



ZIMBABWE

REPORT

Of the

Comptroller and Auditor-General

On the

**MANAGEMENT OF HARDWOOD TIMBER HARVESTING
IN GAZETTED AND RURAL DISTRICT COUNCIL FORESTS**

by the

FORESTRY COMMISSION

VFM 2013:01



ZIMBABWE

Office of the Comptroller and
Auditor-General of Zimbabwe
48 George Silundika Avenue
Cnr. Fourth Street,
Harare, Zimbabwe

The Hon.F. Nhema
Minister of Environment and Natural Resources
Kaguvi Bulding
Central Avenue
Harare

Dear Sir

I hereby submit my Value for Money Report on Management of Hardwood Timber
Harvesting in Gazetted and Rural District Council Forests by Forestry Commission in
terms of Section 11 of the Audit Office Act (Chapter 22:18).

Yours Faithfully

A handwritten signature in black ink that reads 'mchiri'.

M. Chiri (Mrs)
COMPTROLLER AND AUDITOR-GENERAL

Harare

April 2, 2013

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GLOSSARY OF TERMS

No.	Term	Definition
1.	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.
2.	Block	A section of a forest designated to represent a territorial division in a forest reserve.
3.	Concession	Within the context of timber harvesting in Zimbabwe, a concession refers to the right granted by the Forestry Commission or Rural District Council to a third party to harvest specific types of timber within a forest falling under their jurisdiction. The operation of a concession is guided by the concession agreement as well as other regulations relating to the harvest of indigenous timber.
4.	Deforestation	Deforestation is the removal of a forest or stand of trees where the land is thereafter converted to a non-forest use.
5.	Ecosystem	A community of all plants and animals and their physical environment, functioning together as an interdependent unit.
6.	Endangered Species	Any species which is in danger of extinction throughout all or a significant portion of its range
7.	Fauna	Refers to the animals that are characteristic of a particular region or area.

8.	Flora	It is the plant life occurring in a particular region or time, that is, the naturally occurring or indigenous plant life
9.	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.
10.	Forest Certification	Forest certification is an <i>independent</i> assessment which verifies that a particular forest manages its resources in a <i>responsible</i> and <i>sustainable</i> 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.
11.	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 a biotic environment.
12.	Forest Encroachment	Activities that occupy a forest or part thereof without legal permission. It may include such activities as settlement, cultivation, grazing etc.
13.	Forest Management	The practical application of scientific, economic and social forestry principles to the administration of forests for specific forestry objectives
14.	Forest Reserve	An area declared by law to be a central or local forest reserve for purposes of natural forests and forest reserves. These forest reserve areas are managed mainly for sustainable use of natural ecosystems.
15.	Hardwood	This refers to the wood from a broad-leaved tree as well as the tree from which such wood may be

		obtained, for example, teak, mukwa, mahogany. Hardwoods are generally harder than softwoods.
16.	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.
17.	Natural Selection	Means that each tree in a compartment to be harvested should have an equal and independent chance of being selected.
18.	Off-take	Refers to the maximum amount of timber that a concessionaire is required to harvest within a period.
19.	Over-bark	Bark refers to the outer sheath of tissue covering a tree. The term over-bark is used mainly in measuring a tree's diameter for the calculation of the volume of a standing tree or cut logs. In this respect it refers to the measure of diameter used in calculating volume including the outer bark.
20.	Protected Area	All land gazetted and held in trust by government, such as Forest Reserves, National Parks and Wildlife Reserves.
21.	RDC	Rural District Council
22.	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.
23.	Royalties	These are fees charged to concessionaires per cubic-metre of timber harvested. They represent a usage fee for exploiting natural resources.

24.	Slashes	Refers to the off-cuts and debris remaining after a tree is felled and cross-cut into logs.
25.	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.
26.	Under-bark	In relation to measurement of volume, under-bark is considered as a more accurate measure of utilisable wood from a tree. It is the volume of timber after deducting an estimate of the volume of the tree's outer bark.
27	Salvage Harvesting	This is when harvesting is merely done to clear land to make way for other purposes for example dam construction.

EXECUTIVE SUMMARY

The Forestry Commission is a parastatal established under the Forest Act [Chapter 19:05] of 1948. It is a body corporate under the Ministry of Environment and Natural Resources Management.

Motivation

My audit was motivated by press reports over the rampant illegal cutting down of trees taking place in Zimbabwe's forests. There was also concern over the loss of biological diversity due to illegal logging and forest fires and the need for forests to be properly managed and preserved. During previous audits there was evidence of people carrying out logging without harvesting licences.

The purpose of my audit is to report on the extent of efficiency and effectiveness with which the Forestry Commission has fulfilled its mandate in the management of the harvesting of hardwood timber in gazetted and Rural District Council (RDC) forests, and to suggest ways of improving the operations.

Summary of Findings

My audit revealed shortcomings in the management of harvesting operations by Forestry Commission related to issues of failure to effectively monitor hardwood timber harvesting which led to illegal logging operations, loss of biodiversity, illegal settlements, failure by concessionaires to achieve agreed off-take and the failure by the Forestry Commission to effectively manage forest fires. The results of the audit which are detailed in Chapter 4 of the report are summarised below:

1. The Forestry Commission was not marking seed trees that were not supposed to be harvested. This resulted in concessionaires cutting seed trees which should be left for future regeneration of species.

Five out of ten concessions inspected did not have the Forestry Commission hammer stamp. As a result logs were not stamped to show that they had been recorded. I also noted that 37 logs at Teak Barons sawmill in Tsholotsho district were not stamped. The logs measuring 4.871m³ worth US \$146.13 were also not recorded. Another 50 logs at Siyabaza ramp were neither marked nor recorded. The volume and total monetary value of these logs could not be established as there was no equipment such as the calliper to measure the volume of the logs.

I observed that fuel storage was not as per standard as 40% of the concessions visited did not put concrete slabs to prevent spillages to the ground as required by the standard. This causes a threat to the surrounding vegetation and other living organisms in the soil. I also observed that oil leakages from tractors had negatively affected plant growth.

The Forestry Commission allowed five concessionaires to operate with expired concession agreements with some operating for 42 months leading to unregulated harvesting of timber.

2. I noted that there were inadequate anti-poaching patrols in gazetted forests by the Forest Protection Unit (FPU) of the Forestry Commission to ensure that there is no poaching of timber. Failure to conduct anti-poaching patrols was mainly attributed to lack of resources such as motor vehicles and camping equipment. Midlands Province had only one limited runner vehicle based at the Provincial Office. Matabeleland Province had

only four operational vehicles out of twenty-nine. There was wide spread cutting down of young indigenous timber species for fencing kraals and yards in Msokheli and Tsholotsho districts in Midlands and Matabeleland North province respectively. This posed a threat to regeneration of trees and forest renewal.

3. The Forestry Commission was failing to prevent the rise in illegal settlements in gazetted forests. In the year 2000, there was an estimated 85 families illegally settled in Mafungabusi forest. At the time of audit in July 2011, there were over 700 families settled in Mafungabusi forest occupying about 10 000ha of forest land. Illegal logging by villagers in Mafungabusi forest was causing a major threat to biological diversity due to the random and uncontrolled nature of the illegal harvesting activity. The forest was gazetted for the conservation of the Catchment Rivers, Mbumbuzi, Semwa, Ngondoma and Lutope that feed into the Zambezi River. The very existence of illegal settlers was a threat to the preservation of the rivers as they were causing river siltation due to cultivating activities along river banks.
4. I noted a case in which the Forestry Commission had to write off budgeted revenue from harvesting activity of \$325 551. The write-off was as a result of the failure by concessionaires to achieve the agreed quantity of timber to be harvested per concession. At the time of audit on August 5, 2011, the Forestry Commission was only charging for actual timber harvested as opposed to the previous contract agreement where concessionaires were charged for the maximum permitted off-take regardless of actual output.
5. The Forestry Commission was failing to prevent forest fires in gazetted forests. As custodian of these forests, the Forestry Commission is required to put in place measures to prevent and manage forest fires. A total of 75 750ha were burnt in 9 gazetted forests in Matabeleland North Province in 2010. In 2009 approximately 200ha in Mafungabusi Forest in Gokwe South district in Midlands province were burnt causing a major threat to wildlife and vegetation. Forest fires were mainly caused by wildlife poachers who use fire to trap the animals, and preparation of land for agriculture by settlers using slash and burn technique also contributed to the rise in forest fires. I observed that the quality of timber was compromised in areas that were burnt by forest fires. Forest fires are a threat to the preservation of biological diversity.
6. I observed that concessionaires and Forestry Commission workers did not have adequate protective clothing such as work suits, gloves, gumboots and face masks. Lack of protective clothing exposes workers to risk of injury.

