



Office of the Auditor General

**ENVIRONMENTAL AUDIT REPORT ON THE PROTECTION  
OF CENTRAL FOREST RESERVES IN UGANDA IMPLEMENTED BY NATIONAL FOREST  
AUTHORITY**



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## **LIST OF ABBREVIATIONS**

<b>AOP</b>	Annual Operating Plan
<b>BOD</b>	Board of Directors
<b>BP</b>	Business Plan
<b>CFR</b>	Central Forest Reserves
<b>Cpt</b>	Compartment
<b>DFO</b>	District Forest Officer
<b>DLG</b>	District Local Government
<b>EIA</b>	Environmental Impact Assessment
<b>FMP</b>	Forest Management Plan
<b>FNCMP</b>	Forest Nature Conservation Master Plan
<b>FS</b>	Forest Supervisor
<b>FSSD</b>	Forest Sector Support Department
<b>GIS</b>	Geographical Information System
<b>GoU</b>	Government of Uganda
<b>GPS</b>	Global Positioning System
<b>GPSC</b>	Global Positioning System Coordinates
<b>IDI</b>	International Development Initiative
<b>IFRS</b>	International Financial Reporting Standards
<b>INTOSAI</b>	International Organization of Supreme Audit Institutions
<b>IOP</b>	Individual Operating Plan
<b>ISSI</b>	Integrated Stock Surveys and Management Inventory
<b>LFR</b>	Local Forest Reserve
<b>M &amp; E</b>	Monitoring & Evaluation
<b>MPA</b>	Management Plan Area
<b>MWE</b>	Ministry of Water and Environment
<b>NEMA</b>	National Environment Management Authority
<b>NFA</b>	National Forestry Authority
<b>NFTPA</b>	National Forestry and Tree Planting Act
<b>NGO</b>	Non-Governmental Organization
<b>NTSC</b>	National Tree Seed Centre

<b>OAG</b>	Office of the Auditor General
<b>PS</b>	Permanent Secretary
<b>REDD</b>	Reduced Emissions from Deforestation and forest Degradation
<b>RM</b>	Range Manager
<b>SAI</b>	Supreme Audit Institution
<b>SM</b>	Sector Manager
<b>SMS</b>	Subject Matter Specialist
<b>SNR</b>	Strict Nature Reserve
<b>THF</b>	Tropical High Forest
<b>TMF</b>	Tropical Moist Forest
<b>UWA</b>	Uganda Wildlife Authority
<b>VFM</b>	Value for Money
<b>WCA</b>	Wildlife Conservation Area
<b>WGEA</b>	Working Group on Environmental Auditing

## **EXECUTIVE SUMMARY**

This Value for Money audit on Protection of Central Forest Reserves by National Forestry Authority (NFA) was conducted in accordance with Article 163 (3) of the Constitution of the Republic of Uganda. This mandate is amplified by Section 21 (1) of the National Audit Act 2008 which requires the Auditor General to carry out value for money audits for purposes of establishing economy, efficiency and effectiveness in the operations of any Ministry or Department.

### **Motivation**

Forests provide a wealth of direct and indirect environmental benefits to the people. Tropical High Forests (THFs) are particularly important as they provide disproportionately high values of natural products, environmental services and support high levels of biodiversity. However, in Uganda, the quantity and quality of the THFs has declined overtime. Well over 30% of the THF in Uganda is now degraded, with private forests shrinking more rapidly than forests managed by the government.<sup>1</sup>

### **Major Findings:**

#### **Forest Management Plans (FMP)**

A review of documents and management interviews confirmed that out of 506 only 8 FMPs for Mabira (6 CFRs), Kalinzu (1 CFR) and Namavundu (1 CFR) had been approved by 2010. This implies that only 46,123 ha, representing 4% ha are managed according to plan leaving 1,219,348 ha, that is, 96% of forest coverage managed at the discretion of NFA management without approved plans, since the National Forestry Tree Planting Act (NFTPA) came into force in 2003. It was further noted that seventeen (17) FMPs that were submitted to the Minister in 2009 have remained unapproved to date, while the remaining FMPs are still with the Board. Although the process of making FMPs was not concluded, a review of documents relating to the financing of NFA revealed that shs.100,650,000 and shs.902,143,992 was budgeted for FMPs and board members and a total of shs.123,904,340 and shs.769,840,313 was spent on FMPs and board members respectively for the three years.

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<sup>1</sup> The Value of Uganda's forests: A livelihoods and ecosystems approach, 2004

### **Recommendation**

NFA should expedite the review and submission of draft FMPs for approval. Efforts should also be taken to get feedback on the submitted FMPs to the Minister responsible. Board members outputs should be clearly determined with clear timelines.

### **Opening and Maintenance of Forest Roads for effective management of CFRs**

Out of the 404 km forest roads planned only 122 kms were actually opened and maintained representing 30% performance. The 122 km work was done in only eight out of the thirty five CFRs i.e. in Budongo, Mabira, Kalinzu, Namanve, Itwara, Bugoma, South Busoga and Mbale. From the review of documents, it was noted that shs.572,326,000 was budgeted for road maintenance and shs.224,612,051= was spent in the three years under review.

### **Recommendation**

NFA should ensure that forest roads are well maintained to facilitate responsible forest management. This can be achieved by setting realistic achievable targets in a phased manner in the operational plans.

### **Forest boundaries**

The boundaries of the thirty five forests in the sample were found to be unclear. The sampled forests have a total cut-line boundary length of 1340.32 kms. In the three years under review 668.85 kms of forest boundary were planned for reopening and maintenance. Out of this, only 453.3 kms of the boundary were actually maintained, representing 68 % performance. Review of the financial statements indicated that shs.1,123,910,000 was budgeted for boundary opening and shs 809,804,810= was spent in the three financial years under review, implying that the boundaries of the forests should have been clear.

### **Recommendation**

NFA should ensure that Forest boundaries are opened and maintained. Beacons (Pillars) such as the ones used in South Maramagambo CFR, should be installed at forest boundaries that are unclear and prone to encroachment. Work plans and budgets should be prepared on the basis of the resource envelope so that they can be effectively implemented.

### **Prevention of Forest Fires**

The audit revealed that for all the thirty five forests in the sample there were no serious cases of fire except in the South Busoga CFR. This is because natural forests have a very low risk of fire since they are ever green. While the fire cases were not serious, the forest stations were not equipped with the necessary tools to fight fire in the event that serious fires broke out. Station managers reported that the small fires were fought using fire beaters (tree branches). It was also noted that there were no nearby sources of water to fight the fires in case of emergency. Furthermore the stations did not have a fire monitoring crew and there was no evidence of sensitization of surrounding communities on the prevention of fire. The analysis of financial statements revealed that shs.553,420,000 was budgeted for fire control and shs 300,062,084 was spent during the period under review.

### **Recommendation**

Using the budget allocation, NFA should ensure that basic tools and equipments for firefighting are prioritized and procured for forest stations. Fire monitoring and fighting crews should be established.

### **Illegal Activities within CFRs**

Audit found out that in all the thirty five forests under study, there were various illegal activities going on. Management reports, field observations and fines (as a revenue source) confirmed the existence of illegal activities, such as: timber harvesting, cultivation, settlement, grazing, sand mining and charcoal burning. Review of the financial records revealed that shs.865,675,000 was budgeted for forest patrols and shs 1,143, 585, 291= was spent on this activity, implying that illegal activities should have been drastically reduced but which is not the case.

### **Recommendation**

NFA should implement a zero tolerance on illegal activities. Collaborative Forest management practices should be stepped up to make the communities appreciate the value of forests. NFA should form collaborative arrangement with the local government to sensitize the communities on the benefits of forests so that the community may appreciate them.

### **Encroachment**

All the 35 forests in the sample had been encroached on and, according to management; the number of encroachers has gone much higher since the last census in 2005. In South Busoga CFR, for example, 13,105.6 ha out of the 16,382 ha of the forest, representing 80%, had been encroached on by 844 settlers according to the 2005 census by NFA. The analysis of the financial records indicated that shs. 380,597,988= was budgeted for law enforcement and shs.639,313,366= was incurred, implying that encroachment of CFRs should have been scaled down.

### **Recommendation**

The NFA should restore the legal integrity of CFRs by evicting all encroachers. Furthermore, NFA as the lead agency mandated to protect all CFRs in Uganda, should plan and expedite the introduction of environmental police just like UWA has wild life conservation police to protect CFRs from encroachment.

### **Community Sensitization and Participation**

Review of documents and interviews with management revealed that twenty-two Collaborative Forest management (CFM) agreements were signed with communities adjacent to five (5) CFRS only, out of the thirty five sampled, representing 14 % performance. The analysis of the financial statements for the financial year under review revealed that shs 738,553,068= was budgeted and shs 284,524,400=, indicating a performance of 38.5% implying that this activity was not prioritized by management.

### **Recommendation**

NFA should embrace community participation in responsible forest management by ensuring that as many CFM groups as possible are formed and respective agreements signed to reduce the level of encroachment.

## CHAPTER ONE

### INTRODUCTION

#### 1.0 **Background to the Audit**

This Value for Money audit on Protection of Central Forest Reserves by National Forestry Authority (NFA) was conducted in accordance with Article 163 (3) of the Constitution of the Republic of Uganda. This mandate is amplified by Section 21 (1) of the National Audit Act 2008 which requires the Auditor General to carry out value for money audits for purposes of establishing economy, efficiency and effectiveness in the operations of any Ministry or Department.

#### 1.1 **Motivation**

The study was carried out in response to a communication from the International Organization of Supreme Audit Institutions (INTOSAI) and International Development Initiatives (IDI) on Trans-regional Capacity Building Programme for performance Audits of Environmental Issues in Forestry. It was stressed that Environmental issues related to forestry have become a prevailing global challenge across nations and accordingly, a concern of Supreme Audit Institutions (SAIs). SAIs play an important role in promoting environmental governance by carrying out environmental audits on the levels of commitment by their governments to environmental protection.

Forests provide a wealth of direct and indirect environmental benefits to the people. Tropical High Forests (THFs) are particularly important as they provide disproportionately high values of natural products, environmental services and support high levels of biodiversity. However, in Uganda, the quantity and quality of the THFs has declined overtime. Well over 30% of the THF in Uganda is now degraded, with private forests shrinking more rapidly than forests managed by the government.<sup>2</sup> Uganda's forests contribute significantly to the protection and stabilization of the environment. In 2004, the combined contribution of forests to soil and water management, carbon sequestration, and future uses for Uganda's biodiversity was valued at UGX 222.2 billion (US\$130.7million) annually (Glenn Bush op cit). This represents the amount of money

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<sup>2</sup> The Value of Uganda's forests: A livelihoods and ecosystems approach,2004

which government would have spent annually to provide fertilizers, drill new boreholes and clean air pollution if the forests were destroyed.

According to the National Environment Management Authority (NEMA) report of 2008, the country's environment is in danger as its forest cover and wetlands could soon disappear. There is a dramatic reduction of forest cover in Uganda, especially in the District of Kibale. In 1990 Kibale had about 114,000 hectares of forest cover with a population of about 220,300 people. But by 2005, its forest cover had fallen to about 58,300 hectares (48.8%) with a population of about 413, 000 people due to migration.

The rate of deforestation in Uganda is alarmingly high at 1.9% annually, leading to a loss of 90,000 ha of forest cover per year. The current mature timber plantations will be exhausted within 3-5 years (by 2011-2013). At the current sustainable harvesting levels of 53,000 M<sup>3</sup> per year from the natural forest CFRs over the next 30 years, the available stock of natural forests will not be able to meet the demands for timber.

The NEMA report for the year 2009 showed that forests are facing a serious threat from the rising population. About 1.2 million ha of forest cover was lost between 1990 and 2005. The Country's forest cover was 5,000,000 ha in 1990 but by 2005, it had reduced to 3,500,000 ha. The most affected districts are Mayuge, Wakiso, Mubende, Kibale and Mityana. The high deforestation is due to demand for wood fuel. About 99% of Uganda's population use charcoal or fire wood.

