indigenous forest into the plantation forest. Sixty scouts have been trained to support conserve Kakamega Forest a tropical rain forest which is 90% indigenous and 10% plantations.

In areas where the forest adjacent community has small pieces of land, the PELIS has succeeded e.g. in Nyeri and Kiambu. While in areas where the communities have adequate land the system have not worked. PELIS have also been mismanaged resulting to under-stocked stands, delayed replanting and poor quality plantation establishment. Moreover, in places like Loitokitok Forest, it was observed that non-suitable/non-recommended crops such as maize have been planted alongside tree seedlings hampering their growth. The KFS Board has confirmed that maize is not suitable under PELIS.

The re-planting by the saw millers is voluntary and there is no formal framework of engagement between the KFS and saw millers. In 2017, KTMA gave 2.5 million seedlings to KFS, leading to replanting of 2,000 ha and the establishment of one of the

largest tree nursery in Kericho. KTMA expect to produce over 5 million seedlings to hand over to KFS in 2018 for planting but on visiting the nursery they can only manage to supply 2.6 million seedlings to KFS. Some Saw millers indicated that they make a follow up to ensure that the seedlings they plant are maintained up to a sapling stage.

The involvement of saw millers in planting in the absence of a well thought out engagement regime may result to conflict of interest, based on the view that they have invested in replanting, and hence they should get preferential treatment in the allocation of the forest stocks. In some instances, Nakuru saw millers (small and medium) confirmed that they contribute money to KFS through KTMA in the range of KES 15,000 in cash, per ha to support replanting but it is not clear how such money is accounted for by KFS. Some saw millers who are not comfortable paying the KES 15,000 opted to plant directly.

KFS collect royalties to a level of KES 3.2 billion (KFS 2017/2018 Budget) in a year but this amount goes toward recurrent expenditure instead of a portion of it going towards the support of the planting operations.

One of the main inadequacies is that KFS does not have an elaborate monitoring regime to ensure that the seedlings planted by the CFAs and saw millers or by themselves survive leading to low quality plantation establishment.

4.3.5 Valuation procedures and methods for forest stocks

KFS conducts two (2) types of inventory procedures, namely, management inventory and sales inventory. Management inventory is done via sampling to inform management decisions, while the sale inventory is done to estimate the stumpage volume, which is a key parameter for the valuation of the forest stock and determination of the stumpage price.

Unlike the management inventory, which is through sampling, sale inventory entail measurement of all trees diameter and the height of every tenth tree. This data is then transmitted to the Head of Inventory, supported by two other inventory staff at KFS Head Office, who then keys in the data. Different computation formulae are the applied, based on the tree species, to generate the standing volume of a specific forest plantation areas earmarked for felling as per the felling plan.

The inventory is conducted by an inventory team composed of one Forester and two enumerators. Currently, KFS have 11 field inventory teams, which are deployed, on different plantations earmarked for felling on need basis. Due to limited number of permanent KFS staff, casuals are often hired to undertake inventory, thus high potential of compromising the integrity of the process. The inventory is done too close to the allocation of the plantations to the saw millers for felling and as such in all cases the inventory team is under pressure and this denies them time to undertake verification or quality assurance. As such, there is a possibility for the saw millers to

collude with the field inventory staff to compromise the inventory process in favour of the saw miller. There is also likelihood to manipulate the raw inventory data collated in the field during data entry and volume computation at the KFS Headquarters. Observations made across the field visits included undervaluation of the trees for harvesting as a common practice between KFS officers and saw millers. Public submissions on Githaka Forest, Ragia Forest, and Sasumua Dam provide clear evidence of indigenous tree felling and illegal logging activities.

The inventory is conducted to establish the standing volume for tree species poised for sawn timber whether from clear fell or thinning, which is pine and cypress. For the trees intended for transmission poles and posts, the pricing is based on individual pieces, a system prone to subjectivity hence potential loss of revenue.

Every three years, KFS undertakes a stumpage appraisal through market analysis using the residual pricing method to establish the market price for both the sawn wood and poles. This involves, assessing the total cost incurred by the saw millers or transmission pole plants in processing their products, makes a provision of 10% profit margin and then deduct this cost from the market timber price to arrive at the unit price per cubic metre. It is this unit price that is multiplied by the stumpage volume to arrive at the stumpage price.

This price schedule is then submitted to the KFS Board for approval and then to the Cabinet Secretary responsible for Forestry for gazettelement.

The current KFS forest plantation stocks disposal is based on standing volume meaning that the saw miller or transmission poles dealers buy the tree while standing and go ahead and fell themselves. In this system, the value of the forest stock is only dependent on the quantity and thus it's not optimal since it does not capitalize on the quality of the products. KFS is aware of this challenge and piloted the grading system but faced resistance from the saw millers who were in favour of the standing volume method, perhaps fearing that they may have to pay more if the grading system is adopted. The KFS method of selling sawn timber is based on merchantable height, which is wasteful and out-dated.

The KFS Technical Orders that stipulates the rotation age (currently at 30 years) for pine and cypress is out-dated and needs to be reviewed in light of recent scientific knowledge. For instance, the current rotation is biological and ignores optimal economic considerations. In good soils according to current KFS data, a pine plantation at 22 years would have reached optimal economic value, but now have to wait until its 30 years as per the Technical Orders.

A visit to James Finlay, a private entity in Kericho, demonstrated that forest plantations in Kenya can be established, managed and harvested professionally, efficiently and effectively and present a good case study for learning. Indeed Finlays has invested heavily on automated modern machinery such as the Eco-log forest harvester, Eco-log forestry forwarder and the Pallari stump harvester used for

harvesting of logs and establishing the standing volumes of forest stocks in an automated way which enhances accuracy, accountability and transparency.

4.1 Recommendations

4.4.1 Adequacy, fairness and appropriateness of procedures, qualification and conditions for licensing of saw millers

Short-Term

1. KFS should discontinue the 'Procedure for disposal of forest plantation material' that provides for direct allocation of forest stocks.
2. In the meantime, KFS should strictly adhere to the current Forests (Participation in Sustainable Forest Management) Rules 2009 with respect to issuance of timber licenses and permits.
3. No administrative additions of saw millers to the prequalification list should be done before an appropriate forest stocks disposal procedure has been developed.
4. KFS should undertake an independent due diligence of all the prequalified sawmills.
5. Ministry of Environment and Forestry should undertake an independent audit of all saw millers who have been granted access to forest stocks by KFS through the allocation letters.
6. The criteria used by KFS to classify saw millers into small, medium and large categories should be reviewed to enhance its transparency.
7. Clear modalities for disclosure and management of conflict of interest where a CFA or its members are also saw millers should developed.

Medium-Term

8. KFS should undertake an external audit of the wood conversion efficiency, human resources and technological capacity of the sawmill before prequalification to ensure that sawmills using wasteful technology such as circular bench saws and tractor saws are not prequalified.
9. The Cabinet Secretary responsible for Forestry should formulate regulations, through a participatory process in accordance with the procedures laid down in the FCMA and the Constitution, to govern the disposal of forest stocks from community and Public Forests. The formulation process should, among others, address the following:
 - a) Geographical area of operation of the saw miller; and
 - b) Affirmative action for local small-scale saw millers, and communities neighbouring forest areas.

4.4.2 Effectiveness of the monitoring and verification procedures for compliance with licensing conditions

Short-term

1. KFS should clearly communicate the timber license terms and conditions to all saw millers upon issuance of the licenses and for the Forest Rangers to be made aware of the same.

Medium-term

2. The Cabinet Secretary for Environment and Forestry should, on recommendation by KFS, make Regulations on harvesting to operationalize FCMA.
3. KFS should establish an elaborate framework and procedures to monitor, verify and audit the compliance with the licensing conditions by the saw millers.
4. The Cabinet Secretary responsible for Forestry should provide oversight to routinely audit and enforce compliance to saw millers' license conditions.

4.4.3 Adequacy and effectiveness of the Chain-of-Custody system

Short-Term

1. KFS should review and implement the procedure for removal of forest produce from public forest to enable tracking and monitoring to ease traceability.
2. County Governments, in consultation with KFS, should review and implement the procedure for removal of forest produce from private and community forests to enable, tracking, and monitoring to ease traceability.
3. KFS should establish clear framework for tracking and identifying imported timber to seal illegal logging loopholes on origin.
4. KFS should develop a protocol that governs the use, safe custody, administration of the revenue hammer mark and tracking of imported timber.

Medium-term

5. KFS should review technical and general orders to include tracking and monitoring the movement of forest products from forest industries to the end use.
6. KFS should develop an elaborate mechanism for tracking and monitoring the movement of poles and firewood from the public forests.
7. The Cabinet Secretary for the National Treasury should establish regulations for the identification, tracking monitoring and verification of imported wood and wood products, in conjunction with the Ministry responsible for Forests, that will in the interim ease the pressure on our forest resources, and in the long run, make them competitive.

4.4.4 Adequacy and effectiveness of felling plans and associated programmes

Short-Term

1. KFS should develop an elaborate control mechanism to ensure that felling plans are strictly adhered to by having the annual felling plan approved by the KFS Board and that any alteration to the plan can only be reviewed and approved by the same Board.
2. KFS should improve transparency on the felling plan once approved by the Board and share across relevant stakeholders and have digital platform available for public access to felling plans.

Medium-Term

3. KFS should develop a full rotation-felling plan to ensure sustainable and long term planning and budgeting.
4. KFS should commission an independent assessment and evaluation to identify the most effective and efficient forest plantation establishment strategies and approaches, and make the necessary recommendations.
5. The Treasury should make provision for adequate financial resources to KFS through the Ministry responsible for Forestry to enable full execution of the planting programmes.
6. KFS should ensure strict adherence to the rules governing PELIS to stick to the pre-determined appropriate crop species.
7. CFAs should enhance their governance and develop a National self-regulatory entity enshrined in the Forest Sector statutes.

Long-Term

8. KFS should create an Environmental unit under the CCF to act as a liaison office with NEMA and to ensure environmental compliance in all KFS forestry operations.
9. Operationalize the Forest Sector Trust Fund to allow KFS to use a portion of royalties and taxes generated for replanting, reforestation and other silvicultural practices.

4.4.5 Valuation procedures and methods for forest stocks

Short-Term

1. KFS should put in place an internal and external control system to ensure quality assurance of the sale inventory process.
2. KFS should institute an internal and external control system to ensure quality assurance of the stumpage price determination process.

3. KFS should conduct sale inventory at least one year before the felling date of the forest stocks.

Medium- Term

4. KFS should ensure that management mensuration and inventory is conducted on all the forest plantations annually and put in place control mechanism to ensure that the process is objective.
5. KFS should pilot and test grading system for the disposal of the forest stocks to ensure optimal value and based on the outcome make necessary recommendations.
6. KFS should review Technical Orders to allow for the adoption of modern technologies for management, harvesting and disposal of forest stocks.
7. KFS should review the Technical Orders to ensure that the most economical rotation age regime is determined and applied.
8. KFS should review their current merchantable height method of the sawn timber to total volume valuation.

4.4.6 General Recommendations (Medium-Term)

1. Ministry responsible for Forestry should develop guidelines on cost and benefit sharing mechanism for the forest sector.
2. KFS should develop subsidiary legislations and guidelines to implement section 44 of FCMA 2016 on concession management.
3. The Auditor General Office, the National Treasury and the Ministry responsible for Forestry should adopt National Taxation, valuation, and auditing regime to suit forestry sectors.
4. The saw-milling subsector should enhance their governance and establish a self-regulatory entity recognised within the forest sector statutes.

Chapter Five

GOVERNANCE AND FINANCE

5.1 Preamble

The mandate and functions of the forest sector are enunciated by the FCMA as well as in the Executive Order No. 1 of 2016. Further, under the provisions of the Constitution in the Fourth Schedule, the function of forestry and environment is a concurrent function assigned to both National and County Governments. Specifically, the National Government is responsible for the residual function of policy formulation and protection of the environment and natural resources with a view to establishing a durable and sustainable system of development. On the other hand, County Governments are responsible for implementation of specific national government policies on natural resources and environmental conservation including forestry.

According to the Executive Order No. 1 of 2016, the function of forestry is assigned to the Ministry of Environment and Natural Resources with the following specific mandate; Forestry development policy management, development of forests, re-forestation and agro-forestry, restoration of strategic water towers and Kenya forestry services. Other than the Ministry itself, the other institutional structures that have been created some of these functions are KFS, KEFRI and KWTA. It is noted that this function is now being performed by the current Ministry of Environment and Forestry.

Other Ministries, Department and Agencies that are involved in forest management and conservation include the Ministry of Water; Agriculture, Livestock and Fisheries; Lands and Physical Planning; the National Land Commission (NLC), Kenya Wildlife Service (KWS), the National Museums of Kenya (NMK), Water Resources Authority (WRA) and the National Environment Management Authority (NEMA).