Recommendations

My recommendations on how Forestry Commission could improve on curbing illegal logging and loss of biodiversity are contained in Chapter 5 of this report and are summarized below:

1. Trees are a source of livelihood for human beings and wild life. These have to be preserved for the sake of generations to come. Harvesting should be adequately monitored on the ground such that standing rules are followed and adhered to. This will go a long way in minimising illegal logging.

Forestry Commission should mark trees to be harvested for control purposes. There should be regular supervision to ensure that operations adhere to standing regulations that stipulate that trees to be harvested should be marked in advance. Seed trees 31cm and above should be adequately marked so that they are left for regeneration purposes.

Forestry Commission hammer stamps should be availed at all timber concessions to ensure that all harvested logs have been stamped with a Forestry Commission hammer stamp and marked to reflect the diameter and length of the log. All harvested logs should be recorded immediately after felling and cross-cutting. This should be enforced to ensure that all harvested logs are properly billed to the concessionaire.

Forestry Commission should ensure that the concessionaire has put in place the required infrastructure before the commencement of harvesting. This will ensure that standards are complied with.

The Forestry Commission should not allow concessionaires to continue harvesting operations after the expiry of their contracts. Forestry Commission should also ensure that they follow the correct procedure for review of applications for renewal of concession agreements.

2. Forestry Commission should reconsider the allocation of motor vehicles as a priority to ensure effective supervision of forest activities. Personnel manning forests should be equipped with adequate camping material so that they will be able to effectively monitor activities in the forests.

There should be an intensified awareness campaign done to communities for them to appreciate the importance of preserving trees. Communities should be educated on planting fast growing trees that they can use for fencing their homesteads.

3. There should be enforcement of regulations that require that settlements in gazetted forests should be controlled so that there is no rise in illegal settlements. The Forestry Commission must put in place measures that monitor and prevent the creation of new settlements within gazetted forests.

4. The Forestry Commission should carry out a thorough and objective evaluation of any prospective concessionaire's capacity to effectively conduct harvesting operations in line with the terms of the concession agreement. The evaluation should especially focus on the availability of tractors, personnel, cutting equipment, protective clothing and financial resources to construct and maintain structures and facilities at camp sites. There should be constant monitoring of concessionaires to ensure that they have adequate equipment for the duration of the concession agreement. Forestry Commission should also consider revising off-take targets to ensure that they are attainable.

5. There is need to intensify the education of the public to raise public awareness on forest fires. This could reduce incidences of fires in gazetted and RDC forests. Communities living

on the peripheral and inside the forest should be taught on the importance of preserving forests and also against activities that cause veld fires. It is also recommended that Forestry Commission should enforce environment laws such as the preparation and maintenance of fireguards to curb forests fires.

6. The health and safety of workers should be of utmost priority and as such operations should not resume until all measures to ensure the health and safety of workers have been put in place. The Forestry Commission should provide its employees in the field with adequate protective clothing to protect them against injury at work. For those employed by concessionaires, the Forestry Commission should ensure that no harvesting operations commence without evidence of adequate protective clothing.

CHAPTER 1

1. INTRODUCTION

In this audit I examined the effectiveness and efficiency with which Forestry Commission controls the harvesting of timber in gazetted forests and rural district council land.

The objectives of the audit are:

- To verify whether harvesting is being done in compliance with set regulations.
- To find out whether harvesting is being conducted in a way that ensures the protection of fauna and flora
- To evaluate whether policies and procedures in place are effectively curbing illegal logging.

1.1 Motivation

The audit was motivated by press reports over the rampant illegal cutting down of trees taking place in Zimbabwe's forests. There was also concern over the loss for biological diversity due to illegal logging and forest fires and the need for forests to be properly managed and preserved. During previous audits there was evidence of people carrying out harvesting without harvesting licences.

1.2 Description of the Audit Area

The Forestry Commission is a Parastatal established under the Forest Act [Chapter 19:05] of 1948. It is a body corporate under the Ministry of Environment and Natural Resources Management.

1.2.1 Statutory Mandate

Forestry Commission was established as a statutory body in 1948 under the Forest Act [Chapter 19:05]. It is also guided by the Communal Land Forest Produce Act [Chapter 20 of 1987]. Its functions include the regulation of the forestry sector, forestry extension, gazetted forest management, training and capacity enhancement, plantation forest management, production of timber products and trading in timber and its products.

1.3 Mission Statement

“To contribute to national socio-economic development through effective regulation and capacity enhancement in the sustainable utilisation and management of forest resources.”

1.4 Objectives

The Forestry Commission is the government's principal advisor on all forestry and forestry related matters. Its objectives are to:

- Facilitate improved supply and management of tree and forestry resources through equipping communities with knowledge and skills on tree planting and management,
- Increase income from sustainable utilisation of tree and forest products or services by communities in communal and resettlement areas,
- Regulate trade in wood related forest products,
- Develop appropriate technologies for the improved and sustainable management of indigenous and exotic plantation forests and to produce superior seed and other plant materials,
- Train personnel up to diploma level in wood technology, forestry and saw doctoring,
- Provide employee satisfaction and skills development and empowerment of managers.

1.5 Organisational Structure

At the apex of the organizational structure of Forestry Commission is the General Manager. To effectively carry out its mandate, Forestry Commission has been organized into two technical divisions namely the

Conservation & Extension Division (CONEX) and the Research & Training Division (R & T). The two heads of these two technical divisions are the deputy General Managers. The third division, Ngamo Safaris, is a hunting and photographic division. Forestry Commission has a wholly owned subsidiary company (Allied Timbers). Annexure ‘A’ attached shows Forest Commission’s organisational structure.

1.6 Funding

1.6.1 Forestry Commission

The Forestry Commission is funded by the government through the Ministry of Environment and Natural Resources Management. It also has some income generating projects like the Ngamo Safaris Unit, seed sales, timber harvesting and timber sales. The Budget Estimates and other income for the years ended 31 December 2009 to 31 December 2011 are as detailed in table 1 below.

Table 1: Forestry Commission budget for the period Jan 2009- Dec 2011

Financial Year	Voted Funds US\$	Income from Timber US\$	Other income US\$	Total US\$
2009	1 141 600	324500	1 341 384	2 807 484
2010	1 850 000	400 000	1 863 995	4 113 995
2011	2 625 000	504 000	2 122 076	5 251 076

Source: Budget Estimates for 2009 -11and Forestry Commission budget and Work plans 2009 -11.

CHAPTER 2

2. METHODOLOGY

I conducted the audit in accordance with International Organization of Supreme Audit Institutions (INTOSAI) Auditing Standards, the IDI Guidance Materials on Auditing the Forest and Audit Office VFM Audit Manual. These standards require that a performance /VFM audit should 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, I reviewed documents, carried out interviews and physical inspection/observation of the forests to obtain evidence on Management of Hardwood Timber Harvesting.

2.1 Scope of Audit

I carried out the audit in terms of Section 6 (1) (b) of the Audit Office Act [Chapter 22:18]. My audit covered the period January 2009 to August 2011. My audit which was to assess the effectiveness and efficiency in the management of hardwood timber harvesting activities by the Forestry Commission covered Matebeleland North and Midlands provinces. The two provinces have a concentration of hardwood timber species namely mukwa, teak and mahogany.

2.1.1 Sampling

The audit covered hardwood timber harvesting within Rural District Council (RDC) and gazetted forests. Gazetted forests are areas of land which have been demarcated in terms of the Forest Act [Chapter 19:05]. The primary objectives for demarcation or gazetting of forests are for the preservation of the fragile Kalahari sands ecosystem; for soil conservation and for the protection of the catchment areas for major rivers and their tributaries. The RDC forests visited were Jimila, Mapengula, Bubi and Sodaka in Matebeleland North province and Msokheli in Midlands province. Gazetted forests visited were Lake Alice, Gwayi, Fuller and Inseze forests in Matebeleland North Province and Mafungabusi Forest in Midlands Province. The forests in Matebeleland North were selected because harvesting activity was taking place in the forests. I also conducted field visits in Mafungabutsi and Msokheli forests where there were no harvesting concessions to ascertain whether indeed there were no harvesting activities taking place.