## 1.2 **Description of the Audit area**

The NFA is located in Kampala on plot 10/20 Spring Road and has fourteen main field offices and these include: Lakeshore Range office, Achwa Rivers Range Office, South Western Range Office, Mwenge Plantations Office, Lendu Plantations Office, National Tree Seed Centre, Bundongo Systems Range Office, Muzizi River Range Office, Mbarara Plantations Office, South Busoga Plantations Office- Mayuge, Kyoga Range Office, West Nile Range Office, Katuugo Plantations Office and Mafuga Plantations Office.

Forests in Uganda are classified as Central Forest reserves (CFRs); Local Forest reserves (LFRs); Community Forest reserves (CF); Private Forests (PF) and Forests forming part of a wild Life Conservation area declared under Uganda Wild Life Statute 1996.

Forest cover stands at about 4.9 million ha, which is 24% of Uganda's land area. The forests comprise both natural and man-made plantations. Natural forests include both the Tropical Moist Forests (TMF) and other naturally wooded land that falls within the definition of forests. The TMFs cover 924,000 ha (just under 5% of Uganda's area) while other wooded lands cover 3,974,102 (19%). About 70% of the forest cover is found on private land. The remainder is in Protected Areas (PAs) as CFRs under the management of the NFA, LFRs under the management of the District Local Governments (DLGs) and Wild Life Conservation Areas (WCA) under the management of Uganda Wild Life Authority (UWA). In CFRs, natural forests cover 791,682 ha (15.3% of all the natural forests in Uganda), 38,343 ha are managed jointly with UWA in dual management areas while 491,357 ha are exclusively in WCAs.

The Ministry of Water and Environment is responsible for the formulation of policy guidelines and regulations. The Forestry Sector Support Department (FSSD) offers supportive back up both to NFA and District Forestry Services (DFS).

### 1.3 **Statutory Mandate**

The NFA is mandated, under The National Forestry and Tree Planting Act of 2003 (NFTPA), to manage all forests in CFR (506 CFRs). This is an 'Act to provide for the conservation, sustainable management and development of forests for the benefit of the people of Uganda'. These Permanent Forest Estates were reserved for providing forest products and ensure that public goods, like: protecting river banks, lakeshores, water catchments and steep slopes; conserving biodiversity; mitigating the effects of climatic change; and providing the amenity and recreation services, are delivered to the people of Uganda and the international community.

### 1.4 **Vision, Mission Statement and Strategic Objectives**

The vision, mission, goals and objectives of NFA are stated as follows:

#### 1.4.1 **Vision**

"To have a sufficiently forested, ecologically stable and economically prosperous Uganda"

#### 1.4.2 **Mission**

“To manage the Central Forest Reserves on a sustainable basis and to supply high quality forestry related products and services to government, local communities and the private sector”

#### 1.4.3 **Goal**

“An integrated forest sector that achieves sustainable increases in economic, social and environmental benefits from forests and trees by all the people of Uganda, especially the poor and the vulnerable”

#### 1.4.4 **Strategic objectives**

- i) To improve management of the CFRs leading to sustainable yield of forest products and income through agreed FMPs, new investments initiatives and professional forestry management.
- ii) To expand partnership arrangements so as to substantially increase the size of the CFR and those being managed under the arrangement with local Governments, communities and private Investors.
- iii) To supply good quality products and services such as timber, technical advice, seeds, seedlings and forestry related services
- iv) To attain financial sustainability by the fourth year of operation.

#### 1.5 **The roles of National Forest Authority**

The roles of NFA, among others, include the following:

- i) Hold forests in protected areas as permanent forest estates (PFE) in trust for all the people of Uganda;
- ii) Enhance the rights of the forest adjacent communities to access and utilize land and resources in Forest Reserves (FRs) by managing the resources together with NFA and the local governments responsible for FRs;
- iii) Promote conservation of biodiversity in order to sustain the forest resource base and other products and environmental benefits accruing from forests;
- iv) Promote conservation and rehabilitation of water shed to ensure sustained supply of adequate and clean water for domestic consumption, Industrial development, production and generation of hydroelectricity;

- v) Promote urban forest for beautification, environmental sanitation from industrial emissions and provision of tree products.

#### 1.6 **Major activities**

- i) To develop and manage all CFRs;
- ii) To promote innovative approaches for local community participation in the management of CFRs;
- iii) To identify and recommend to the minister, areas for declaration as CFRs and amendment of those declarations;
- iv) To prepare and implement management plans for CFRs and to prepare reports on the state of CFRs and such other reports as the Minister may require;
- v) To carry out or commission research for the purposes of conservation, development and utilization of forests, and for the conservation of biological diversity and genetic resources.

#### 1.7 **Forest Protection Activities**

The major Forest protection activities include: Fire Protection; Illegal activities; Encroachment; Protection against plant and livestock, pests and diseases dangerous to forests; Protection against alien and exotic species; Controlled harvesting; Boundary surveying and demarcation; Forestry inventory; Community participation; Sensitization and Training; Licensing and Monitoring and evaluation.

#### 1.8 **Organizational Structure**

The NFA reports to Government through the Minister responsible for forestry, and is supervised by a Board of Directors (BOD). The BODs is responsible, under the Act, for proper management of the funds of the NFA. Section 71 of the Act mandates the Board to perform its function in accordance with sound financial and commercial practice and ensure that revenue is sufficient to meet expenditure. The Board is therefore responsible for: General Direction and supervision of the NFA including its finances, ensuring that proper books of accounts are maintained and the financial statements that are prepared to give a true and fair state of affairs of NFA and safeguarding of assets of NFA and putting in place adequate systems and internal controls in order to minimize errors, fraud and any other irregularities.

The Board is facilitated by four Directorates headed by the Executive Director. The Directorates include: the Directorate of Natural Forests; the Directorate of Plantations; the Directorate of Corporate Affairs and the Directorate of Finance and Administration.

### 1.9 **Funding of NFA**

NFA has three sources of revenue, namely: locally generated revenue, assistance from development partners and Government of Uganda (GOU) contributions. Donor funds have contributed a significant proportion to the funds of NFA while GOU contributions have drastically decreased starting from Financial Year 2006/07. The proportion of locally generated revenue has been increasing with exception of FY 2009/10.

**Table 1: NFA Sources of revenue for financial Years 2008/09-2010/11 (SHS)**

<b>Financial Years</b>	<b>2008/09 (000)</b>	<b>2009/10 (000)</b>	<b>2010/11 (000)</b>	<b>TOTAL (000)</b>
Own Revenue	15,221,434	11,337,386	14,734,559	41,293,379
Government Subvention	161,999	1,175,000	563,928	1,900,927
Grants	2,096,004	3,588,082	4,035,800,	9,719,886
<b>Total</b>	<b>17,479,437</b>	<b>16,100,468</b>	<b>19,334,288</b>	<b>52,914,192</b>

*Source: Audited and Draft Accounts of NFA*

### 1.10 **Audit Objectives**

- i) To ascertain whether the level of success made by NFA in protecting the physical and legal integrity of central forest reserves is effectively and efficiently done.
- ii) To ascertain whether CFRs are being maintained free from encroachment and illegal activities effectively and efficiently;
- iii) To ascertain whether partnership arrangements for collaborative forest management between NFA, adjacent communities and other institutions in helping forest protection are being done effectively and efficiently.

iv) To ascertain whether NFA conducted regular monitoring to reduce threats to the physical and legal integrity of CFR effectively and efficiently.

1.11 **Scope**

The audit was conducted at NFA Headquarters in Nakawa-Kampala and in thirty five (35) CFRs with total area of 482,970ha, which were selected from the seven (7) ranges of Achwa, Budongo, West Nile, Kyoga, South West, Lakeshore and Muzizi.

The audit covered three financial years from July 2008 to June 2011.

## **CHAPTER TWO**

### **METHODOLOGY**

The audit was conducted in accordance with the auditing standards of the International Organization of Supreme Audit Institutions (INTOSAI) and ISSAI; the forest guidelines of the Working Group on Environmental Audit (WGEA) and the VFM Audit Manual of the Office Auditor General (OAG). These standards require that a performance/value for money audit be planned in a manner which ensures that an audit of high quality is carried out in an economic, efficient and effective way and in a timely manner. In collecting data from the field, the team reviewed documents, carried out interviews and conducted physical inspection/observation of the forests to obtain evidence on their conditions.

#### **2.1 Sampling**

The audit covered NFA Headquarters in Nakawa-Kampala and thirty five (35) CFRs selected using multi-stage sampling technique, representing 38% of the total forest area managed by NFA. One largest CFR from each of the seven ranges was chosen and four (4) other CFRs per range were randomly selected through the raffle sampling technique.

#### **2.2 Audit Criteria used to assess performance**

The sources of criteria used to assess performance were obtained from: The National Forestry Tree Planting Act (NFTPA) of 2003, NFA performance contract with government, NFA work plans, NFA business plan 2009-2014, Forest Management Plans, Forestry Nature Conservation Master Plan of 2002 (FNCMP), National Forest Policy, National Forest Plan 2002, Annual Operating Plan and Forest Fire Protection Guidelines 2005.

The specific criteria used from these sources to assess performance were agreed upon with the management of NFA.

#### **2.3 Document review**

The team reviewed the documents to obtain information relating to the legal frame work/mandate of NFA, key processes, assess performance, and obtain organization vision, mission, objectives and challenges faced by NFA for the period under review. The list of documents reviewed is in **Appendix 1**.

#### 2.4 **Interviews**

The team interviewed the Acting Executive Director; four Directors of Natural Forest, Plantation, Corporate affairs and Finance and Administration; seven Range Managers (RM); fifteen Sector Managers (SM); and thirty five Forest Supervisors (FS); with a view to corroborate the information obtained from document review. The list of officers interviewed is attached as **Appendix 2**.

#### 2.5 **Field Inspections**

The team inspected the sampled forests to get on the spot facts/conditions and to corroborate the information obtained from the Geographical Information System (GIS)/ Global positioning System (GPS) regarding the integrity of the central forest reserves.

#### 2.6 **Use of GIS and GPS**

The team used GIS and GPS to obtain geographical data/information that identified the geographical location of features and boundaries on earth, stored as coordinates and topology, and the data was mapped.

## CHAPTER THREE

### **SYSTEMS AND PROCESSES IN THE PROTECTION OF FORESTS**

#### 3.1 **ROLES AND RESPONSIBILITIES OF KEY PLAYERS**

##### 3.1.1 **Ministry of Water and Environment (MWE)**

The National Forestry Authority falls within the portfolio of the Ministry of water and Environment with the Minister as the political head. The Directorate of Environment is responsible for environmental policy guidance within the Ministry and the Forest Sector Support Department (FSSD) is responsible for the forestry policy guidance and regulation within the Directorate. By law, NFA reports to the Minister but on a day-to-day basis, it works with FSSD and the MWE permanent Secretary on behalf of the Minister.

##### 3.1.2 **Board of Directors (BOD)**

The Board is composed of seven members, representing various stakeholders in the natural resource sector. The functions of the board are stipulated in section 60 (1) & (2) of the NFTP. The BOD is responsible for the general direction and supervision of the Authority and reports to the Minister. The functions of the board include the following:

- Review and approve operating plans, budgets, reports and audited financial statements;
- Oversee the operations of the entity;
- Provide guidance to the Executive Director (ED) and staff of the Authority;
- Establish and approve rules and procedures for appointment, termination, discipline and terms and conditions of service of staff of the Authority.

##### 3.1.3 **Executive Director (ED)**

The Executive Director is the Head of the management team and is responsible for the day to day operations and administration of the authority. He is assisted by four Directors for Natural Forests, Plantations, Corporate Affairs and Finance and administration. There are six units in the Executive Director's Office, namely: Law

Enforcement, Public Relations, marketing, Internal Audit, Legal affairs and Procurement. The key roles of the ED are:

- To initiate the development and review of policies for the organization's physical, human and financial resources;
- To monitor the overall Authority's performance and compliance to financial accounting systems in line with Parliament and Government requirements on control of expenditure;
- To develop advocacy strategies for networking with private sector, NGO's forest adjacent communities, investors, local councils and other stakeholders in the management of forest resources;
- To implement the Performance Contract agreement between NFA and the Government and develop entrepreneur strategies for self-financing;
- To develop strategies for enforcing NFA compliance with the relevant legislations, forestry and environmental laws and Government's relevant policies.