FCMA establishes various governance and institutional structures responsible for the management of respective functional areas as provided for in the Constitution and the Act. The key governance and institutional structures are:

a) Cabinet Secretary

The Cabinet Secretary in consultation with County Governments and relevant stakeholders is required to develop a national forest policy for the sustainable use of forest and forest resources which policy should at least once in every five years be reviewed. Further, the Cabinet Secretary is required within one year of commencement of the Act and every five years thereafter, following public participation, formulate a public forest strategy. The Cabinet Secretary is also responsible for resource mobilization for the sector as well as playing an oversight role on the performance of the other institutional structures in the sector.

b) Kenya Forest Service

FCMA establishes a body corporate known as KFS, whose functions include, among others:

- Conservation, protection and management of all public forests,
- Preparation and implementation of management plans for public forests, and assistance with the same for community and private forests
- Permitting /licensing activities relating to forest resources
- Assisting counties to build capacity in forestry and forest management
- Through collaboration, identifying research needs and the application of such research
- Management of water catchments to enhance ecosystem services
- Implementation and enforcement of rules and regulations governing importation, exportation and trade in forest produce.

KFS is managed by a Board of Directors whose primary responsibility is to ensure proper performance of the various functions assigned to the Service under the Act.

Under the provisions of Section 14 of the Act, the position of CCF is established with the principle function of being responsible for the direction of the affairs and transactions of the Service as well as performance of its objectives, functions and duties. The CCF is also the accounting officer and is responsible for the day-to-day running of the Service. In addition, the Board has responsibility for appointment of such other officers and staff of the Service as is necessary to carry out the functions of the Service.

Amongst the staff of the Service, the Board has the power, on recommendation of the Cabinet Secretary responsible for matters related to internal security, to establish and designate the specific cadre of staff of the Service to be uniformed and disciplined force.

According to the provisions of Section 11 of the Act, the Board has the leeway to establish committees for the better carrying out of its functions. Currently, the Board has four committees, which include; Audit and Governance, Human Resource and Administration, Finance and General Purposes as well as the Technical, Planning and Development committees.

c) County Governments

Under the provision of Section 21 of the Act, County Governments are assigned the following functions:

- a) Implementation of national policies on forest management and conservation;
- b) Management of all forests on public land defined under Article 62(2) of the Constitution;

- c) Preparation of an annual report, with the approval of the County Assembly, for the Service on the activities of the county government in relation to this Act and any national policies on forest management and conservation;
- d) Promotion of afforestation activities in the county;
- e) Advising and assisting communities and individuals in the management of community forests or private forests; and
- f) Enter into joint management agreements with communities or individuals for the management of community forests or private forests.

A County Assembly may enact legislation for the better carrying into effect of the provisions of this section.

KFS may, if requested, collaborate, partner or offer assistance to the County Government

d) Kenya Forestry College

Section 17 of the Act establishes the Kenya Forestry College mandated to provide forestry education, provide vocational and technical training courses in forest conservation and the management and sustainable utilization of forests, and provide training in the protection of forests and allied natural resources.

The College is required to develop training programmes in forest management and utilization design training programmes to support apprenticeship and vocational training in the forest sector including short courses for communities, private forest owners and forest industries.

e) Kenya Forest Research Institute (KEFRI)

The Kenya Forestry Research Institute (KEFRI) is established under the Science, Technology and Innovation Act, 2013 with the mandated of forestry research and development.

The Institute is required to develop research and development programmes to provide information and technologies for sustainable development of forestry and allied natural resources. In addition, KEFRI is required to consult with relevant organizations to:

- a) Prepare forestry research and development strategies for the country;
- b) Conduct expert training courses in forestry and allied natural resources;
- c) Disseminate research findings to support forestry development in the country and counties; and
- d) Participate in the development and monitoring of national forest standards.

The Institute shall, on a regular basis, compile and submit a report for the Cabinet Secretary relating to forestry research and development.

f) Forest Conservation and Management Trust Fund

The objective of the Forest Conservation and Management Trust Fund is to nurture, promote and support innovations and best practices in forest conservation and development including the support of community forestry programmes; reforestation and afforestation programmes; forestry extension programmes; apprenticeships and vocational training; and programmes for payment for ecosystem services.

5.2 Interpretation of the Terms of Reference

The following subsections present the interpretation of the terms of reference pertaining to Governance and Finance by the Taskforce.

5.2.1. Effectiveness of participatory forest management programmes including CFA operational and governance structures

The Taskforce was required to:

- Identify all participatory forest management programmes that are spelt out in the FCMA;
- Undertake an assessment of how each of these programmes work;
- Determine the governance structures that are in place for each of these programmes and how effective they are in meeting their objectives;
- Undertake a specific review of CFAs operational and governance structures.

5.2.2. Revenue generation from forests against the investment and operational costs

The Taskforce was required to:

- Undertake a determination of all revenue generated from the forest sector through KFS.
- Assess investments undertaken towards the forestry sector by KFS.
- Assess or determine the operational costs in KFS.
- Compare the revenue generation of KFS vis-a-vis its investment and operational costs.

5.2.3. Penalties under the Forest Conservation and Management Act, 2016 and related laws

The Taskforce was required to undertake a review of the relevant Acts that touch on or have an impact on forestry management, with the aim of harmonizing and or enhancing the penalties therein. These include:

- Constitution of Kenya 2010

- Forest Conservation and Management Act, 2016
- Wildlife Conservation and Management Act, 2016
- Energy Act, 2006
- Agriculture Food and Fisheries Act, 2013
- Water Act, 2016
- Water rules, 2007
- Land Act, 2012
- Land (Amendments), 2016
- Survey Act Cap. 295
- Physical Planning Act Cap. 286
- County Government Act, 2012
- Environmental Management and Coordination Act, 1999
- Ministry of Environment and Forestry Strategic Plan
- Forest (Participation in Sustainable Forest Management) Rules, 2009
- Forest (Charcoal) Rules, 2009
- Draft National Forest Policy, 2015
- Sessional paper no 3 of 2009 on National Land Policy
- Sessional Paper 1 of 2017 on National Land Use Policy (NLUP)
- National Spatial Plan (2015-2045)
- Devolution Policy, 2016
- Catchment Management Advice of KEFRI, 2009
- Kenya Water Towers Status Report 2013, 2014, 2016 and 2018
- KWTa Strategic Plan 2016-2020
- KWS Strategic Plan

5.2.4. Statutory and regulatory regime governing charcoal burning and trade

The Taskforce was required to review the FCMA and the Charcoal regulations 2009 and any other regulatory mechanisms at (including the County level) to identify the gaps in legislation and the institutional weaknesses that face the Charcoal sector and therefore determine whether the production, trade and consumption of charcoal can be better regulated.

Additionally, the Taskforce was to determine whether it is practical, feasible and possible to ban the production and use of charcoal in the country.

5.2.5. Effectiveness of participatory forest management programmes and CFA operational and governance structures

5.2.5.1 Participatory Forest Management

The Taskforce was required to review the strategies employed in sustainable forest management through the involvement of communities living in the neighbourhood of forests. In Kenya, this is done through CFAs, individuals, institutions and government agencies that are granted permission to undertake some economic activities while protecting and conserving the forests. There are three main participatory forest management tools used by KFS, which include; the community participation, forest concession and joint management agreements.

5.2.5.2 Community Participation

Provision in the Law

Section 48 of the FCMA establishes CFAs, whose membership comprises of members of a forest community resident in the same area coming together and being registered as a society. The CFA may then apply to KFS for permission to participate in conservation and management of a public forest. Where KFS grants permission, the CFA in conjunction with KFS develops a forest management plan and signs a management agreement with KFS in order to participate in the management and conservation of the forest.

Obligation of the CFAs

A registered CFA would be under obligation to protect, conserve and manage the public forest in accordance with the approved management plan, formulate and implement sustainable forest programmes, protect sacred groves and protected trees, assist KFS in enforcing the provision of the FCMA, help in fire-fighting, inform KFS of any developments, changes and occurrences which are critical for conservation of biodiversity and lastly with the permission of KFS, enter into partnerships with other persons to ensure efficient and sustainable management of the forest.

CFAs User Rights

The CFAs user rights comprise of collection of medicinal herbs, harvesting of honey, harvesting of timber or fuel wood, grass harvesting and grazing, collection of forest produce for community based industries, ecotourism and recreational activities, scientific and educational activities, plantation establishments, development of community wood and non-wood forest based industries and contacts to assist in carrying out specified forest operations.

Rationale of Participatory Forest Management

The objective of Participatory Forest Management is to inculcate a sense of ownership in communities living within the vicinity of the forest, and enable them to conserve and manage the forest.

Structure of the CFAs

The typical organizational structure of a CFA comprises of the executive committee, which is the highest organ in decision-making, management committee and the members who would comprise of community based organizations (CBOs). The CBOs consist of specific user rights groups like honey harvesters and grazers, among others. The CFA is intended to be an all-inclusive body that encompasses all forest user-groups within the communities adjacent to the forest.

Role of KFS in managing PFM operations

KFS through its Participatory Forest Management Guidelines, 2015 facilitates the formation and strengthening of CFAs in the following manner; identifies community structures, provides technical and management advice to community, conduct elections and capacity building.

5.3 Effectiveness of participatory forest management programmes

5.3.1. Findings and Situational Analysis

5.3.1.1 Status of Registration of CFAs

Information obtained from KFS⁴⁹ indicates that a total of 325 CFAs have been registered across the ten conservancies in the country. The ten conservancies are Nairobi, North Eastern, Nyanza, Western, Eastern, Ewaso North, North Rift, Mau, Coast and Central Highlands. Out of the 325 CFAs, 156 have forest management plans and only 99 have signed management agreements with KFS. What this means is that, the participatory forest management system through the CFAs vehicle is not entirely encompassing since only about 30% of the registered associations have met the legal requirements. It can only be concluded that the remaining 70% of the associations are not making the requisite contributions to sustainable management and conservation of the forests and therefore call to question the effectiveness of KFS and entire forest sector in exploitation of this very important window in efficient management of the forest resources. What raises even more concern is that many of these associations, which have not met the legal requirements, are in active operation without being obligated to comply with the law.

According to the investigations and inquiries carried out by the Taskforce, there are many instances of CFAs that are in active operation in various conservancies that have not been registered by the registrar of societies. It is obvious that such CFAs are operating completely outside the law but with complicity of KFS.

⁴⁹ KFS. Community Forest Association Register, Kenya 9 Mar 2018

Whereas the law requires that the membership of CFAs should comprise of members of communities resident in the same area around the forest, in some instances, there are CFAs whose membership comprises of people who are not resident in the same area, people driven by common business interest to the exclusion of other community members (e.g. saw milling), people of the same family and people who are allegedly proxies of KFS officers. In addition, it was found that KFS in some instances influences the membership of CFAs and its governance.

5.3.1.2 Role of KFS in Effective Operation of CFAs

According to the provision of the FCMA and the Forest (Participation in Sustainable Forest Management) Rules, 2009, KFS is under obligation to perform the following functions with respect to operation of CFAs:

- a) Grant permission for a CFA to participate in the conservation of a public forest;
- b) Impose conditions necessary for effective participation;
- c) Provide technical assistance and capacity building to empower CFAs to perform their functions;
- d) Maintain an up to date records of all association that have been granted permission;
- e) In liaison with the CFAs develop forest management plans;
- f) Administer the forest management agreements signed by the CFAs; and
- g) Assist CFAs in carrying out periodic elections.

Whereas the above specific roles of KFS are well spelt out both in the law and the attendant regulations it has been observed that:

- a) There are many CFAs operating in the various conservancies that have not been granted the necessary permission by KFS by way of an agreement as provided for in the law. Indeed, there are 226 CFAs that are operating without the signed agreements⁵⁰.
- b) KFS has not been strict in imposing and enforcing the conditions laid down in the laws and regulations in the operations of the CFAs. For instance, close to 50% of the CFAs were found to be operating without the requisite Forest Management Plans.
- c) KFS has not developed a system to monitor or audit the activities of the CFAs within the forests with regard to determining compliance with the set conditions in the agreements.
- d) Many of the CFAs are operating without the requisite capacity for effective implementation for the management plans, organization and management of their own affairs as well as efficient utilization of their forest user rights. This is

⁵⁰KFS 2018; Community Forest Association Register, Kenya

on account of both the internal inadequate capacity and poor governance practices on the part of KFS.

- e) Many of the CFAs are plagued with governance problems; a number of these CFAs have not held elections. For example, in Makueni County all the CFAs have not held elections since their formation despite repeated calls to KFS to assist in conducting elections. In some instances, CFAs reported a direct interference by KFS officers in their electoral processes.
- f) A number of the PFMPs across the various conservancies were found to be outdated and therefore ineffective as instruments for management and conservation of the forests.

5.3.1.3 Plantation Enhancement and Livelihood Improvement Scheme

The Concept of PELIS System

PELIS is an administrative arrangement that is administered by the KFS through the CFAs that allows members of the community resident within the vicinity of the forest to be allocated portions of land that are earmarked for replanting. They are allowed to use such land for growing of food crops on subsistence basis while participating in replanting and nurturing of tree seedlings for a given period of time before the trees reach the canopy stage of their growth.