2.2 Documentary Review

I obtained and reviewed documents listed below to obtain information relating to the legal frame work/mandate of Forestry Commission, organisational vision, mission objectives, key processes, activities, and assess performance of Forestry Commission for the period under review. These included:

- Forest Act [Chapter 19:05],
- Communal Land Forest Produce Act [Number 20 of 1987],
- Environmental Management Act [Chapter 20:27],
- Statutory Instrument 7 of 2007 (Environmental Management Regulations) and
- Statutory Instrument 112 of 2001 (Forest Regulations),
- Statutory Instrument 9 of 1989
- Forestry Commission Strategic Plan Document 2006-2010,
- The Process of Drawing up, Awarding, Supervision and Management of Timber Concessions,
- Monthly Harvesting reports 2009-2010,
- Minutes of Meeting for the Technical Advisory Committee on Export of Indigenous Hardwood timber.

2.3 Interviews

I interviewed key personnel so as to get information on the operations of each section with a view of corroborating information obtained from document review. These were:

Ministry of Environment and Natural Resources Management

- Director of Environment
- Director of Natural Resources Management

Forestry Commission

- General Manager,
- Acting deputy General Manager, Conservation & Extension,
- Deputy General Manager Research & Training,
- Operations Manager, Conservation and Extension,
- Information and Communications Manager,
- Finance Manager,
- Chief Conservator of forests,
- Acting Provincial Forestry Extension Manager (Midlands),
- 3 Field and Extension Officers,
- 4 Foresters,
- 8 Forest protection unit, officers
- Nursery propagator and
- 14 Timber measurers.

Zibagwe Rural District Council

- Chief executive Officer in Kwekwe.

I also interviewed councilor of ward 25 in Msokeli communal lands.

Bubi Rural District Council

- Chief Executive officer

9 Concessionaires

CHAPTER 3

3. SYSTEMS DESCRIPTION

3.1 Functions and Roles

The functions of the Forestry Commission include the regulation of the forestry sector, forestry extension, management of the gazetted indigenous forests, forestry research and training and providing tourist services through hunting and photographic safaris. Forestry Commission is divided into sub divisions as follows;

3.1.1 The Conservation and Extension (CONEX) division is responsible for regulating the trade and export in wood related products. It is also involved in management of forests through equipping communities with practical skills in tree planting and management. The skills acquired help to mitigate the causes of degradation and the depletion of the nation's woodland and forest resources;

3.1.2 The Research and Training division is responsible for training of forestry manpower both for the local and regional forestry industry. The division also undertakes cost effective forestry research for the Zimbabwean forestry sector. It also has the responsibility to carry out research on tree breeds that are genetically superior and of high quality suitable for different environments;

3.1.3 The Ngamo Safaris Division is responsible for the sustainable utilisation of the rich biodiversity found in the gazetted indigenous forests through hunting and photographic safaris. It has access to the gazetted forests which have varied scenery and climatic conditions which make them ideal for tourism. The gazetted forests are also home to prime game. In Matebeleland North the division operates four hunting camps namely Mubiya, Intundla, Kazuma and Amandundumela and two photographic lodges Ganda and Jafuta. Ngamo's objective is to generate funds to support the developmental activities of the Forestry Commission.

3.2 Process Description

Management of harvesting of timber

3.2.1 Pre-Harvesting

The Forestry Commission's mandate entails conducting regulatory, management, capacity enhancement and revenue generation activities in the forestry sector. The organisation is also mandated to mobilise the key personnel, expertise and knowledge required to coordinate timber harvesting activities. Sections 8 and 15 of the Forest Act [Chapter 19:05] give the Forestry Commission the specific mandate to control, manage and exploit gazetted forests. The Forestry Commission's role of managing timber harvesting activities in RDC forests came about through the issue of Statutory Instrument 9 of 1989, in which the Minister of Environment and Natural Resources Management delegated this role to the Forestry Commission.

In communal areas, timber resources belong to the RDC and it is the responsibility of the RDC to manage these resources. Knowing what quantities and quality of the resource are available is the first step towards successful management. Forestry Commission is the delegated authority responsible for monitoring and evaluating the efficient and effective management of forestry activities. They therefore work hand in hand with the RDCs in carrying out harvesting activities to ensure that the available resource are preserved for future use and that laid down rules and procedures are followed. To this end, Forestry Commission has produced guidelines for the process of drawing up, awarding, supervision and awarding of timber concessions which are largely based on the indigenous hardwoods.

Before carrying out harvesting of timber in RDC forests, the RDC carries out an inventory to be able to determine whether, on the basis of the available timber quantities and quality, it is worthwhile to award a concession. The inventory can be carried out by a consultant engaged by RDC or they can engage the Forestry Commission. The intensity of the inventory depends on the availability of the resources so it can either be a 100% inventory meaning they do an inventory of all the tree species in the forest or less than 100% where they only do a sample inventory. Should the inventory reveal that there are sufficient timber resources of the right quality, the RDC will then approach the Forestry Commission with the intention to open up an area for timber exploitation.

The Forestry Commission will take into consideration the inventory results submitted by the RDC in deciding whether to proceed with awarding the concession to harvest timber. When both the Forestry Commission and the RDC agree in principle that, on the basis of the inventory results, a concession can be awarded, the RDC then advertises the intention to award a concession. All tenders are evaluated by the RDC with the Forestry Commission acting as Official advisor. Criteria used to evaluate the tenders include but are not limited to; availability of adequate tools, equipment and personnel to conduct timber harvesting, credibility of tenderers, including their royalty and fee payment history.

In gazetted forests, the Forestry Commission follows a 40 year cycle for harvesting purposes, i.e. they carry out harvesting in a forest every 40 years. The Conservation and Extension (CONEX) division declares that a forest is due for harvesting to the General Manager who in turn seeks approval from the board. If the board approves, the Forestry Commission will advertise in local newspapers, inviting prospective concessionaires to make bids for the award of concessions. The criteria used for evaluating tender bids are similar to those used in the award of concessions in RDC forests. The Forestry Commission will, after evaluation of bids, award the concession to the winning bidder.

At this stage it is important to note that any award of the concession does not entitle the winner to start harvesting. Commencement of harvesting will depend on the recommendations and acceptance of the Environmental Impact Assessment (EIA), as well as the submission of an acceptable harvesting plan by the winning bidder.

An **Environmental Impact Assessment (E.I.A)** is required by the Environmental Management Agency and is carried out by a consultant on behalf of the concessionaire and then Environmental Management Agency inspects and approves the Environmental Impact Assessment and a copy is sent to Forestry Commission. The E.I.A involves looking at the physical area taking into account the terrain, drainage, vegetation and soil types. The consultant is required to conduct an assessment of the timber resources available, species and diameter classes. The socio-economic situation of the harvesting area is also assessed during the E.I.A process. This takes into account the physical infrastructure development, land use patterns, population density, sources of income and impact of harvesting on the community. The biodiversity and tree cover of the area is assessed so as to recommend whether harvesting should take place taking into account the impact and any mitigatory measures to be undertaken if harvesting is to take place. All these factors are taken into account and recommendations are given whether harvesting should go ahead in view of the effects identified.

Thereafter a tripartite concession agreement involving the Forestry Commission, the RDC, in the case of RDC forests and the concessionaire is signed. In the case of gazetted forests, the agreement would be between the Forestry Commission and the concessionaire. Each party can terminate the agreement after giving one

month's notice but the aggrieved party is free to seek litigation. The agreement specifies the amount of timber to be harvested by the concessionaire every month. Trees to be harvested are marked by Forestry Commission and the diameter should not be less than 31cm. Salvage harvesting can be done on trees less than 31cm diameter after written approval has been sought from the Forestry Commission and all the above procedures have been followed.

The concession agreement is a 5 year contract renewable after 5 years based upon an audit and production of an audit report by the Forestry Commission. A concessionaire can apply for extension of the contract three months prior to the expiry of the contract. In the case of an RDC forest, the Concession agreement shall provide for the payment of a management levy (5% of royalties) to Forestry Commission, stakeholder levy (minimum of 10% of royalties) to the community and the RDC gets 85% of the royalties. The management levy is used in the development of management plans, technical and research work. The stakeholder fee is used for direct investment in the communities from which the timber comes from. The concession agreement also specifies, among other issues, the species to be harvested, the amount to be harvested which, at the time of audit was set at 400m³ or less per month, area to be harvested and boundaries, duration of agreement, the rights of the respective parties, duties of the concessionaire and the clauses in respect of suspension and termination of the agreement. The clauses state that a concession agreement may be terminated by any of the parties giving the other party a month's notice with all parties reserving the right to sue for damages in terms of the agreement.