#### 3.1.4 **Director of Natural Forests**

The Director carries out the main business of NFA. He manages the bulk of CFRs and is directly responsible for all matters relating to the management of CFRs excluding plantations. His major duties include conservation of biodiversity, sustainable forest utilization, boundary survey, and land development and management.

There are two Coordinators at the NFA Headquarters (Natural Forest Conservation and Forest Utilization) who provide coordination functions, technical, administrative and management support to RMs. In addition, there are six Subject Matter Specialists (SMS) for Natural Forest Management, Partnership Development, Eco-tourism, Land management, Encroachment and Forest utilization. At the field level, the country is divided into seven ranges, each headed by a RM who reports to the Director. Each RM is assisted by a number of SM and Forest Supervisors (FS) who are the frontline field technical staff.

The major roles of the Director are:

- Participate in development of site specific criteria & indicators responsible for Forest Management;

- Develop guidelines relating to the implementation of Criteria & Indicators;
- Ensuring the implementation of strategies for species conservation (in-situ or ex-situ);
- Linking the Directorate of Natural Forests into the ongoing Climate Change activities including REDD<sup>3</sup>;
- Prepare and submit regular reports to the ED.

### 3.1.5 **Director of Plantations**

The director is responsible for all activities geared at plantation development, promotion of private forestry, advisory services, harvesting activities and supply of products such as timber, seeds and seedlings to the market. Plantations are the major sources of revenue and are the business arm of NFA.

The Directorate is comprised of: Advisory Services, Plantation development, Saw mill centre and the National Tree Seed Centre (NTSC). Each unit is headed by a Coordinator or a Manager (for centres) and has a SMS. There are seven Plantation managers at field level, responsible for the main plantation areas. These are assisted by SMs and FSs.

The key roles of the Director are:

- Offer leadership and direction for the Plantation Division;
- Administration and supervision of staff including performance appraisal;
- Lead and guide the planning for the division (both strategic and annual operational plans, including budgeting);
- Monitor, evaluate and control the implementation of work plans both at headquarters and in the field;

### 3.1.6 **Director of Corporate Affairs**

The director plays an expertise role in corporate planning, reporting, image building, environment impact assessment, monitoring and evaluation, information technology, consultancy services, GIS, surveys and mapping. The roles of the units in this directorate are described below:

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<sup>3</sup> Reduced Emissions from Deforestation and forest Degradation

### 3.1.6.1 Geographical information systems (GIS) and Mapping

- Supervises all activities associated with mapping information management;
- Advises on implementation of GIS developments-timing, training, resources, support, monitoring and management of change;
- Provides support to GIS and other NFA information working groups;
- Promotes GIS applications as forest management tools;
- Supervises preparation of maps and boundary plans, image and/or photo processing
- Ground truthing of GIS and image data;
- Manages all GIS and mapping projects and activities.

### 3.1.6.2 Inventory and Surveys

#### **Responsibilities and Tasks**

- Develop and improve appropriate guidelines for boundary surveys and inventory work;
- Develop and maintain of inventory & surveys databases;
- Plan, coordinate and implement National Biomass Surveys and compile inventory reports;
- Verify field work to ensure accuracy of field data collected and/or quality of work done under exploratory inventory, integrated stock surveys and management inventory (ISSMI), permanent sample plots, and road marks;
- Supervise cartography, forest surveys and map production for forest zonation systems.

### 3.1.7 **Director of Finance and Administration**

The Director is responsible for financial management, budgeting, maintenance of books of accounts, financial reporting, human resource management and administration. The key roles are:

- Developing financial systems, policies and procedures that ensure adequate controls to maintain proper books of accounts and to safeguard the assets of NFA;
- Preparing annual accounts within in accordance with the NFTP and IFRSs;
- Preparing annual operational plans and budgets timely;

- Monitoring financial performance on a regular basis and reporting to Management and the Board;
- Preparing and submitting departmental reports and other briefs to the ED when required.

### 3.1.8 **Range Manager**

At field level the country is divided into seven ranges, each headed by a Range Manager who reports to the Director responsible. The key responsibilities of a range manager are to:

- Take charge of management and administration of the range;
- Prepare estimates and annual work plans for the range and ensuring successful implementation;
- Co-ordinate and supervise all NFA activities in the range;
- Manage and supervise human resources under his/her control;
- Co-ordinate and report monthly, quarterly and annually on monitoring and evaluation, corporate planning and audit issues;
- Take lead in developing forest management plan and annual procurement plans.

### 3.1.9 **Sector Manager**

Each range manager is assisted by a number of sector managers who are responsible for managing the forest sectors assigned to them.

### 3.1.10 **Forest Supervisor**

The specific duties include:

- Take full charge of a beat as defined by the Sector Manager, adopting the landscape approach to management;
- Prepare weekly activity schedules and targets and ensure their accomplishments;
- Carry out regular maintenance on forest boundaries;
- Conduct and supervise forest patrols;
- Prepare and submit situational and weekly reports to SM;
- Participate in FMP preparation.

## 3.2 **PROCESS DESCRIPTION**

### 3.2.1 **Forest Management Plan (FMP)**

A ten year Forest management plan (FMPs) is prepared by the directorate of corporate affairs in consultation with the Range /Sector managers, stakeholders and the local communities and approved by the Minister, as per section 28 of the NFTP. Plantation inventories are carried out every 5 years to enable updates of management plans. The plan should be disseminated to the local community and revised every five years. The National Forest Authority (NFA) further prepares a five-year business plan to give it strategic direction. Annual operational plans (AOPs) and budgets are prepared by the directorate of finance and administration for implementation of the Business Plan.

### 3.2.2 **Forest Maintenance Process**

Forest maintenance entails activities geared towards maintaining the physical and legal integrity of forests. It includes boundary opening, re-surveying, demarcation and rationalisation of forest boundaries in the CFRs; forest roads maintenance; removal of encroachers from CFRs; maintenance of young crop-safeguarding the growing stock against all forms of illegal activities within the MPA, maintenance of mature crop and protection against fire and carrying out silvicultural activities to maintain forest health.

### 3.2.3 **Forest Zonation Process**

Zonation involves demarcation of a biodiversity-rich natural forest reserve into various divisions, normally three. Its aim is to promote forest protection through restriction of activities carried out within the forest.

The first step in zonation is done on paper where 20% of the total forest area is demarcated as Strict Nature Reserve (SNR), 30% as buffer and 50% as production zone.

Thereafter, a team of NFA surveyors and other staff go to the CFR to carry out the physical zonation by measuring and marking/painting as indicated on paper.

### 3.2.4 **Monitoring and Evaluation Process**

Regular field visits at different senior management levels are carried out in line with the job description to ensure that operations are carried out as targeted in the annual and individual operational plans. A monitoring plan is prepared during the first six months of implementing the Business plan.

Field visits: the Senior Management Team visits the field (CFRs) regularly to inspect activities at forest level. Range and sector managers also monitor forest level activities. The team undertakes a mid-term evaluation at the end of year two of the Business Plan. Assessment of BP performance is done once a year just before starting work on a new annual operating plan. Once a year, the board formally assesses performance based on the monitoring plan.

NFA has signed a performance contract with GoU to monitor performance of NFA through the Performance Review committee chaired by the Permanent Secretary (PS) Ministry of Water and Environment (MWE). The committee carries out a formal monitoring exercise once every six months.

Value for money audits are carried out by the internal audit quarterly and become the aggregated Annual Audit Plan.

The monitoring team comprising of the M&E specialists, the relevant coordinators and the Internal Auditor conduct quarterly monitoring to reduce threats to the physical and legal integrity of permanent forests and prepare monitoring reports.

## CHAPTER FOUR

### **FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### 4.1 **Forest Management Plans (FMP)**

Section 28 (1) of the NFTP A 2003 requires NFA to prepare a management plan for every CFR declared under the Act, and for those in existence at the commencement of the Act, within one year after the coming in force of the Act and that such plans be approved by the responsible Minister or a person designated by the Minister and revised every five years or as the Minister may prescribe.

The audit established that NFA management needed 54 FMPs to cover the 506 CFRs. However, a review of documents and management interviews confirmed that out of 506 only 8 FMPs for Mabira (6 CFRs), Kalinzu (1 CFR) and Namavundu (1 CFR) had been approved by 2010. This implies that only 46,123 ha, representing 4% ha are managed according to plan leaving 1,219,348 ha, that is, 96% of forest coverage managed at the discretion of NFA management without approved plans, since the National Forestry Tree Planting Act (NFTP A) came into force in 2003. It was further noted that seventeen (17) FMPs that were submitted to the Minister in 2009 have remained unapproved to date, while the remaining FMPs are still with the Board. Management explained that most of the plans were being implemented in anticipation of retrospective approval. Although the process of making FMPs was not concluded, a review of documents relating to the financing of NFA revealed that monies were provided for this activity for the three years under review as indicated in the tables below:

**Table 2: Budget for Forest Management Plan**

<b>Financial Year</b>	<b>Budgeted figure (Shs)</b>	<b>Amount spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	40,900,000	108,854,340	67,954,340
2009/10	57,750,000	15,050,000	42,700,000
2010/11	2,000,000	0	2,000,000
<b>Total</b>	<b>100,650,000</b>	<b>123,904,340</b>	<b>112,654,340</b>

*Source: OAG analysis from the NFA financial statements.*

**Table 3: Board Expenses between 2008/09-2010/11 F/Years**

<b>Financial Year</b>	<b>Budgeted amount</b>	<b>Amount spent</b>	<b>Variance</b>
2008/09	200,847,992	158,958,410	41,889,582
2009/10	407,670,000	324,268,103	83,401,897
2010/11	293,626,000	286,613,800	6,785,687
<b>Total</b>	<b>902,143,992</b>	<b>769,840,313</b>	<b>132,077,166</b>

**Source:** OAG analysis of NFA financial statements

Despite the amount of money spent on the development of the FMPs and Board members, the Board has not finalised reviewing FMPs to-date.

Management appear not to have accorded approval of FMP its due priority despite its importance.

Without approved FMPs, there is the risk that forests are not being managed in line with the Poverty Eradication Action Plan (PEAP), Plan for Modernization of Agriculture (PMA), Environment and Natural Resources Sector Investment Plan, and the Uganda Vision 2035. Further, there is no assurance that the FMPs have been prepared in consultation with local communities and other relevant stakeholders. The management of forests without FMPs may negatively affect forest health and deny forest benefits to the local communities and all Ugandans in terms of livelihood improvement, revenue for government and contribution towards environmental stability, causing a threat to forest protection.

### **Conclusion**

Forest management plans for 503 CFRs are in draft form and have not been approved by the re Minister responsible. This has affected the objectives of Responsible Forest Management (RFM) as the activities of various stakeholders cannot be aligned to RFM, which causes a threat to forest resources.

### **Recommendation**

NFA should expedite the review and submission of draft FMPs for approval. Efforts should also be taken to get feedback on the submitted FMPs to the Minister responsible. Board members outputs should be clearly determined with clear timelines.

### **Management comments**

*Management will follow up with the Minister on the balance of Forest Management Plans (FMPS) that have not yet been approved. One (1) FMP is on running, three (3) were approved by the Minister while eighteen (18) Forest Management Plans are with the Minister for signing. The balance of twenty nine (29) FMPS are in draft form and are to be submitted to the Board of Directors and subsequently to the Minister for approval before the end of the FY 2011/12.*

*Ideally, each Central Forest Reserve (CFR) should have a FMP. However, some CFR with similar characteristics were put into clusters for ease of management.*

*The land cover of forests in Uganda is now at about 18% a drop from 24%. The ideal situation however would be at least 30%.*

#### 4.2 **Forest Zonation**

According to the Forestry Nature Conservation Master Plan of 2002 (FNCMP) CFRs should be zoned as follows: 20% of the total forest area of natural CFRs should be maintained under strict nature conservation (SNR) to conserve the biodiversity and use them for sustainably, while 30% should be maintained as a buffer zone and 50% as a production zone. The purpose of zoning is to protect valuable and rare biodiversity (within the strict nature reserve), and to restrict production activities to the production zone in order to control the activities.