Rationale of PELIS

The purpose of this Scheme is to tap the goodwill of the communities in enhancing the forest cover through replanting while at the same time enabling them to sustain their livelihoods for the defined period of time. It therefore creates a positive symbiotic relationship between KFS and the communities that allows the forests to be managed and conserved on sustainable basis.

Role of KFS in the PELIS System

KFS is supposed work with CFAs to carry out an objective and fair system of allocation of the portions of land to members of the CFAs. KFS is required to issue operational guidelines for the implementation of the non-resident cultivation and issue a cultivation permit. Additionally, it must monitor and supervise the planting of crops and the replanting of the tree seedlings to ensure that the seedlings are not interfered with. In addition, KFS is supposed to ensure that after the period of three years the planting of crops is discontinued to allow the tree seedlings to thrive.

Implementation of PELIS

Proper implementation of this Scheme is supposed to first ensure that there are no backlogs in the replanting programme and secondly, the communities participating in the implementation of this Scheme are expected to own and protect the replanted forests as the foremost stakeholders in this process.

Challenges of the PELIS System

In spite of the noble intentions for the PELIS Scheme, the Taskforce established that its implementation has had mixed fortunes. A few successes have also been reported and in many instances the following challenges were observed:

- a. The process and practice of allocating plots to participants in this Scheme is fraught with corruption, nepotism and poor governance. It has been observed that in a lot of situations, plots are allocated unfairly to persons who are associated with KFS officers and others who are not ordinarily residents within the areas adjacent to the respective forests or non-CFA members.
- b. In some instances and especially in Ontulili, Marmanet and Sorget forest stations, there are huge tracts of forestland that have been turned into large-scale commercial farms in total abuse of the PELIS system. This information is well documented in some of the reports that have come to the attention of the Taskforce from KFS as well as the verifiable presentations received from the stakeholders.
- c. The supervision and management of the PELIS system in some of the forest areas is weak translating to low survival rates of replanted sites. This has led to in some instances, PELIS participants deliberately compromising the survival of tree seedlings in order to continue cultivating their crops even beyond the three-year limit. Besides this, some farmers have engaged in the growing of crops that are in direct competition with the young tree seedlings further compromising their ability to establish. Despite this, KFS has continued to allow such farmers to access and enjoy the benefits to the detriment of the forest.
- d. KFS does not have an accountable system to monitor and determine the proper payment accrued from the allocation of plots under PELIS. This has allowed corruptive practices perpetrated by KFS officers and CFA officials who abuse the system for personal gain.
- e. In spite of the apparent full implementation of the PELIS system across all the conservancies, KFS still faces a serious backlog in their forest-replanting programme.
- f. It was found that KFS has not adequately performed its role in the support of the CFAs by supplying quality seed for tree planting. Many of the seedlings that were planted in the various CFA nurseries could not be traced to a certified source.
- g. CFAs in many areas have employed community-based scouts who assist KFS in monitoring the situation in these forests. However, there isn't an established arrangement for compensation of these scouts for their time and efforts. It was reported that CFAs had to generate their own funds to compensate them. This is not a sustainable practise.

- h. KFS has not established a standard plot size for allocation to CFA member under the PELIS program. It was found that the size allocations varied in size across the various forest stations.
- i. The duration of non-resident cultivation under the PELIS system varied widely across the various forest stations. In some areas, the duration was 2 years while in others it was as long as 6 years.
- j. Some of the user rights include livestock grazing and grass harvesting (cut & carry). Livestock grazing was found to have a destructive impact on young tree seedlings and soil erosion mostly due to trampling and browsing on seedling. The fee charged for grazing is KES 100 per cow per month, while the fee charged for cut and carry is KES 50 per gunny bag (a cow requires approximately 10 gunny bags per month, translating to KES 500 per cow per month). This means that it is much cheaper for a CFA to keep livestock in the forest (which is a more destructive practise) than to harvest grass through cut and carry (which is a less destructive practise). This kind of arrangement does not provide an adequate impetus for CFA members to keep livestock out of the forest.
- k. Although CFAs are recognized as a very important vehicle for operationalization of the participatory forest management system, it was noted that many of these associations are poorly organized and lack the necessary institutional and management capacity to effectively run their affairs. In many instances, it was found that CFAs have not carried out their periodic elections and operate in a manner that lacks transparency and accountability.

5.3.1.4 Forest Concession

The FCMA allows for management of the forest through a concession agreement, which gives a right of use to an individual or organization in respect to a specific area in a national or county forest by means of a long-term contract for the purpose of commercial forest management and utilization. KFS has entered into two concession agreements in Kibwezi and Ngare Ndare forests, both of which are for ecotourism activities.

5.3.1.5 Joint Management Agreements

The FCMA empowers KFS to enter into a joint management agreement for the management of any indigenous forests with any person, institution, and government agency or forest association.

5.3.2. Recommendations

1. PELIS should be progressively phased out in the next four years. No further PELIS area should be opened. In parallel to the phase out of the PELIS, concessions of forest plantations should be established that provide a role for the CFA members in the establishment of the plantations.

2. Establish a multi-agency forestry and conservation committee in all forest stations drawing membership from national administration, county government, local community elders, youth and women association, People Living with Disabilities (PLWD) groups, KFS, KWTA and KWS. The purpose of this multi-agency structure will be to:
 - a. Pending the Phase out of PELIS:
 - i. Review and rationalize the existing PELIS system arrangements in the various ecosystems;
 - ii. Vet and approve applications for allocation of plots under PELIS; and
 - iii. Monitor and report on the performance of CFAs, implementation of the agreements, management plans and the integrity of PELIS system.
 - b. Verify and register CFAs.
 - c. Vet CFA members.
3. The multi-agency forestry and conservation committee should audit the existing CFA in terms of membership, implementation of the management plans, compliance with the forest management agreements, capacity to tap into their forest user rights as well as their management practices with regard to PELIS system. The purpose of the audit will be to provide the basis for determination of those CFAs that need to be deregistered, strengthened and regularized as per the law. The existing arrangement under the PELIS system should be reviewed accordingly to provide the basis for determination and rationalization as appropriate.
4. There is need for KFS to mount a deliberate capacity building programme for CFAs and collaborate with the Forest Conservation and Management Trust Fund to provide the requisite financial support to enhance their performance. Further, KFS should work closely with the Registrar of Societies in enforcing the regulations pertaining to elections and conduct of office bearers for the CFAs.
5. Harvesting of timber should not be one of the forest user rights assigned to a CFA because it creates a conflict of interest in conservation and management of forests. Further, any member of the CFA who desires to become a saw miller should cease from being a member of CFA.
6. For purposes of avoiding the current challenges associated with dualism in registration and operation of the CFAs, it is recommended that the registration and operation of the CFAs should be solely under the law governing the administration of forests.
7. The law should be amended to provide for specific financial benefits to the communities adjacent to the forests through the CFAs. This may be through a

fund that would support, among others, the development of social amenities, and capacity building for the communities around the forest.

8. In order to create enhanced motivation among the community members in participating in forest management activities it is recommended that KFS should hire and deploy some of the lower cadre staff (rangers) from amongst the communities adjacent to the forests. The community-identified scouts should be put in a structure for payment of a stipend as a way of motivating them to participate more effectively in the management of the forests.
9. Promote the use of indigenous knowledge in forest management. For example, the traditional knowledge of the Mijikenda people has helped in the preservation of the Kaya forests in the coast as well as in the mangrove forests.
10. The Forest Conservation Management Trust fund needs to be operationalized to, among other things, provide funds to CFAs to support their conservation and forest management activities as well payment of stipends to the community forest scouts.

5.4 Forest revenue against investment and operational costs

The funds of the Service as provided in law consist of monies appropriated by Parliament, monies as may accrue or vest in the Service in the course of the exercise of their powers, monies as may be payable to the Service pursuant to the FCMA or any other law, gifts and donations given to the service.

In practice, the main streams of income for the Service are; internally generated revenues from fees and charges, levies and cost sharing initiatives; Government grants; monies from development partners and other incomes.

Over the past 5 years, the Service has received revenue from the various sources as shown in Table 2. The revenue figures in Table 2 can be compared to the funds needed in the last 3 years as summarised in Table 3.

Table 2: KFS Revenue for the last five years

KES	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	Millions	Millions	Millions	Millions	Millions
Internally generated revenue from fees, charges, levies, cost sharing etc.	2,023	2,720	3,258	3,617	4,305
Government Grants	1,847	1,627	2,169	1,547	2,319
Development partners	1,091	492	451	19	194
Other Incomes	135	97	67	143	112
Total Recurrent Revenue	5,096	4,936	5,945	5,326	6,930

*Source – KFS Audited Accounts (2012/2013, 2013/2014, 2014/2015, 2015/2016, 2016/2017)

Table 3: KFS Total recurrent Revenue against the Funds needed

	2014/2015	2015/2016	2016/2017
	(KES)	(KES)	(KES)
Funds Needed**	9,600	14,500	15,100
Total Recurrent Revenue	5,945	5,326	6,930
Deficit	(3,654)	(9,174)	(8,170)

Source – KFS: Funding for the 2014 – 2017 Strategic plan Investment and Operational Costs*

Table 4: KFS Total recurrent Revenue against Expenditure

Expenditure	2012/2013		2013/2014		2014/2015		2015/2016		2016/2017	
	KES	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions
Recurrent	Personal Emoluments	3,011	3,430	3,574	3,972	4,302				
	Boards Expenses	21	7	8	30	31				
	Operating/ Administrative Expenses	1,126	1,323	1,275	1,314	1,465				
	Repairs and Maintenance	113	316	286	276	321				
	Total	4,271	5,076	5,143	5,592	6,119				
Development	Percentage of Recurrent	79.61%	86.17%	97.41%	98.11%	97.58%				
	Acquisition of Assets	1,094	815	137	108	152				
	Percentage of Development	20.39%	13.83%	2.59%	1.89%	2.42%				
	Total Operating Expenses	5,365	5,891	5,280	5,700	6,271				
	Operating Surplus / (Deficit)	-269	-955	665	-374	659				

***KFS Audited Accounts (2012/2013, 2013/2014, 2014/2015, 2015/2016, 2016/2017)

5.4.1 Key Findings

1. There has been a steady increase in internally generated revenue due to improved control systems, revised royalties on timber and enhancement in other revenue streams like hire of aircraft⁵¹. Over the past five years, this revenue stream has recorded an increase of 112.8%.

Whereas the Taskforce has not found any reason to cast doubt on the apparent improvement in the revenue generated, it is still calls for further inquiries to determine the veracity of the explanation given by the Service.

In spite of this increase there is evidence that the Service could have collected more monies if it had ensured the following:

- i) That all the monies due to it for sale of forest materials was collected efficiently.
 - ii) The existence of an effective accounting and monitoring system for payment of PELIS.
 - iii) A more transparent and realistic method of valuation of trees.
 - iv) Collection of revenues due to the Service on account of easement, way leaves and installations in forests including construction of dams. This has attracted a qualified audit opinion from the Auditor General. According to the report from the Auditor General the outstanding receivable in this regard is KES 496,370,179 for financial year ending June 30th, 2016.
2. Over the past five years, revenue from Government grants has increased by 26%, which is a very slight increment and does not compare well with the recorded increase on internally generated revenue. This means that in spite of the enhanced mandate of the Service, which necessitates implementation of broader strategic activities, the available capacity and resources are not sufficient.
 3. It is evident from a review of the KFS finances that a third of its expenditure is classified as operating/administrative expenses. However, the Service was not able to demonstrate the exact allocation directed to establishment/ regeneration of new forests as it was lumped under operating/administrative expenses. Without such information, the Service was not able to justify its performance (or lack thereof) in ensuring the sustainability of forest plantations.
 4. It was noted that the KFS financial management system is not linked to the licensing and material allocation systems. As a result, the Service is not able to accurately account for the materials allocated and paid for at Station level.
 5. The financial report submitted by KFS does not give the exact amount committed to the achievement of its strategic objectives.

⁵¹KFS Audited accounts

6. The funding received by KFS is not sufficient to expand its institutional and human resources requirements to effectively execute its mandate.
7. In terms of asset base, the Service has not secured its asset including land, property, plant and equipment and consequently the accuracy of the reported status of the asset base is in doubt. This is one of the reasons repeatedly cited by the Auditor General in qualifying KFS Audit Reports.
8. The Auditor General has also issued qualified opinion in relation to the following matters:
 - i) Outstanding temporary imprest issued to officers of the Service;
 - ii) Unsupported payments to casuals;
 - iii) Unsupported expenditures;
 - iv) Failure by the Service to achieve its approved budget.
9. A review of the 2016 financial report by the Auditor General revealed the following malpractices by the Service in handling its accounts.
 - i). Analysis of data maintained under the accounts receivable including customer master data and invoices issued revealed that 52 customer identities were created more than once in the IT system. Further, 94 customers had accounts that did not have adequate details including customer number, address and status. Additionally, 8,176 customer invoices and serial numbers could not be traced in the IT system.
 - ii). Analysis of data and accounts payable including vendors master data and LPOs revealed that 17 vendors had multiple accounts in the system. There were inconsistencies in suppliers codes and 69 codes were found missing in addition to 5 missing LPOs.
 - iii). Analysis of HR bio-data and payroll revealed that 12 officers were sharing bank account without the required authorization, among other HR related inconsistencies.
10. An analysis of the expenditure indicated that the Service has registered a decline year on year in the amount expended in development dropping from 20% in F/Y 1012/13 to a paltry 1% in F/Y 2016/17. This means that the Service cannot engage in development and improvement of its infrastructure and capital formation programmes. This has undermined the capacity of the Service to achieve its strategic objectives. It is however noted that the recurrent expenditure has increased.