On termination of the agreement the concessionaire shall within a period of not more than one month remove from the concession area all plant, equipment, buildings and any other structures they may have installed. The concessionaire shall pay supervisory fees for the period that it requires to remove its property from the concession area. At the termination of the concession agreement, the concessionaire is required to leave all boreholes and any permanent structures on the concession area for the benefit of the RDC and the local community. Any property of the concessionaire which is not removed by the concessionaire after the stipulated period or extension thereof shall become the property of the RDC without payment of any compensation.

The Forestry Commission may suspend the operations of the Concessionaire for such period as it deems sufficient to enable the concessionaire to rectify any problems. During the period of suspension the Concessionaire shall pay supervision fees to the Commission for the purpose of keeping the Commission's employee on site until the suspension is lifted or superseded by another action. Furthermore, the Concessionaire shall not remove any of its property from the concession area without the written permission from the Commission.

The concessionaire is supposed to supply the Forestry Commission with a cutting plan which is made up of the concession site map clearly showing all the avenues to be opened, equipment to be used, ramps, camps and direction of harvesting. The cutting plan should also take into account sensitivity to surrounding vegetation by incorporating the recommendations of the Environmental Impact Assessment Report. After the successful approval of the cutting plan, a security deposit will be paid to the land owner either Forestry Commission or Rural District Council before harvesting commences. The deposit is set at an amount equivalent to the value of one month's harvesting in royalties or the value of one-twelfth of the expected annual off-take.

3.2.2 During Harvesting

Forestry Commission deploys two timber measurers in each concession, who are responsible for marking the trees to be harvested. They use a cane knife or a hand axe to do the markings. They are also responsible for monitoring harvesting activities on the ground in concession areas. Seed trees to be left for regeneration purposes are marked using white paint around the stem. The timber measurer should be available during the whole harvesting period and they should make sure that the concessionaire follows all harvesting guidelines as specified in the concession agreement. These include felling only marked trees that are 31cm in diameter and above. Timber measurers should make sure that the felling and extraction methods agreed and rules on preservation of surrounding vegetation are complied with. Selecting trees for harvesting purposes should take into account the natural selection of the forest such that not only good trees are selected for harvesting. Nesting trees should not be selected for harvesting purposes as this will disturb the biological diversity in the forest as animals and birds would be relying on these trees for their very existence.

A forester employed by Forestry Commission is the overall supervisor and he/she is responsible for supervising the timber measurer and the whole harvesting process in the area. The RDC may have their own timber measurers who could simultaneously record measurements for their own interests. During harvesting, the Forestry Commission timber measurer produces monthly returns showing the volume of timber harvested in cubic metres and the reports are sent to the Forestry Commission provincial office for invoicing and monitoring purposes. The invoicing is done on a monthly basis. At the time of audit the Forestry Commission was invoicing as per the amount of timber harvested. The concessionaire pays a flat fee of \$450 per month to the Forestry Commission to cater for the welfare of the timber measurers on site. At the time of audit, the timber royalty rates were set at \$33/cubic metre for certified forests in Tsholotsho and \$30/cubic metre for non certified forests. The concessionaire is required to pay royalties monthly after receiving an invoice from the Forestry Commission. Failure to pay royalties will result in the suspension or cancellation of the concession agreement.

The concessionaire is restricted to the boundaries set in the cutting plan and these have to be clearly marked in the concession area. Before harvesting operations commence, the concessionaire opens up avenues to be used for accessing timber and for hauling of timber from the forest to the ramp. A ramp is a place where the Forestry Commission and the concessionaire agree to store logs temporarily awaiting transportation to customers and for further processing. Harvesting is done according to coupes. A coupe is an area followed when harvesting and is divided into four portions which are supposed to be 400m apart. A concessionaire should not move to the next coupe before completing harvesting in the first coupe. Inspection is supposed to be carried out by a Forestry Commission officer two weeks prior to the anticipated completion of the coupe and written permission is given to move to the next coupe. The purpose of the inspection is to assess whether harvesting operations have been conducted in accordance with the cutting plan. Cutting of trees is done using equipment specified in the cutting plan and this should aim at minimising timber waste in the field. When harvesting, it is required that trees are cut leaving a stump not measuring more than twenty five centimeters. The felled tree should be fully utilised in such a manner that logs of up to 19cm diameter are all used.

The Forest Act [Chap 19:05] requires that standing trees be felled in such a manner as to cause minimum injury to surrounding vegetation and also to obviate soil erosion. Dragging of logs should be done on dragging lines which are not more than 200m long and each dragging line should not be used more than three times. The concessionaire is required by the Forest Act [Chap 19:05] to construct fireguards in the harvest area and also dispose of any slashes (off-cuts) resulting from the felling of trees so as to minimise dangers of fire.

Health and safety of workers should be of utmost priority such that Forestry Commission has to ensure that all workers in timber concessions are adequately equipped with safety wear such as work suits, head gear, gloves and safety boots to protect them against injury whilst at work. Forestry Commission should provide safety wear for their employees and monitor the employees of concessionaires to ensure that they are putting on adequate protective clothing.

The concessionaire is supposed to put up bushing facilities such as camping shelter and toilets on the site. The toilets are supposed to be one for every 25 people resident at the camp. Fuel and oil should be properly stored and used so as to avoid leaks and spills that can be hazardous to animals and also affect ground water and plants. A cement floored fuel and oil storage room is supposed to be constructed by the concessionaire and the Forestry Commission should oversee that this is done.

3.2.3 Post Harvesting

The harvested logs are measured and recorded by Forestry Commission timber measurers before removal from the forest. All the measured logs should be hammer stamped with a Forestry Commission hammer stamp, which has the code for a particular station, and the length and diameter of each log is written on one side of the log and is recorded on a log sheet. Log hauling should be done using specified routes. Workers should not be allowed to sit on loaded trailers as this could lead to serious injury or death. Concessionaires are encouraged to provide a separate tractor for the transportation of labour. No timber shall be brought from outside the forest without written approval from Forestry Commission. Before removal of timber from the forest the concessionaire has to first acquire a timber movement permit from the Forestry Commission which cost \$20 for big trucks and \$10 for small trucks.

Environmental Audits are done on expiry of the harvesting contract by the Forestry Commission, the Environmental Management Agency and Agritex to find out whether the harvesting process was being done in conformity with set rules and regulations. Statutory Instrument 112 of 2001 prohibits the exportation of raw and semi processed timber. Exportation of timber is accredited by Forestry Commission who sends inspectors to inspect the consignment and an export permit is given. The National Technical Advisory committee decides whether a product is exportable or not. Forest Act [Chap19:05] stipulates that anyone who intends to cut trees for the purposes of clearing land and also for domestic purposes has to get a harvesting permit from Forestry Commission.

3.2.4. Monitoring of Forests

As stated in the Forest Act [Chap 19:05] section 86, Forestry Commission is required to monitor activities in forests to ensure that there is no poaching of timber. Forestry Commission employs forest guards who conduct regular anti-poaching patrols in gazetted forests especially for the hardwood timber species which take a very long time to mature.

The current staff establishment of forest guards is 112. Every forest station is supposed to have at least a motor vehicle to ferry the forest guards to their respective places of work. The number of forest guards at each station will also depend on the size of the forest to be monitored. The forest guards are supposed to be supervised by the Forester for that particular area who makes regular visits to assess if there is adequate monitoring of forests. There are times when forest guards are required to conduct anti-poaching patrols overnight and at road blocks. They are supposed to be supplied with camping material when they are conducting anti-poaching patrols overnight. Forest guards report on their activities to the Forester who incorporates their reports and activities in his monthly report to the provincial office. RDCs have

environmental officers who are responsible for the monitoring and protection of RDC forests. Forestry Commission's Extension officers assist the RDC officers in monitoring and supervision of RDC forests during harvesting operations within those forests.

CHAPTER 4

4. FINDINGS

This chapter details my findings relating to the efficiency and effectiveness in management of timber harvesting activities by Forestry Commission.