The audit found that most CFRs were not zoned. Out of the thirty five (35) CFRs sampled, only 6 have been physically zoned, while the 24 have been zoned on paper/map. The remaining reserves, namely; Arua, South Busoga, Mbale, Pingire and Kapchorwa are plantations, therefore production forests. Large reserves of high ecological value such as Mt Kei CFR (40,689 ha), Zulia (91,612 ha) and Kadam (39,917ha) had not been zoned as required. Physical zonation was, however, done in the forests of: Budongo, Bugoma, Kasyoha-Kitomi, Kalinzu, South Maramagambo, and Mabira. Physical zonation is done by painting the trees that separate one zone from another as shown in **pictures 1 & 2 below**:

**Picture 1**



**Picture 2**



*OAG Pictures 1 & 2 taken on 22/07/2011 showing how physical zonation was done in Budongo CFR in Cpt N15 (SNR) of Nyakafujo Block and Cpt B4 of Biiso Block respectively.*

According to the management, failure to physically zone forests was as a result of forest boundaries that were not opened yet it was a prerequisite for Responsible Forest Management (RFM). Management further explained that the opening of unclear forest boundaries was very expensive and funds were not available for the exercise.

However, audit attributed the failure for zonation to lack of prioritization of this activity coupled with un-approved FMPs. It was further noted that no budget lines were provided for forest zonation in the three financial years audited.

Forest zonation helps to define the activities that should or should not be carried out within the forest with the aim of promoting sustainable forest use and forest protection. In the absence of zonation there is a risk of indiscriminate use of forest products. Production activities, if carried out in an uncontrolled manner, will lead to massive forest depletion, including the SNR, hence destruction of valuable forest biodiversity and ecosystem. Due to lack of zonation, uncontrolled human activities have led to the depletion of tree species. In South Busoga CFR, the Mvule trees have since disappeared due to heavy degradation, save for remnants as shown in **Pictures No.24 & 25**. Prospects for regeneration have been reduced since mature trees are not spared for seed production.

Unplanned and uncontrolled use of forest resources means that the THF are not managed responsibly and hence sustainable use is not being made of the forests.

Forest protection, through zonation, promotes Ecotourism which has the highest revenue potential. For example, in the financial year 2007/08, out of a total of 12 revenue sources for Budongo CFR, Ecotourism fetched the highest revenue of UGX 95,488,125 of the total revenue of UGX 125,235,115 realised, representing 76.2% of the total revenue (*Page 20 of Budongo FMP refers*). The two (2) Ecotourism sites of Kaniyo Pabidi and Busingiro in Budongo are models which can be used as benchmarks by other CFRs to boost their revenue generation. If tourism facilities are not developed, government could lose revenue from this vital source.

### **Conclusion**

NFA has not physically zoned most of CFRs sampled into production, buffer and strict nature. Out of the thirty five CFRs sampled 6 have been physically zoned and twenty four zoned on paper. In the absence of Zonation there is a risk of indiscriminate use of forest products which leads to massive destruction of valuable forest biodiversity.

### **Recommendation**

NFA should prioritise and allocate budget lines for the physical zonation of CFRs that have not been zoned to promote their sustainable use.

### ***Management response***

*Management is to review the twenty four (24) CFRs and prioritize some for zoning based on the available resources. This notwithstanding, zoning of land for private tree farmers is on-going. Zoning per se, however, is an expensive exercise and, therefore, a few big reserves have been earmarked for zoning and eventually all forests will be zoned. Meanwhile, the focus of management was more on activities that generate revenue for NFA since its survival is mostly from the little non tax revenue that it generates, with minimal government financial support. This activity was grossly affected by the freezing of NFA accounts due to a court order and the subsequent donor pull out.*

#### 4.3 **Opening and Maintenance of Forest Roads for effective management of CFRs**

According to the Annual operating plans for FY 2008/09 to 2010/11 of the sampled CFRs, NFA should have opened and maintained a total of 404kms of forest roads for easy management of the forest reserves.

The audit established that, for the three years under review, plans were made and approved for road works but the activities were not implemented as planned. Out of the 404 km planned only 122 kms were actually opened and maintained representing 30% performance. The 122 km work was done in only eight out of the thirty five CFRs i.e. in Budongo, Mabira, Kalinzu, Namanve, Itwara, Bugoma, South Busoga and Mbale.

From the review of documents, it was noted that road maintenance was budgeted for as indicated in the table below:

**Table 4: Forest Road Maintenance Budget and Expenditure (All CFRs)**

<b>Financial Year</b>	<b>Budgeted figure (Shs)</b>	<b>Amount spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	107,326,000	110,089,401	2,763,401
2009/10	309,400,000	75,483,050	233,916,950
2010/11	155,600,000	39,039,600	116,560,400
<b>Total</b>	<b>572,326,000</b>	<b>224,612,051</b>	<b>353,407,751</b>

*Source: OAG Analysis from NFA financial statements*

**Table 5: Forest Road opened and maintained**

<b>Financial Year</b>	<b>Planned Roads (Km)</b>	<b>Actual kms worked</b>	<b>Variance (Km)</b>
2008/09	211	51	160
2009/10	105	51	54
2010/11	88	20	58
<b>Total</b>	<b>404</b>	<b>122</b>	<b>282</b>

*Source: OAG Analysis of field data*

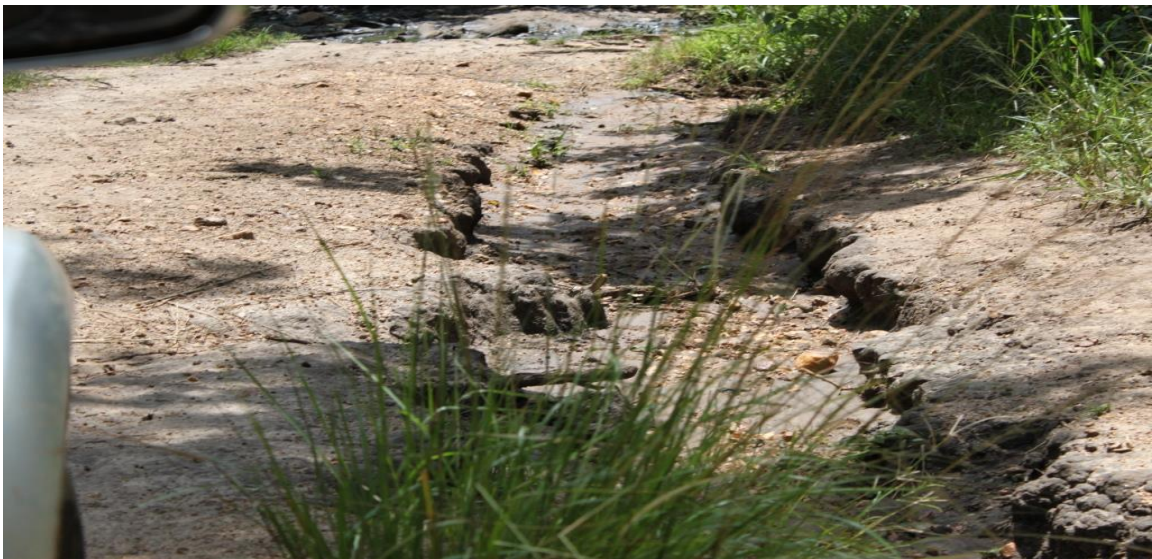
The data availed above was in respect of only 19 CFR instead of 35 implying that data for planning was available in respect of only 54% of the sampled CFR.

From the table above, it can be noted that in the three financial years under review, a total of shs 224,612,051 was spent on road maintenance against a budgeted figure of shs 572,326,000 representing 39.2% budget performance.

According to management the poor performance was due to underfunding by government and low internally generated revenue. However, it is apparent from the audit analysis that management does not have reliable data on forest roads for planning purposes and thus could not prioritize the road works necessary for effective management of the forest reserves. It was further noted that the non- approval of the FMPs by the Minister could have led to lack of direction in the management of the forest roads.

In the absence of well-maintained roads, activities such as patrols, harvesting, fire management and general maintenance of the CFRs is rendered difficult as seen in **Pictures 3 & 4 below.**

**Picture 3**



*Picture taken at Mt Kei CFR on 18/07/2011 showing the state of unmaintained forest roads*

#### Picture 4



Unmaintained forest roads in Kilak CFRs making it impassable for any forest protection intervention.

#### **Conclusion**

NFA did not implement work plans on the maintenance of forest roads as planned.

In the absence of well-maintained roads, activities such as patrols, harvesting, fire management and general maintenance of the CFRs can hardly be carried out.

#### **Recommendation**

NFA should ensure that forest roads are well maintained to facilitate responsible forest management. This can be achieved by setting realistic achievable targets in a phased manner in the operational plans.

#### **Management response**

*Due to the high cost involved, NFA will open roads that are frequently used to access planted areas for both NFA and private tree farmers. The roads which are important for monitoring activities within natural forests will be prioritized. However, NFA has gone through bad times that have had significant consequences on most of the planned activities. Most of the affected planned activities were to be funded from donor funds which were locked up in Bank of Uganda due to the court order that arose from a legal suit that NFA lost to Beachside Development Services Ltd.*

#### 4.4 **Forest boundaries**

The national forest plan 2002 and NFA standards require NFA to identify CFRs whose boundaries are not clear for purposes of boundary demarcation; re-surveying and

rationalisation. Furthermore, priority 1.1 under objective 1, of the performance contract required that by the end of year five of inception, NFA would have re-opened and maintained 10,000 km of the CFR boundaries.

The boundaries of the thirty five forests in the sample were found to be unclear. The sampled forests have a total cut-line boundary length of 1340.32 kms. In the three years under review 668.85 kms of forest boundary were planned for reopening and maintenance. Out of this, only 453.3 kms of the boundary were actually maintained, representing 68 % performance.

For example, much of Matiri CFR cut-line boundary length was unclear; the whole of Kadam CFR cut-line boundary length of 121.5 kms were found to be unclear and had not been maintained. Similarly, much of Mabira's 301.3km cut-line boundary was found to be unclear. During a field visit to Naluvule beat, boundaries for compartments 196, 197 and part of 194 were noted to be unclear. Some corner cairns and directional trenches had disappeared. The only clear boundaries in Mabira were of compartments 171,176 and 234 which were opened in 2006. The analysis of the clear and unclear cut line boundaries is attached as **Appendix 3**. It was noted that there was inadequate survey equipment for accurate work; staff were not technically skilled in boundary demarcation techniques; while infrequent supervision further contributed to the unclear boundaries.

**Picture 5**



*Clear live mark forest boundary at Maligita Beat- Mabira CFR*

**Picture 6**



*Un-clear forest boundary at Matiri CFR*

Management explained that insecurity caused by cattle rustlers in the Northern and North- eastern parts of Uganda made it difficult to reopen the boundaries of CFRs in those regions. Through document reviews and interviews with 7 RM and 15 SM of NFA across the country, the failure to resurvey and open forest boundaries was largely attributed to lack of funding. Despite the above explanations by management, a review of financial statements revealed that management budgeted and funds were spent on boundary opening as indicated in the table below:

**Table 6: Forest Boundary opening budgets and expenditures**

<b>Financial Year</b>	<b>Budgeted figure (Shs)</b>	<b>Amount Spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	139,560,000	552,841,834	413,281,834
2009/10	570,460,000	121,057,411	(449,402,589)
2010/11	413,890,000	135,905,565	(277,984,435)
<b>Total</b>	<b>1,123,910,000</b>	<b>809,804,810</b>	<b>(314,105,190)</b>

*Source: OAG analysis of NFA financial statements*

From the analysis of the table above, for the three financial years under review, shs 809,804,810 was spent on boundary opening against a budgeted figure of shs 1,123,910,000 representing a budget performance of 72% as compared to the overall physical performance of 68%. In the financial year 2008/09, the budget was exceeded by 296% yet the physical performance was 85%. This is an indication that more funds were released yet less forest boundaries were opened, more so in the financial year 2008/09.

Due to unclear forest boundaries encroachers find it easy to claim parts of the forest. In Mabira, for example, a member of the Royal family is claiming compartment 201 (part of the SNR) and 196 of Naluvule beat, with total area of 941 ha, saying it belonged to her ancestors and has dragged NFA to courts of law. At the time of this audit, NFA had felled 118 round wood logs of Musizi species valued at UGX: 9,440,000; but these lay unprocessed and were rotting because court had issued an injunction over the disputed ownership of this part of the forest. (**Refer to the pictures 7 & 8 below**).