5.4.2 Recommendations

1. Based on the figures outlined above, it is obvious that the Service is severely underfunded and therefore requires a radical funding program if it has to achieve the objective for which it was established. It has to be appreciated that the forest sector contributes 3.6% of the GDP in addition to many other un-quantified benefits that the economy derives from the forest ecosystem.
2. The Government should identify the forest sector as a key enabler of the economy, which requires radical funding programmes beyond the current allocations. This is because the sector has a lot of implications on supply of adequate water both for domestic and industrial use, is a major factor in sustenance of the rural economy, a key determinant for sustaining biodiversity and a significant contributor to minimizing the harsh impacts of climate change.
3. In addition, the forest sector is a major contributor to the success of the BIG FOUR targets in terms of manufacturing and housing development
4. Introduce a forest levy fund that will derive funding from the following already existing developments:
 - a. Dams for supply of water and generation of electric power;
 - b. Installation of communication masts and other infrastructure;
 - c. Railways and highways constructed through the forests;
 - d. High tension power lines passing through the forest land;
 - e. Any other strategic installations within the forest land.

It is critical that the government should comply with the National Spatial Plan, Sessional Paper No. 1 of 2017 on National Land Use Policy as well as the Land Use Guidelines issued under the Environmental Management and Coordination Act, 1999 that strictly discourages the development of large-scale infrastructure in forests and other fragile ecosystems. The Government should also operationalize the Forest Conservation and Management Trust Fund. This fund will be specifically used for the establishment, rehabilitation and enhancement of the forests, purchase of the required equipment and infrastructure necessary for the sector, installation of the requisite technology for monitoring and protection of forests, as well as funding of research necessary for development of the sector.

5. Government should provide adequate funding to the service to facilitate radical enhancement of its institutional and human resource capacity to ensure effective implementation of the strategic objectives related to establishment and protection of the forest resources.
6. Integration of financial management system with all the licensing and material allocation system.

5.5 Penalties in the Forest Conservation and Management Act, 2016 and other related written laws

5.5.1 Key Findings

5.5.1.1 Legal, Institutional and Policy Framework

1. The management of the forest sector in this country is beset by weak and inappropriate legal, institutional and policy framework. It has been noted that the FCMA has glaring weaknesses and does not make adequate provisions for effective, sustainable and efficient management of the sector. Furthermore, it is observed that to date the country has not formulated a current national policy to provide legal and administrative framework for the sector.
2. It is a fact that in addition to the FCMA, there are other sectoral laws and policy framework, which have not been synchronized with this particular Act. This scenario presents a perfect recipe for duplication, conflict as well as institutional overlaps in performance of functions related to the management of the forest functions. Indeed this is a major weakness that has to be addressed as a matter of urgency for the country to find the right policy and legal regime that responds not only to the constitutional requirements but also to the aspiration of the people of Kenya.
3. The enforcement and compliance unit that comprises the uniformed and non-uniformed staff of the KFS does not have a solid anchorage under the FCMA. This is because its creation and designation is left to the whims of the Board and the Cabinet Secretary responsible for matters related to internal security.

5.5.1.2 Offences

4. Compared to the Forest Act, 2005, the FCMA has shifted from minimum sentences and fines to maximum sentences and fines. The Taskforce found out that the present Act apparently provides more lenient sentences and fines compared to the old Act, in all circumstances except one, namely, wilful or malicious setting of fire. Table 5 provides a quick comparison of some of the fines and penalties in the Forest Conservation and Management Act, 2016 and the Forest Act, 2005.
5. The prescribed sentences and fines are not commensurate to the serious offences committed. For example, the penalties under the Forest (Harvest) Rules, 2009 and Forest (Charcoal) Rules, 2009 are minimum fine of KES 10,000 which compared to the commercial value of such produce may not be much. One may indeed take a risk of committing a crime in the knowledge that the profits attained can very well offset any fines imposed. The same goes for illegal harvesting of timber.
6. Violation of the FCMA constitutes a threat to the environment and indirectly the lives of individuals. Environmental crimes need to be treated as serious offences. For example, the Wildlife Management and Conservation Act, 2013, deals with offences relating to endangered species, the penalty being a fine of KES 20 Million or life imprisonment or both. Illegal logging under the FCMA (including of endangered species) attracts lenient fines and imprisonment.

Table 5: Penalties in the Forest Conservation and Management Act, 2016 compared to those in the Forest Act, 2005

OFFENCE		PENALTIES	
		2005 Act	2016 Act
Offences in relation to mining, quarrying and re-vegetation activities		Section 44 term of Not less than 6 months or to a fine of not less than KES 100,000/= or to both	Section 66 (excludes mining) A fine not exceeding one million shillings or to imprisonment for a term not exceeding two years or to both such fine and imprisonment.
<p>Except under a licence or permit or a management agreement issued or entered into under this Act, no person shall, in a public or provisional forest –</p> <p>(a) fell, cut, take, burn, injure or remove any forest produce;</p> <p>(b) be or remain therein between the hours of 7 p.m. and 6 a.m. unless using a recognised road or footpath, or is taking part in cultural, scientific or recreational activities;</p> <p>(c) erect any building or livestock enclosure, except where the same is allowed for a prescribed fee;</p> <p>(d) smoke, where smoking is by notice prohibited, or kindle, carry or throw down any fire, match or other lighted material;</p> <p>(e) de-pasture or allow any livestock to be therein;</p> <p>(f) clear, cultivate or break up land for cultivation or for any other purpose;</p> <p>(g) enter any part thereof which may be closed to any person;</p> <p>(h) collect any honey or beeswax, or hang on any tree or elsewhere any honey barrel or other receptacle for the purpose of collecting any honey or beeswax, or enter therein for the purpose of collecting honey and beeswax, or be therein with any equipment designed for the purpose of collecting honey or beeswax;</p> <p>(i) construct any road or path;</p> <p>(j) set fire to, or assist any person to set fire to, any grass or undergrowth or any forest produce;</p> <p>(k) possess, bring or introduce any chain saw or logging tools or equipment;</p> <p>(l) damage, alter, shift, remove or interfere in any way whatsoever with any beacon, boundary mark, fence notice or notice board.</p>		Section 52 (1) Fine not less than KES 50,000 or imprisonment for a term not less than 6 months or to both	Section 64 (2) Fine not exceeding KES 100,000/= or an imprisonment term not exceeding 6 months, or to both fine and imprisonment

Table 5: Penalties in the Forest Conservation and Management Act, 2016 compared to those in the Forest Act, 2005

OFFENCE	PENALTIES	
	2005 Act	2016 Act
Counterfeiting or unlawfully affixing marks under	Section 53 Provided for a fine of not less than KES 200,000/= or imprisonment of not less than 3 years, or to both such fine and imprisonment.	Section 65 provides for fine not exceeding KES 500,000/= or to imprisonment for a term not exceeding 3 years or to both.
maliciously sets fire to any public, provisional, community or private forest commits	Section 54 (3) Fine not less than KES 200,000/- or to imprisonment for a term of not less than one year, or to both such fine and imprisonment	Section 67(2) Fine not exceeding one hundred thousand shillings or to imprisonment for a term not less than one year, or to both such fine and imprisonment.
Operating a sawmill illegally	Section 54 (3) Attracted a fine of at least KES 500,000/= or a jail term of at least 3 years or both;	Section 67(3) Attracted a fine of at not Exceeding KES 1 million or a jail term not exceeding 3 years or both;
8)Any person who, in any forest area— (a)introduces any exotic genetic material or invasive plants without authority from the forest manager; (b)dumps any solid, liquid, toxic or other wastes in a forest without authority of the forest manager; (c)grows any plant from which narcotic drugs can be extracted; or (d)extracts, removes, or causes to be removed, any tree, shrub or part thereof for export;	Section 54 (8) a fine not less than KES 3 million shillings or to imprisonment for a term of not less than 10 years, or to both such fine and imprisonment.	Section 67 (8) commits an offence and is liable on conviction to a fine not exceeding KES 3 million shillings or to imprisonment for a term not exceeding 10 years, or to both such fine and imprisonment.

Table 5: Penalties in the Forest Conservation and Management Act, 2016 compared to those in the Forest Act, 2005

OFFENCE	PENALTIES	
	2005 Act	2016 Act
General Penalty offences against the provisions of this Act for which no specific penalty is provided	<p>Section 57 a fine not less than KES 10,000 shillings or to imprisonment for a term not exceeding three months, or to both such fine and imprisonment.</p>	<p>Section 69 fine not exceeding ten thousand shillings or to imprisonment for a term not exceeding three months, or to both such fine and imprisonment.</p>

7. The FCMA in some instances refers to non-existent regulations e.g. penalty for illegal quarrying refers to regulations, which are yet to be made. Similarly Section 61 prohibits trade in restricted forest produce although no such notice of gazette has been published.
8. The current law does not provide for disciplinary code and regulations targeted towards officers of the Service and which applies to the uniformed and disciplined officers unlike the Wildlife Conservation and Management Act, 2013 which provides the same.

5.5.2 Recommendations

1. Review of the FCMA to take care of the following limitations among others:
 - i) Weaknesses observed in the penalties and fines provided for in the Act;
 - ii) Inconsistencies and apparent contradictions in the various provisions relating to establishment of the institutional structures;
 - iii) Weakness in establishment of the enforcement and compliance unit;
 - iv) Administration and management of the participatory forest management system;
 - v) Inconsistencies and disharmony with other laws in the Environment Sector; and
 - vi) Lack of the relevant subsidiary regulations to operationalize the Act.
2. For effective management of the sector, the FCMA should be reviewed alongside existing legislations to align it to the following:
 - i) Survey Act, Cap 299;
 - ii) Environmental Management and Coordination, 1999;
 - iii) Water Act, 2016;
 - iv) Wildlife Conservation and Management Act, 2013;
 - v) Climate Change Act, 2016;
 - vi) Physical Planning Act Cap 286;
 - vii) Land Act, 2012;
 - viii) Land Registration Act, 2012;
 - ix) National Land Commission Act, 2012;
 - x) County Governments Act, 2012;
 - xi) Agriculture, Food and Fisheries Act, 2013; and
 - xii) Mining Act, 2016.

5.6 Statutory and regulatory regime governing charcoal burning and trade

5.6.1 Findings

5.6.1.1 Charcoal

The national study on charcoal in Kenya by Energy for Sustainable Development Africa (ESDA, 2005) estimated that annual production was 1.6 million tons. Production has since risen to 2.5 million tons, an increase of 156% within eight years (or almost 20% growth per annum). The economic value of charcoal production over the same period grew from KES 32 billion to KES 135 billion, representing a 422% growth.

Charcoal is the dominant fuel in urban households. It provides domestic energy for 82% of urban and 34% of rural households. The charcoal sector has acquired considerable economic importance because of increasing urbanisation (Githiomi, 2012).

The charcoal industry is also part of the informal sector and is by far the largest contributor to job creation, employing approximately 700,000 people, who in turn are believed to be supporting 2.3–2.5 million dependants (MEWNR, 2013a).

The most extensive sources of charcoal are in what are considered dry lands of Kenya, which coincidentally are the most fragile ecosystems in Kenya (Kitui, Makueni, Tana River, Kwale, Narok, Baringo, Kajiado Garissa, Kwale, Tana River, Narok, Baringo among others)

Regulation of charcoal although a function of the KFS (as the Agency that issues charcoal production and movement permits) is prone to “regulation” by other authorities including police, KWS, Administration Police, county askari, etc.

Under the law, the business of charcoal production and transportation is supposed to be regulated by the county governments. However, most counties in Kenya are not in a position to regulate this business because they have not signed the Transition Implementation Plans (TIPs) that will give them the necessary power to do this. The Taskforce has noted that out of the 47 counties, 17 have signed the TIPs with KFS. On this account, it is unfortunate that the charcoal business remains almost unregulated in spite of the existence of the FCMA.

Charcoal production and transportation goes on unabated despite the many attempts by the Counties to “BAN” it. In addition, this business is fuelled by corruptive practices and is controlled by powerful cartels operating allegedly in cohort with rogue KWS and KFS rangers.

There is a general public perception that charcoal production and transportation is illegal; yet its use is legitimized mostly in urban areas, despite efforts by government

and in particular KFS to develop a legal and institutional framework such as Charcoal Producers Association to manage and regulate charcoal production and movement. This has resulted to more attention being granted to transportation of charcoal rather than on sustainable production.

Several Charcoal Producers Associations exist, but their capacity for self-regulation and self-governance is inadequate.