4.1 Logging Operations

Hardwood timber growing is mainly concentrated in Matebeleland North and Midlands Provinces where timber species such as Mukwa, Teak, Mahogany and Mupapama are most prevalent. Less common among hardwood species in this area is the Mchibi tree. During harvesting of hardwood timber, monitoring of concession operations in communal (RDC) and gazetted forests is the responsibility of the Forestry Commission and is done by forestry extension officers and timber measurers employed by the Forestry Commission. During my visits I observed that there was inadequate monitoring of timber harvesting operations which resulted in the following:

4.1.1 Marking trees (for seeding and logging)

Trees to be harvested should be marked by Forestry Commission personnel using a cane knife or a hand axe. Seed trees to be left for regeneration purposes are marked using white paint around the stem. The timber measurer should be available during the whole harvesting period and he/she should make sure that the concessionaire follows all harvesting guidelines as specified in the concession agreement.

Forestry Commission was not marking seed trees at nine of the ten timber concessions visited namely: Mukusi, Lyspaw, South South Investments, Teak Baron, Savana Wood, Architectural Aluminum, Hyde Park, Siyabaza, Alumcury and Gwayi Forest where Forestry Commission was carrying out its own timber harvesting and sawmilling activities. Olive Groove in Bubi RDC forest was the only concession which clearly marked seed trees with white paint around the stem. The Forestry Commission failed to provide a satisfactory explanation regarding the non-marking of seed trees. There is therefore the possibility that concessionaires cut down all trees of good form which could provide the best timber leaving only the poorer form trees, leading to weakening of future generations of the tree species.

I also observed that trees to be felled were not marked prior to harvesting and the explanation given was that trees were being marked as and when they are about to be felled. This was contrary to standing provisions and what was on the ground as I found that no trees were being marked for harvesting and this resulted in concessionaires harvesting beyond their cutting boundaries.

The non-marking of trees was also raised in concession audit reports where it was stated that concessionaires were harvesting timber beyond boundaries. For instance Spearhead Timbers which was harvesting in Gwayi forest harvested 700m³ of unmarked trees, worth approximately US \$21 000. The timber measurer blamed the concessionaire for not obeying standing instructions. Taking into account that the concessionaire was only allowed an off take of 400m³ a month, it was clear that the concessionaire was left to go against standing rules and regulations for a long time and no corrective action was taken. The Forestry Commission was not regularly supervising harvesting operations as this was discovered two months later.

This was also evident during my documentary review at Matebeleland North provincial office as I noted that, Siyabaza and Wood Industries were cutting unmarked trees in Lake Alice and Fuller forest in January 2009 and January 2010 respectively. The audit reports I reviewed did not provide the quantity of unmarked trees harvested. All this presents evidence of lack of adequate monitoring on the ground.

The audit report issued by the Forestry Commission for the Msokheli Concession in the Midlands Province dated July 28, 2010, reference number GWE/C/20/165, revealed that the concessionaire, Joubert Hardwood Ventures cut timber outside the concession area in breach of clause 3.1 of the concession agreement which requires that the concessionaire only cut timber within the concession boundaries. The report provided did not quantify the volume of timber harvested outside the concession area.

An audit report issued by the Forestry Commission for the Savanna Wood concession dated September 30, 2009 indicated that Timber measurers were at times using visual assessment to assess tree diameter before harvesting as opposed to using a caliper as required in the Guidelines to Work Procedures for Timber Concessions. This resulted in trees of less than 31cm diameter being felled and negatively affecting forest renewal and regeneration of affected species. The report also stated that seed trees were not painted white at the stem by Forestry Commission personnel to prevent their harvesting. This is attributable to lack of supervision by Forestry Commission personnel on the ground.

Forestry Commission responded that they will upscale supervision in logging operations. They also agreed that seed trees were not marked due to failure to acquire white paint used in marking the trees. They made a commitment that all seed trees will be marked in future.

4.1.2 Failure to Measure and Mark logs

The harvested logs are supposed to be measured and recorded by a Forestry Commission timber measurer before removal from the forest. All the measured logs should be hammer stamped with a Forestry Commission hammer stamp and the length and diameter of each log written on one side of the log and recorded on a log sheet. This is done to ensure easier tracking and identification of logs when they are moved. The length and diameter are written on the side of the logs for the calculation of volume and for proper record-keeping.

Five out of ten concessions visited did not have the Forestry Commission hammer stamp because the Forestry Commission failed to provide them with hammer stamps. The hammer stamps are used by the Forestry Commission timber measurers to mark logs that have been measured and recorded. Failure to hammer-stamp logs may result in the Forestry Commission failing to distinguish between logs recorded in the log tally and volume sheets and those not recorded. In the event that logs are stolen, it would be difficult for the Forestry Commission to identify them and to trace their true origin.

During my field visit at Teak Barons, Siyabaza and Mukusi concessions on July 26, 2011, I noted 37 and 50 logs that were not marked at Teak Barons and Siyabaza respectively. The logs at Teak Barons were measured at 4,871m³ over-bark and they were worth \$146.13. (Refer to Picture 1 below). At Mukusi concession, I noted logs were left unmarked in avenues ready for collection by tractors. I could not ascertain the volume and therefore value of the logs at Siyabaza and Mukusi sawmills due to the fact that there was no equipment with which to measure length and diameter of the logs.

Picture 1



Part of the logs at Teak Barons ramp which were not marked and recorded by the timber measurer

Failure to mark logs created a risk that such logs may be collected and transported by the concessionaire without the Forestry Commission's knowledge. This would also result in the concessionaire paying less royalties and fees than what was supposed to be paid based on harvested quantities.

The Forestry Commission acknowledged that some concessions did not have hammer stamps. They attributed this to the non-availability on the market of the copper material used to manufacture the hammer stamps. Forestry Commission highlighted that they shall continue to source the hammers.

4.1.3 Fuel and Oil storage

In terms of the approved cutting plans and Environmental Impact Assessments, which guide the operation of concessions, fuel and oil should be properly stored and used so as to avoid leaks and spills that can be hazardous to animals and also affect ground water and plants. A cement floored fuel and oil storage room is supposed to be constructed by the concessionaire and the Forestry Commission should oversee that this is done.

During my audit, I noted that four out of the ten concessions visited, were operating without proper fuel and oil storage facilities. At Teak Baron, Savanna Wood and Hyde Park Concessions, I observed visible signs of fuel and oil spills on the bare ground. The storage facilities constructed by all three concessionaires did not have the required concrete floors. The fuel and oil spills posed a threat especially to plant and animal life. This would also potentially lead to contamination of underground water.

At Alumcury Concession in Tsholotsho district, fuel and oil containers were stored in an uncovered trailer, exposed to direct sunlight, rain and even fire. Forestry Commission failed to ensure that the concessionaire has all the required facilities before operations resumed.

In response the Forestry Commission indicated that after completion of logging concrete slabs were difficult to deal with because the destruction left an unsightly environment. It was further stated that use of the methods which are environmentally friendly for storage of fuel like using bio digester after spillages and use of saw dust were being encouraged. The procedures (standards) for fuel storage were going to be amended to capture the new changes.

4.1.4 Expired Concessions

The Forest Act [Chapter19:05], section 42 requires that for anyone to harvest any species or type of tree they should have a harvesting permit. For harvesting concessions a concession agreement has to be signed between the concessionaire, the Forestry Commission and RDC representative if harvesting is to be done in an RDC area.

At the time of audit on July 24, 2011, 5 concessions operating in gazetted forests did not have valid concession agreements. The Forestry Commission allowed concessionaires to operate with expired concession agreements with some operating for 42 months with expired concession agreements. However, the concessionaires were being charged royalties and fees for timber harvested throughout the period they were harvesting. The obvious implication of this would be that the Forestry Commission would not be able to enforce non-valid concession agreements. The Forestry Commission would have no legal recourse in the event that a concessionaire failed to honour their obligations such as royalty payments.

Table 2 below shows the concessionaires who continued operating in gazetted forests without valid concession agreements.

Table 2: Concession expiry dates

Name of Concession Holder	Date of Expiry on Concession Agreement	Date Operations Ceased	Period Harvesting was done without valid permit(mths)
Savanna Wood (Fuller Forest)	30/09/07	01/03/11	42
Architectural Aluminium (Inseze Forest)	31/07/09	31/07/11	24
Hyde Park (Inseze Forest)	31/07/10	31/07/11	12
Wood Industries (Lake Alice Forest)	28/02/11	31/07/11	5

Siyabaza (Lake Alice Forest)	28/02/11	31/07/11	5
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Source: Concession Agreements

The above operations were only ceased during my audit that is July 31, 2011 except for Savanna Woods which had been suspended in March 2011 due to non-payment of royalties.