**Picture 7**



**Picture 8**



*Pictures 7 & 8, taken on 27/04/2011 by OAG, showing some of the felled logs of Musizi rotting away in compartment 196 of Naluvule Beat.*

Except for Kalinzu and Itwara which had clear boundaries, the remaining thirty three forests with unclear boundaries had conflicts between NFA and forest adjacent communities over ownership and use of forest resources.

Unclear forest boundaries lead to increased incidence of encroachment on forests which compounds the problem of biodiversity loss. Biodiversity loss in turn reduces the potential of the tourism industry which currently is the second-highest foreign exchange earner for Uganda.

Where forest boundaries are not clear and well demarcated, it is difficult to define the extent of forest in relation to private land, further aggravating conflicts with the neighbouring communities and making it costly for NFA to deal with illegal activities.

### **Conclusion**

The Boundaries of the thirty five forests in the sample were not opened and maintained as planned. In the absence of clear forest boundaries, encroachers find it easy to claim parts of the forests

### **Recommendation**

NFA should ensure that Forest boundaries are opened and maintained. Beacons (Pillars) such as the ones used in South Maramagambo CFR, should be used by NFA at forest boundaries that are unclear and prone to encroachment. Work plans and budgets should

be prepared on the basis of the resource envelope so that they can be effectively implemented.

**Management response**

*NFA has opened some forest boundaries in conflict areas (boundary conflicts with local communities) and has started marking boundaries with concrete pillars/markers starting with Rwenzori and Kasagala CFRs. Under the Kalagala sustainable management plan, Kalagala CFR in Kayunga district will be marked with concrete pillars. It should be appreciated that to open and mark the 10,000 km boundary line with pillars needs a specific project due to the high costs involved.*

*Conservation activities are mostly donor funded and, as earlier mentioned, this funding source had been a major setback when the donor funds were locked up in the bank due to a court order. Meanwhile, locally generated revenue is used primarily for plantation activities such as buying seeds, raising of seedlings, planting and silvicultural operations.*

4.5 **Prevention of Forest Fires**

According to the NFA Forest Fire protection guidelines 2005, NFA is required to put in place the following fire prevention measures: create and maintain fire breaks/lines, form a fire fighting crew during the fire season, establish a fire monitoring crew, provide the crews with fire management equipment and sensitise surrounding communities on fire prevention and management.

The audit revealed that for all the thirty five forests in the sample there were no serious cases of fire except in the South Busoga CFR. This is because natural forests have a very low risk of fire since they are ever green. While the fire cases were not serious, the forest stations were not equipped with the necessary tools to fight fire in the event that serious fires broke out. Station managers reported that the small fires were fought using fire beaters (tree branches). It was also noted that there were no nearby sources of water to fight the fires in case of emergency. Furthermore the stations did not have a fire monitoring crew and there was no evidence of sensitization of surrounding communities on the prevention of fire.

The plantations which are more prone to fires were found to be bushy, thus increasing the risk of fire. Pingire, South Busoga and Arua plantations were bushy and at risk of fire. Refer to the pictures below showing absence of Silvicultural activities.

**Picture-9 N053°82'81" E016°21'43"**

**Picture-10**

**Picture-11**

**N030°07'81" E030°55'15"**



*Pictures 9, 10, & 11 depicting unmaintained (lack of Silviculture) plantations in Pingire, South Busoga and Arua CFRs respectively.*

According to the review of documents and the interviews carried out during the audit, the minor fires were deliberately set by cattle keepers who burn bushes so as to encourage growth for grazing their animals. This was noted as a major cause of fire in Mt Kei, Kadam, South Busoga and Budongo CFRs. In the ranges of Budongo and Achwa, fire was deliberately started by disgruntled fire fighting crew members who were not paid by NFA for services rendered in protecting forests.

In South Busoga CFR the fires were started by encroachers to clear forests for cultivation. Some fire outbreaks were accidental.

Another reason for fire outbreaks are the few patrolmen, despite the big sizes of the areas they patrol. NFA employs two patrolmen per beat irrespective of size. The analysis of NFA financial statements for the period under review revealed that funds were budgeted for fire and patrol men as follows:

**Table 7: Fire control budget and expenditure over the three years**

<b>Financial Year</b>	<b>Budgeted figure (Shs)</b>	<b>Amount Spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	93,072,000	95,431,050	( 2,359,050)
2009/10	234,435,000	115,511,850	118,923,150
2010/11	225,913,000	89,119,184	136,793,816
<b>Total</b>	<b>553,420,000</b>	<b>300,062,084</b>	<b>253,357,916</b>

From the analysis above a total of shs 300,062,084 was spent on fire control against the budgeted figure of shs 553,424,000, representing a performance of 54.2%; however, some basic fire management tools were not procured by NFA.

**Table 8: Forest Patrol budgets and expenditures**

<b>Financial Year</b>	<b>Budgeted Amount (Shs)</b>	<b>Amount Spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	233,720,000	415,160,227	(181,440,227)
2009/10	327,680,000	378,392,434	50,712,434
2010/11	304,275,000	350,032,630	(45,757,630)
<b>Total</b>	<b>865,675,000</b>	<b>1,143,585,291</b>	<b>277,910,291</b>

*Source: OAG analysis of NFA financial statements*

From the table above a total of shs 1,143,585,291 was spent on forest patrol against a budgeted figure of shs 865,675,000, overshooting the budget by shs 277,910,291. Despite this over expenditure, field visits indicated that, on average, patrol men were not paid for a period of nine months. Further, a review of M&E quarter 1 and 2 reports for 2009/10 revealed that payment to patrol men were in arrears since September 2008. Forest fires can destroy commercial forests. The fires also retard the growth of trees, which take longer to mature and deny the forest adjacent communities the expected benefits from the forests. It further leads to loss of biodiversity, home to the numerous fauna and flora, and loss of soil nutrients with adverse effects to the environment, which leaves the soils bare and prone to erosion during torrential rains.

**Picture-12**



**Picture-13**



*Effects of fire caused by encroachers on sections of South Busoga CFR Plantation (Pictures taken on 10/05/2011 by OAG)*

### **Conclusion**

The forest stations were not equipped with the necessary tools to fight fire in the event that serious fires broke out. This poses a risk in case of serious fire outbreaks which may not be controlled.

### **Recommendation**

Using the budget allocation, NFA should ensure that basic tools and equipments for firefighting are prioritized and procured for forest stations. Fire monitoring and fighting crews should be established.

### **Management response**

*NFA opens external fire breaks before the fire season and deploys fire patrol and fighting gangs from neighbouring communities, among them Collaborative Forest management (CFM) groups. Basic tools, especially fire beaters, hoes and machete/pangas have been put in place, especially for the plantations which are more prone to fires. Staff, patrol personnel and fire fighters will be retrained at the onset of the fire seasons. Payment for fire management during the past fire season has been prioritized. However, the challenge is limited funds. NFA recommends that public information, education, and awareness raising; and an overall enforcement of control of bush burning be implemented by Local Governments.*

#### 4.6 **Illegal Activities within CFRs**

Section 14 (1) and 32 (1) of the NFTP 2003 prohibits any person from: cutting, damaging, destroying, disturbing or removing any protected tree or collecting, removing, transporting, exporting, purchasing, selling, donating or in any other manner acquiring or disposing of any part of a protected tree without the written consent of the minister or the respective district council. Other prohibited activities include Farming, Grazing, Felling trees, Charcoal burning, Baking Bricks, Sand mining and construction.

Audit found out that in all the thirty five forests under study, there were various illegal activities going on. Management reports, field observations and fines (as a revenue source) confirmed the existence of illegal activities, such as: timber harvesting, cultivation, settlement, grazing, sand mining and charcoal burning.

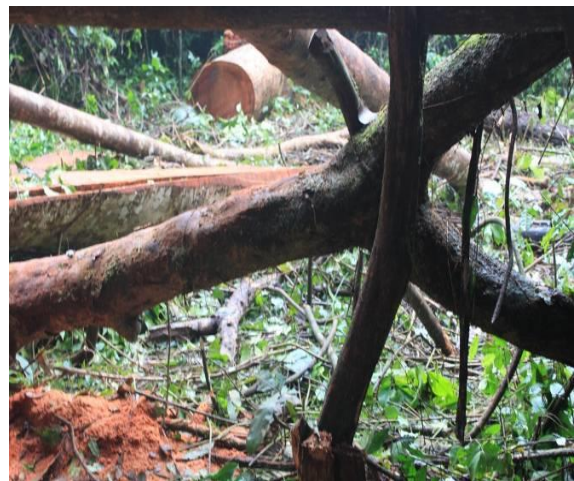
#### **Illegal logging**

During field inspections of Mabira forest, 456 pieces of illegally harvested timber impounded by NFA was found in Naluvule beat station. Illegal logging was also found to be wide spread in Budongo; especially in Biiso, Siba, East Waibira & Kaniyo-Pabidi; targeting the highly valuable mahogany which has a ready market at high prices.

**Picture 14**



**Picture 15**



*ures taken on 22/07/2011 showing illegal logging of Mahogany in Cpt N15 (SNR) of Budongo CFR.*

**Picture 16**

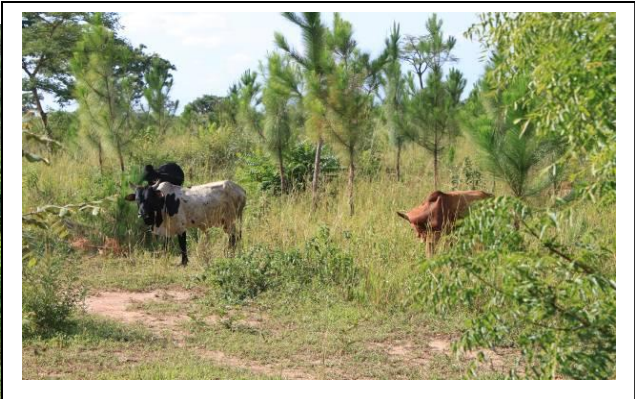


*OAG photo taken on 03/05/2011 showing impounded timber from illegal timber harvesters in Namulaba Beat Mabira CFR but could not be transferred to Sector office due to lack of transport*

**Illegal grazing** was found to be rampant in South Busoga, Mt Kei, Arua, Pingire, Kadama, Matiri and Budongo (especially in Biiso, Siba and West Waibira blocks) where herdsmen were seen moving with large herds of animals in search of pasture/water.

**Picture 17**

**Picture 18**



**Pictures 17 showing cattle grazing in Arua CFRs Cattle grazing in Pingire CFR on 27/07/2011**

*On 19/07/2011*

**Picture 19 (GPSC-N025084'21" E006020'58")**



*Grazing of large herds of cattle like this was a common sight at Matiri CFR*

**Cultivation of crops** was seen in all the forests sampled, especially in forests with unclear boundaries. According to the Lake Kyoga Range Manager, over 80% of South Busoga CFR was degraded and gardens with crops like maize and cassava were most common sites during field inspection. In Mt. Kei CFR tobacco growing was seen progressing deep inside the forest. See photos below.

**Picture 20**



**Picture 21**



*Pictures 20 & 21 taken on 10/05/2011 & 18/07/2011 showing rampant illegal cultivation of crops (maize and tobacco) in South Busoga and Mt.Kei CFRs respectively.*

Sand mining and brick making were taking place in Namanve and Kyampisi CFRs as shown in the pictures below.

**Picture 22 (GPSC-N031°23'43'')**



**Picture 23**



*Picture showing illegal sand miner being arrested by NFA officials in Kyampisi CFR on 01/08/2011*

From the documents availed to the audit team, there was no statistical data showing the magnitude of these illegal activities.

Management attributed the causes to: high Population growth leading to demand for land for livelihood; high levels of poverty among the population; the high demand for forest products like: charcoal, firewood, timber for construction and furniture; unclear forest boundaries too encourage illegal entry into forests as NFA may not be able to prove the extent of forest boundaries. The community adjacent to central forests believe that the forests belonged to their ancestors and are a naturegiven gift to them and they should, therefore, be free to use them without restriction. The executive order from the President to halt the eviction of encroachers was misunderstood by the people as a go ahead to occupy forests. Political interference by top politicians who encourage people to settle in forests, especially during campaigns when vote hunting is another cause of illegal entry into the forests.