Indeed, there is no regime (working cycle) by KFS to guide sustainable management of forest plantations/woodlots for charcoal production nor certification system. This makes it difficult to ensure sustainable charcoal production.

5.6.1.2 Fuel wood

Fuel wood harvesting has on late been on the upward trajectory due to the commercial significance that this practice has assumed. KFS has fuelled this business awarding licenses to producers without putting in place the necessary monitoring and regulatory mechanisms. Producers of fuel wood have abused the rights given to them under this and unfortunately, have been converting prime timber to fuel wood. This is mainly attributed to the fact that there is a lot of laxity on the side of the manager at the forest station level.

Stakeholders submitted that this business is proving to be detrimental to the management of forests in Kenya.

5.6.2 Recommendations

1. Establish National Framework anchored in law to deter illegal sourcing, production and transportation of charcoal from the gazetted forests.
2. Review the Forest (Charcoal) Rules, 2009 to bring them in tandem with the FCMA and to enable the formalization of the charcoal sector.
3. KFS to develop national sustainable management standards and guidelines for charcoal working cycle.
4. KFS to develop a national charcoal certification system to ensure that charcoal is being produced from sustainable sources and through efficient conversion methods.
5. County Government, in collaboration with KFS, should develop charcoal regulation framework to operationalize the national charcoal management standard and certification.
6. Government should establish clear administrative mechanisms to legitimize operations of the charcoal business including investment targeted towards the promotion of efficient charcoal production technologies.

7. The government should aggressively promote the up scaling of already researched alternative sources of energy to increase accessibility and availability of these alternatives to the larger population of the country.
8. Identify and promote fast growing tree varieties for charcoal production as researched by KEFRI and other knowledge institutions to ease pressure on indigenous forests especially in dry land ecosystem.
9. The National and County Governments should make deliberate efforts to promote, facilitate and enhance the proliferation of farm forestry for charcoal production all over the country to discourage illegal charcoal production from the indigenous forests.
10. For purposes of ensuring County Governments play their role in the management of forests resources within their jurisdiction, the National Government should work closely with the respective County Governments to complete the signing and operationalization of the Transition Implementation Plans (TIPs).
11. Forest Conservation and Management Committee should strengthen the capacity of the Charcoal Producers Association to ensure governance and self-regulation and enable sustainable charcoal production and trade.

5.7 Governance structures and their performance in management of the forestry sector in Kenya

5.7.1 Ministry of Environment and Forestry

1. The Ministry has not developed a National Forest Policy for the sustainable use of forests and forest resources. The last policy formulated for the Sector is the 1968 version, which is not only out-dated, but is also completely out of step with the current realities in the Sector in view of the constitutional policy guidelines as well as the attendant governance structures. It is appreciated that there was an initiative to formulate a fresh sector policy, which culminated in the Draft National Forest Policy, 2014. This Draft Policy was submitted to Parliament for debate and approval in 2015. However, for unknown reasons the draft policy has never been considered by parliament and therefore the sector remains without a guiding policy framework. It is a matter of concern that the FCMA was formulated and enacted without being based on a proper Sector policy framework.
2. The FCMA requires that such a policy should be reviewed at least once in every five years. Without an up-to-date policy that is reviewed periodically, it is evident that the management of the forest sector cannot be undertaken in a sustainable manner taking into account emerging issues and challenges in the sector.
3. Since the FCMA came into force, the Ministry has not been able to formulate the required regulations and rules to operationalize the Act. The various Forest Rules

of 2009 remain in place despite the various changes that have since taken place rendering them difficult to enforce.

4. It has also become apparent that the forest sector is critically underfunded. The Ministry has not been able to adequately mobilize resources to ensure that this most important sector is given adequate prominence in terms of budgetary allocation of national resources as well as from other sources such as development partners. With such deficits, the forest sector continues to struggle in its attempt to sustainably manage the country's forests.
5. The Ministry maintains the oversight role of forest resource management in the country. It is noted that the Ministry has not been able to effectively undertake this role as evidenced by the significant challenges that currently bedevil the forest sector and which have resulted in moratoria being put in place from time to time with seemingly no firm direction on finding a permanent and long term solution.
6. **Green Schools Programme:** This initiative was started by the Government for the purpose of inculcating the value of conservation and tree planting among school going children. The programme was based on a fund that was allocated to the Ministry of Environment and Forestry to facilitate tree planting, sensitization and provision of the requisite equipment to all primary schools in the country. The initial amount allocated to this fund was about KES 500 million. However, its implementation has remained hazy because it is not clear how this money has been used from 2013 to date. It is noted that in as much as the implementing agency of this program was KFS, the indication to the Taskforce is that the Ministry did not release the funds in their entirety for the intended purpose.

5.7.2 County Governments

1. In spite of the prominence accorded to County Governments in assignment of the forest sector function by the Constitution, it is noted that Counties have not done enough to demonstrate their readiness to undertake this very critical mandate. It was envisaged that County Governments in consultation with KFS would sign the TIPs to facilitate the transfer of the forest functions related to the management of Community and Private Forests. To-date, only 17 Counties have signed the TIPs. This is indeed a drawback in the sense that only these few counties are legally empowered to undertake this responsibility.
2. Additionally, the counties that have signed the TIPs have not yet developed the necessary institutional, technical and human resource capacity to manage the sector.
3. It was also observed that most of the counties are yet to formulate the requisite policy and legislative frameworks to guide the management of the forest sector at their level.

5.7.3 Kenya Forest Research Institute

1. Research is a key component in sustainability. The Kenya Forest Research Institute (KEFRI) needs to be enhanced to ensure that the most effective, efficient and up-to-date methods of forestry management are deployed within the forestry sector in Kenya.
2. It has been found that KFS continues to apply out-dated methods in its operations despite the fact that KEFRI exists to look into the development of this sector through research to provide for a more efficient, effective and sustainable sector. Indeed some well-established private sector players have been noted to be undertaking effective forest management using modern technology.
3. Private farm forestry has also not been adequately facilitated to fully realize the country's potential of forestry. KEFRI has yet to effectively disseminate the various research findings to enable the expansion of this sector. The potential for enhancement of forestry in the arid and semi-arid lands is yet to be fully actualized, although KEFRI has undertaken research in suitable varieties for the climatic zones in the Country.

5.7.4 Forest Conservation and Management Trust Fund

The process of operationalizing the Forest Conservation and Management Fund is on going. Innovations and best practice in forest management have yet to be seen to work, forestry extension programmes are no longer undertaken across the country and no programmes for payment for ecosystem services through this fund are in place.

5.7.5 Kenya Forest Service

1. KFS is managed by a Board of Directors whose main responsibility is to provide strategic policy leadership to the service. In the review of the performance of the Board by the Taskforce, it has been found that:
2. On appointment of the previous Board in 2015, there was a very good initiative to formulate a Strategic Plan to guide the operations of the Service. The Strategic Plan identified the key strategic objectives and result areas that the Service was expected to pursue in the process of transforming the sector. However, what comes through is that the so called Strategic Objectives that were identified by the Board were not transformative enough to the extent that whatever was achieved after the initial 3-year implementation period did not make much difference in terms of the critical strengths, weaknesses, opportunities and threats that the sector faced.
3. A review by the Taskforce of the 2015-2017 Strategic Plan revealed that the Service rated its performance at 100% on most of the strategic targets identified.

This kind of performance rating was found to be doubtful and misleading for the reason that the sector still faces the same endemic challenges that were there before the Board took over.

4. The Board as the overseer of the Service has not done enough to stem the corruptive and unethical practices that are experienced in the sector such as but not limited to the obvious flouting of the procedures for valuation of forest products, allocation of materials to saw millers, administration of the PELIS system and non-adherence to the procedure and prescribed instruments for licensing.
5. The Taskforce has also received allegations from Stakeholders in the sector about the rampant collusion between some members of the Board and a few wayward officers in senior management in perpetuating malpractices in valuation and inventory of the forest materials for their personal benefit.
6. The senior management members with the full knowledge of the Board have colluded with some influential members of society to allocate forestland under the guise of the PELIS practice for use as commercial farmlands. The Taskforce verified that one private company was allocated 100 acres of land in Ontulili forest allegedly for re-forestation but the same was later found to have been used for commercial growing of food crops.
7. The Board of Directors sanctioned management to deviate from the open tendering system of allocation of forest materials as provided by law to a system of direct allocation to saw millers purportedly on consultation with the Public Procurement Oversight Authority. In spite of the fact that this was an outright breach of the law, neither management nor the Board has presented any evidence of such consultation having taken place.
8. The Taskforce has noted that according to the analysis done on the human resource requirements of KFS, there was a total establishment of 3,195 officers in the core cadres of conservators, foresters, ENCOM and survey, mapping, GIS and remote sensing. This figure compares very poorly with the required number of 6,630. This means that the Service faces a shortfall of 3,435 officers in these core cadres. For instance, in the ENCOM cadres, the service has 2,542 rangers against the total requirement of 5,000.
9. The Service has not done enough to build the capacity of the County Governments to prepare them to take up the transferred forest functions.
10. It was noted that the Service has yet to develop National Forest Standards, which is a core, mandate assigned to it. Without this, the Service has been unable to develop a proper framework for quality assurance in its entire operations.

11. It is a matter of serious concern that 16 officers were sent on compulsory leave, and there is currently no Board in place to commission administrative investigations into the matter.

5.7.6 Recommendations

The following interventions are recommended in the **Short Term**:

2. The Cabinet Secretary for Forestry should expedite the process of constituting a new KFS Board. This will enable an immediate commencement of the administrative investigation process for the sixteen suspended officers of KFS, among other urgent matters.
3. Investigation of any member of the immediate former Board of Directors of KFS against whom allegations of malpractices have been made, and the necessary action taken by the relevant agencies.
4. Investigation of any Officers of KFS against whom allegations of malpractices have been made, and the necessary action taken by the relevant agencies.
5. The Cabinet Secretary for Forestry should establish an organ with powers to undertake:
 - a. Public vetting of serving KFS personnel with the aim of determining the suitability and culpability of officers of the service. This will help to eliminate malpractice by officers, instil an ethical culture within the service and restore public confidence in the Institution
 - b. Investigation of any Officers of KFS against whom evidence of malpractices has been identified during the vetting.
6. The Auditor General should conduct a forensic audit into the following:
 - a. The Green Schools Programme of the Ministry of Environment and Forestry;
 - b. The revenue collection and transmission systems under KFS, including the PELIS system;
 - c. Expenditure and accounting systems under KFS; and
 - d. Inventory, valuation and sale system of forest stocks from thinning and clear fell.
7. Constitution of a caretaker management team with special authority, and comprising of competent persons (who meet the criteria under Article 6 of the Constitution of Kenya) with mandate to manage the operations of the Service in the interim and assist the Government in carrying out the necessary institutional and other structural reforms of the Service during the transition phase

8. Review the existing Private Sector Participation Programme activities outlined in the Forests (Participation in Sustainable Forest Management) Rules, 2009 including all permits, licences, bids, contracts, joint management agreements and concession agreements. This is aimed at streamlining of the operational systems. In the interim there should be a freeze on further expansion of PELIS in new areas.
9. Review and audit all Community Forest Management Plans, agreements, allocations, permits, licences, and any other authorizations outlined in the Forests (Participation in Sustainable Forest Management) Rules, 2009 with the aim of streamlining the processes and regulation of the same. In the interim there should be a freeze on the signing of any new authorizations.
10. Review and audit of all permits, licenses, contracts, agreements or any other authorizations issued with respect to logging, allocation of felling rights, sawmilling, timber and charcoal business under the FCMA.
11. Authorize and deploy the use of effective, innovative and suitable technology to aid in effective monitoring, surveillance, tracking and other interventions for efficient and sustainable forest management. This includes but not limited to remote sensing, aerial surveillance, drones, community based intelligence systems, forest fire alert and response systems, and technological applications (apps).
12. Empower and deploy the administrative arms of Government to control the activities currently undertaken within riparian areas all over the country for immediate reclamation, restoration and sustained protection of water catchment areas, watersheds, springs, riparian land along river courses, water bodies and wetlands as well as undertake community awareness and involvement in the protection of water sources and riparian lands.
13. Immediate implementation of soil erosion prevention measures all over the country to be coordinated by an institution tasked with this responsibility and supported by all relevant Government agencies.

The following interventions are recommended in the **Medium Term**:

14. Develop the capacity of KFS, including through secondment of officers from other disciplined services to assist in development of appropriate operating systems and command structure.
15. Increase the establishment of forest rangers within the forests of Kenya and undertake a force modernisation process.
16. A review of all internal administrative and technical operating structures of the Service with a view to identifying rectifying and closing loopholes/gaps/ambiguities within the system.