In response Forestry Commission indicated that concessionaires with expired concession agreements were given a grace period by the General Manager to operate since they owed the Forestry Commission. They highlighted that this was done to allow the concessionaires to continue operating so that they could clear their arrears.

While Architectural Aluminium was one example given which cleared its arrears under this arrangement, information about other concessionaires was not supplied to that effect.

4.2. Illegal Logging

Trees are a source of livelihood for human beings and wild life. These have to be preserved for the sake of generations to come. Monitoring of forests is done by the Forest Protection Unit (FPU) of the Forestry Commission. Each forest has an authorised establishment of forest guards depending on the size of the forest being manned. At the time of audit the Forestry Commission had in its employment 108 forest guards against an establishment of 112 guards for 23 gazetted forests.

The largest forest in Midlands province is Mafungabusi forest in Gokwe South district measuring approximately 82100ha. The forest was being manned by 11 forest guards who were residing within the forest at Lutope Camp. My visit to Mafungabusi revealed that the forest guards had to walk for distances of up to 30km a day monitoring activities in the forest. This appears to be very physically demanding taking into consideration that they would be expected to carry out monitoring activities daily. As a result of ineffective monitoring I discovered that illegal logging of precious hardwood timber such as teak and Mukwa was rampant in Mafungabusi forest. This was evidenced by freshly cut stumps in a forest where official harvesting was not supposed to take place.

The Forestry Extension Officer for Gokwe South district who was in charge of Mafungabusi forest was based at Gokwe Centre, about 40km away from the forest. The officer was facing transport challenges to supervise staff in the forest. He relied on a motorbike that he shared with the Forest Extension Officer for Gokwe North district. According to the Forestry Extension Officer, a motorbike was not appropriate for use in the Kalahari sands that are found in Gokwe North and South districts. In such environments, four wheel drive vehicles were more suitable for daily travel on forest roads.

Lack of adequate monitoring resulted in illegal logging. In my documentary review, I read of instances of illegal logging and sawmilling activities in Mudzongwe Forest, Copper Queen farming area, Sanyathi Centre, Chemagora small scale farming area and Ndlalambi Ward within Mafungautsi Forest. In all the above cases the Forestry Commission could not establish the extent of timber lost through these activities. There was at least one death reported of a worker who was crushed and killed by logs being transported to an illegal sawmill in Sanyati. In all these cases, the individuals concerned did not have concession agreements, permits or licenses authorising them to exploit timber.

A Forestry Commission report reference number GWE/D/18/112 dated May 20, 2010 had evidence of illegal timber harvesting activities in Gokwe North and South districts. The Provincial Forestry Extension Manager reported discovery of a sawmill and a group of workers at Farm 1 in the Chemagora Small Scale farming area. The report states that the owner of the farm allowed harvesting and milling to be conducted on his farm after being informed by the timber poacher that the Forestry Commission had allowed the operations. The timber poacher's activities also overlapped into the neighbouring gazetted Mafungabusi Forest. However, Forestry Commission could not provide a record or estimate the amount of timber harvested by the poacher.

I observed a high prevalence of illegal timber harvesting carried out by illegal settlers within Mafungabusi Forest. A common technique employed by the settlers was that of girdling, in which a section of a tree's bark is removed, especially around the stem, killing the tree's transport system and leading to the death of the tree itself. Picture 3 below refers.

Picture 3



*Girdling or ring-barking, killing the tree's transport system:
Zanda Community in Mafungabusi Forest.*

There was widespread cutting down of trees, including commercial species such as teak, for domestic construction purposes by the local community in Msokheli communal lands in the Midlands Province. Because of the difficulty in using basic tools like axes to cut hardwood species such as Teak and Mukwa, the locals resorted to cutting down younger species of the teak and mukwa trees for fencing their kraals and yards (Refer picture 4). This practice presented possibly the greatest threat to the communal woodlands as there was limited scope for regeneration and forest renewal due to the haphazard manner in which the

harvesting was taking place. When trees are harvested haphazardly, it would be difficult to manage the forest and trees that would ensure sustainable future regeneration.

Picture 4



Some of the younger species of trees used in fencing kraals and yards

Harvesting activities are not being done in a way that ensures the protection of flora and fauna

I attribute lack of adequate monitoring in gazetted forests to;

- **Inadequate motor vehicles**
- **Absence of camping equipment**

4.2.1 Inadequate Motor Vehicles

At each Forestry Commission station, there is ideally supposed to be one motor vehicle for all forestry-related operations. According to the January–December 2010 Monthly Progress reports, anti-poaching patrols were being hampered by lack of vehicles. My review of the Matebeleland North vehicle register showed that the province had 29 motor vehicles of which only 4 were runners and were based at the provincial office, 13 were limited runners and were distributed around seven district offices, 12 were non-runners and were thus grounded. Adequate monitoring of forests cannot be achieved with a depleted fleet.

An analysis of the Midlands vehicle register revealed that out of the nine motor vehicles allocated to the province only one was working and this hindered the monitoring of activities within the gazetted forests. At the time of the audit on June 28, 2011 the only vehicle which was supposed to be working was being attended to by a motor mechanic as it was encountering some mechanical problems.

The Forestry Commission acknowledged the finding and indicated that anti-poaching patrols and monitoring operations were constrained due to the limited number of vehicles available for operations. It was revealed that the Commission was in the process of acquiring vehicles following allocation of some funds by Treasury.

4.2.2 Absence of Camping Equipment

Officers manning the forest are supposed to be equipped with resources such as camping material and rifles to use when monitoring activities in the forest.

The forest guards did not have camping equipment to use when carrying out patrols over night. During my visit to Gwayi forest, Fuller forest and Umguza district, I noted that the forest guards did not have camping equipment. As a result, they were unable to conduct anti-poaching patrols overnight, the time when most of the poaching is done. Lack of camping equipment was confirmed by the Forestry Commission Head Office, which also revealed that they were in the process of procuring new camping equipment. I found that in these areas there was timber poaching. For instance, I found about 20m³ of poached timber that was left in the Gwayi forest. Refer to Picture 5 below. Forestry Commission cited lack of adequate camping material as hampering their effectiveness in monitoring illegal activities in the forest.

Picture 5



Part of the logs left by suspected illegal loggers in Gwayi forest

Failure to effectively monitor forests robs the country of future timber resources if available resources are not preserved. This results in loss of revenue.

4.3 Illegal settlements

The Forest Act [Chapter 19:05] prohibits settlements in forests gazetted for preservation purposes. However the government, through the Forest-Based Land Reform Policy of 2004, has made a provision that those already settled in forests should be allowed to stay but new settlements should be prohibited.

The Forestry Commission was failing to prevent the rise in illegal settlements in gazetted forests. The preservation of biodiversity in forests was being threatened by the existence and the increasing number of illegal settlers. In Gwayi Forest which measures approximately 144 265ha and Lake Alice Forest, which is approximately 39 000 hectares, there was evidence that settlers within the forests were poaching timber and animals without due regard to the preservation of the forests. At the time of audit, there were pockets of settlements within all major gazetted forest areas. Crop agriculture was a more viable land use pattern for the settlers; therefore the forests were under threat from unsanctioned harvesting as the settlers sought to clear land for agriculture. The Forestry Commission could not provide clear data on area and amount of timber harvested by the settlers. The Forestry Commission could also not provide evidence of measures taken or to be taken to prevent establishment of new settlements within the gazetted forests. In total Forestry Commission indicated that there was an estimated 32 431 settlers occupying the Lake Alice, Kavira, Mzolo, Gwayi, Ngamo, Bembesi, Umgusa, Inseze and Chesa forests as at 31 December, 2010.

At the time of audit on June 17, 2011, there were over 700 families settled in Mafungabusi Forest occupying about 10 000ha of forest land, a steep rise from the 85 families that were estimated to be residing in the forest in the year 2000. The settlers were illegally cutting down trees for domestic and commercial purposes. Illegal logging by settlers in Mafungabusi forest in Gokwe South district was causing a major threat to biological diversity due to the increasing population. The forest was gazetted for the preservation of the Catchment Rivers, Mbumbuzi, Semwa and Mutokwe that feed into the Zambezi River. The settlement of people in gazetted forests threatened the preservation of the rivers due to river siltation caused by cultivating along river banks.