Lack of sensitisation of the communities about the importance of forests was another contributor to illegal activities. Many of the people do not understand the link between forests and a clean and healthy environment and have no idea that irresponsible forest use would affect future generations.

The audit also noted that the NFA forest stations lacked basic tools like measuring tapes, GPS, callipers, fire fighting equipment and protective wear which could be used in

patrols, forest fire prevention and establishing areas of illegal activities. However, from the financial statements, funds were budgeted and spent as shown in the table below:

**Table 9: Field Equipment budgets and expenditures**

<b>Financial Year</b>	<b>Budgeted Amount (Shs)</b>	<b>Amount Spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	37,964,000	28,018,790	9,945,210
2009/10	178,068,000	37,463,133	140,604,867
2010/11	188,383,880	185,435,472	2,948,408
<b>Total</b>	<b>404,415,880</b>	<b>250,917,395</b>	<b>153,498,485</b>

*Source: OAG analysis of NFA financial statements*

From the table above the sum of shs.250,917,395 was spent on equipment against shs.404,415,880 implying that some basic equipment should have been purchased by NFA management.

Uncontrolled use of forests has led to the destruction and disappearance of valuable indigenous tree species such as *milicia excelsa* (Mvule in South Busoga which has since evolved into a plantation due to degradation), the *Maesopsis* is no longer dominant in Mabira as shown by the 1993 inventory data which recorded 30 compartments out of 61 to be without the tree species.

The destruction of mature trees leaves no trees to provide seed for natural regeneration, thus loss of local species. Illegal harvesting of timber depletes the forest stock making timber expensive and could lead to timber importation. Illegal grazing is a threat to live boundary markers at their early stages; the animals destroy directional trenches and hinder plantation development, and loss of government revenue due to illegal dealership in forest products frustrates efforts to provide services to the people and defeats the government poverty alleviation goal.

Many of the CFRs are water catchment areas; destroying them through illegal activities will have adverse climatic effects such as: prolonged droughts, erratic floods and unstable rains. The destruction of South Busoga CFR, for example, has robbed the shores of Lake Victoria of a vital water catchment area and exposed it to erosion and siltation, as well as destroyed the breeding grounds for fish, and interfered with the

unique micro climate offered by the forest to the communities. The plantation has a 67km touchline to Lake Victoria, making it an important water catchment area.

Indiscriminate destruction of forests reduces their economic value. In Mabira CFR, for example, much of the forest is young crop and harvesting is limited to planted trees in Compartments 187, 196 and 234 at an annual allowable cut (AAC) of 200m<sup>3</sup> per year.

Grazing of cattle and fires prevent forest regeneration thus leading to loss of valuable species.

**Picture 24**



**Picture 25**



*Remnants of Mvule species standing isolated in Pine plantation in sections of South Busoga CFR. Mvule used to be the predominant species in this reserve. The once 16,800 ha of HTF is now degraded by over 80%*

## **Conclusion**

There were various illegal activities going on in CFRs. Illegal activities included timber harvesting, cultivation, settlement, grazing, sand mining and charcoal burning. The current level of destruction of forest cover due to illegal activities, if not checked, may soon expose Uganda to desertification.

## **Recommendation**

NFA should implement a zero tolerance on illegal activities. Collaborative Forest management practices should be stepped up to make the communities appreciate the value of forests. NFA should form collaborative arrangement with the local government to sensitize the communities on the benefits of forests so that the community may appreciate them.

### **Management response**

*NFA is in the process of strengthening the patrol teams within the forests with armed personnel called Environmental Protection Force (EPF) as approved by the Cabinet. (Though deployment has delayed). Fifty (50) EPF personnel will be needed as a start but, ultimately, all the one hundred and fifty (150) EPF personnel will be brought on board. CFM practices are to be stepped up. Furthermore, NFA has initiated a process of stepwise removal of encroachers from Wambabya and Kisombwa CFRs.*

#### **4.7 Encroachment**

According to the Performance Contract, part 2.3.1, NFA was required to evict encroachers that invaded CFRs after the year 1992 and by the end of that year five, 95% of the CFR area should have been freed of encroachment.

According to the document review (encroachment report 2005), cultivation and livestock grazing are the two most rampant activities in most encroached CFRs. All the 35 forests in the sample had been encroached on and, according to management, the number of encroachers has gone much higher since the last census in 2005. In South Busoga CFR, for example, 13,105.6 ha out of the 16,382 ha of the forest, representing 80%, had been encroached on by 844 settlers according to the 2005 census by NFA.

In Mt Kei CFR, 24 settlers, a primary school and 27.8 ha of farmland were identified as encroachers occupying an approximate area of 681 ha of the forest. In Naluvule beat of Mabira CFR, encroachment was seen in compartments 196,197 and 194.

In Namanve CFR, government degazetted compartments 1, 2, 10, 13, 15 and 16 totalling to 1,006 ha in 1997 for establishment of Kampala Industrial Park (KIP) by Uganda Investment Authority (UIA). The remaining compartments 3, 4, 5, 6, 7, 8, 9, 12 and 14, with a total area of 1,200 ha, constituting the current Namanve CFR, were not excised and are managed by NFA in accordance with the NFTP, 2003 and the FMP. However, at the time of this audit, compartments 6, 7 and 12, totalling to 536.06 ha, had been encroached on.

In compartment 7, that covers 266.58 ha, young eucalyptus forest of more than 2 years old planted by private tree farmers licensed by NFA was destroyed by the encroachers. The matter has been taken to court for redress.

Compartment 12, with a total area of 107.71ha, was encroached on by 2 private companies: Roofings Ltd and Plast Net, which have constructed industrial buildings in the reserve, as shown in the **pictures 26**.



***Cpt 12 of Namanve CFR: Newly constructed Roofing factory in Cpt 12.***

**Picture 27**



**CPT 6 of Namamve CFR:** *New permanent houses, with galvanized iron sheets at the foreground, is constructed by encroachers who claim to be army veterans.*

**Picture 28**



**Cpt 7 of Namanve CFR:** *Picture showing young eucalyptus forest [266.58 ha] of more than 2 years old destroyed by the encroachers.*

Further review of documents revealed that thirty one people and private companies had acquired land titles in CFRs, with a total area of 66,851.53 ha, across the country. It was also noted that the last encroachment census by NFA was done in 2005 in selected CFRs.

The analysis of the financial statements of NFA revealed that funds for law enforcement was budgeted and released as indicated in the table below:

**Table 10: Law Enforcement Budgets and Expenditures**

<b>Financial Year</b>	<b>Budgeted Amount (Shs)</b>	<b>Amount Spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	34,937,988	214,617,650	(179,679, 662)
2009/10	188,000,000	181,953,990	6,046,010
2010/11	157,600,000	242,741,726	(85,081,726)
<b>Total</b>	<b>380,597,988</b>	<b>639,313,366</b>	<b>(258,715,378)</b>

*Source: OAG analysis of NFA statements*

From the above table a total of Shs 380,597,988 was budgeted in the three financial years under review and Shs 639,313,366 was spent representing a performance of 168% implying that encroachment and illegal activities should have scaled down due to extra funding. However, this was not the case.

According to management the cause of forest encroachment was due to high population growth, high poverty levels, fertile forest land, high demand for forest products and unclear boundaries. Document review and interviews with management revealed that eviction of encroachers takes long because it requires boundary verification and maintenance which has not been done because of financial constraints. Unclear forest boundaries encourage encroachers to extend deeper into forests, thus gaining more areas of forest land.

The executive order from the President in the year 2005 to halt forest evictions pending consultations with technical advisers was misunderstood by encroachers to mean a right to own forest land. They thus invaded forests in big numbers and turned hostile to NFA staff. This order has not been lifted to date.

Disregard of the law was also a cause for encroachment. While many encroachers were aware of the government role in protecting forests, they deliberately settled in Forests and became hostile to NFA, considering that NFA has a weak presence in the forests.

The pressure of urbanisation and industrialisation was also seen as a major cause of encroachment on forests. There is increasing rural-urban migration which has caused a shortage of housing in urban centres. This has, in turn, triggered the need for

investment in the housing sector, with forests, especially those near urban centres, being a target. Mabira CFR, for example, is being claimed by a sugar company for sugar cane growing, while Namanve was invaded by veterans and there is a proposal to claim parts of it for the re-settlement of the tenants from Nakawa and Naguru housing estates.

It was also observed during the field inspection that the use of Corner Cairns as a structure to mark forest boundary was not adequate enough and is another cause of encroachment because it is not clearly visible to the public as compared to Beacon. Pictures in **appendix 4 refers**.

Forest resources offer environmental benefits such as carbon sequestration (Carbon sinks i.e. absorb carbon dioxide and release oxygen); they provide a cooling effect and when destroyed temperatures tend to rise and there is increased incident of diseases. Deforestation results into environmental degradation with adverse effects such as soil erosion and silting of the important rivers and lakes.

Forests absorb the waste gases emitted by cars, factories and people, hence affording a clean environment. Destruction of forests would lead to increased pollution of air and water, drying up of rivers and lakes, leading to unreliable and unpredictable rainfalls. Uganda being a largely agricultural country, unreliable rainfalls will adversely affect agricultural productivity, leading to food shortage, high poverty levels and increased disease incidence and crime rates.

Forests provide oxygen, a life supporting gas for humans; with increasing deforestation and a rising population, there is likely to be a shortage of oxygen for human survival.

Forest encroachment leads to forest degradation and the ensuing negative environmental and socio-economic effects such as biodiversity loss, floods, river silting, prolonged droughts, food insecurity and poverty. For example, South Busoga CFR with 67 kms of touch line to L. Victoria is now more than 80% degraded due to heavy encroachment. This has resulted into the receding level of Lake Victoria.

Furthermore, Mabira, Namamve and South Busoga CFRs which are situated near urban centres, if destroyed, industrial and auto mobile emissions would not be absorbed, rain

catchments for Lake Victoria will be reduced and sieving of waste material which contaminates water flowing into the lakes will not be achieved.

The supportive and regulatory functions enhance avoidance of natural hazards such as floods, soil erosion, mass wasting and strong winds. It is also clear that forests and woodlands can create public revenue as well as reduce public expenditure on natural hazards thus saving money for the country.

Loss of forest cover has led to changes in rainfall patterns, which have become unpredictable and unreliable. This has in turn affected agricultural production which is Uganda's backbone. This has led to food scarcity and a threat of famine.

### **Conclusion**

Encroachment was noted in all the 35 Central forest reserves sampled. Encroachment included settlements, factory building, cultivation and individuals and companies with land titles in CFRs.

### **Recommendation**

NFA as the lead agency mandated to protect all CFRs in Uganda, should plan and expedite the eviction of encroachers in CFRs. Environmental police just like other sister organization such as UWA should be introduced by NFA.

There is need for NFA and other government agencies/departments to coordinate the management of forestry issues. Government should come up with clear land use policies as regards settlement, farmland, industrial land and forest land.

NFA should conduct forest risk assessment of CFRs to come up with a risk map showing encroached areas, which will in turn help to design strategies to mitigate these risks.

### **Management response**

*Draft cabinet paper on resolving encroachment in CFRs is with the Cabinet for discussion before tabling to Parliament. NFA will continue preventing further encroachment and clarifying boundaries in preparation for eventual removal of encroachers.*

#### **4.8 Reduction of Part or Removal of the whole Forest Reserve (De-gazetting)**

Sections 6, 7 and 8 of the NFTP (2003) require that where the Minister declares an area to be a CFR or makes an amendment to an order declaring a CFR resulting in the reduction in part or removal of the whole forest reserve, an area of at least equivalent to

the reduction or removal shall be simultaneously declared a CFR. It further requires that before a new area is declared a CFR an Environmental Impact assessment (EIA) must find the area to be of equivalent or greater environmental value. Additionally, the sections require that the declaration or amendment to the order declaring a CFR shall be approved by parliament.