17. Sensitization of the judicial system on environmental and land use planning matters with a view to creating a detailed appreciation of the concept of environmental crime and its impact on the society for sustainable development.
18. Commission a situational analysis of KFS Systems (workload, staff establishment, resource requirement) with a view to proposing the necessary reform and transformation package.
19. County Governments should urgently in collaboration with the Ministry and KFS fast track the signing and operationalization of Transition Implementation Plans (TIPs), capacity building and resourcing for the efficient transfer and implementation of the devolved function. Further, a clear framework for collaboration in forestry functions between the National Government and County Government should be put in place
20. Develop Sustainable Forest Management Standards as provided for in the FCMA; and guided by best practices including the FAO Principles of Responsible Management of Planted Forests.
21. Development of an all-inclusive National Environment Policy and National Forest Policy as well as the implementation of the related policy frameworks that have a bearing on the sector.

The following interventions are recommended in the **Long-Term**:

22. Review the FCMA and all sectoral laws, rules and regulation relating to the management of forests and allied natural resources in Kenya with a view to harmonizing these legislations to remove ambiguity, conflict, duplications and enhancement of penalties.
23. Organise training on environmental matters for the members of the court user committees in all counties.
24. All public institutions should include in their performance contracts an obligation and duty to protect the environment.
25. Sustain judicious implementation of the 2009 Report of the Mau Taskforce by the KWTA and other relevant agencies.
26. **Review of the relevant Policy frameworks:** Prioritize the formulation of a Forest Policy and review the other existing policies to make them more amendable to efficient and effective management of the forest sector. It is therefore recommended as follows:
 - i) Revision and completion of the Draft National Forest Policy 2015
 - ii) Implementation of the recommendations of the Sessional Paper No. 1 of 2017 on National Land Use Policy (NLUP)
 - iii) Implementation of Sessional Paper No. 3 of 2009 on National Land Policy

- iv) Implementation of the strategies and policies of the National Spatial Plan relating to conservation and management of forests and other ecosystems.
- v) Review the Agriculture Food and Fisheries Policy with a view to mainstreaming it into the National Forest Policy.
- vi) Implementation of the Devolution Policy.

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ANNEXES

Annex 1: Kenya Gazette Note stipulating Terms of Reference of the Taskforce to inquire into Forest Resources Management and Logging Activities in Kenya

SPECIAL ISSUE



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THE FOREST CONSERVATION AND MANAGEMENT ACT

(No. 34 of 2016)

APPOINTMENT

IT IS NOTIFIED for the general information of the public that the Cabinet Secretary for Environment and Forestry has appointed a Task Force to inquire into forest resources management and logging activities in Kenya which shall comprise of—

Chairperson:

Marion Wakanyi Kamau, Chairperson of the Greenbelt Movement.

Members:

Linda Chepkorir Ruto Munyao (Vice-Chairperson of the Environment Institute of Kenya).

Christian Lambrecht (Rhino Ark Charitable Trust).

Phyllis Wakiaga (Chief Executive Officer of the Kenya Association of Manufacturers).

Isaac Kalua (*Dr.*) (Chairperson of the Kenya Water Towers Agency).

Duncan Kimani (Kenya Private Sector Alliance).

Ernest Nakenya Nadome (Central Organisation of Trade Unions).

Adil Arshed Khawaja (Advocate of the High Court of Kenya).

Gideon Solonka Kilakoi (Advocate of the High Court of Kenya).

Faith Waguthi Waigwa (Advocate of the High Court of Kenya).

A representative from the Ministry of Interior and Co-ordination of National Government.

A representative from the Ministry of Devolution and Arid and Semi-Arid Lands.

A representative from the Ministry of Water and Sanitation.

A representative from the Ministry of Lands.

A representative of the Council of County Governors.

Joint Secretaries

Stephen M. King'uyu

Irene Kamunge

1. The terms of reference of the Task Force shall be to—

(a) determine the scale of illegal logging, destruction, degradation and encroachment of public and community forests, water towers and other catchment areas, as well as the associated impacts;

(b) review the procedures, qualification and conditions for licensing of saw millers to determine their adequacy, fairness and appropriateness;

(c) review and determine the effectiveness of the monitoring and verification procedures to ensure compliance with license conditions;

(d) review the chain-of-custody system established by the Kenya Forest Service through which forest products from public, community and private forests are distributed, tracked and monitored from their origin in the forest to their end-use, and determine their adequacy and effectiveness;

(e) review felling plans and associated programmes including planting and replanting to determine their adequacy and effectiveness;

(f) determine the institutional and technical capacity of the Kenya Forest Service and other agencies involved in the management of forests to enforce compliance with forest laws and regulations;

(g) determine the effectiveness and efficiency of inter-agency and intra-agency collaboration of agencies involved in the management of forests;

(h) review and determine the effectiveness of participatory forest management programmes including the operational and governance structures of Community Forest Associations;

(i) review and analyse the valuation procedures and methods for forest stocks;

(j) audit revenue generation from forests against the investment and operational costs;

(k) review the Forest Conservation and Management Act, 2016 and other related written laws to enhance penalties for contravening the provisions of the Act and related written laws;

(l) review the statutory and regulatory regime governing charcoal burning and trade, and make recommendations on the need, or otherwise, to ban charcoal burning, trade or use; and

(m) make recommendations on short-term, medium-term and long-term interventions to ensure sustainable management, restoration and protection of forests and water catchment areas.

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In the performance of its mandate, the Taskforce—

- (a) shall co-ordinate an inclusive stakeholder consultation process at all levels;
- (b) shall undertake aerial and ground-based surveys and investigations;
- (c) shall identify and co-opt technical experts or any other resource, provided that the co-opted members do not exceed one third of the Taskforce;
- (d) may, with the approval of the Principal Secretary in the State Department of Environment and Forestry, engage the services of such consultants as may be found necessary for the performance of its mandate;
- (e) shall conduct public hearings and receive representations, memoranda and petitions from the public;
- (f) shall commission any studies or research to elaborate on critical technical matters as may be necessary; and

(g) shall call for and subpoena any relevant documents and information in the possession, custody or control of any relevant institution or persons.

3. The term of office of the Taskforce shall be thirty (30) days from the date of the publication of this notice:

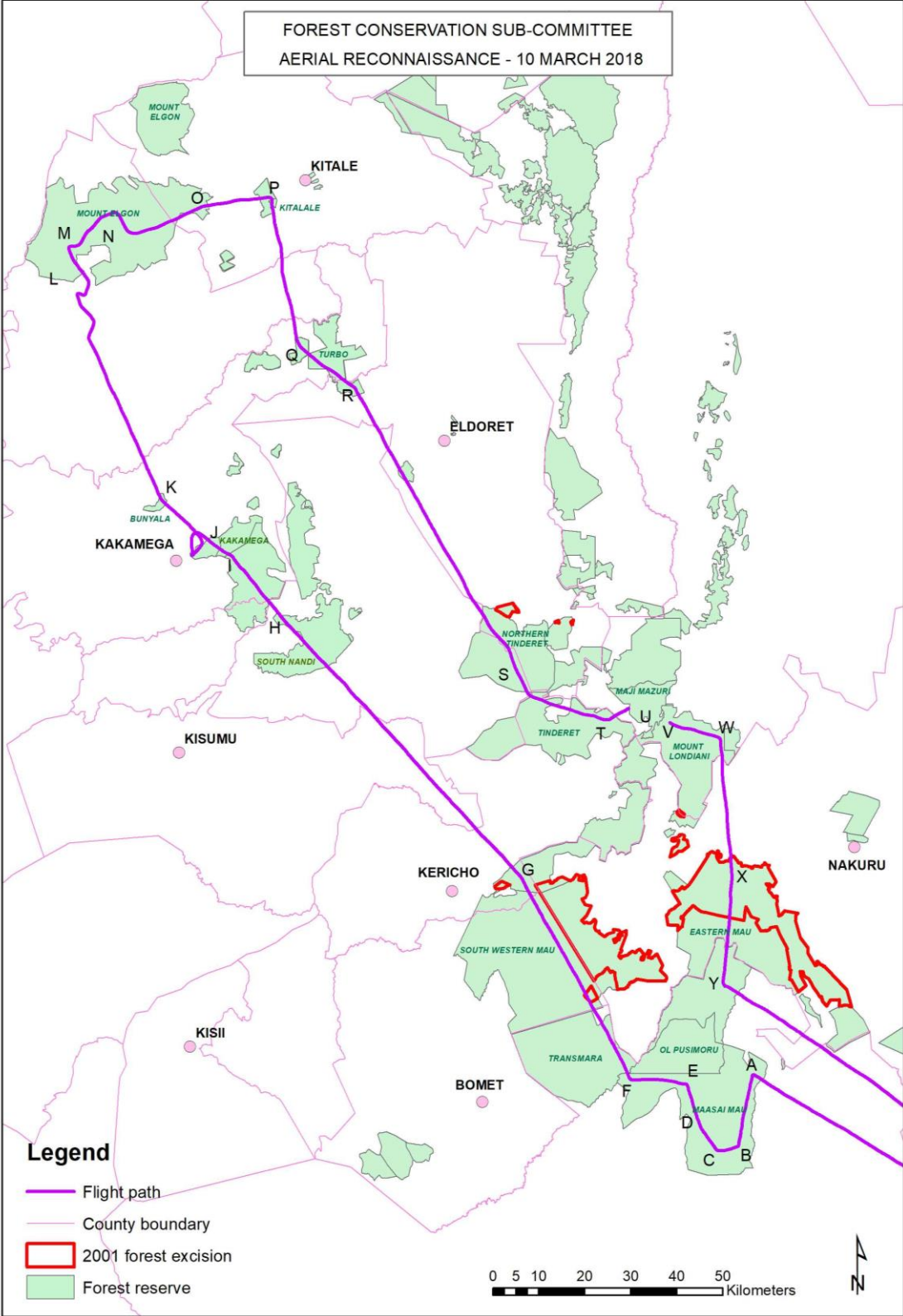
Provided that the Taskforce shall submit to the Cabinet Secretary an interim report within fourteen (14) days.

4. The costs incurred by the Taskforce shall be defrayed from the voted funds of the Ministry.
5. The Secretariat of the Taskforce shall be based at the headquarters of the Ministry of Environment and Forestry.

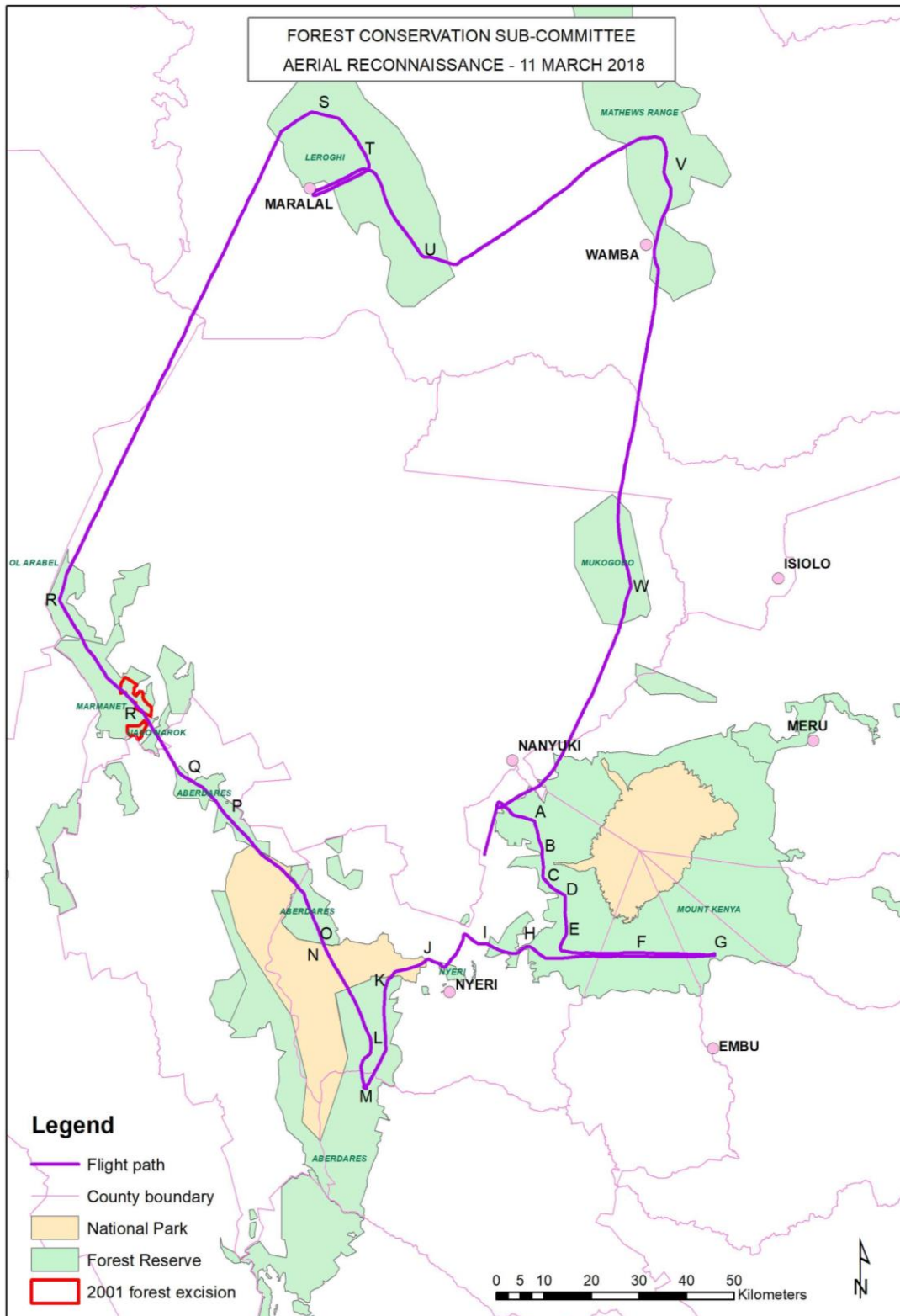
Dated the 26th February, 2018.