Illegal settlers in Zanda area in Mafungabusi Forest were opening land for agriculture leading to serious deforestation. They were cutting trees without recognizing surrounding vegetation and without using proper machinery and safety precautions which is dangerous to human beings and wild animals. The timber harvesting activity was being carried out without any permits, licences or agreements issued by the Forestry Commission contrary to the Forest Act which require land owners to approach Forestry Commission when they intend to clear land for agriculture. Picture 6 below refers.

Picture 6



A section of forest cleared for agricultural purposes in Zanda Forest Community in Mafungautsi Forest.

The Forestry Commission acknowledged the presence of illegal settlements in gazetted forests and stated that they did not consent to the presence of the illegal settlements. They revealed that they had been granted High court orders to remove the settlers but they had been stopped from implementing the court orders pending availing of alternative land for resettling the illegal settlers. Forestry Commission appealed to Government to urgently find alternative land for these settlers in order to facilitate sustainable management of forests.

4.4 Failure to Select Competent Concessionaires

Timber harvesting is one of the major sources of revenue for Forestry Commission. When selecting tenders for timber harvesting, Forestry Commission and the RDC have to be satisfied that the bidder has the adequate resources to be able to harvest the annual off take required. This will ensure that Forestry Commission selects only those bidders with enough capacity to meet harvesting targets.

I noted that an amount of \$325 551 was written off on August 27, 2010 representing amounts that could have been charged to concessionaires for timber they failed to harvest. This was the result of an agreement reached between the Forestry Commission and the concessionaires after the latter had complained that they were being charged for timber which they did not harvest. At the time of audit Forestry Commission was only charging for actual timber harvested.

My review of documents at Forest Hill Offices revealed that a logging contractor called J&R Timbers harvested timber in Gwayi forest between the periods July 23, 2004 to August 2009, before the Forestry Commission took over harvesting activities. The contract for J&R Timber was terminated due to non-performance. According to records their harvest was 19.9% of the annual off take indicating that the concession was not performing very well hence loss of revenue for Forestry Commission as they would have already budgeted for those funds. The non-performance was due to inadequate equipment as highlighted in an audit report produced by Forestry Commission that revealed that J&R Timbers had no adequate tools and equipment. The audit report also stated that the concessionaire was not complying with the requirements of the cutting plan. It was also reported that harvesting equipment was not tallying with what was indicated on the cutting plan. Table 3 below shows tools and equipment for J&R Timbers.

Table 3: Tools and equipment record for J & R Timbers

Items	Total number	Number working	Variance
Chainsaws	3	1	2
Tractors	4	1	3
Trailers	4	1	3
Axes	5	5	0
Shovels	5	5	0
Dragging chains	4	4	0
Calipers	2	2	0

Source: Forestry Commission’s audit report

According to records of timber volumes logged at Inseze forest between the period January to December 2010 the figures recorded showed that Hyde Park had harvested 4 959,338m³ against their off take of 5 454,545m³ over-bark per annum resulting in a variance of 495,207m³. Architectural Aluminum managed to harvest 2 776,489m³ against their annual off-take of 4800m³ per annum resulting in a variance of 2023.511m³ over-bark which translates into royalties of \$75 561.54. Both parties were not paying royalties on time.

Forestry Commission stated that despite the stringent vetting, concessionaires have in the past failed to meet their target. They attributed failure to meet targets to breakdown of machinery, failure to pay workers on time and failure to recapitalise by concessionaires.

4.5 Forest Fires

The Forest Act [Chap 19:05] section 69 requires that standard fireguards are constructed by the owner in all forest areas including areas where harvesting would be taking place. Forestry Commission is supposed to conduct monitoring to ensure that fireguards are constructed. Concessionaires are supposed to maintain and store their equipment and supplies in a manner that minimises the risk of fire and other environmental damages.

In my review of documents, I noted one report of a fire that burnt approximately 300 hectares of Inseze forest which was caused by an exhaust spark from a tractor owned by Hyde Park concessionaire. The concessionaire was fined US\$600 by the Environmental Management Agency.

In Matebeleland North Province there were reports of forest fires which caused extensive damage to forest resources and were also a threat to other species that rely on the forests for their survival. A total of 75 750ha were burnt in 9 gazetted forests in Matebeleland North Province. Refer to Annexure B for details on statistics of fires. In 2009 approximately 200ha in Mafungabusi Forest were burnt causing a major threat to wildlife and vegetation, and the cause of the fire could not be established.

Other causes of forest fires were wildlife poachers who used fire to trap the animals. Preparation of land for agriculture by illegal settlers using slash and burn technique also contributed to the rise in forest fires. I observed that the quality of timber was compromised in areas that were burnt by forest fires. Preservation of biodiversity was also being threatened by the forest fires.

There is inadequate control of forest fires as measures in place are not enforced to prevent the spread of forest fires.

The Forestry Commission acknowledged the problem of forest fires and stated that they had strategies in place to cope with forest fires. Their efforts were not achieving the intended results due to limited resources such as motor vehicles for supervision, tractors to make fire guards and communications equipment such as radios. The Forestry Commission in collaboration with the parent Ministry conducts extensive fire awareness campaigns before the commencement of the fire season every year to conscientise people on the dangers of uncontrolled fires. They have also collaborated with FAO to train neighbouring communities outside forest areas. Forestry Commission stated that despite these efforts, they failed to eradicate uncontrolled fires which started from neighbouring communities. They made an undertaking to continue improving on fire management including awareness campaigns until they achieve a zero percent uncontrolled fire incidences in forest areas.

4.6 Health and safety of workers

Health and safety of workers should be protected to ensure that all workers in timber concessions are adequately equipped with safety wear such as work suits, head gear, gloves and safety boots to protect them against injury at work. According to Work Instructions for timber concessions, workers should not be allowed to sit on loaded trailers as this could lead to serious injury or death. Concessionaires should provide a separate tractor for the transportation of labour, and the Forestry Commission has the responsibility to ensure that these regulations are complied with.

Forestry Commission chainsaw operators and timber measurers at Gwayi Forest, Mukusi sawmills, Alumcury Concession and Architectural Aluminium did not have any protective clothing while working in the field. Forestry Commission was failing to adequately provide its workers with protective clothing as their employees at all the 10 visited concessions did not have adequate protective clothing. Workers in the field did not have safety shoes, overalls, gloves and hard hats/helmets. Failure to provide protective clothing exposes workers to risk of injury during sawing and loading operations. For instance at Teak Baron concession a Forestry Commission timber measurer who was not putting on any protective clothing was injured during tree felling and she had to be hospitalized for a week. However during our visit she was back at work.

At the time of audit in July 2011, the Alumcury concessionaire in Tsholotsho district had been operating for 7 weeks and was still in the process of constructing houses for workers and storage facilities. This was despite the requirement that construction of houses should be done prior to the commencement of operations.

The Hyde Park and Architectural Aluminium Concession at Inseze forest in Umgusa district, workers were being transported from the harvest site to the ramp site in the same tractor carrying logs, posing serious risk of injury. I attributed this to failure on the part of Forestry Commission to ensure that concessionaires abide by standing health and safety regulations as set out in the approved cutting plan.

There is weak implementation of health and safety policies and procedures by Forestry Commission resulting in workers being exposed to injury at work.

In response, Forestry Commission indicated that they will intensify their supervision to ensure concessionaires abide by the standing rules and regulations on health and safety. They also stated that all concessionaires without adequate protective clothing will be stopped from harvesting. Forestry Commission cited cash flow problems and long procurement procedures as the major reasons for its employees working without protective clothing. They further highlighted that, it is the policy of Forestry Commission that employees receive not only adequate protective clothing, but also that they work in a healthy environment.

CHAPTER 5

5. RECOMMENDATIONS

The following chapter presents recommendations that are aimed at addressing challenges that are being experienced by Forestry Commission in controlling harvesting of timber resources. It is hoped that these recommendations will result in improved service delivery.

5.1 Logging operations

Harvesting should be adequately monitored on the ground such that standing rules are followed and adhered to. Forestry Commission should prioritise allocation of motor vehicles when resources become available to ensure effective monitoring and supervision of forest activities. This will go a long way in minimizing illegal logging by concessionaires as they go beyond marked boundaries.

5.1.1 Marking of trees (for seeding and logging)

Forestry Commission should mark trees to be harvested for control purposes. There should be regular supervision to ensure that operations adhere to standing regulations that stipulate that trees to be harvested should be marked in advance. Seed trees of 31cm and above should be adequately marked so that they are left for regeneration purposes.