Audit found out that none of the thirty five forests in the sample had been degazetted. However, it was noted that urban central reserves were under threat of being degazetted for industrial development and housing sector due to the growing urban population. The selected sample had at least six urban forests where request for degazetting had been expressed by some authorities and individuals. For example, Kapchorwa CFR with an area of five hectares was found to be wholly degraded; while requests for degazetment had been made for Mabira, Namanve, Arua and Mbale reserves. In Arua reserve at least three hectares (3 ha) had been lost to installations relating to veterans and another one hectare (1 ha) was now home to a government aided primary school.

Urban forests are at a great risk of extinction due to a growing population and the need for housing, wood fuel and for industrial development.

**Picture 29**



*Picture 29 showing installations covering an approximate area of 3 ha claimed to be a project of Veterans in Arua CFR.*

**Picture 30**



*Government aided school (Mvara Junior Primary School); in Arua CFR occupying approximate area of 1 ha.*

Urban areas have a high incidence of pollution from the high volumes of automobiles and industrial activity. Forests act as carbon sinks; they absorb large amounts of toxins thus leading to a clean environment. Clearing of urban forests thus puts the health of the urban population at risk of diseases from unclean environment and reduced supply of oxygen released by trees and needed by humans.

Mabira Forest, for example, is the only remaining biodiversity-rich forest ecosystem in the watershed of L. Victoria and L. Kyoga and it doubles as water catchment for international riverines of Nile and Ssezibwa, besides being of high national importance for tourism in Uganda.

Forests are water catchment areas, they regulate the climate and induce rainfall; but with the dwindling forest cover, urban areas are becoming increasingly hot and dry. Cities (especially Kampala) have become dusty and temperatures high leading to increase in diseases, especially respiratory infections. Lately, because of low rainfall, reduced levels of Lake Victoria and other wetlands have affected the supply of electricity, making it expensive and in turn causing increased need for wood fuel as a cheaper source of energy due to increased load shedding. The low production of

electricity makes life more expensive, since people have to find other sources of energy, hospitals have to invest in generators and fuel to give critical medical services. Forests and wetlands provide filtration to water and are most needed in urban areas which generate large quantities/amounts of waste and toxins. If degraded, water sources will be at risk of contamination.

### **Conclusion**

Urban central reserves are under a threat of being degazetted for industrial development and housing due to the growing urban population. Forests act as carbon sinks; they absorb large amounts of toxins thus leading to a clean environment. Clearing of urban forests thus puts the health of the urban population at risk of diseases from unclean environment and reduced supply of oxygen released by trees and needed by human beings.

### **Recommendation**

Before degazetting a CFR NFA should ensure that an equivalent size of land of would-be CFR to be degazetted has been identified and the Environmental Impact Assessment has been done.

### **Management response**

*The National Forestry and Tree Planting Act, 2003 details the process for gazetting and degazetting of CFRs. This law has to be followed to the later. NFA has guided urban councils to follow the law and nine (9) urban councils have identified suitable areas for exchange.*

#### **4.9 Community Sensitization and Participation**

The best practice stated under **prescription 61 and 34** of Mabira and Budongo FMP, respectively, require that sensitization and participatory forest management shall be done to make the adjacent communities appreciate the importance and value of forests through holding regular seminars that keep communities aware and knowledgeable about the current developments in forest management.

Review of documents and interviews with management revealed that twenty-two Collaborative Forest management (CFM) agreements were signed with communities adjacent to five (5) CFRS only, out of the thirty five sampled, representing 14 %

performance. The analysis of the financial statements for the financial year under review revealed that funds were budgeted and released for this activity as follows:

**Table 11: Community grants and collaboration activity funding**

<b>Financial year</b>	<b>Budgeted Amount (Shs)</b>	<b>Amount Spent (Shs)</b>	<b>Variance (Shs)</b>
2008/09	104,353,068	78,384,500	25,968,568
2009/10	358,200,000	68,584,800	289,615,200
2010/11	276,000,000	37,555,100	238,444,900
<b>Total</b>	<b>738,553,068</b>	<b>184,524,400</b>	<b>554,028,668</b>

*Source: OAG analysis of Financial Statements of NFA*

From the table above management spent only shs184, 524,400 on CFM with the adjacent communities against a budgeted figure of shs738, 553,068, representing a performance of 24%, implying that this activity was not prioritised by NFA during the period under review. Audit attributed the reasons for not implementing CFM with adjacent communities to lack of prioritisation of this activity as evidenced by the financial analysis above.

The absence of collaborative management increases incidences of illegal activities within the reserves and limits the transfer of knowledge, skills and technologies in forest management. It was noted that in the 5 CFRs where CFM agreements were signed with the respective communities, the level of illegal activities had reduced. This was due to the fact that the members of these communities had become aware of the benefits of the forests and could now help in monitoring and patrol of the CFRs.

### **Conclusion**

Collaborative Forest Management (CFM) agreements were signed with communities in only five CFRs as compared to the thirty five sampled. The absence of collaborative forest management increases incidences of illegal activities within the reserves and limits the transfer of knowledge, skills and technologies in forest management.

### **Recommendation**

NFA should embrace community participation in responsible forest management by ensuring that as many CFM groups as possible are formed and respective agreements signed to reduce the level of encroachment.

**Management response**

*NFA has mobilized communities as shown by many applications for CFM but due to the funding gap, it is prioritizing areas of higher conservation value and challenges first. Thirty two (32) CFM agreements have been signed with communities. NFA is also working in collaboration with NGOs like CARE, world Wide Fund (WWF), Jane Good all institute (JGI) to promote Collaborative Forest Management.*

**4.10 Monitoring and Evaluation**

According to the Business Plan of NFA 2009-2014 page 64 Para. 7.4.1 staff from the headquarters, including members of senior the management team, will visit the field regularly to inspect activities at the forest level. In the same way, range and sector managers will also monitor forest level activities.

The audit team noted that monitoring was done haphazardly at all levels. This was evidenced by lack of Monitoring workplans which should have detailed the frequency of the activity. Furthermore, a review of the documents revealed that budgets were provided for but actual expenses could not be verified since they were not separately disclosed in the financial statements. Details are as below:

**Table 12: Monitoring**

<b>Financial Year</b>	<b>Budgeted Amount</b>	<b>Amount Spent</b>	<b>Variance</b>
2008/09	88,700,000	-	
2009/10	62,739,500	-	
2010/11	72,696,600	-	
<b>Total</b>	<b>224,136,100</b>	-	

*Source: OAG analysis of financial statements of NFA*

The audit team attributed the cause of not carrying out monitoring to lack of planning and priotization of this activity as part of responsible forest management by NFA.

The effect of not conducting regular monitoring has been incapacitation or de-motivation of field staff due to inadequate facilitation in the form of field allowances, office imprest, fuel, transport, field equipment/tools and security as well as delayed payments; especially to the patrol men whose monthly emoluments are not paid on time or promptly. The risky nature of the job for the patrol men vis-à-vis the pay leads

to low motivation of these staff who may be compromised by encroachers for the sake of their safety.

In the absence of planned monitoring, the challenges faced by Range and Sector managers may not be brought to the attention of top management in time to address them. For instance, the issue of not paying patrol men and failure to implement approved work plans for the range and sector managers featured prominently during the audit.

### **Conclusion**

Monitoring and evaluation was done haphazardly without work plans; therefore, the challenges faced by the range and sector managers could not be addressed on time.

### **Recommendation**

NFA should prepare a detailed work plan that covers the entire CFRs for purposes of carrying out monitoring and evaluation. The challenges faced by range and sector managers should be brought to the attention of management in time for appropriate action to be taken.

### **Management response**

*The FMP have provision for key monitoring indicators and AOP indicators shall be developed annually. Quarterly and annual monitoring reports indicate the issues raised from the field, however, some have not been addressed due to financial constraints.*

#### **4.11 Staffing of NFA**

According to the staff establishment NFA is required to have 553 members of staff categorized as follows: Executive Director's office 20, Directorate of Plantations 100, Directorate of Natural Forests 332, National seed Centre 8, Directorate of corporate Affairs 26, and Directorate of Finance and Administration 67.

The audit noted that out of 553 establishments, NFA has filled 279 positions leaving 274 unfilled, representing 49.5%. Out of the required 332 in the Directorate of Natural Forests, 150 posts have been filled leaving a staff gap of 182 representing 54.5%. In the Directorate of Plantation, out of the required 100 positions 41 have been filled leaving 59 (59%) vacant. It was further noted that in the directorate of Natural Forests

the position of 150 Forest Assistants and 7 Collaborative Forest management Supervisors had not been filled at all.

With almost half of the staff positions not filled NFA may not be able to effectively execute its mandate and the efforts of the existing staff may be overstretched. The absence of Forest Assistants and Collaborative Forest Management Supervisors renders the patrol and management of Natural Forests difficult as the Forest supervisors rely on Patrolmen who are not permanent employees of NFA.

Management attributed the cause of vacant positions to high staff turnover and lack of funds to make an immediate recruitment.

### **Conclusion**

NFA has not filled all the vacant position in the staff establishment. This is affecting the implementation of its mandate as the planned activities are not being implemented effectively.

### **Recommendation**

NFA should ensure that the current vacant positions are filled taking into account positions that are core to its activities.

### **Management response**

*The NFA management has interviewed candidates for all the vacant posts and the recruitment report is before the NFA board for approval before hiring. The advert for the post of Executive Director, Internal Audit Specialist and Legal clerk were advertised. We hope to have interviewed the best candidates by the end of January 2012.*

John F.S. Muwanga  
**AUDITOR GENERAL**

**KAMPALA**

**15<sup>TH</sup> FEBRUARY, 2012**

## GLOSSARY OF TERMS

No.	TERM	MEANING
1.	Authority	The National Forestry Authority established by section 52 of the National Forestry and Tree Planting Act, 2003.
2	Beat	The smallest unit of a CFR.
3.	Biological Diversity	The variability among living organisms from all sources including, among others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this include diversity within species, between species and of ecosystem ( <i>IUCN, 1994</i> )
4.	Block	A section of a forest designated to represent a territorial division in a forest reserve.
5.	Buffer Zone	A zone within a protected area, protecting particularly sensitive areas such as strict nature reserves from undue human pressure that may exist outside the protected area, usually by allowing some limited and controlled human use within the buffer ( <i>Simon Grove, 1995</i> ).
6.	Carbon Sequestration	Terrestrial carbon sequestration is the process through which carbon dioxide (CO <sub>2</sub> ) from the atmosphere is absorbed by trees, plants and crops through photosynthesis, and stored as carbon in biomass (tree trunks, branches, foliage and roots) and soils. The term "sinks" is also used to refer to forests, croplands, and grazing lands, and their ability to sequester carbon. Agriculture and forestry activities can also release CO <sub>2</sub> to the atmosphere. Therefore, a carbon sink occurs when carbon sequestration is greater than carbon releases over some time period.
7.	Central Forest Reserve	An area declared to be a central forest reserve under section 6 of the National Forest and Tree Planting Act, 2003
8.	Collaborative Forest Management	A mutually beneficial arrangement in which a local community or forest user group and a responsible body share roles, responsibilities and benefits in a forest reserve or part of it or an agreement signed under the Forest and Tree Planting Act for the purpose of defining a legally binding agreement between the lead agency and a partner for the utilization and

		management of a forest/forest resource.
9.	Compartment	The smallest management unit of a specified area or plantation where one operational activity should be done in the same year and all records for a compartment should be maintained through i.e. from planting to harvesting.
10.	Deforestation	Change of land cover with depletion of tree crown cover to less than 10% ( <i>European Forest Institute, 2002</i> )
11.	Degraded Forest	Former forest severely damaged by the excessive harvesting of wood and/or non-wood forest products, poor management, repeated fire, grazing or other disturbances or land-uses that damage soil and vegetation to a degree that inhibits or severely delays the re-establishment of forest after abandonment. It delivers a reduced supply of goods and services from a given site and maintains only limited biological diversity. It has lost the structure, function, species composition and/or productivity normally associated with the natural forest type expected at that site. ( <i>ITTO Policy Development Series No 13</i> )
12.	Ecosystem	A community of all plants and animals and their physical environment, functioning together as an interdependent unit. ( <i>Sophie Higman, et al 2002</i> )
13.	Endangered Species	Any species which is in danger of extinction throughout all or a significant portion of its range ( <i>Sophie Higman, et al 2002</i> )
14.	Enrichment Planting	The planting of desired tree species in a modified natural forest or secondary forest or woodland with the objective of creating a high forest dominated by desirable (ie local and/or high-value) species. ( <i>ITTO Policy Development Series No 13</i> )
15.	Forest	An area of at least 1 hectare of land with a minimum tree canopy cover of 30% and minimum tree potential height of 5 meters ( <i>UNFCCC, 2001</i> )
16.	Forest Certification	Forest certification is an <b>independent</b> assessment which verifies that a particular forest manages its resources in a <b>responsible</b> and <b>sustainable</b> way against agreed external standards. It provides proof that the forest management practices conform to internationally agreed standards. These standards cover not just sound business practices (e.g.