KERIAKO TOBIKO,
Cabinet Secretary for Environment and Forestry.

Annex 2: Route of aerial Reconnaissance of 10 March 2018



Annex 3: Route of aerial Reconnaissance of 11 March 2018



Annex 4: Pictures showing widespread forest destruction

In September/October 2016, an extensive elephant census / forest health survey was undertaken across the Mau Forests Complex. The survey recorded widespread forest destruction, in particular illegal logging of Cedar trees. The photographs below were taken during the survey.



Figure 1: Illegal logging in Maasai Mau forest (September/October 2016)



Figure 2: Illegal logging in Maasai Mau forest (September/October 2016)



Figure 3: Bushmeat in Maasai Mau forest (September/October 2016)



Figure 4: Logging in Ol Pusimoru Forest Reserve (September/October 2016)



Figure 5: Charcoal making in Ol Pusimoru Forest Reserve (September/October 2016)



Figure 6: Poaching in Transmara Forest Reserve (September/October 2016)



Figure 7: Logging in South Western Mau Forest Reserve (September/October 2016)



Figure 8: Charcoal making in South Western Mau Forest Reserve (September/October 2016)

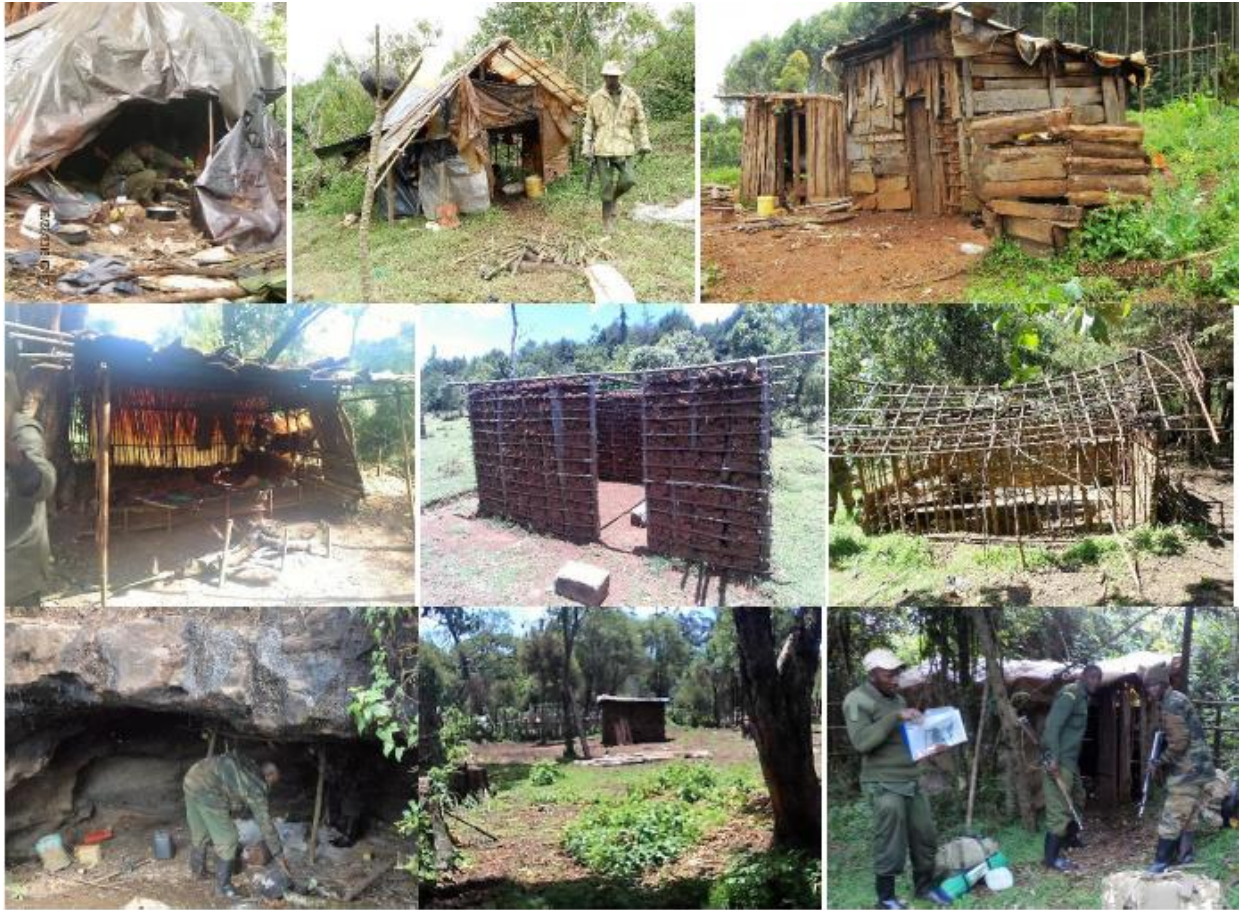


Figure 9: Illegal structures in South Western Mau Forest Reserve (September/October 2016)



Figure 10: Charcoal making and clear-felling in Mt. Londiani Forest Reserve (September/October 2016)



Figure 11: Illegal shelters and littering in Mt. Londiani Forest Reserve (September/October 2016)

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
DEFINITION OF FORESTS	<p>Section 2: Definition of Forest “forest” means land which is declared or registered as a forest, or woody vegetation growing in close proximity in an area of over 0.5 of a hectares including a forest in the process of establishment, woodlands, thickets.</p> <p>Article 69 of the Constitution of Kenya The Constitution of Kenya does not define the term “forests” but refers to the term “tree cover” under Article 69. Article 69 states: (1)The State shall— (a) ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits,</p>	<p>Comment The Constitution of Kenya (the Constitution) refers to “tree cover” while FCMA refers to “forest”. As a result, there is no clarity on what FCMA has been mandated to conserve and manage. As it would be difficult to amend the Constitution to include the definition of forests, we recommend that the FCMA be amended to include a clear definition of the term “forests” as follows: Proposed Amendment We propose the definition of forests in FCMA be amended by replacing it with the following definition: “forest” means land with trees that have a capacity of reaching a minimum height of 5 meters and growing in close proximity in an area of over 0.5 hectares. Forest include: a) woodlands, thickets and any other woody vegetation with a capacity of reaching a minimum height of 5 meters and growing in close proximity in an area of over 0.5 hectares; b) land which is declared, gazetted or registered as a forest under this Act; and</p>	<p>a) From the current definitions, it is unclear whether forests refer to any form of tree cover or whether forests include only tree plantations with the primary purpose of producing wood or wood-derived products. A wrong definition of forests results in collation of wrong statistics on the current forest cover in Kenya and consequently misleads Kenyans and non-Kenyans alike on the state of forestation in Kenya.</p> <p>b) The Food and Agriculture Organisation of the United Nations (FAO) provides a definition for forests that gives clarity on what part of a country constitutes a forest and what part does not. FAO defines forests as: “Land with tree crown cover (or equivalent stocking level) of more than 10 percent and area of more than 0.5 hectares (ha). The trees should be able to reach a minimum height of 5 meters (m) at maturity in situ. May consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground; or open forest formations with a continuous vegetation cover in which tree crown cover exceeds 10 percent. Young natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10 percent or tree height of 5 m are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention or natural causes but which are expected to revert to forest.</p>

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
	(b) work to achieve and maintain a <u>tree cover of at least ten per cent of the land area of Kenya</u>	c) young natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10 percent or tree height of 5 meters in areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention or natural causes but which are expected to revert to forest.”	Includes: forest nurseries and seed orchards that constitute an integral part of the forest; forest roads, cleared tracts, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of specific scientific, historical, cultural or spiritual interest; windbreaks and shelterbelts of trees with an area of more than 0.5 ha and width of more than 20 m; plantations primarily used for forestry purposes, including rubberwood plantations and cork oak stands. Excludes: Land predominantly used for agricultural practices”. ⁵²
	Section 30: Classification of forests (1) Forests may be classified as public, community or private forests.	Comment Under section 30 (2) (b), public forests are defined as land between the high and low water marks classified under Article 62 (1) of the Constitution. There is no Article 62 (1) (1) of the Constitution of Kenya.	a) The reference to section 62(1)(1) instead of 62(1)(L) appears to have been erroneous; and

⁵²<http://www.fao.org/docrep/006/ad665e/ad665e06.htm>

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
	(2) Public forests include— (a) public forests classified under Article 62 (1)(g) of the Constitution; and (b) forests on land between the high and low water marks classified under Article 62 (1) (1) of the Constitution.	Comment Under section 30 (2) (b), public forests are defined as land between the high and low water marks classified under Article 62 (1) (1) of the Constitution. There is no Article 62 (1) (1) of the Constitution of Kenya. From the reading of the section, section 30(2) (b) appears to refer to Section 62 (1) (L).	b) Failure to provide correct definitions and correct references in the Act may lead to improper identification on the forests that the Kenya Forest Service (KFS) is mandated to protect, conserve and manage.
PUBLIC FOREST STRATEGY	Section 6: Public Forest Strategy (1) The Cabinet Secretary shall, within one year of the commencement of this Act and every five years thereafter, following public participation, formulate a public forest strategy.	Comment The date for commencement of FCMA was 31st March 2017. The Cabinet Secretary for Environment and Forests is required to have formulated a forest strategy within one year from this commencement date that is by 31 st March 2018. A forest strategy should be developed if it has not yet been developed by the KFS to avoid its officers being held liable for contravening provisions on FCMA.	a) The object of the public forest strategy is to provide the Government's plans and programs for the protection, conservation and management of forests and forest resources. Without such strategy, there is a higher likelihood that the protection, conservation and management of forests in Kenya will be compromised; and b) According to section 69 of the FCMA, failure to develop the forest strategy amounts to contravention of the Act and any such contravention is an offence that is punishable by a fine of KES 10,000 or imprisonment for 3 months or both upon conviction by a court of law.

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
SPECIFIC PENALTIES	<p>Section 64: Prohibited activities in forests</p> <p>(2) Any person who contravenes the provisions of subsection (1) of this section commits an offence and is liable on conviction to a fine not exceeding <u>one hundred thousand shillings or to imprisonment for a term not exceeding six months, or to both such fine and imprisonment.</u></p>	<p>Comments:</p> <p>Section 64 (2) prescribes a punishment of a maximum of KES 100,000 or six months of imprisonment for any person who carries out any prohibited activity listed under section 64 (1) of FCMA.</p> <p>When compared with penalties from other jurisdictions, this penalty would be considered to be lenient and one that would not deter future activities that degrade Kenya's forests. For example, the penalties in various jurisdictions are as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> United States of America - \$500,000 (approx. Kshs. 50,605,500); <input type="checkbox"/> Australia - AUD\$425,000 (approx. Kshs. 33,102,803); <input type="checkbox"/> Japan - ¥300,000 (approx. Kshs. 286,630) for companies and ¥500,000 (approx. Kshs. 477,716) for individuals⁵³; and <input type="checkbox"/> Europe - £5,000 (approx. Kshs. 706,947) for companies⁵⁴. 	<p>a) Low penalties have failed to deter activities that lead to deforestation in Kenya;</p> <p>b) The penalty prescribed under section 52(2) of the repealed Forest Act 2005 was higher than the current penalty, that is, a minimum fine of KES 50,000 or six months of imprisonment. Lowering the penalty under the FCMA has not served to increase protection of the forests in Kenya. On the contrary, protection of the forests has been on a steady decline; and</p> <p>c) Rangers and officers from the KFS have registered complaints stating that the low penalties provided under FCMA do not deter people from engaging in activities that lead to deforestation in Kenya.</p>

⁵³ file:///C:/Users/Rnjeri/Downloads/eutr-lacey_act-ilpa-clean_wood_act_comparison_table351938.pdf