5.1.2 Failure to measure and mark logs

Forestry Commission hammer stamps should be availed at all timber concessions to ensure that all harvested logs have been stamped with a Forestry Commission hammer stamp and marked to reflect the diameter and length of the log. All harvested logs should be recorded immediately after felling and cross-cutting. This should be done to ensure that all harvested logs are properly billed to the concessionaire.

5.1.3 Fuel and oil storage

Forestry Commission should not allow concessionaires to commence harvesting before putting in place the standard requirements. This will ensure that oil spills are minimized as they cause destruction to vegetation. The procedures manual should be adjusted in line with the new environmental friendly changes.

5.1.4 Expired concessions

The Forestry Commission should stop harvesting operations upon expiry of concession agreements. Any resumption of harvesting must only be allowed after the signing of a new concession agreement.

5.2 Illegal logging

Increased monitoring should be carried out in order to curb illegal logging and loss of revenue for the entity. Forestry Commission should reconsider the allocation of motor vehicles as a priority to ensure constant supervision of forest activities. Personnel manning forests must be equipped with adequate camping material to be used in the monitoring of activities in the forests. In order to meet the resources required for the purchase of adequate equipment, the Forestry Commission should consider awarding concessions to competitive concessionaires to ensure greater revenue generation.

There should be an intensified awareness campaign to communities living in gazetted forests for them to appreciate the importance of preserving trees. Communities should be educated on planting fast growing trees that they can use for fencing their homesteads.

5.3 Illegal Settlements

There should be enforcement of regulations that require that settlements in gazetted forests should be controlled. The Forestry Commission must put in place measures that monitor and prevent the creation of new settlements within gazetted forests.

5.4 Failure to Select Competent Concessionaires

Forestry Commission should ensure that concessionaires have tractors and adequate equipment in good working condition before they are granted concessions. Forestry Commission should also consider revising off-take targets to ensure that they are attainable.

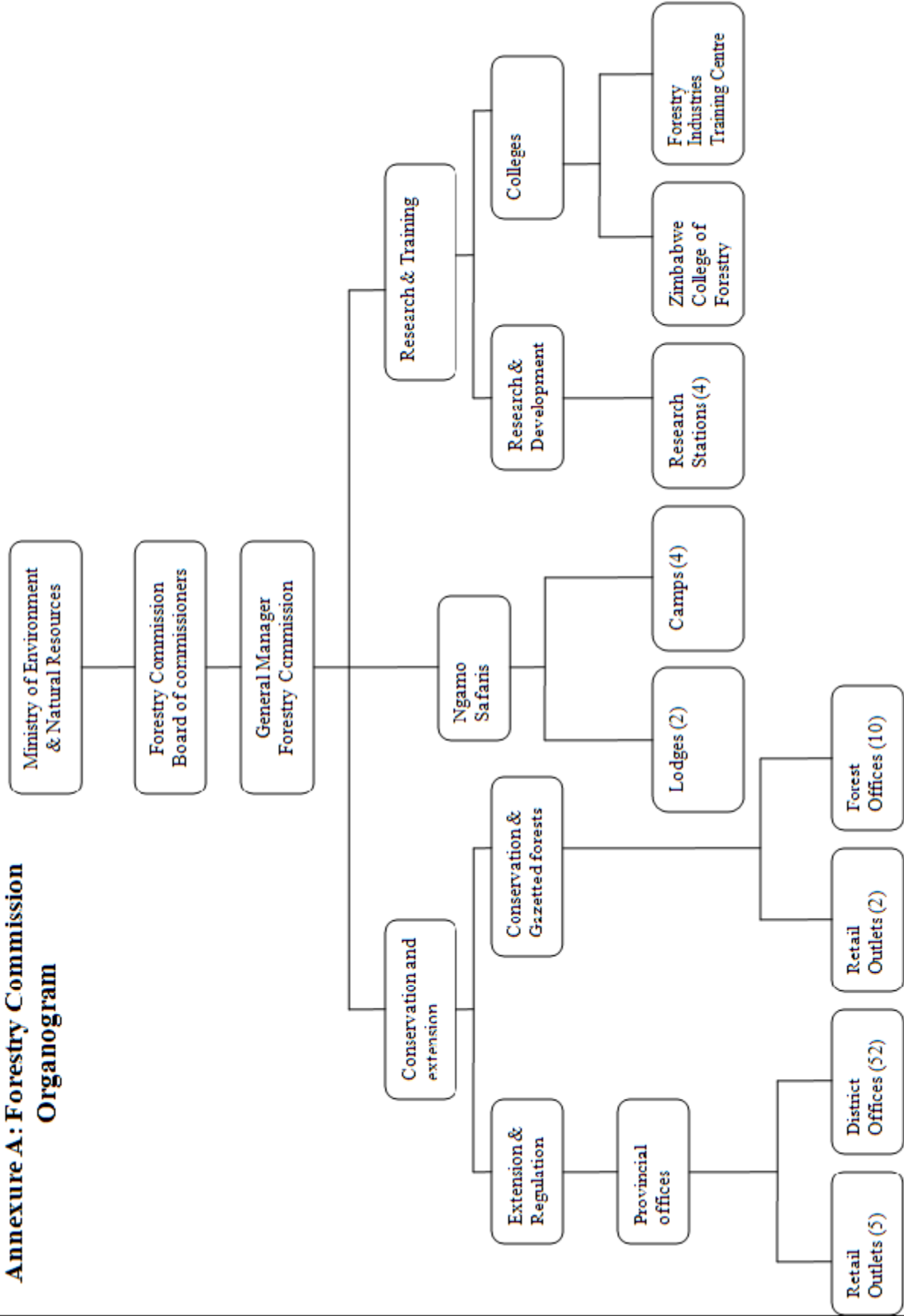
5.5 Forest Fires

There is need for education to raise public awareness on forest fires. This could reduce incidences of fires in gazetted and RDC forests. Communities living on the peripheral and inside the forest should be taught about the importance and benefits of preserving forests and also against activities that cause veld fires leading to deforestation. It is also recommended that Forestry Commission should step up the enforcement of environmental laws such as the preparation and maintenance of fireguards to curb forest fires.

5.6 Health and Safety of Workers

The health and safety of workers should be addressed to enhance safety standards and operations should not resume until all measures to ensure the health and safety of workers have been put in place. The Forestry Commission should provide its employees in the field with adequate protective clothing to protect them against injury at work. In the case of individuals employed by concessionaires, the Forestry Commission should ensure that no harvesting operations commence without evidence of adequate protective clothing and transport which ferries employees separately from the harvested timber.

Annexure A: Forestry Commission Organogram



Annexure B: Fire statistics in Matebeleland

Lupane District

Forest	Total Area (ha)	Area Burnt(ha)	No. of Fire incidences	Date fire occurred	Cause
Gwayi	144265	24700	4	21/10/2009	Wildlife poachers

Umgusa District

Forest	Total Area(ha)	Area Burnt(ha)	No. of fire incidences	Date fire occurred	Cause
Umgusa	32200	22150	3	04/10/10	Land preparation by illegal settlers.
Inseze	35200	300	1	04/10/10	Tractor exhaust spark from Hyde park loggers and was fined US \$600 by EMA
Inseze	35200	400	2	06/10/10	Unknown–started in the middle of the forest
Inseze	35200	9000	3	09/10/10	Spread from Inseze extension through Seafeld resettlement
Inseze extension	8400	8000	1	06/10/10	Land preparation at a homestead

Hwange District

Forest	Area	Burnt	Fires	Date	Cause
Fuller	23300	2500	1	12/10/10	fields clearing in woodlands resettlement
Kazuma	24000	3500	1	17/08/10	Poachers in Matetsi Safari
Pandamasuwe	33500	1500	1	14/09/10	The fire was a break out from national parks area unit 2 and it was blown in the forest area by the strong wind.

Nkayi district

Forest	Total Area(ha)	Area Burnt(ha)	No. of Fire incidences	Date fire occurred	Cause
Gwampa	47000	50	1	28/08/10	Thatch grass cutters
Gwampa	47000	250	2	25/09/10	Land clearing in communal lands
Gwampa	47000	400	3	05/10/10	Wildlife poaching

Bubi district

Forest	Total Area(ha)	Area Burnt(ha)	No. of Fire incidences	Date of occurrence	Cause
Bembesi	55100	3000	1	04/10/10	Land clearing in Umguza farms
TOTAL		75750			