		planning, silviculture and administration) but social and environmental aspects too.
17.	Forest Degradation	The term <b>forest degradation</b> refers to the reduction of the capacity of a forest to produce goods and services. Capacity includes maintenance of ecosystem structure and functions. <i>(ITTO Policy Development Series No 13)</i>
18.	Forest Ecosystem	Any natural or semi-natural formation of vegetation whose dominant element is trees, with closed or partially closed canopy, together with the biotic and abiotic environment. <i>(National Forestry and Tree Planting Act, 2003)</i>
19.	Forest Encroachment	Activities that occupy a forest or part thereof without legal permission. It may include such activities as settlement, cultivation, grazing etc.
20.	Forest Management	The practical application of scientific, economic and social forestry principles to the administration of forests for specific forestry objectives <i>(National Forestry and Tree Planting Act, 2003)</i>
21.	Forest Management Plan	A management plan for a forest prepared in accordance with section 28 of the Forestry Act.
22.	Forest Reserve	An area declared by law to be a central or local forest reserve <i>(National Forestry and Tree Planting Act, 2003)</i> . For purposes of natural forests, forest reserves are placed in Category VI (Managed Resource Protected Area) of IUCN Categories for nature protection. This category of protected area is managed mainly for sustainable use of natural ecosystems.
23.	Forestry	The management and conservation of forests and trees, and includes the management of land that does not have trees growing on it, but which forms part of an area reserved for or dedicated to forestry <i>(National Forestry and Tree Planting Act, 2003)</i> . It includes all activities related to forests, tree growing, forest produce, forest conservation, forest management and forest utilization <i>(Uganda Forestry Policy, 2001)</i>
24.	Gap Planting	Gap planting is the planting of trees to fill gaps left after harvesting.
25.	Ground Truthing	Ground truthing is a term used in remote sensing techniques such as cartography, meteorology, analysis

		of aerial photographs, satellite imagery etc. in which data are gathered at a distance i.e. information that is collected "on location."
26.	Invasive Plant Species	These are species (plant, animal or microorganism), which become established in natural or semi-natural ecosystems or habitat, which are agents of change and threaten native biological diversity or cause negative impacts on biological diversity, agriculture, human development or even human health.
27.	Inventory	A survey carried out to determine, in a given area, the constitution, extent and condition of a forest or areas reserved for forestry.
28.	Local Community	Persons and households living in close proximity to a forest and identified by common history, common culture, or common residence and may, from time to time, include all the residents of a village which share a boundary with a forest.
29.	Management Plan Area	An area covered by FMP. It may one forest reserve or a collection of reserves.
30.	Natural Forest	Forest areas where most of the principle characteristics and key elements of native ecosystems such as complexity, structure and diversity are present ( <i>Sophie Higman, et al 2002</i> )
31.	Permanent Forest Estate (PFE)	Land that is set aside for forestry activities in perpetuity ( <i>Uganda Forestry Policy, 2001</i> )
32.	Production Forest	Forested areas, which are treated by using specific silvicultural practices. The stands are treated repeatedly and sometimes in order to achieve multi-purpose goals ( <i>European Forest Institute, 2002</i> )
33.	Production Zone	As for "production forest" but the area is part of the overall forest nature conservation programme.
34.	Protected Area	All land gazette and held in trust by government, such as Forest Reserves, National Parks and Wildlife Reserves ( <i>Uganda Forestry Policy, 2001</i> )
35.	Responsible Forest Management	Forest Management that is ecologically and or environmentally sustainable, economically profitable and socially acceptable. It entails applying management approaches that promote ecological sanctity and balances with social and economic benefits to the people.

36.	Savannah	Grassland dotted with trees. Grasses form the predominant vegetation type, usually mixed with herbs and shrubs, with trees scattered individually or in small clumps ( <i>The Free Dictionary.com Encyclopedia</i> )
37.	Silviculture	A process associated or in relation to the science of growing and nurturing trees from seed to a mature tree.
38.	Strict Nature Reserve	An area within a forest reserve set aside for species and habitat protection and in which only research, education and monitoring are permitted. ( <i>National Forestry and Tree Planting Act, 2003</i> ).
39.	Sustainable Forest Management (SFM)	The management of forest resources so as to supply goods and services to satisfy the needs of present and future generations in perpetuity ( <i>Uganda Forestry Policy, 2001</i> )
40.	Sustained Yield	Production of forests products on a perpetual basis, ensuring that the rate of removal of forest products does not exceed the rate of replacement over the long term ( <i>Sophie Higman, et al 2002</i> ).
41.	Threatened Species	Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range ( <i>Sophie Higman, et al 2002</i> ).
42.	Tropical Moist Forest (TMF) [also known as Tropical Rain Forest]	Broadleaf forests found in a belt around the equator and are characterized by warm humid climates with high year-round rainfall. Normally forests are evergreen although some species may shed their leaves periodically.
43.	Woodland	Land that has a crown cover (or equivalent stocking level) of more than 30% of trees not able to reach a height of 5 metres at maturity ( <i>FAO 2000</i> )

## APPENDIX 1: LIST OF DOCUMENTS REVIEWED

<b>DOCUMENT</b>	<b>PURPOSE</b>
The Constitution of Uganda 1995 as amended	To obtain the legal mandate of Forests
National Forest and Tree Planting Act, 2003	Obtain mandate , functions and enabling laws on Forest management
National Environment Act, Cap 153	The ascertain environmental provisions
National Forest Policy 2001	To ascertain and evaluate policies concerning sustainable management of Forests
National Forest Plan 2002	To understand and evaluate Management plans and strategies on Forest reserves
The Business Plan of National Forestry Authority 2009-2014	To understand the Business processes of National Forest Authority
Management of Natural Forests in Central Forest Reserves	To assess the effectiveness of strategies for management of Natural Forests
Management Reports	To assess the performance of National Forest authority
Studies carried out on the sector	To gain understanding on the Forest sector
Annual work plans	To assess the performance of NFA
Forest management plans for Mabira, Budongo, South Busoga, Marabigambo and Mt Keyi forests.	To assess the effectiveness of the management plans
Logging in Natural Forests Supervisors Toolkit, June 2005	To ascertain the process involved in logging in Natural Forests
Uganda's forestry, nature and master plan	To ascertain measures put in place to protect Central Forest Reserves
A field guide to integrated stock survey and management inventory (ISSMI) December 2005	To ascertain measures put in place to manage stock for timber harvesting.
Performance Contract between GOU and NFA 2009-2014	To ascertain performance indicators and whether they have been attained
Annual operating work plans for Mabira, Budongo, Maramagambo, South Busoga and Mt. Keyi	To ascertain and assess the implementation of Management plans for each CFRs
Monitoring and Evaluation reports	To assess the effectiveness of the annual operating work plans

## APPENDIX 2: LIST OF PERSONS INTERVIEWED

<b>S/N</b>	<b>Person(s) Interviewed</b>	<b>Purpose of the interview(s)</b>
1.	Ag. Executive Director, NFA	To obtain an overview of the entity.
2.	4 Directors i.e. of Natural Forests, Plantation, Corporate Affairs and Finance and Administration	To obtain key directorate activities, processes, and challenges.
3.	Seven (7) Range Managers	To obtain key activities in the range and challenges faced.
4.	Fifteen (15) Sector Managers	To obtain key activities and challenges faced in the sector.
5.	Thirty five (35) Forest Supervisors	To obtain key activities and unique challenges faced by each Supervisor in executing their duties.

**APPENDIX 3: ANALYSIS OF THE CLEAR AND UNCLEAR CUT-LINE BOUNDARIES**

<b>S/N</b>	<b>CENTRAL FOREST RESERVE</b>	<b>Total Cut-line (km)</b>	<b>Clear cut-line (km)</b>	<b>Un-clear cut-line (km)</b>
1	Mt. Kei	14.9	14.9	-
2	Arua	3.2	-	3.2
3	Luku	25	-	25
4	Budongo	171	80	91
5	Bugoma	131.45	34	97.45
6	Nyakarongo	42.2	35	7.2
7	Kagombe	109	-	109
8	Kihaimira		-	
9	Nakuyazo		-	
10	Nyabigoye		-	
11	Kasyoha-Kitomi	49	11	38
12	Kalinzu	60	60	-
13	Maramagambo	20	18	2
14	Zulia			
15	Kilak	5.7	-	5.7
16	Got-Gweno	21.3	-	21.3
17	Labala	16.6	-	16.6
18	Acet	6.49	-	6.49
19	Kadam	121.5	-	121.5
20	South Busoga	27	-	27
21	Pingire	12.1	5.1	7
22	Mbale	12.9	10.9	2
23	Kapchorwa	3.5	-	3.5
24	Mabira	301.3	No data	No data
25	Namanve			-
26	Mako			
27	Lwamunda			

28	Kyampisi	28.9	-	28.9
29	Itwara	21	21	-
30	Matiri	35	31.25	3.75
31	Kaweri	18	-	18
32	Guramwa	16.98	-	16.98
33	Lusiba	10.6	-	10.6
34	Kasolo	36.1	-	36.1
35	Muinaina	13.6	-	13.6
	<b>Grand total</b>	<b>1334.32</b>	<b>321.15</b>	<b>711.87</b>
	<b>Percentage</b>	<b>100</b>		

**APPENDIX 4: ADDITIONAL PICTURES DEPICTING CONDITIONS OF VARIOUS CFRs  
SAMPLED ACROSS THE COUNTRY**



*Settlement in Mt. Kei CFR*



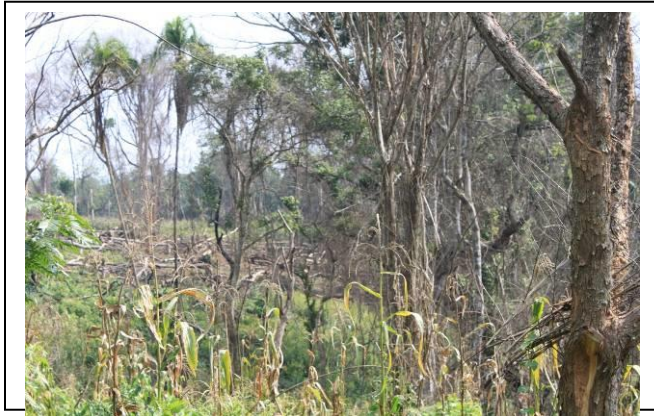
*Truck loaded with firewood from Luku CFR*



*Acet CFR which is 100% degraded*



*Degradation in Luku CFR due to fire wood harvesting*



Area more than 5kms degraded by encroachers in *Impounded truck with illegal timber at Bugoma Kagombe CFR-GPSC-N026°83'42" E009°84'64"23/07/2011*



Gate of cattle range occupying over 5,000 ha of Kagombe CFR [Picture taken on 23/07/2011]-**GPSC-N027°12'46" E009°16'74"**



*Settlements in Kadam CFR*



*Settlements in South Busoga CFR-OAG Picture taken on 10/05/2011*



*Large section of Matiri CFR degraded due to illegal activities in the reserve [Photo taken on 01/08/2011]-  
**GPSC-N025°74'56" E006°26'85"***



Settlement in Cpt 2 of Matiri CFR at Mukunumura [Photo taken on 01/08/2011]-**GPSC-N025°72'48" E006°26'67"**



Conspicuous concrete pillar (Beacon) used for marking the forest boundaries in South Maramagambo CFR. This is desired demarcation feature to be used in un-clear forest boundaries by NFA. **GPSC-N082°31'47" E993°52'38"**



Corner Cairn between two trees in Nsozi Beat, CFR-**GPSC-N027°49'72" E013094'27"**



Corner Cairn in Mabira CFRs uncovered on inspection