⁵⁴ <https://www.illegal-logging.info/regions/uk>

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
		<p>Proposed Amendment to section 64 (2)</p> <p>Any person who contravenes the provisions of subsection (1) of this section commits an offence and is liable on conviction to a fine not exceeding <u>one million shillings</u> or to imprisonment for a term not exceeding <u>three years</u>, or to both such fine and imprisonment.</p> <p>Proposed Amendment to section 69</p> <p>Any person found guilty of an offence against the provisions of this Act for which no specific penalty is provided shall be liable on conviction to a fine not exceeding <u>one million shillings</u> or to imprisonment for a term not exceeding <u>three years</u>, or to both such fine and imprisonment.</p>	
	<p>Section 64 (3): Prohibited activities in forests</p> <p>(3) Any person who contravenes the provisions of section 61 shall be guilty of an offence and is liable on conviction to a fine not exceeding one million or to imprisonment for a term not exceeding three years, or to both such fine and imprisonment.</p>	<p>Comments:</p> <p>Section 64 (3) provides a penalty of a maximum of Kshs.1,000,000 or 3 years of imprisonment for offences described in Section 61.</p> <p>Section 61 however does not mention any offence. Section 61 states “The Cabinet Secretary may declare by Notice in the Gazette any forest produce that may not be exported or imported.”</p>	<p>a) The reference to section 61 instead of 60(1) appears to have been erroneous; and</p> <p>b) Such error may render the penalty provision 64 (3) defective preventing enforcement against any person who contravenes the Act by importing and exporting forest products without a permit issued by KFS.</p>

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
		<p>From the reading of the section, section 64(3) appears to erroneously refer to section 61 instead of referring to Section 60 (1) that states: “(1) No person shall import, export, re-export or introduce any forest products into or from Kenya without a permit issued by the Service under this Act.”</p> <p>Proposed amendment:</p> <p>(3) Any person who contravenes the provisions of section 60(1) shall be guilty of an offence and is liable on conviction to a fine not exceeding one million or to imprisonment for a term not exceeding three years, or to both such fine and imprisonment.</p> <p>If the drafters of section 64 (3) did not intend to refer to section 60 (1) as set out above, we recommend that section 64 (3) be amended to refer to the correct section.</p>	
<p>Section 64 (4): Prohibited activities in forests</p> <p>(4) Any person who contravenes the provisions of section 59 shall be guilty of an offence and shall be liable upon conviction to a fine not exceeding five million shillings or to imprisonment for a term not exceeding three years, or to both such fine and imprisonment.</p>	<p>Comments:</p> <p>Section 64 (4) provides for a penalty of a maximum of Kshs. 5,000,000 or 3 years of imprisonment for offences described in Section 59.</p> <p><i>Section 59 however does not mention any offence. Section 59 states “(1) The Cabinet Secretary in consultation with the relevant stakeholders shall prescribe Regulations for the grading and valuation of timber and other forest products. (2) On the advice of the registered association of professional foresters, the Cabinet Secretary may, by notice in a Gazette, authorize any person to be a timber grader or valuer for the purposes of this Act.”</i></p>	<p>a) The reference to section 59 appears to have been erroneous; and</p> <p>b) Such error may render the penalty provision 64 (4) defective preventing enforcement against any person who contravenes this provision.</p>	

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
GENERAL PENALTIES	<p>Section 64 (4): Prohibited activities in forests</p> <p>(4) Any person who contravenes the provisions of section 59 shall be guilty of an offence and shall be liable upon conviction to a fine not exceeding five million shillings or to imprisonment for a term not exceeding three years, or to both such fine and imprisonment.</p>	<p>From the reading of section 64(4), it is unclear what activity the drafters of this section intended to penalise.</p> <p>Comments: The general penalties under section 67 and 69 should also be increased to improve compliance to FCMA and consequently reduce deforestation in Kenya. Proposed Amendment to sections 67 and 69 We propose that sections 67 and 69 be amended to replace the fines and imprisonment terms with “<u>five hundred thousand shillings</u>” and “<u>one (1) year</u>” as and where they so appear. 67. Other offences (1) Any person who— (a) commits a breach of, or fails to comply with the provisions of this Act; (b) commits a breach of, or fails to comply with any of the terms or conditions of a licence issued to him or her under this Act;</p>	<p>Failure to prescribe high penalties would not deter activities that lead to deforestation in Kenya.</p>

SECTION	SECTION CONTENT	COMMENT AND PROPOSED AMENDMENT	RATIONALE
		<p>(c) fails to comply with a lawful requirement or demand made or given by a forest officer;</p> <p>(d) obstructs a person in the execution of his or her powers or duties under this Act;</p> <p>(e) makes or is found in possession of charcoal in a national, county or provisional forest; or in community forest, private forest or farmlands without a licence or permit of the owner as the case may be:</p> <p>commits an offence and is liable on conviction to a fine not exceeding <u>fifty thousand shillings</u> or to <u>imprisonment for a term not exceeding six months</u>, or to both such fine and imprisonment.</p> <p>(2) Any person who wilfully or maliciously sets fire to any public, provisional, community or private forest commits an offence and is liable on conviction to a fine not exceeding <u>one hundred thousand shillings</u> or to <u>imprisonment for a term not less than one year</u>, or to both such fine and imprisonment.</p> <p>Section 69: General penalty</p> <p>Any person found guilty of an offence against the provisions of this Act for which no specific penalty is provided shall be liable on conviction to a fine not exceeding <u>ten thousand shillings</u> or to <u>imprisonment for a term not exceeding three months</u>, or to both such fine and imprisonment.</p>	

Annex 6: Review of Legislation governing the Forestry and Water Industries

Section Title	Section Content	Comment and Proposed Amendment	Rationale
A. ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT, 1999 (EMCA)			
1. MANDATE OF NEMA VIS- A-VIS KFS	<p>9. Objects and functions of the Authority⁴</p> <p>(1) The object and purpose for which the Authority is established is to exercise <u>general supervision and co-ordination over all matters relating to the environment</u> and to be the <u>principal instrument of Government in the implementation of all policies relating to the environment.</u></p> <p>(2) (l) <u>monitor and assess activities, including activities being carried out</u> by <u>relevant lead agencies, in order to ensure that the environment is not degraded</u> by such activities, environmental management objectives are adhered to and adequate early warning on impending environmental emergencies is given,</p> <p>(r) <u>work with other lead agencies to issue guidelines and prescribe measures to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya.</u></p>	<p>The Ministry of Environment and Forestry has 5 semi-autonomous agencies⁵ as follows:</p> <ol style="list-style-type: none"> 1. National Environment Management Authority (NEMA) 2. Kenya Water Towers Agency (KWTA) 3. Kenya Wildlife Service (KWS) 4. Kenya Forest Service (KFS) 5. Kenya Forest Research Institute (KEFRI) <p>Supervisory Role of NEMA</p> <p>Section 9 of EMCA provides that the function of NEMA is to:</p> <ol style="list-style-type: none"> a) supervise and co-ordinate all matters relating to the environment, b) monitor activities by the lead agencies in order to ensure that the environment is not degraded, and c) work with the lead agencies to achieve 10% tree cover in Kenya. <p>On the other hand, the function of KFS is to ensure the conservation, management and protection of forests in Kenya.</p> <p>Inter-agency role of NEMA</p> <p>Under EMCA, NEMA has been given the following mandate as relates to conservation of forests in Kenya:</p> <ol style="list-style-type: none"> a) declare traditional interest of local communities customarily resident around forests to be protected interests⁶; 	<p>a) if NEMA does not exercise its supervisory role and fails to monitor KFS's activities, there will be reduced accountability on the lead agencies that are to ensure that a 10% tree cover in Kenya is achieved;</p> <p>b) Where deforestation becomes prevalent, NEMA should (in consultation with KFS) develop and issue regulations, procedures, guidelines and measures for the sustainable use of forests.</p>

⁵⁵NEMA

⁵⁶http://www.environment.go.ke/?page_id=2 ; Semi- autonomous means acting as independent entities to some degree

Section Title	Section Content	Comment and Proposed Amendment	Rationale
		<p>b) (in consultation with KFS) issue guidelines and prescribe measures for co-management of critical habitats within forest zones⁷;</p> <p>c) (in consultation with KFS) develop and issue regulations, procedures, guidelines and measures for the sustainable use of forests and shall control the harvesting of forests located in hill and mountain areas⁸;</p> <p>d) (Through the Country Environment Committee) take measures to plant trees or other vegetation in an area targeted for afforestation or reforestation by encouraging voluntary self-help activities in the county's respective local community⁹;</p> <p>e) (In consultation with the Chief Conservator of Forests), enter into a contractual arrangements for registration of land as forest land¹⁰.</p> <p>Section 48 of EMCA provides that any person who contravenes any conservation measure prescribed by NEMA, or fails to comply with a lawful conservation directive issued by NEMA or its Environment Committee at the counties commits an offence.</p> <p>According to section 144 of the EMCA, any contravention of EMCA is an offence that is punishable by a fine of not less than Kshs. 2,000,000 but not more than Kshs. 4,000,000, or imprisonment for a term of not less than 1 year but not more than 4 years, or both, upon conviction by a court of law.</p>	

⁵⁷EMCA, section 43(1)

⁵⁸EMCA, section 43(2)

⁵⁹EMCA, section 44

⁶⁰EMCA, section 48 (1)

⁶¹EMCA, section 48 (4)

Section Title	Section Content	Comment and Proposed Amendment	Rationale
		<p>Proposed Amendments</p> <p>a) NEMA should issue measures for the sustainable use of forests on an annual basis to ensure that forests are being used sustainably. The penalty for failing to comply with such conservation measure should be retained. Section 44 should be amended to include the following subsection after subsection 44(1):</p> <p><i>“44(2) The Authority shall issue measures for the sustainable use of forests on an annual basis and such measures shall be adhered to by the relevant lead agencies.”</i></p> <p>b) Under section 44 of EMCA, NEMA has the mandate to monitor KFS and prescribe regulations, procedures, guidelines and measures to ensure a 10% tree cover is achieved in Kenya. NEMA is not active in issuing such measures and should take up its supervisory role and do so.</p> <p>c) Under section 9 (2) (r) of EMCA, NEMA has the power to issue guidelines to ensure 10% tree cover is achieved. NEMA should issue guidelines and in these guidelines promote an inter-agency model that would help achieve 10% tree cover in Kenya.</p>	

Section Title	Section Content	Comment and Proposed Amendment	Rationale
WATER ACT, 2002 a. Df3e4f3422. .2. 2.	<p>8. Powers and functions of the Water Resources Management Authority (the Authority)</p> <p>(1) The Authority shall have the following powers and functions—</p> <p>(e) to regulate and protect water resources.</p>	<p>Comment:</p> <p>The Authority has been given the mandate to regulate and protect the quality of water resources from adverse impacts. Activities that promote deforestation should be noted as examples of activities that have a diverse impact on the quality of water resources.</p>	<p>Officers of the Water Resources Management Authority have an important role to play in ensuring that deforestation in Kenya is reduced as this would protect the quality of water resources from adverse impacts. If they appreciate that deforestation is linked to Kenya's water sources, this will be a step towards reducing the impacts of drought in Kenya.</p>

WILDLIFE CONSERVATION AND MANAGEMENT ACT, 2013.

<p>3. ROLE OF KWS IN REDUCING DEFORESTATION</p>	<p>110. Powers of authorized officers</p> <p>An authorized officer may –</p> <p>(a) demand from any person the production of an authority, license or permit for any act done or committed by that person in relation to wildlife resources for which an authority, permit or license is required under this Act or under any rules made thereunder;</p> <p>“authorized officer” includes a member of, the Service, <u>a forest officer</u>, a fisheries officer, a police officer, a customs officer, an administrative officer, or any person so designated under this Act;</p>	<p>Comment:</p> <p>A forest officer has the responsibility to ensure that wildlife resources are protected. They should not ignore this responsibility as and when he is required to exercise it.</p> <p>Officers of KWS have not been given the responsibility to protect forests under the Wildlife Conversation and Management Act. This gap in law should be filled to improve inter agency efforts aimed at reducing deforestation in Kenya.</p>	<p>KWS has an important role to play in ensuring that deforestation in Kenya is reduced.</p>
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COUNTY GOVERNMENTS ACT, 2012

4.	<p>ROLE OF COUNTY GOVERNMENTS IN REDUCING DEFORESTATION</p>	<p>102. Objectives of county planning</p> <p>The objectives of county planning shall be to—</p> <p>work towards the achievement and maintenance of a tree cover of at least ten per cent of the land area of Kenya as provided in Article 69 of the Constitution;</p>	<p>Comment:</p> <p>The County Government, in its planning, development and issuance of approvals for planning and development by other parties, should work towards ensuring a tree cover of 10% of the land area in Kenya is achieved.</p>	<p>The County Government has an important role to play in ensuring that deforestation in Kenya is reduced.</p>
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PHYSICAL PLANNING ACT, 1996

<p>ROLE OF PHYSICAL PLANNING AUTHORITY IN REDUCING DEFORESTATION</p>	<p>29. Powers of local authorities</p> <p>Subject to the provisions of this Act, each local authority shall have the power - to reserve and maintain all the land planned for open spaces, parks, <u>urban forests</u> and <u>green belts</u> in accordance with the <u>approved physical development plan</u>.</p>	<p>Comment:</p> <p>The County Government, in its consideration and approval of development plans, should ensure that developments:</p> <p>(a) do not interfere with land planned for urban forests and green belts; and</p> <p>(b) are consistent with the constitutional objective of achieving a 10% tree cover of the land area in Kenya.</p>	<p>The County Government has an important role to play in ensuring that deforestation in Kenya is reduced.</p>
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